GODIŠNJAK TEHNIČKOG FAKULTETA Sveučilišta u Rijeci • ANNUAL REPORT - FACULTY OF ENGINEERING University of Rijeka 2009/2010

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Sveučilište u Rijeci
TEHNIČKI FAKULTET

University of Rijeka
FACULTY OF ENGINEERING

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ANNUAL REPORT FACULTY OF ENGINEERING University of Rijeka

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PREDGOVOR DEKANA / DEAN'S PREFACE

Edukacija i razvoj osnova su društva temeljenog na znanju. Stoga Sveučilišta i pojedini fakulteti trebaju djelovati kao središnje točke edukacije, istraživanja i razvoja, omogućujući transfer znanja i tehnoloških rješenja svojem okruženju.

Tehnički fakultet Sveučilišta u Rijeci jedna je od vodećih visokoobrazovnih i znanstvenoistraživačkih institucija u Republici Hrvatskoj u području tehničkih znanosti.

Sveučilište u Rijeci sa svojih više od 17.000 studenata i oko 1.300 zaposlenika definiralo je svoju misiju da predstavlja moderno znanstvenoistraživačko Sveučilište s visokom kvalitetom edukacijskog procesa i aktivnom suradnjom sa svojim privrednim okruženjem i svim elementima civilnog društva. Tehnički fakultet Sveučilišta u Rijeci, kao jedan od 10 fakulteta Sveučilišta u Rijeci, dijeli tu viziju i aktivno surađuje u njezinoj implementaciji.

Naša je institucija osnovana prije 49 godina temeljeći se na stoljećima dugoj tradiciji

Education and research are crucial foundations for a knowledge-based society. Hence, universities and faculties have to act as central points of education, research and development, providing transfer of knowledge and technological solutions to their surroundings.

The Faculty of Engineering of the University of Rijeka is one of the leading educational and scientific-research institutions in the field of technical sciences in the Republic of Croatia.

With more than 17.000 students and 1.300 member staff, the University of Rijeka defines its mission as that of a modern research university with a high quality education and active co-operation with economic and public sectors. As one of the 10 constituent institutions of the University of Rijeka, the Faculty of Engineering shares this vision and actively works on its implementation.

Originating from a centuries long world renowned tradition of development of technical

razvoja svjetski relevantnih tehničkih i tehnoloških rješenja i inovacija u našem gradu i njegovoj okolici.
Danas je Fakultet moderna, dobro organizirana ustanova s dokazanim i akreditiranim visokim razinama kvalitete svih svojih procesa, čije ustrojbene jedinice ne obuhvaćaju samo zavode i katedre nego i brojne laboratorije (od kojih su neki certificirani u skladu s međunarodnom normom za akreditirane ispitne laboratorije), računalni centar, IT akademiju te knjižnicu.

Zaposlenici Fakulteta koriste se postojećom znanstvenoistraživačkom infrastrukturom za razvoj inovativnih proizvoda, tehnologija i servisa potrebnih poslovnom sektoru, te svojim studentima nude preddiplomske sveučilišne studijske programe koji vode do akademskog stupnja prvostupnika struke, diplomske sveučilišne studijske programe koji vode do akademskog stupnja magistra struke, kao i poslijediplomske doktorske studijske programe koji ih obrazuju za stupanj doktora znanosti.

Naši diplomanti te magistri i doktori znanosti ne pridonose samo razvoju lokalnoga gospodarstva te znanstvenom i razvojnom potencijalu Republike Hrvatske, nego su svojim znanjem i kvalifikacijama pridonijeli prepoznatljivosti Fakulteta u Europi i svijetu.

Suradnjom s brojnim akademskim partnerima i vrlo naglašenom istraživačkom aktivnošću Tehnički fakultet zasigurno će i u budućnosti biti stožerna visokoškolska i znanstvenoistraživačka institucija u regiji u kojoj djeluje, i šire.

solutions in our city and its surroundings, our institution was founded 49 years ago.
Today, the Faculty is a modern, well organised institution with proven and certified high quality of all of its processes, encompassing not only the departments and chairs, but also numerous laboratories (many soon to become officially certified in accordance with international standards), a computer centre, the IT academy and a library.

The Faculty's employees employ the existing research infrastructure to develop innovative products, technologies and services needed by the business sector, and to offer to our students undergraduate university study programs leading to a BSc, graduate university study programs leading to a Masters, as well as postgraduate study programs leading to Doctor of Science degrees.

Our alumni contribute not only to the development of the local economy, the Croatian economy and the European economy, but also to the enhancement of the scientific and developmental potential of Croatia. Moreover, their knowledge and skills have certainly contributed to the reputation of the Faculty in Europe and in the world.

Cooperating with numerous inland and foreign academic partners and through extremely vigorous research activity, the Faculty of Engineering will certainly remain one of the leading higher education and research institutions in its surroundings and on a much broader scale.

Godišnjak Tehničkog fakulteta u Rijeci omogućuje detaljan uvid u ustroj i život naše institucije, njezin način rada te doprinos privrednom, znanstvenom i kulturnom životu grada Rijeke i šire regije.

Ovom prigodom želim čestitati i zahvaliti svim zaposlenicima, studentima i završenim inženjerima, kao i svim prijateljima Fakulteta, čiji je doprinos omogućio da naša institucija predstavlja poželjno mjesto za rad, predavanja, studiranje i znanstveno istraživanje.

This Annual Report offers a detailed overview of the organisation and the activities performed at our institution, our work and its contribution to the economic, scientific, and cultural life of the city of Rijeka and the region.

I would like to express here my congratulations and gratitude to all of our staff, students and graduates, as well as all the friends of the Faculty who continuously contribute to the development of the faculty and help us make it a more attractive place for work, teaching, study and research.

Prof. dr. sc. Tonči Mikac

Dekan
Tehničkog fakulteta
Sveučilišta u Rijeci

Full Prof. D. Sc. Tonči Mikac

Dean
Faculty of Engineering
University of Rijeka

1. OPĆE INFORMACIJE O FAKULTETU / GENERAL INFORMATION

Tehnički fakultet Sveučilišta u Rijeci stožerna je visokoškolska i znanstvenoistraživačka institucija na području tehničkih znanosti ne samo na Sveučilištu u Rijeci nego i u regiji u kojoj djeluje, konkurentna na europskom i svjetskom tržištu znanja. Fakultet objedinjuje danas djelatnost 11 zavoda, i to:

- Zavoda za automatiku i elektroniku;
- Zavoda za brodogradnju i inženjerstvo morske tehnologije;
- Zavoda za elektroenergetiku;
- Zavoda za industrijsko inženjerstvo i menadžment;
- Zavoda za konstruiranje u strojarstvu;
- Zavoda za matematiku, fiziku, strane jezike i kineziologiju;
- Zavoda za materijale;
- Zavoda za mehaniku fluida i računarsko inženjerstvo;
- Zavoda za računarstvo;
- Zavoda za tehničku mehaniku;
- Zavoda za termodinamiku i energetiku.

U sklopu zavoda djeluje 37 katedri i 49 laboratorija, a na Fakultetu djeluju i Računalni centar, Knjižnica, te Financijska služba, Služba općih i kadrovskih poslova, Služba studentske evidencije i Tehnička služba.

The Faculty of Engineering of the University of Rijeka is a leading higher education, scientific and research institution in the field of technical sciences not only at the University of Rijeka, but also in the region where it is situated. It is competitive on the European and the world knowledge market. The Faculty encompasses today 11 departments, namely:

- Department of Automation and Electronics;
- Department of Naval Architecture and Ocean Engineering;
- Department of Electrical Power Engineering;
- Department of Industrial Engineering and Management;
- Department of Mechanical Engineering Design;
- Department of Mathematics, Physics, Foreign Languages and Kinesiology;
- Department of Materials Science and Engineering
- Department of Fluid Mechanics and Computational Engineering;
- Department of Computer Science;
- Department of Engineering Mechanics;
- Department of Thermodynamics and Energy Engineering.

37 chairs and 49 laboratories operate within the departments, while the Faculty encompasses also a Computer Centre, a Library as well as an Accounting Division, the General and Personnel Office, the Students' Record Office and the Maintenance Services.

Od 193 zaposlenika 64 ih je u znanstveno--nastavnim, 37 u nastavnim i suradničkim zvanjima, 37 je znanstvenih novaka, a 55 je djelatnika u administrativnim i stručnim službama. Na Fakultetu rade i 64 vanjska suradnika.

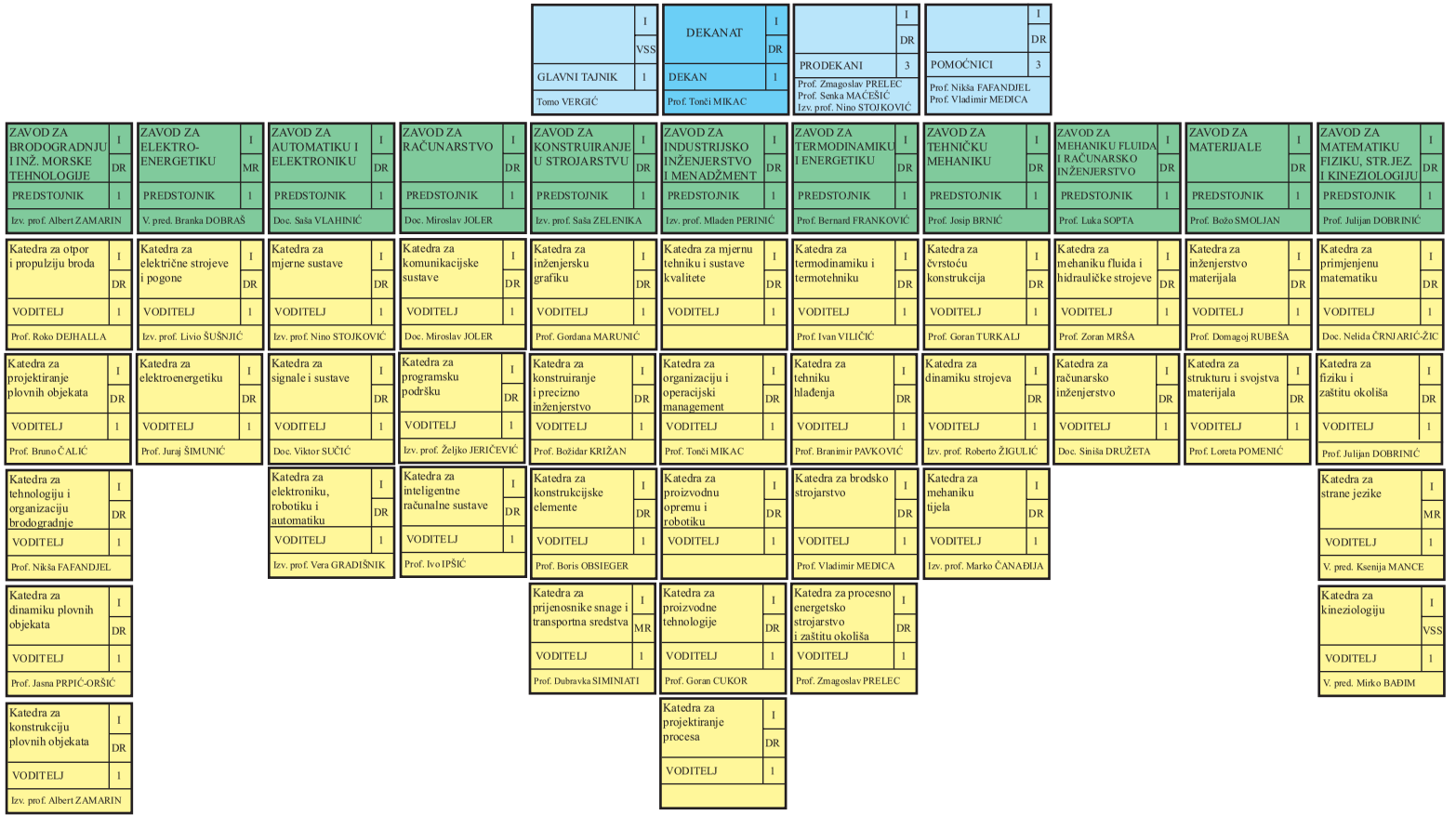
Fakultet izvodi sveučilišne preddiplomske, sveučilišne diplomske te stručne studijske programe na polju strojarstva, brodogradnje i elektrotehnike, kao i trogodišnji treći ciklus obrazovanja koji omogućava stjecanje doktorata znanosti na području tehničkih znanosti, i to na polju strojarstva, brodogradnje te temeljnih tehničkih znanosti. Gotovo 4300 doktora znanosti, magistara znanosti, diplomiranih inženjera i inženjera steklo je svoje diplome na Fakultetu, a danas tu studira oko 1400 studenata. Tehnički fakultet redovito izdaje znanstveni časopis *Engineering Review*, a djelatnici Fakulteta objavili su i brojne knjige i udžbenike.

Fakultet aktivno surađuje s gospodarskim, visokoškolskim i znanstvenim subjektima u bližnjoj i daljoj okolici te se, uz naglasak na daljnjem razvoju znanstvenoistraživačke i nastavne djelatnosti i na njihovoj kvaliteti, dinamički razvija i ubrzano radi na integraciji u europski prostor znanosti i visokog obrazovanja.

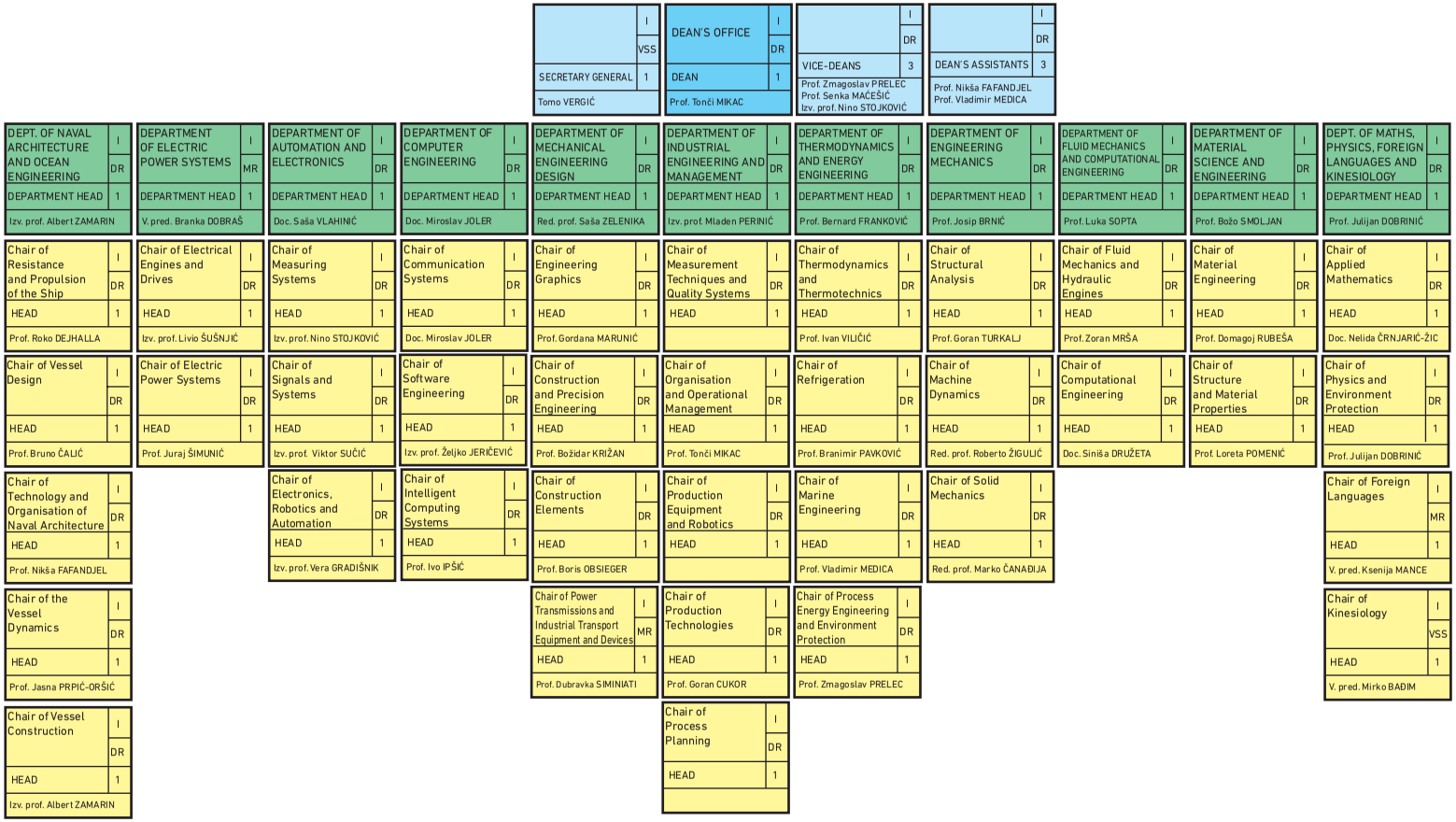
Of 193 employees, 64 are professors, 37 lecturers and assistants, 37 junior researchers and 55 work in the administrative and professional staff section. 64 external collaborators also work at the Faculty.

The Faculty holds undergraduate university, graduate university and vocational study programs in mechanical and electrical engineering and in naval architecture as well as post-graduate doctoral studies in the fields of mechanical engineering, naval architecture and basic technical sciences. Almost 4300 students have acquired here their Doctor of Science, Master of Science or undergraduate and graduate diplomas, while today ca. 1400 students carry on their studies at the Faculty. The Faculty of Engineering regularly publishes the Engineering Review scientific journal; the faculty staff have also authored several books and textbooks

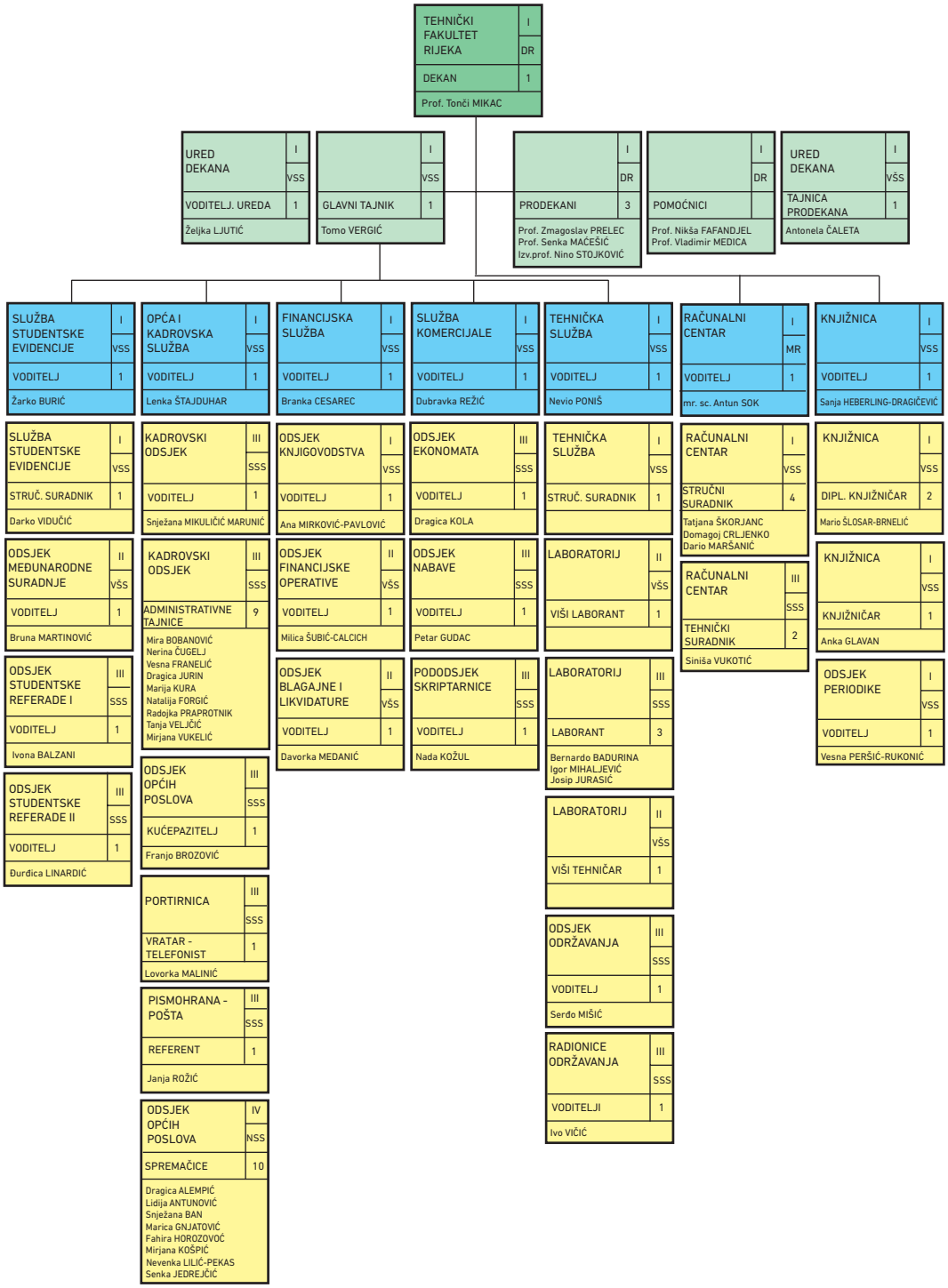
The Faculty actively collaborates with industrial, higher education and scientific institutions in its vicinity and farther away. It is also an institution which develops dynamically, and seeks to attain integration into European standards of science and higher education, always bearing in mind development of scientific reasearch and teaching quality.



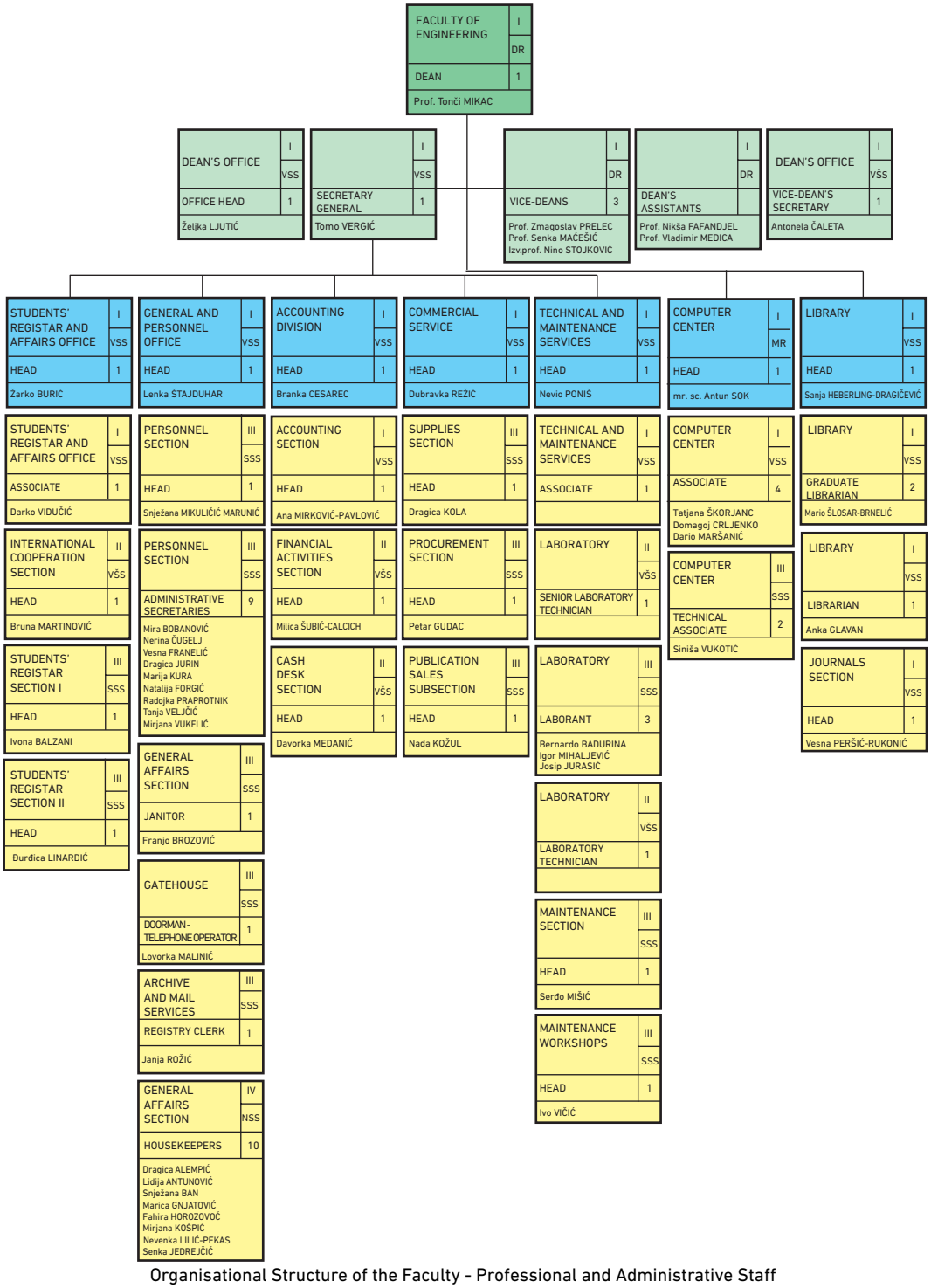
Organizacijska struktura fakulteta - Zavodi i katedre



Organisational Structure of the Faculty - Departments and Chairs



Organizacijska struktura fakulteta - Stručne službe



Organisational Structure of the Faculty - Professional and Administrative Staff

2. POVIJESNI PREGLED / HISTORICAL OVERVIEW

Tehničko obrazovanje i uopće razvoj tehničke struke u Rijeci započeli su znatno prije osnivanja današnjega Tehničkog fakulteta Sveučilišta u Rijeci.

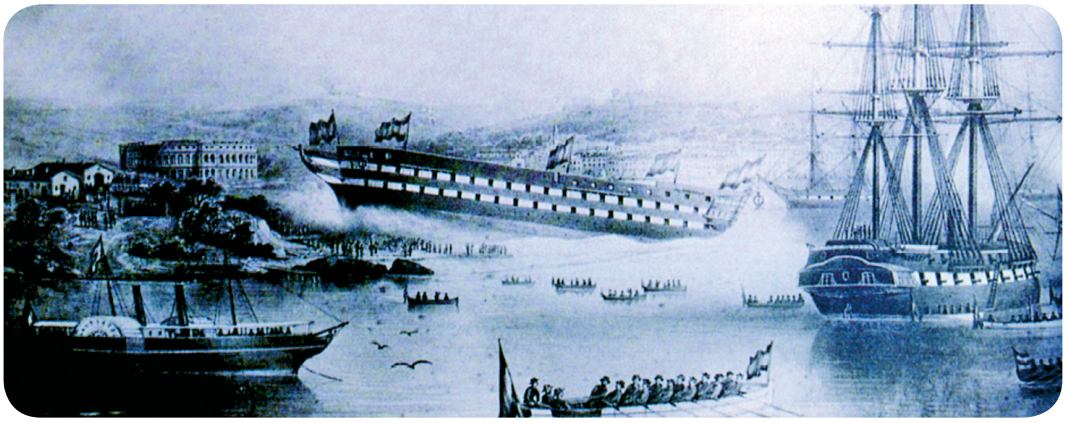
Sredinom XIX. stoljeća, slijedom izbijanja ratnih događaja i sukoba između Austrije i Italije, austrijske vlasti nastoje što brže popuniti svoj mornaričko-tehnički kadar, pa je 9. svibnja 1854. godine donesena carska odluka o izgradnji Mornaričke akademije u Rijeci.

Tu je odluku zasigurno potaknula činjenica da se na području sjevernoga Jadrana od najranije povijesti intenzivno razvijalo pomorstvo, trgovina, brodogradnja, prerada i razmjena roba. Gradnja čuvenih drvenih brodova bila je razvijena na obalama Kvarnera, Istre te na otocima. Zapaženija je brodogradnja započela najprije u Kraljevici 1729. godine, kada car Karlo VI. određuje izgradnju arsenala i brodogradilišta za gradnju ratnih brodova. Brodogradilište u Puli osnovano je 1856. godine kao arsenal austrijske ratne mornarice. Kao prva gradnja porinut je 1858. godine ratni brod Kaiser, na pogon jedrima i parnim strojem izrađenim u Rijeci. Kasnije su izgrađeni brojni ratni brodovi i podmornice te drugi brodovi. Godine 1862. na području Rijeke djelovalo je čak 12 manjih brodogradilišta. U Puli, Rijeci i Kraljevici izgrađen je veći dio brodova snažne austrougarske ratne flote. U doba kad su

Engineering education and in general the development of technical professions in Rijeka had begun long before the foundation of the Faculty of Engineering University of Rijeka.

In the mid 19th century, due to the outbreak of war events and conflicts between Austria and Italy, Austrian authorities tried to reinforce their marine engineering personnel as quickly as possible; thus on May 9th, 1854 an imperial decision gave the impetus to build the Naval Academy in Rijeka.

This decision was based on the fact that seafaring, trading, shipbuilding and goods exchange have been developed since early times on the Northern Adriatic. The building of wooden ships, which were known throughout the world, was well established on the Kvarner Bay and Istrian coast as well as on the islands. Noteworthy shipbuilding started in Kraljevica in 1729, when the emperor Karlo VI decided upon building the arsenal and naval shipyard. The shipyard in Pula was founded in 1856 as an Arsenal of the Austrian Navy. Its first ship, launched in 1858, was the warship Kaiser, propelled by sails and a steam engine, which were built in Rijeka. Later on, numerous warships, submarines and other ships were built. In the year 1862 there were as many as 12 smaller active shipyards in the Rijeka area. In Pula, Rijeka and Kraljevica, a great number of ships of the strong Austro-Hungarian navy were built. At the time these ships were built, they presented the latest advancements in



Porinuće broda „Kaiser“ koji je poslije odnio pobjedu u bitci kod Visa /
The launching of the ship “Kaiser” which later gained the victory at the battle of Vis

građeni, brodovi su po brodograđevnim rješenjima i po svojoj opremi predstavljali najnovija dostignuća u svim područjima tehnike.

Jačanje brodogradnje i proizvodnih djelatnosti bilo je uvjetovano razvitkom prometnih veza i trgovine, posebice porastom prometa u riječkoj luci. Rijeka je sa zaleđem povezana izgradnjom Karolinske ceste 1728. te Lujzinske ceste 1809. godine.

Uz to, 1854. godine u Rijeci je počela djelovati i prva moderna strojograđevna industrija *Fonderia Metalli* kao ljevaonica i radionica. Dolaskom Roberta Whiteheada, engleskoga strojarskog inženjera, u Rijeci započinje proizvodnja parnih strojeva, pa tvrtka mijenja naziv u *Stabilimento tecnico Fiumano*.

Na raskrižju trgovačkih putova razvijena je i važna prerađivačka industrija. Tako je već 1764. godine u Rijeci osnovana tvornica konopa, zatim tvornice kemijskih proizvoda, ukočenog drva, rafinerija šećera i druge. Godine 1824. osnovana je tvornica papira

all fields of technology; both in terms of their naval design and equipment.

The growth of shipbuilding as well as production activities was closely related to the development of communications and trade, especially the upward traffic trend in the port of Rijeka. Rijeka was connected with its hinterland by the Caroline Road in 1728 and by the Louise road in 1809.

In addition, in 1854 a casting plant and workshop was initiated as Fonderia Metalli - the first modern engineering industry in Rijeka. With the arrival of Robert Whitehead, an English mechanical engineer, the production of steam engines began in Rijeka, and the company changed its name to *Stabilimento tecnico Fiumano*.

At the crossroads of merchant routes, an important manufacturing industry was developed. In 1764 the production of ropes, chemical products, hardwood and sugar was initiated in Rijeka. Well known for the quality of its products, the Smith & Meynier paper

Smith i Meynier, poznata širom svijeta po kvaliteti svojih proizvoda. U tvornici je već 1833. godine instaliran pogonski parni stroj, prvi u ovom dijelu Europe. Godine 1883. u Rijeci je puštena u rad Rafinerija kamenog ugljena, kao jedna od prvih rafinerija u Europi.

Godine 1846. u Rijeci je uvedena plinska rasvjeta s 52 rasvjetna mjesta, iako je još tada grad bio pretežito rasvijetljen uljnim svjetiljkama. Prvi pogon plinare pušten je u rad 1852. na području Školjića. Tom je prilikom središte Rijeke osvijetljeno s 226 plinskih svjetiljki, pa se to ujedno uzima i kao godina utemeljenja gradskih plinara i plinske rasvjete na tlu Hrvatske.

Na tim iznimno snažnim tehničkim i tehnologijskim temeljima svečano polaganje kamena temeljca za zgradu Mornaričke akademije, današnje riječke bolnice, izvršeno je 26. ožujka 1856. godine u nazočnosti zapovjednika austrijske ratne mornarice nadvojvode Ferdinanda Maksimilijana, bana Josipa Jelačića, velikog župana baruna Bartola Zmajića, te drugih dostojanstvenika. Zgrada je dovršena tijekom 1857. godine. Iako je Akademija 1857. godine iz privremenog boravišta u Trstu premještena u Rijeku, ipak je, zbog ratnih sukoba, sve do 1866. godine veći dio vremena bila smještena na fregati "Venus". Od tada, pa sve do 1918. godine, Akademija neprekidno djeluje u Rijeci. Tako je 1866. godine u Rijeci započelo akademsko tehničko obrazovanje i znanstvena djelatnost u području specifičnih stručnih i općih tehničkih sadržaja.

Nastavni program na Akademiji bio je četverogodišnji, tj. obuhvaćao je 8 semestara, pa to predstavlja začetak i temelje visokoga

mill was established in 1824. A steam power engine, the first in this part of Europe, was installed as early as 1833 in this mill. In the year 1883 the pit coal refinery in Rijeka was put into operation and was one of the first refineries in Europe.

In 1846, public gas illumination with 52 lamps was introduced in Rijeka, although the city was mainly illuminated with oil lamps. The first gas supply plant began its operation in 1852 on the location of Školjić. On this occasion, the centre of Rijeka was illuminated with 226 gas lamps; this is considered as the founding year of city gas plant and gas illumination in our country.

On these well established technical and technological bases, the cornerstone for the building of the Naval Academy, today's hospital building, was laid on March 26th, 1856 in the presence of the Archduke Ferdinand Maximilian, who was the Austrian Naval Commander of that time, the governor Josip Jelačić, the great district prefect baron Bartol Zmajić and other high officials and respected citizens. The building was completed in the year 1857. Although the Academy was relocated from its temporary abode in Trieste to Rijeka in 1857, because of war conflicts up to 1866, the Academy was mainly located on the frigate "Venus". Since then, and up to 1918, the Academy was uninterruptedly active in Rijeka. It was in this way that in 1866 academic engineering education and scientific work in the field of specific vocational and general engineering context began in Rijeka.

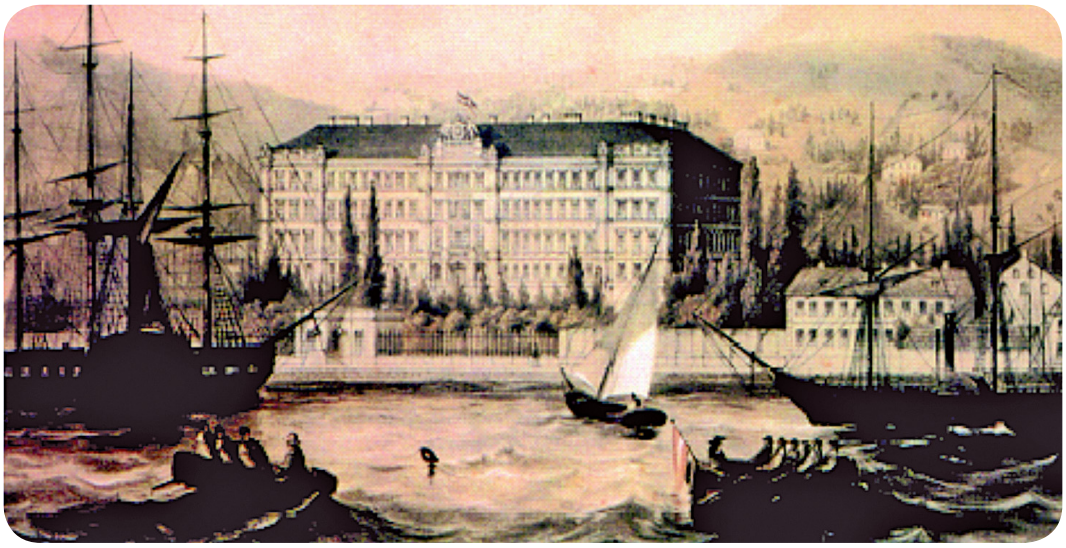
The Academy offered a four-year (i.e. 8 semesters) curriculum and this fact represented the beginning and the basis of higher engineering education in these regions.

tehničkog obrazovanja u nas. Plan nastave bio je uspoređivan i usklađivan sa sličnim programima u tadašnjim vodećim europskim državama: Austriji, Francuskoj, Engleskoj i Njemačkoj. Nastavno je osoblje na Akademiji bilo probrano i na vrlo visokoj stručnoj i znanstvenoj razini. Znakovito je da su u tehničkim strukama, općenito, prevladavali inženjeri iz tada gospodarski razvijenijih područja Austrije, Njemačke, Češke i Ugarske.

Program studija u početku je obuhvaćao 31 predmet, ali je 1871. godine proširen dopunskim stručnim sadržajima. U nastavnom su programu zapaženo mjesto imali sadržaji iz više matematike, nacrtne geometrije i crtanja, kemije, fizike i mehanike te gradnje brodova, parnih strojeva i brodske opreme. Broj nastavnih sati kretao se od 33 do 37 sati tjedno.
U radu Mornaričke akademije u Rijeci važnu su ulogu imali i mornarički Hidrografski zavod sa svojim vrsnim nastavnicima za specifična

The syllabus was compared and adjusted to similar programs of leading European countries of that time: Austria, France, England and Germany. The Academy teaching staff was highly screened and esteemed at a very high professional and scientific level. It is illustrative that the engineering professional courses were mostly taught by engineers from well developed regions of Austria, Germany, Bohemia and Hungary.

At first, the study program included 31 subjects, but in 1871 it was extended to include supplementary professional contents. In the teaching program, special attention was devoted to subjects in higher mathematics, descriptive geometry and drawing, chemistry, physics and mechanics, as well as the building of ships, steam engines and fitting out. There were 33-37 hours of lessons per week.
For the activity of the Naval Academy in Rijeka, the Navy Hydrographic Department served an important role with its competent teachers in specific professional fields. The



Grafika s inauguracije Mornaričke akademije 1866. /
Graphics taken at the inauguration of the Naval Academy in 1866

stručna područja iz nastavnog plana Akademije, te Mornarička knjižnica u Puli (danas zbrinuta u Puli kao zaštićeni spomenik kulture Republike Hrvatske), s iznimno bogatom općom, znanstvenom i stručnom literaturom. Za Mornaričku se knjižnicu može reći da je po svojem knjižnom fondu od oko 40 tisuća svezaka tada predstavljala najveću vojno-pomorsku knjižnicu na Sredozemlju. Pojedina izdanja bila su tiskana u Puli, Rijeci, Pazinu, Kraljevici i Bakru. Katalozi Mornaričke biblioteke u Puli iz razdoblja do Prvoga svjetskog rata obuhvaćaju najranija izdanja stručne literature iz područja tehničkih i prirodnih znanosti sve od 1582. godine (Jacobi, *Theatrum instrumentorum et machinarum*), uz djela Boškovića (Venecija, 1796.), Newtona (London, 1707.), Jeana i Daniela Bernoullia, Coulomba i drugih. Posebno mjesto zaslužuju i udžbenici stručnih sadržaja, tiskani sve do početka XX. stoljeća, u vlastitim nakladama Mornaričke strojarske škole u Puli i Mornaričke akademije u Rijeci. Većina stručne literature potječe iz mnogobrojnih država Europe i Sjeverne Amerike, a djela su pisana na latinskom, francuskom, njemačkom, engleskom, talijanskom, španjolskom, švedskom, nizozemskom, ruskom, pa i na hrvatskom jeziku.

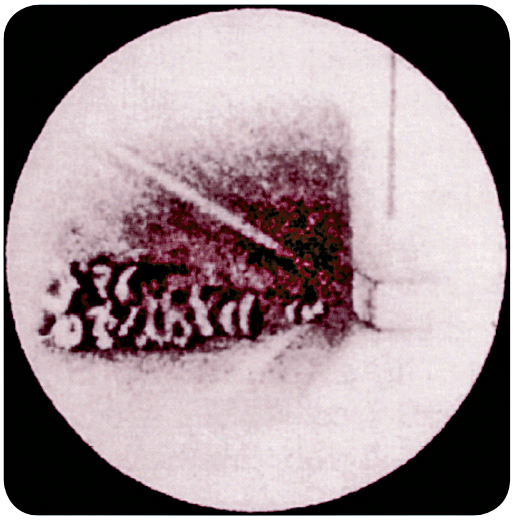
Na poticaj profesora Mornaričke akademije u Rijeci je 1868. godine utemeljena i meteorološka postaja.

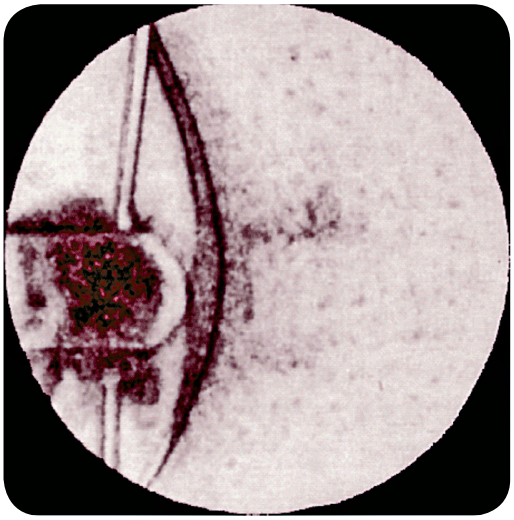
Potrebno je spomenuti da je Akademija imala dobro opremljene istraživačke laboratorije za fiziku i kemiju, te da je 1886. godine u Rijeci, prvi put u svijetu, znanstvenik svjetskog ugleda i priznati začetnik znanstvene fotografije, profesor dr. Peter Salcher, na prijedlog prof. dr. Ernsta Macha i zajedno s riječkim gimnazijskim

same can be said of the Naval Library in Pula (today again situated in Pula as a monument of cultural heritage of the Republic of Croatia) with particularly rich general, scientific and professional literature. The Naval library, with its approximately 40 thousand volumes, is said to have been the largest naval maritime library in the Mediterranean of that time. Some of its editions were published in Pula, Rijeka, Pazin, Kraljevica and Bakar. The catalogues of the Naval library in Pula dating up to World War I comprise the earliest editions of technical literature and natural science spanning back to 1582 (Jacobi, Theatrum instrumentorum et machinarum), along with works by Bošković (Venetia, 1796), Newton (London, 1707), Jean and Daniel Bernoulli, Coulomb and others. Special attention is merited by the handbooks published until the beginning of the 20th century in proprietary editions of the Naval Mechanical Engineering School of Pula and the Naval Academy of Rijeka. Most of the literature originates from numerous European and Northern American countries, with works written in Latin, French, German, English, Italian Spanish, Swedish, Dutch, Russian and even Croatian.

The weather reporting station was founded in Rijeka in 1868. This project was encouraged by the Naval Academy professors.

It should be mentioned that the Academy had well equipped research laboratories for physics and chemistry and that in 1886 in Rijeka, for the first time in world history, a world famous scientist and the initiator of scientific photography, Professor Dr. Peter Salcher, at the suggestion of Professor Dr. Ernst Mach and with the assistance of high-school Professor A. Rieger, succeeded in taking snapshots of a shock pressure wave





Snimke udarnih valova pri letu puščanog metka koje je prvi u svijetu izradio prof. dr. P. Salcher 1886. godine
Snapshots of shock waves around a flying bullet taken for the first time in the world by Dr. P. Salcher in 1886

profesorom A. Rieglerom, uspio snimiti tlačne udarne valove oko puščanog metka pri letu nadzvučnom brzinom. Prof. dr. Salcher je 1889. godine otkrio i pojavu udarnih valova i vrtloga pri istjecanju stlačenog zraka. Vrlo su važni i njegovi eksperimenti s rendgenskim snimkama svega četiri tjedna nakon prvoga Röntgenova javnog izvješća o x-zrakama.

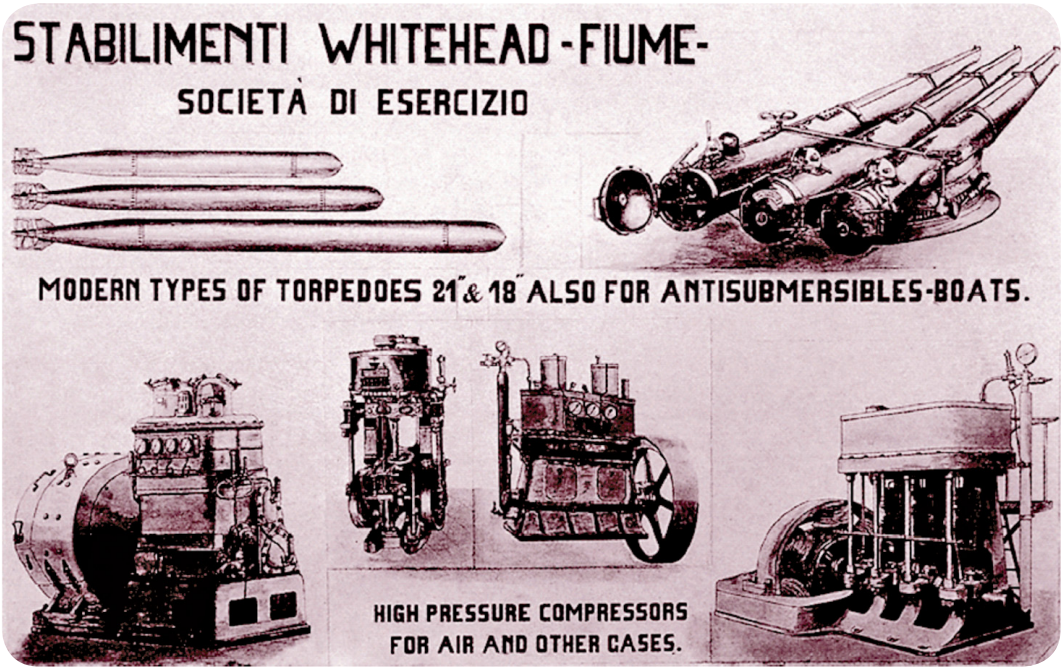
Rijeku u to doba obilježavaju i druga važna otkrića i izumi koji su iz nje krenuli u osvajanje svijeta. U okvirima tehnike i prirodnih znanosti zasigurno se može izdvojiti izum torpeda, oružja koje dovodi do novog načina ratovanja na moru.

Riječanin Giovanni Blasius Luppis de Rammer, zapovjednik austrijske fregate "Bellona", došao je 1859. godine do zamisli o izradi obrambenoga mornaričkog oružja za zaštitu obale od mornaričke blokade. Najprije je to bila ideja o jedrilici napunjenoj eksplozivom upravljanoj s obale pomoću konopaca. Giovanni Ciotta (gradonačelnik Rijeke od

around an supersonic flying bullet. Prof. Salcher discovered in 1889 also the shock pressure waves during outflow or streaming of pressurised air. Very important are also his experiments with X-rays made only four weeks after the first public reports on X-rays by Röntgen.

Rijeka was also distinguished at that time by its several significant discoveries and inventions which captivated the world. Within the technical and natural sciences, especially note-worthy is the invention of the torpedo, a weapon which introduced new methods of warfare at sea.

Giovanni Blasius Luppis de Rammer from Rijeka, the commanding officer of the Austrian frigate "Bellona", had the idea of designing defensive weapons to protect the coast from naval blockade. The first idea was that of a yacht filled with explosives guided from the coast by towing ropes. Giovanni Ciotta (Mayor of Rijeka from 1872 to 1896) recognised the



Reklamni materijal tvornice torpeda /
Advertising media of the torpedo factory

1872. do 1896. godine), uvidjevši vrijednost te zamisli, uspio je nagovoriti strojarskog inženjera Roberta Whiteheada da prihvati suradnju s Luppisom na usavršavanju ideje i izradi prototipa torpeda. Nakon provedenih prvih pokusa 1866. godine R. Whitehead uz pomoć svojega sina Johna i mehaničara Annibala Ploecha dovršava prototip torpeda. Došlo se tako do rješenja u obliku podvodnog projektila na pogon dvocilindarskim strojem na stlačeni zrak s dometom do 200 metara. Primjenom žiroskopa riješen je problem održavanja putanje torpeda pa je postignuta visoka preciznost pogodaka. Veličina torpeda vremenom je dosegla 6 metara, promjera 345 odnosno 406 mm, s brzinom od oko 6 čvorova. Poslije je riječki torpedo postizao brzine veće od 50 čvorova. U Rijeci je 1867. godine na brod "Gemse" prvi put u svijetu ugrađena torpedna lansirna cijev promjera

value of the idea and managed to persuade the mechanical engineer Robert Whitehead to work in cooperation with Luppis on the project and to construct the torpedo prototype. After the first experiments carried out in 1866, R. Whitehead, with the help of his son John and the mechanic Annibal Ploech, finished the prototype. The final torpedo had the form of an underwater missile driven by a two-cylinder compressed-air machine with a maximum range of 200 m. The gyroscope solved the problem of keeping the torpedo on route, achieving thus high targeting accuracy. The torpedo size eventually reached 6 meters in length with a diameter of 345 mm or 406 mm and a speed of 6 knots. The torpedo designed in Rijeka later achieved a speed of over 50 knots. In 1867 the world's first torpedo launching tube with a diameter of 457 mm was installed in Rijeka on the ship "Gemse".

457 mm.
Kao važna postignuća u Rijeci i njezinoj okolici iz tog vremena valja se prisjetiti i prve acetilenske svjetiljke za noćno ribarenje koju je izumio i 1898. godine počeo upotrebljavati Ivan Dellaitti, ribar poduzetnik iz Senja. Svjetiljku je ispitala i preporučila za uporabu tadašnja austrijska pomorska uprava.

Akademik prof. dr. Andrija Mohorovičić rođen je 1857. u Voloskom. Nakon gimnazije u Rijeci završava studij matematike i fizike u Pragu. Od 1882. do 1891. godine predaje meteorologiju i astronomiju na Nautičkoj školi u Bakru, a 1887. osniva meteorološku postaju. Zakonom o porastu brzina potresnih valova s dubinom te utvrđivanjem plohe diskontinuiteta, koja odjeljuje koru od plašta Zemlje, zauzeo je vrlo istaknuto mjesto na polju svjetske seizmologije.

Prva električna rasvjeta, samo 7 godina nakon prve Edisonove žarulje, primijenjena je u Rijeci na svečanom otvorenju novoga gradskog kazališta 1885. godine. Godine 1892. u Rijeci je izgrađena elektrana izmjenične struje, a 1906. godine započela je izgradnja termoelektrane s dva turbogeneratora, svakim po 1500 kVA.

Razvoj tehnologije i visokog obrazovanja dovodi i do daljnjeg razvoja grada Rijeke. Današnja je luka izgrađena od 1871. do 1914. godine. Otvaranjem Sueskoga kanala 1869. godine pružile su se iznimno široke mogućnosti za razvitak poslovanja, pa se u Rijeci, pored industrijskih i lučkih djelatnosti, razvijaju i važne bankarske, kulturne, obrazovne, komunalne, uslužne i druge djelatnosti. Još je 1852. godine bila osnovana trgovačko-obrtnička komora, a 1871., pored Pučke štedne blagajne, osnovana je i *Banca*

As important achievements in Rijeka and its surroundings, the first acetylene lamp for fishing at night is also to be remembered. It was invented and used in 1898 by Ivan Dellaitti, an entrepreneurial fisherman from Senj. The lamp was examined and recommended by the Austrian Maritime Board.

The member of the Academy of Sciences and Arts, Prof. Dr. Andrija Mohorovičić, was born in 1857 in Volosko. He finished the study of mathematics and physics in Prague. From 1882 to 1891 he lectured on meteorology and astronomy at the Nautical School in Bakar, and in 1887 he established a weather reporting station. By stating the law of shock wave rate increase with depth, as well as by defining the discontinuity between Earth's crust and the mantle, he took an outstanding post in world's seismology.

Electric lighting was used in Rijeka, only 7 years after Edison's first bulb, during the opening ceremony of the new city theatre in 1885. In 1892 an AC power plant was built in Rijeka and in 1906 the construction of a thermal power plant with two turbo generators of 1500 kVA each, began.

The development of technology and higher education helped also the further development of the city of Rijeka. The present port was built in the period from 1871 to 1914. With the opening of the Suez Canal in 1869, wide business possibilities opened up, so that not only industrial and port activities but also important banking, financial, cultural, educational, and communal services developed in Rijeka. As early as 1852, a commercial-handcrafting chamber was established, while in 1871, besides the Public savings fund, the *Banca Fiumana* bank

Pročelje zgrade Strojarskog fakulteta u Rijeci 1963. godine /
The edifice of the Faculty of Engineering in Rijeka in 1963

Fiumana. Godine 1874. puštene su u promet željezničke pruge od Rijeke prema Zagrebu te od Rijeke prema Ljubljani. Godine 1899. u Rijeci je počeo voziti gradski električni tramvaj.

Stanovništvo Rijeke se od 1850. godine, kada je Rijeka zajedno s okolicom imala 12.700 stanovnika, do 1914. godine učetverostručilo. Ipak, prestankom rada Mornaričke akademije u Rijeci nakon Prvoga svjetskog rata ne može se više govoriti o visokoškolskom tehničkom obrazovanju kao do tada.

Osnutak i početak djelovanja Strojarskog fakulteta u Rijeci akademske godine 1960/1961, kao drugoga takva fakulteta u Republici Hrvatskoj, može se smatrati ponovnim početkom

was opened. In 1874 railways from Rijeka to Zagreb and from Rijeka to Ljubljana were put into service. In 1899 the first city tram went into service in Rijeka.

In 1850 Rijeka with its surroundings had 12.700 inhabitants and since that time up until 1914 the population quadrupled.
Still, with the cessation of the activity of the Naval Academy in Rijeka, after World War I, higher engineering education was not present in Rijeka in the sense considered above.

The establishment and the beginning of the activity of the Faculty of Mechanical Engineering in Rijeka in the academic year 1960/1961, as the second mechanical engineering faculty in the Republic of Croatia founded to educate graduate engineers, can

sustavnoga visokoškolskog obrazovanja i znanstvenoistraživačkog rada u području tehničkih znanosti u ovom dijelu Hrvatske.

Na inicijativu istaknutih riječkih znanstvenika, stručnjaka i gospodarstvenika sredinom 1959. godine pokrenuto je pitanje osnivanja visoke škole za obrazovanje tehničkih kadrova, pa je ubrzo izrađen prijedlog za osnivanje Strojarskog fakulteta u Rijeci. Dana 30. srpnja 1959. imenovano je povjerenstvo koje je izradilo iscrpan elaborat koji je u siječnju 1960. godine dostavljen republičkom Saboru. Sabor je 7. srpnja 1960. godine donio Zakon o osnivanju Strojarskog fakulteta u Rijeci.

Od donošenja Zakona o osnivanju Fakulteta pa do početka održavanja nastave protekla su samo četiri mjeseca i u tom je vremenu učinjeno sljedeće: adaptirano je istočno krilo zgrade Fakulteta (nekadašnje vojarne austrougarske regimente "Barun Jelačić" izgrađene tijekom 1911. godine) i nabavljena je potrebna oprema; izvršene su pripreme za formiranje nastavničkog vijeća, kao i osnivanje potrebnih katedara; izabrani su tajnik Fakulteta te potrebno administrativno i tehničko osoblje; objavljen je natječaj i izvršen upis prvih studenata.

Fakultet je službeno otvoren 8. studenoga 1960. uz nazočnost rektora Sveučilišta u Zagrebu te dekana pojedinih zagrebačkih i riječkih fakulteta, kao i mnogobrojnih predstavnika tadašnjega društveno-političkog života. Svečanost otvorenja Fakulteta održana je u novouređenoj velikoj predavaonici, u kojoj je nastava započela 25. travnja 1961. godine.
U početnoj fazi rada Fakulteta od

be considered as the renewed beginning of systematic higher education and scientific research work in the field of engineering sciences in this region of Croatia.

Famous scientists, experts and entrepreneurs gave the impetus for the establishment of a higher education institution for educating engineers already in the middle of 1959, and soon they put forward the proposal for the foundation of the Faculty of Mechanical Engineering in Rijeka. On July 30th, 1959, a committee was constituted and worked out a comprehensive elaborate, which was presented to the National Parliament. On July 7th, 1960, the Parliament passed a law on establishing the Faculty of Mechanical Engineering in Rijeka.

Only four months had passed from the enactment of the Law on the establishment of the Faculty until the first lessons held in it. At that time the following was achieved: the east wing of the present building (built in 1911 as barracks for the "Baron Jelačić" regiment) was adapted and the necessary equipment was supplied. All the preparations for the constitution of the Teaching Council and the necessary chairs were made; the faculty secretary and the administrative and technical staff were elected; the applicants were invited and first students were enrolled.

The Faculty was officially opened on November 8th, 1960 in the presence of the Rector of the University of Zagreb, the deans of several faculties of Zagreb and Rijeka and numerous representatives of the social and political life of that time. The opening ceremony took place in the newly redecorated large lecture-room, where courses began on April 25th, 1961.

neprocjenjive su vrijednosti bili stručna pomoć i iskustvo Fakulteta strojarstva i brodogradnje u Zagrebu, kao i prihvaćanje te mlade znanstveno-nastavne ustanove od strane Sveučilišta u Zagrebu.

U početku Fakultet nije imao laboratorija. Vježbe iz pojedinih kolegija održavale su se u laboratoriju za fiziku Medicinskoga fakulteta u Rijeci, Visokoj industrijskoj pedagoškoj školi, pogonima tvornica Vulkan i Torpedo te u Brodogradilištu „3. maj". U drugoj se nastavnoj godini na Fakultetu pristupilo osnivanju laboratorija za predmet Elementi strojeva. Izradi projektnog zahtjeva za izgradnju zgrade laboratorija pristupilo se stoga već u prvoj godini rada Fakulteta, da bi zgrada laboratorija bila dovršena potkraj 1966. godine

Prva sjednica Vijeća nastavnika Fakulteta održana je 3. prosinca 1960. Na sjednici je za dvogodišnje razdoblje 1960/61. i 1961/62. izabran prvi dekan Fakulteta prof. Miroslav Mikuličić, a za prodekana tada viši predavač Zorislav Sapunar.

Nastava na Fakultetu započela je u okvirima brodostrojarskog i tehnološkog usmjerenja studija strojarstva. Tijekom prvih pet godina održavana je samo nastava drugog stupnja, a akademske godine 1965/66. izrađen je novi nastavni plan s ciljem racionalizacije nastave i uspješnijeg studiranja. U njemu je tjedni broj sati nastave i vježbi smanjen, dok je broj semestara povećan s osam na devet.

Akademske godine 1965/66, na temelju traženja riječke industrije, organiziran je studij ondašnjega prvog stupnja za izvanredne studente. Nastava je bila organizirana tako da je tijekom svake od četiriju godina bio

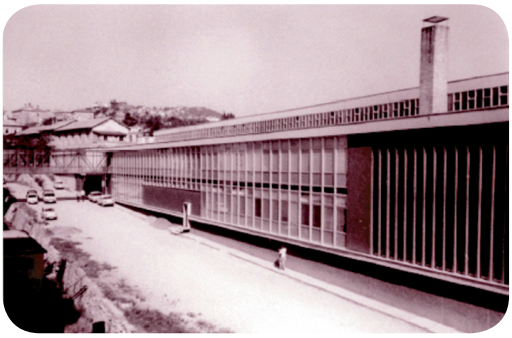
Of outmost importance for the beginning of the activity of the Faculty was the professional support and experience of the Faculty of Mechanical Engineering and Naval Architecture of Zagreb as well as the recognition of this new institution in Rijeka by the University of Zagreb.

Originally, there were no laboratories at the Faculty. Tutorials of course studies were held in the Laboratory of Physics of the Faculty of Medicine of Rijeka, at the High industrial teacher-training school, and at the industrial plants Vulkan, Torpedo and the shipyard "3. Maj". In the second academic year, the Machine Design laboratory was set up at the Faculty. In the very first academic year, the request for the project design of the laboratory edifice was thus elaborated, while the laboratory building itself was completed by the end of 1966.

The first session of the Teaching Council was held on December 3rd, 1960. The first dean of the Faculty, Prof. Miroslav Mikuličić, and vice-dean, senior lecturer, Zorislav Sapunar, were elected for the two-year period (1960/61 and 1961/62).

The study at the Faculty began with marine engineering and production technology university courses. During the first five years, only graduate courses were carried out, while in the year 1965/66 a new curriculum was created to make lectures and studying more efficient. The number of lessons and tutorials was reduced, while the semester number was brought from eight to nine.

During the year 1965/66, regarding the needs of the industry of Rijeka, the undergraduate study for part time students was organised. Lectures were organised so that each year,



Zgrada laboratorija 1966. godine /
The laboratory building in 1966

apsolviran po jedan semestar.

U desetoj godini svojega postojanja, akademske godine 1969/70, Fakultet je, na traženje brodograđevne industrije sjevernojadranskoga bazena, započeo s izvođenjem nastave na drugome stupnju studija brodogradnje.

Od samog je početka djelovanja bio zapažen znanstveni i stručni rad nastavnika Fakulteta. Nastavnici redovito sudjeluju na znanstvenim skupovima i objavljuju radove u eminentnim znanstvenim časopisima u zemlji i inozemstvu. Nastavnici su i intenzivno pisali i pišu knjige i udžbenike, poglavito za područja za koja nije postojala odgovarajuća literatura.

Od 1970. godine Fakultet izdaje Zbornik radova koji je vremenom prerastao u znanstveni časopis *Engineering Review*, koji je danas indeksiran u relevantnim međunarodnim bazama podataka.

Do 1970. godine puni je naziv Fakulteta bio Strojarski fakultet u Rijeci Sveučilišta u Zagrebu, a kako je akademske godine 1969/70. počela nastava drugoga jedinstvenog stupnja studija brodogradnje, naziv Fakulteta

throughout the four years, one semester could be completed.

In its tenth year of existence (1969/70), the Faculty began to perform graduate-level lectures in Naval Architecture, keeping abreast of the requirements of the shipbuilding industry of the North Adriatic basin.

From the very beginning, the outstanding scientific and professional work of the Faculty teaching staff was noticeable. They regularly took part in scientific conferences and published their papers in eminent scientific journals at home and abroad. Lecturers were and still are intensively engaged in writing books and textbooks, especially for the fields in which there is a lack of appropriate literature.

Since the year 1970, the Faculty has been issuing its Proceedings that with time have evolved to become the scientific journal Engineering Review that is cited in relevant scientific databases.

Up until 1970, the full name of the Faculty was the Faculty of Mechanical Engineering of Rijeka – University of Zagreb. As

promijenjen je u Strojarsko-brodograđevni fakultet u Rijeci Sveučilišta u Zagrebu. Fakultet je akademske godine 1971/72. započeo s izvođenjem nastave na studiju građevinarstva drugog stupnja, što 1973. godine dovodi do promjene naziva u Tehnički fakultet Rijeka te Fakultet ulazi u sastav Sveučilišta u Rijeci osnovanog 17. svibnja 1973. godine. Godine 1976. građevinski se studij odvaja u samostalnu organizaciju i osniva se Građevinski fakultet.

Poslijediplomski znanstveni studij utemeljen je na Tehničkom fakultetu Sveučilišta u Rijeci 1971. godine.

Statutom iz 1994. godine promijenjen je naziv Fakulteta u Sveučilište u Rijeci - Tehnički fakultet.

Fakultet je izobrazbu stručnjaka na polju elektrotehnike započeo 1987. godine otvaranjem stručnog studija elektrotehnike.

U međuvremenu je došlo do više promjena, pa je u srpnju 1999. godine donesen Statut u kojemu je registriran i novoosnovani sveučilišni dodiplomski studij elektrotehnike. Prvi diplomirani inženjeri elektrotehnike promovirani su akademske godine 2003/04.

Novi nastavni program poslijediplomskog studija uveden je 2002. godine.

Početkom akademske godine 2005/06. započeto je, odobrenjem Ministarstva znanosti, obrazovanja i športa, održavanje nastave na trogodišnjim stručnim i sveučilišnim preddiplomskim studijima strojarstva, brodogradnje i elektrotehnike usklađenim

the integrated graduate study of Naval Architecture was introduced in 1969/70, the Faculty was renamed to Mechanical and Naval Architecture Faculty of Rijeka – University of Zagreb. The introduction of the study of Civil Engineering in 1971/72 brought about in 1973 its renaming to the Faculty of Engineering of Rijeka. The Faculty became hence part of the University of Rijeka established on May 17th, 1973. In 1976 the study of civil engineering became an independent organisation and the Faculty of Civil Engineering was founded.

The post-graduate scientific study was initiated at the Faculty of Engineering in Rijeka in 1971.

According to the Statute of 1994, the Faculty's name was changed to become: University of Rijeka – Faculty of Engineering.

When the vocational study of Electrical Engineering was opened in 1987, the Faculty began to carry out also the university level education of electrical engineers.

In the meantime, many things have changed, so that in July 1999, a new Faculty Statute was passed, in which the new university level study of Electrical Engineering was registered. The first electrical engineers graduated in 2003/2004.

The new curriculum of post-graduate studies was issued in the year 2002.

With the approval by the Ministry of Science, Education and Sports, the lectures on the three-year undergraduate vocational and university studies of Mechanical Engineering, Naval Architecture and Electrical Engineering, prepared in accordance with the Bologna

s Bolonjskom deklaracijom, a dobivene su dopusnice i za odgovarajuće dvogodišnje diplomske sveučilišne studije. Iste je godine pokrenut i poslijediplomski, sada trogodišnji doktorski studij, usklađen s Bolonjskom deklaracijom te sustavno strukturiran kroz projekt koji je financirala Nacionalna zaklada za znanost RH.

Declaration, began in the academic year 2005/2006, while the respective two-year graduate studies were also approved. In the same year, the new three-year post graduate scientific doctoral study, in accordance with the Bologna Declaration and set up through a project financed by the National Science Foundation, was launched, continuing the tradition of former similar study.

Tijekom akademske godine 2007/08. pokrenut je postupak ustroja trogodišnjega preddiplomskog sveučilišnog studija računarstva, za što je ubrzo ishodovana i dopusnica resornog Ministarstva, pa se na Fakultetu izvodi i nastava za studente računarstva.

During the academic year 2007/08 preparations for the establishment of the three-year undergraduate study of computer science were met. Soon after that, the respective approval of the authorised ministry was obtained, and the faculty has thus offered lectures for Computer Science students as well.

Nastavni su programi na svim studijima koje Fakultet izvodi tijekom 2008. godine upotpunjeni precizno definiranim ishodima učenja, sukladno daljnjoj implementaciji Bolonjskog procesa, opterećenje studenata zadržano je konstantnim, ali je frontalna nastava smanjena na 20 sati tjedno.

Curricula of all studies performed at the Faculty have been complemented in 2008 with the respective precisely defined learning outcomes, while, with the aim of further implementing of the Bologna process, the study load of the students was kept constant, but the hands-on teaching was reduced to 20 lecturing hours per week.

Potkraj 1990-ih i početkom tekućeg desetljeća ostvarena su znatna ulaganja u nabavu opreme za zavode, laboratorije i praktikume. Također su uložena velika materijalna sredstva u obnovu i održavanje glavne zgrade te zgrade laboratorija. Uz to, važni investicijski zahvati s ciljem rješavanja manjka potrebnoga prostora za normalno odvijanje nastavnih i znanstvenoistraživačkih aktivnosti u posljednjih nekoliko godina omogućili su proširenje radnog prostora pa su osposobljene nove predavaonice, učionice, laboratoriji i kabineti, studentska blagovaonica, knjižnica te ostale prateće

At the end of the 1990's and the beginning of the present decade, significant investments in the equipment of the departments, laboratories and practicum were made. Large investments in the reconstruction and maintenance of the main and the laboratory buildings have also been put in effect. These significant investments in the last few years, intended to resolve the lack of space for normal teaching and scientific research activities, have enabled the enlargement of the workspace thus making available new lecture rooms, classrooms, laboratories and cabinets, a student dining-hall, a new library and other extra rooms. Two

Nova velika predavaonica sa suvremenom audiopremom, videopremom i računalnom opremom /
New main lecture room along with modern audio, video and computer equipment

prostorije. Dvije velike i jedna manja specijalizirana predavaonica potpuno su opremljene audiopremom, videopremom i računalnom opremom te mrežnim sustavom za udaljena predavanja. Te se predavaonice mogu koristiti i za udaljene sastanke odnosno telekonferencije te za održavanje znanstvenih skupova s dislociranim sudionicima.

large and a smaller specialized lecture room are completely equipped with audio, video and computer equipment with teleconferencing capacity. These rooms can also be used for distant meetings and teleconferences as well as for organising scientific meetings with dislocated participants.

U sklopu aktivnosti uvođenja cijeloživotnoga dopunskog obrazovanja, na Fakultetu je opremljen poseban informatički laboratorij za akademiju Cisco gdje se provode specijalizirani programi obrazovanja iz područja mrežnih tehnologija. Na Fakultetu se provode i programi obrazovanja za stjecanje certifikata ECDL (*European Computer Driving Licence*), a tu djeluje i sveučilišna IT akademija koja provodi programe obuke "Microsoft Partners in Learning". Uz ostale oblike cjeloživotnog obrazovanja koje Fakultet nudi, tijekom akademske godine 2007/08. izvršene su sve predradnje za pokretanje programa cjeloživotnog obrazovanja "*E-learning* u nastavnoj praksi" i "Stručno osposobljavanje servisera rashladnih i klimatizacijskih uređaja za rukovanje radnim tvarima u tehnici hlađenja" usklađenih s bolonjskim procesom na kojima će polaznici stjecati ECTS-bodove

In the framework of the activities of introducing lifelong supplementary education at the Faculty, a computing laboratory for the Cisco Academy was equipped, where a special educational program in networking technology was implemented. The Faculty also hosts study programs for the acquirement of the ECDL (European Computer Driving Licence) certificates, as well as the University of Rijeka IT Academy, which offers "Microsoft Partners in Learning" training programs. In addition to other lifelong study programs offered at the Faculty, during the academic year 2007/2008 all necessary actions for the institution of lifelong programs in "E-Learning in Teaching Practice" and "Professional Skills for Handling Cooling Working Media by Air-conditioning Personnel", prepared in accordance with the Bologna process and where the attendees will receive ECTS

(*European Credit Transfer and Accumulation System*).

"Laboratorij za industrijsku energetiku i zaštitu okoliša", koji djeluje pri Zavodu za termodinamiku i energetiku Tehničkog fakulteta, tijekom 2008. godine dobio je od Ministarstva zaštite okoliša, prostornog uređenja i graditeljstva "Suglasnost za obavljanje stručnih poslova praćenja kakvoće zraka i emisija u zrak" u skladu sa zahtjevima međunarodne norme HRN EN ISO/IEC 17025:2005.

Fakultet je u novije vrijeme ustrojio i funkcionalni sustav kvalitete. U nastavom se procesu tako provodi više ciklusa osiguranja kvalitete s redovitim anketiranjem svih dionika nastavnog procesa o njegovoj uspješnosti. Tijekom akademske godine 2007/08, putem Agencije za znanost i visoko obrazovanje, provedena je i međunarodna neovisna vanjska prosudba sustava osiguranja kvalitete prema europskim mjerilima. Ne samo da je Tehnički fakultet prva sastavnica Sveučilišta u Rijeci i jedna od prvih visokoškolskih ustanova u Hrvatskoj gdje je takav postupak proveden, nego su rezultati evaluacije pokazali da je stupanj razvoja sustava osiguranja kvalitete na Fakultetu na vrlo visokoj razini. Tijekom iste akademske godine administrativne i stručne službe fakulteta akreditiralo je kompetentno tijelo prema sustavu kvalitete ISO 9001:2000.

Tijekom 2007. godine Fakultet je, kao prva od sastavnica Sveučilišta u Rijeci, temeljem Strategije Sveučilišta u Rijeci, donio i svoju Strategiju razvoja za razdoblje 2007–2013. Postignuće ciljeva Strategije bit će praćeno kroz ispunjenje 67 zadataka i 82 mjerljiva indikatora učinka koje je Tehnički fakultet sebi postavio.

(European Credit Transfer and Accumulation System) credits, were made.

During the year 2008, the "Laboratory for Industrial Energy and Environmental Protection", active within the Department of Thermodynamics and Energy Engineering of the Faculty of Engineering, received from the Ministry of Environmental Protection, Physical Planning and Construction the "Conformity Declaration for Performing Monitoring of Air Quality and Emissions into Air" in accordance with the international standard HRN EN ISO/IEC 17025:2005.

In recent times, the Faculty has also set-up a functional quality assurance system. The teaching process is subject to cycles of quality control, with the questioning of all participants in the teaching process regarding its success. During 2007/2008, an international independent evaluation of the Faculty quality assurance system was performed, via the National Agency for Science and Higher Education, in accordance with European criteria. Not only is the Faculty of Engineering the first unit of the University of Rijeka and one of the first higher education institutions in Croatia that has undergone such an evaluation, but the results have clearly shown that the level of the quality assurance system is very high. During the same year, the administrative and professional staff of the Faculty has been certified in accordance with the quality system ISO 9001:2000.

During the year 2007 the Faculty, as the first constituent of the University of Rijeka, has accepted the Development Strategy for the period from 2007 to 2013. The achievement of the Strategy objectives will be monitored via the fulfillment of 67 assignments and 82 performance indicators that the Faculty has set forward for itself.

Informatički kabineti /
Computer rooms

U 2009/2010. akad. god. imenovana je radna skupina za izradu prijedloga nastavnog programa Sveučilišnoga diplomskog studija Računalstva. Rad skupine uspješno je završen prihvaćanjem prijedloga na sjednici Fakultetskog vijeća 26. ožujka 2010., nakon čega je prijedlog novog studija upućen u daljnju proceduru Centru za studije Sveučilišta u Rijeci. Cilj je cijelog procesa je da se već prvoj generaciji sveučilišnih prvostupnika računalstva Fakulteta odmah nakon završetka preddiplomskog studija omogući upis na odgovarajući sveučilišni diplomski studij. U istoj akad. god. predani su Centru za studije i prijedlozi više nastavnih programa cjeloživotnog obrazovanja.

Nakon transformacije poslijediplomskog doktorskog studija provedenog u sklopu projekta Nacionalne zaklade za znanost i tehnologijski razvoj RH 2005/2006., u 2009/2010. akad. god. provedena je još jedna promjena nastavnog programa tog studija potaknuta kako iskustvima skupljenim kroz 5 godina prethodnog programa tako i dodatno odlukama Senata Sveučilišta u Rijeci o potrebi samoevaluacije i evaluacije doktorskih studija Sveučilišta. Provedene su izmjene programa u smjeru povećanja znanstveno-istraživačkog i smanjenja nastavnog

In 2009/2010 the working team was appointed in order to shape the proposal of the curriculum of the Graduate University Study of Computer Science. The team`s work was successfully completed with the approval of the proposal at the session of the Faculty council on March 26th, 2010, whereupon the proposal of the new curriculum has been referred to the Centre for the Studies of the University of Rijeka for further procedure. The whole process is aimed at allowing the first generation of university baccalaureus of computer science the enrolment in the appropriate graduate university programme immediately after concluding the undergraduate study. In the same year, proposals of several curricula of longlife education were submitted to the Centre for the Studies.

After the transformation of the postgraduate doctoral study which was undertaken in the framework of the project of the National Foundation for Science and Technological Development RH 2005/2006, in 2009/2010 the curriculum of that study was subject to another change due to the experience accumulated during the 5 years of the former curriculum and additionally due to decisions of the Senate of the University of Rijeka as to the need of selfevaluation and evaluation

dijela aktivnosti doktoranada, povećane odgovornosti mentora i institucionalizacije praćenja napredovanja doktoranada. Nakon što je Fakultetsko vijeće prihvatilo izmjene prijedlog promjena nastavnog programa predan je prorektorici za znanost i razvoj Sveučilišta u Rijeci. Potvrda izmjena očekuje se prije početka izvođenja doktorskog studija u 2010/2011. akad. god., a u međuvremenu su već stigle izuzetno pozitivne ocjene vanjskih evaluatora.

Sve te aktivnosti, uz svekoliki razvitak znanstvenoistraživačkog i nastavnog portfelja, omogućile su Tehničkom fakultetu usklađivanje s nacionalnim i EU prioritetima, inicirajući tako proces potpune integracije naše institucije u europski znanstveni prostor i prostor visokog obrazovanja (ERA – *European Research Area* i EHEA – *European Higher Education Area*).

Tijekom 2010. godine na Fakultetu su ostvarena znatna financijska ulaganja u objekte i opremu sukladno s utvrđenim planom i dogovorenim prioritetima. Sva ta ulaganja, tijekom 2010. godine, ostvarena su sredstvima iz vlastitih prihoda Fakulteta.

Najvažnije je kapitalno ulaganje nabava i ugradnja dizala za invalidne osobe, čime je ova institucija ispunila nastojanje da se na Fakultetu omogući odnosno olakša rad i studentima s ograničenim fizičkim mogućnostima. Svakako, dizalo će biti na raspolaganju i svima ostalima na Fakultetu – njegovim studentima i djelatnicima.

of the doctoral studies of the University. The curriculum has been modified in order to enhance the scientific-research activity of doctoral students and reduce their involvement in the teaching process, as well as to increase the advisor`s responsibility and institutionalise the monitoring of doctoral students` promotion. After the Faculty counceel`s approval of the changes, the proposal of changes of the curriculum has been submitted to the Vice-Chancellor for science and development of the University of Rijeka. The confirmation of these changes is expected to be obtained before the beginning of the doctoral study in 2010/2011, in the meantime independent evaluators have given exceptionally favourable judgments.

All these activities, next to the overall development of the research and education portfolio, have allowed the Faculty to align its priorities with EU and national scientific policies, initiating thus the process of its integration into the European Research and the European Higher Education Areas (ERA & EHEA).

In the course of the year 2010 significant financial investments in objects and equipment have been carried out at the Faculty in consistence with the determined plan and agreed priorities. They have all been realized through incomes of the Faculty.

The most important capital investment is represented by the building in of a lift for disabled persons. This way the Faculty has succeeded in its efforts to allow i.e. facilitate the work of disabled students too. Naturally, everyone else as well at the Faculty- students and employees-will have free use of it. The lift (panoramic version) has been appropriately

Dizalo, koje je panoramske izvedbe, na odgovarajući je način uklopljeno u postojeću građevinu Fakulteta. S pripremom tehničke dokumentacije te ishođenjem potrebnih dozvola započelo se prethodne godine. Kao najpovoljniji izvođač, temeljem javnoga natječaja, odabrana je tvrtka Thyssen-Krupp Končar d.o.o. iz Zagreba, koja je u ugovorenome roku obavila potrebne radove. Radovi su završeni s uspješnim tehničkim pregledom i ishođenjem uporabne dozvole.

Druga po veličini stavka financijskih ulaganja je investicijsko održavanje u kojem su sadržani brojni troškovi neophodni za normalno odvijanje aktivnosti na Fakultetu.

Tijekom 2010. godine Fakultet je sklopio ukupno 23 ugovora za stručne projekte vezane uz suradnju s privredom i ostale znanstveno-stručne usluge. Temeljem radova na tim stručnim projektima Fakultet je ostvario znatan udjel prihoda kojima su se mogli financirati razni troškovi. Iz praćenja broja ugovora i ostvarenoga prihoda od tih aktivnosti uočen je određeni pad u odnosu na prethodnu godinu, iz čega se i na tom području uočavaju posljedice recesijskoga djelovanja u privredi.

Oko 2.750 diplomiranih inženjera i više od 1.560 inženjera dosad je steklo svoje diplome na Fakultetu, čime je naša institucija izravno pridonijela razvitku lokalnoga, ali i hrvatskoga i europskoga gospodarstva. Više od 95 magisterija znanosti i 80 doktorata znanosti dodijeljenih na Fakultetu u znatnoj su mjeri unaprijedili znanstveni potencijal naše domovine.

fitted into the existing building of the Faculty. The preparation of technical documentation and obtaining of necessary licenses began last year. As the most convenient contractor, based on the soliciting for tenders, the company Thyssen Krupp Končar d.o.o. from Zagreb has been chosen and it carried out the necessary works on schedule. The works have been completed with the successful technical inspection and obtaining the certificate of occupancy.

The second big financial investment is represented by the investment maintenance which comprises numerous expenses necessary for a normal proceeding of activities at the Faculty.

During 2010 the Faculty has concluded totally 23 contracts for professional projects linked to the cooperation with the economy and other scientific-professional services. Pursuant to the work on these professional projects, a significant income`s share was realized by the Faculty which enabled the financing of various expenditures. Considering the contracts` number and the realized income from these activities, a certain decrease in comparison to the previous year has been noticed, which indicates in this area as well the consequences of the recessional effect in economy.

More than 4.310 engineers have successfully graduated at the Faculty so far, contributing to the development of the local, the Croatian and the European economy. Moreover, 95 M.Sc. and 80 D.Sc. graduates have significantly enhanced the scientific and development potential of Croatia.

Tehnički fakultet u Rijeci danas je sa svojih 197 djelatnika (od kojih 143 djelatnika u znanstveno-nastavnim, nastavnim i suradničkim zvanjima) i oko 1.400 preddiplomskih, diplomskih i poslijediplomskih studenata, jedna od stožernih sastavnica Sveučilišta u Rijeci. Fakultet je trajno izvorište znanstvenih i nastavnih djelatnosti, ali i inovativnih proizvoda, tehnologija i usluga koje su potrebne nacionalnom i međunarodnom gospodarskom sektoru. Fakultet surađuje s 30 inozemnih i 15 hrvatskih akademskih institucija i dio je *Central European Exchange Program for University Studies* (CEEPUS). Dinamička aktivnost na Fakultetu vidljiva je i iz oko 100 znanstvenoistraživačkih projekata resornog ministarstva te više desetaka projekata koje financiraju lokalna uprava i gospodarstvo na čijem je izvođenju Fakultet sudjelovao i sudjeluje.

Tehnički fakultet Sveučilišta u Rijeci potvrđuje se tako kao vodeća visokoškolska obrazovna institucija na polju tehničkih znanosti u svojem okruženju, u kojoj svi njegovi djelatnici kao i svi studenti imaju prigodu i mogućnost razvoja svojih talenata i potencijala, te tako aktivno pridonose svekolikom razvoju hrvatske znanosti i gospodarstva te izgradnji Republike Hrvatske kao društva znanja.

The Faculty of Engineering in Rijeka today, with its 193 employees (143 faculty staff) and about 1,400 undergraduate, graduate and post-graduate students, represents one of the central components of the University in Rijeka. The Faculty is a continuous source of scientific and teaching activities but also of innovative products, technologies and services needed by the national and international economic sectors. The Faculty collaborates with 30 international institutions abroad and 15 Croatian academic institutions and is part of the Central European Exchange Program for University Studies (CEEPUS). The dynamic research activity at the Faculty is evident through more than 100 scientific research projects financed by the Croatian Ministry of Science and several dozen projects financed by the public sector and industrial subjects, in which the Faculty has participated and still participates.

The Faculty of Engineering of the University of Rijeka establishes thus itself further as the leading higher educational institution in the field of technical sciences in this region, where all its staff and students have the opportunity to develop their talents and potentials so as to actively contribute to the comprehensive development of Croatian science and economy and the establishment of Croatia as a knowledge-based society.

DOSADAŠNJI DEKANI TEHNIČKOG FAKULTETA SVEUČILIŠTA U RIJECI

red. prof. Miroslav Mikuličić
red. prof. Miroslav Pečornik
akademik Zlatko Winkler
red. prof. Josip Barić
red. prof. dr. sc. Zorislav Sapunar
red. prof. dr. sc. Josip Obsieger
red. prof. dr. sc. Edgar Škrobonja
red. prof. dr. sc. Zlatko Šverer
red. prof. dr. sc. Mirko Krpan
red. prof. dr. sc. Robert Eren
akademik Elso Kuljanić
red. prof. dr. sc. Ivan Kamenarović
red. prof. dr. sc. Marko Selaković
red. prof. dr. sc. Igor Rožanić
red. prof. dr. sc. Ivo Katavić
red. prof. dr. sc. Josip Brnić
red. prof. dr. sc. Bernard Franković
red. prof. dr. sc. Božidar Križan
red. prof. dr. sc. Tonči Mikac

DEANS OF THE FACULTY OF ENGINEERING UNIVERSITY OF RIJEKA TO DATE

Full Prof. Miroslav Mikuličić
Full Prof. Miroslav Pečornik
Academician Zlatko Winkler
Full Prof. Josip Barić
Full Prof. D. Sc. Zorislav Sapunar
Full Prof. D. Sc. Josip Obsieger
Full Prof. D. Sc. Edgar Škrobonja
Full Prof. D. Sc. Zlatko Šverer
Full Prof. D. Sc. Mirko Krpan
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Academician Elso Kuljanić
Full Prof. D. Sc. Ivan Kamenarović
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Full Prof. D. Sc. Bernard Franković
Full Prof. D. Sc. Božidar Križan
Full Prof. D. Sc. Tonči Mikac

3. STUDIJSKI PROGRAMI NA FAKULTETU / STUDY PROGRAMS AT THE FACULTY

Studiji na Tehničkom fakultetu ustrojeni su prema Bolonjskom modelu 3 + 2 + 3, što znači da se obrazovanje provodi kroz preddiplomski sveučilišni studij u trajanju od tri godine kojim se stječe 180 ECTS-bodova, zatim diplomski sveučilišni studij u trajanju od dvije godine kojim se stječe 120 ECTS-bodova te poslijediplomski doktorski studij u trajanju od tri godine kojim se stječe 180 ECTS-bodova.

Osim tih studija obrazovanje se provodi i kroz stručne studije u trajanju od tri godine kojima se stječe također 180 ECTS-bodova. Taj je sustav s vrstama pojedinih studija i stečenim nazivima prikazan u sljedećoj tablici.

Studies at Faculty of Engineering are set according to the Bologna model 3 + 2 + 3, which means that education continues through a three-year long undergraduate university study resulting in 180 ECTS credits obtained, followed by a two-year graduate university study resulting in 120 ECTS credits obtained and a postgraduate doctoral study which lasts three years and results in 180 ECTS credits obtained.

Beside these studies, education is accomplished through a three-year vocational study that results in 180 ECTS credits. The curricula with the respective types of studies and obtained titles are shown in the following table.

PREDDIPLOMSKI SVEUČILIŠNI STUDIJ 3-godišnji (180 ECTS)	
Studij	*Naziv*
Strojarstvo	Sveučilišni prvostupnik inženjer strojarstva
Brodogradnja	Sveučilišni prvostupnik inženjer brodogradnje
Elektrotehnika	Sveučilišni prvostupnik inženjer elektrotehnike
Računarstvo	Sveučilišni prvostupnik inženjer računalstva
DIPLOMSKI SVEUČILIŠNI STUDIJ 2-godišnji (120 ECTS)	
Studij	*Naziv*
Strojarstvo	Magistar inženjer strojarstva
Brodogradnja	Magistar inženjer brodogradnje
Elektrotehnika	Magistar inženjer elektrotehnike
POSLIJEDIPLOMSKI STUDIJ 3-godišnji (180 ECTS)	
Polje	*Naziv*
Strojarstvo	Doktor tehničkih znanosti
Temeljne tehničke znanosti	Doktor tehničkih znanosti
Brodogradnja	Doktor tehničkih znanosti
STRUČNI STUDIJ 3-godišnji (180 ECTS)	
Studij	*Naziv*
Strojarstvo	Stručni prvostupnik inženjer strojarstva
Brodogradnja	Stručni prvostupnik inženjer brodogradnje
Elektrotehnika	Stručni prvostupnik inženjer elektrotehnike

UNDERGRADUATE UNIVERSITY STUDY 3 years (180 ECTS)	
Study	*Title*
Mechanical Engineering	University Bachelor Engineer of Mechanical Engineering
Naval Architecture	University Bachelor Engineer of Naval Architecture
Electrical Engineering	University Bachelor Engineer of Electrical Engineering
Computer Science	University Bachelor Engineer of Computer Science
GRADUATE UNIVERSITY STUDY 2 years (120 ECTS)	
Study	*Title*
Mechanical Engineering	Masters in Mechanical Engineering
Naval Architecture	Masters in Naval Architecture
Electrical Engineering	Masters in Electrical Engineering
POSTGRADUATE DOCTORAL STUDY 3 years (180 ECTS)	
Field	*Title*
Mechanical Engineering	D. Sc. in Engineering Sciences
Basic Technical Sciences	D. Sc. in Engineering Sciences
Naval Architecture	D. Sc. in Engineering Sciences
VOCATIONAL STUDY 3 years (180 ECTS)	
Study	*Title*
Mechanical Engineering	Bachelor in Mechanical Engineering
Naval Architecture	Bachelor in Naval Architecture
Electrical Engineering	Bachelor in Electrical Engineering

U nastavku su opisane osnovne značajke pojedinog studija.

PREDDIPLOMSKI SVEUČILIŠNI STUDIJ STROJARSTVA

Preddiplomski sveučilišni studij strojarstva priprema studente za diplomski sveučilišni studij strojarstva, ali im pruža i mogućnost zapošljavanja na odgovarajućim stručnim poslovima. Studij ima za cilj osposobljavanje

The basic characteristics of each study are described below.

UNDERGRADUATE UNIVERSITY STUDY OF MECHANICAL ENGINEERING

The undergraduate university study of mechanical engineering prepares the students for graduate university study and provides an opportunity for placement in appropriate professional employment. The

studenata za primjenu temeljnih i specijalističkih znanja iz strojarstva, prepoznavanje, oblikovanje i rješavanje problema iz prakse, primjenu drugih stečenih znanja iz tehnike, matematike i računalstva, korištenje suvremenih inženjerskih alata, razumijevanje timskog rada i učinkovite komunikacije, razumijevanje etičnosti i etičke odgovornosti, te razumijevanje utjecaja inženjerskih rješenja na društvo i okolinu. Student koji završi ovaj studij sposoban je uključiti se u kontinuirano obrazovanje i profesionalni razvoj te posjeduje šire obrazovanje.

aim of the study is to prepare the students for implementing basic and specialistic knowledge in the field of mechanical engineering, recognizing, defining and solving practical problems, implementing other acquired engineering knowledge, math and computing, using modern engineering tools, understanding team work and efficient communication, understanding ethics and responsibility and the influence of engineering solutions on society and the environment. At the end of study, students are able to continue with education and professional development and possess a broader education.

PREDDIPLOMSKI SVEUČILIŠNI STUDIJ BRODOGRADNJE

Preddiplomski sveučilišni studij brodogradnje priprema studente za diplomski sveučilišni studij brodogradnje, ali im pruža i mogućnost zapošljavanja na odgovarajućim stručnim poslovima. Na preddiplomskom studiju

UNDERGRADUATE UNIVERSITY STUDY OF NAVAL ARCHITECTURE

The undergraduate university study of naval architecture prepares the students for graduate university study and gives them the opportunity for employment in appropriate professional employment positions. At the

brodogradnje polaznicima se u razumnoj količini i na dovoljno visokoj razini daje znanje iz temeljnih tehničkih sadržaja s jedne strane, te iz glavnih brodograđevnih sadržaja s druge strane, kako bi u svojoj radnoj praksi, kao i u svojem daljnjem stručnom i znanstvenom usavršavanju, uvijek bili na razini postavljenih zadataka. Svojim opsegom i sadržajem ovaj studij polazniku daje potrebnu širinu stručnih znanja koja ga po završetku studija osposobljava za samostalan rad, odnosno za rad u stručnim timovima u bilo kojem segmentu brodograđevne struke. Završeni student ovog studija sposoban je uključiti se u kontinuirano obrazovanje i profesionalni razvoj, te posjeduje i šire obrazovanje.

PREDDIPLOMSKI SVEUČILIŠNI STUDIJ ELEKTROTEHNIKE

Završetkom preddiplomskog sveučilišnog studija elektrotehnike polaznik posjeduje temeljna znanja iz matematike, fizike, elektrotehnike i primjene računala. Nadalje, zna pripremiti i izvesti eksperiment, odnosno određena mjerenja, te ih pravilno obraditi i protumačiti rezultate. Sposoban je identificirati, formulirati i riješiti problem. Pri tome se zna koristiti suvremenim inženjerskim alatima i spreman je za rješavanje šireg spektra inženjerskih zadataka uz mogućnost brze specijalizacije u određenom području. Polaznik je također sposoban raditi u (multidisciplinarnoj) grupi, razumije važnost učinkovite komunikacije u rješavanju određenoga inženjerskog problema, a u svojem radu poštuje profesionalne i etičke norme te zaštitu okoliša. Nakon završetka studija sposoban je uključiti se u kontinuirano obrazovanje i profesionalni razvoj te posjeduje šire obrazovanje.

undergraduate study of naval architecture, students on the one hand acquire a reasonable quantity and quality of knowledge in basic engineering and, on the other hand, they acquire knowledge about the main constructs of shipbuilding, so that they can be prepared for professional jobs, as well as for further professional education. With its volume and contents, this study gives adequate width of knowledge so that students can work either in teams or as individuals in any field of the shipbuilding process. At the end of study, students are able to continue with education and professional development and possess broader education.

UNDERGRADUATE UNIVERSITY STUDY OF ELECTRICAL ENGINEERING

Upon completion of the undergraduate university study of electrical engineering, the student obtains a basic knowledge of math, physics, basic electrical engineering and applied computer science. Moreover, he knows how to prepare and conduct experiments and appropriate measurement and correctly process and recognize the obtained results. He is capable of identifying, formulating and solving problems. In such a way, he is able to use modern engineering tools and is prepared for solving a wide spectrum of engineering tasks related to the ability of fast specialization in certain fields. He is able to work in teams, he understands the importance of efficient communication in solving particular engineering problems and he acts in accordance with professional and ethic codes, as well as environmental protection standards. At the end of the study, students are able to continue with their education and professional development and they possess a broader education.

Preddiplomski sveučilišni studiji																			
S	STROJARSTVO			S	BRODOGRADNJA			S	ELEKTROTEHNIKA			S	RAČUNALSTVO		
	Predmet	N	B		Predmet	N	B		Predmet	N	B		Predmet	N	B
I	Matematika I	5	7	I	Matematika I	5	7	I	Matematika I	5	7	I	Matematika I	5	7
	Statika	5	6		Statika	5	6		Fizika I	4	5		Elektrotehnika R	4	7
	Materijali I	3	4		Materijali I	3	4		Osnove elektrotehnike I	5	7		Programiranje	4	6
	Uvod u modernu fiziku	3	4		Uvod u modernu fiziku	3	4		Uvod u računalstvo	4	6		Primjena računala	4	6
	Primjena računala	3	4		Primjena računala	3	4		Inženjerska grafika i dokumentiranje	3	4		Engleski jezik I	3	3
	Inženjerska grafika	3	4		Inženjerska grafika	3	4								
II	Matematika II	5	7	II	Matematika II	5	7	II	Matematika II	5	7	II	Matematika II	5	7
	Kinematika	4	6		Kinematika	4	6		Fizika II	4	5		Elektronika	4	6
	Nauka o čvrstoći I	5	7		Nauka o čvrstoći I	5	7		Osnove elektrotehnike II	5	7		Programsko inženjerstvo	4	7
	Materijali II	3	5		Materijali II	3	5		Programiranje	4	6		Digitalna logika	4	6
	Oblikovanje pomoću računala	3	4		Oblikovanje pomoću računala	3	4		Tehnologija materijala	3	4		Engleski jezik II	3	3
III	Dinamika	3	5	III	Dinamika	3	5	III	Inženjerska matematika ET	5	7	III	Algoritmi i strukture podataka	5	7
	Mehanika fluida	4	5		Mehanika fluida	4	5		Mjerenja u elektrotehnici	5	7		Operacijski sustavi		
	Nauka o toplini I	5	7		Zavarivanje I	3	4		Elektronika I	4	6		Građa računala	4	7
	Mjerna tehnika	3	5		Termodinamika BG	3	5		Električne mreže	4	7		Signali i sustavi	4	6
	Primjena računalnih metoda	3	5		Uvod u plovne objekte	3	4		Strani jezik I	2	3		Izborni predmet I	4	6
	Strani jezik I	2	3		Osnove konstrukcijskih elemenata	3	4							3	4
					Strani jezik I	2	3								
IV	Inženjerska statistika	3	5	IV	Inženjerska statistika	3	5	IV	Digitalna logika	4	6	IV	Računalne mreže	4	7
	Konstrukcijski elementi I	5	7		Brodske forme	4	6		Elektronika II	4	6		Baze podataka	4	6
	Hidraulički strojevi	3	5		Osnove gradnje broda	3	5		Osnove regulacijske tehnike	4	6		Računalom podržana mjerenja	3	5
	Proizvodne tehnologije	4	5		Konstrukcija broda I	4	6		Izborni kolegij	3	4		Poslovno komuniciranje		
	Strani jezik II	2	3		Strani jezik II	2	3		Strani jezik II	2	3		Izborni predmet II	2	3
	Stručna praksa		5		Stručna praksa		5		Stručna praksa		5		Stručna praksa	3	4
															5
V	Konstrukcijski elementi I	5	7	V	Plovnost i stabilitet broda	5	7	V	Električni strojevi	5	6	V	Ugradbeni računalni sustavi	5	7
	Toplinski strojevi i uređaji	3	5		Oprema broda	4	6		Energetska elektronika	4	6		Razvoj web-aplikacija	4	7
	Proizvodni strojevi, alati i naprave	3	5		Konstrukcija broda II	4	6		Signali i sustavi	4	6		Računalna grafika	4	6
	Zavarivanje I	3	4		Tehnologija brodogradnje	4	6		Izborni kolegij skupine	4	7		Izborni predmet III	4	5
	Tehnološki procesi	3	4		Izborni projekt	3	5		Izborni projekt	3	5		Izborni projekt	3	5
	Izborni projekt	3	5												
VI	Energetski sustavi	3	4	VI	Organizacija i ekonomika posl. sust.	3	4	VI	Elektromotorni pogoni	4	5	VI	Informacijski sustavi	4	8
	Automatizacija	3	4						Organizacija i ekonomika posl. sust.	3	4		Organizacija i ekonomika posl. sust.	3	4
	Osiguranje kvalitete	3	4		Hidrodinamika plovnih objekata	5	8								
	Organizacija i ekonomika posl. sust.	3	4		I				Izborni kolegij skupine	5	7		Izborni predmet II	4	4
	Slobodni kolegij				Slobodni kolegij	3	4		Slobodni kolegij	3	4		Slobodni predmet	3	4
	Završni rad	3	4		Slobodni kolegij	3	4		Završni rad		10		Završni rad		10
			10		Završni rad		10								

(Studijski programi pojedinih studija prikazani su na gornjoj i na tablicama koje slijede: s N su označeni sati nastave tjedno, s B broj ECTS-bodova pripadnog predmeta, a sa S semestar u kojem se predmet predaje.)

Undergraduate University Studies

S	MECHANICAL ENGINEERING			NAVAL ARCHITECTURE			ELECTRICAL ENGINEERING			COMPUTER SCIENCE		
	Course	N	B	Course	N	B	Course	N	B	Course	N	B
I	Mathematics I	5	7	Mathematics I	5	7	Mathematics I	5	7	Mathematics I	5	7
	Statics	5	6	Statics	5	6	Physics I	4	5	Electrical Engineering	4	7
	Materials I	3	4	Materials I	3	4	Fundamentals of Electrical	5	7	Programming	4	6
	Introduction in Modern Physics	3	4	Introduction in Modern Physics	3	4	Engineering I			Applied Computing	4	6
	Applied Computing	3	4	Applied Computing	3	4	Introduction to Computer	4	6	English Language I	3	3
	Engineering Graphics	3	4	Engineering Graphics	3	4	Engineering					
							Engineering Graphics and Documenting	3	4			
II	Mathematics II	5	7	Mathematics II	5	7	Mathematics II	5	7	Mathematics II	5	7
	Kinetics	4	6	Kinetics	4	6	Physics II	4	5	Electronics	4	6
	Strength of Materials I	5	7	Strength of Materials I	5	7	Fundamentals of Electrical	5	7	Software Engineering	4	7
	Materials II	3	5	Materials II	3	5	Engineering II			Digital Logic	4	6
	Modelling by Computer	3	4	Modelling by Computer	3	4	Programming	4	6	English Language II	3	3
							Technology of Materials	3	4			
III	Dynamics	3	5	Dynamics	3	5	Mathematics for Engineers ET	5	7	Algorithms and Data	5	7
	Fluid Mechanics	4	5	Fluid Mechanics	4	5	Electrical Measurements	5	7	Structures		
	Thermodynamics I	5	7	Welding Engineering I	3	4	Electronics I	4	6	Operating Systems	4	7
	Measuring Technique	3	5	Thermodynamics	3	5	Electrical Circuits	4	7	Computer Structure	4	6
	Applied Computational Methods	3	5	Introduction to Floating Objects	3	4	Foreign Language I	2	3	Signals and Systems	4	6
	Foreign Language I	2	3	Fundamentals of Machine Elements Design	3	4				Elective course	3	4
				Foreign Language I	2	3						
IV	Statistics for Engineers	3	5	Statistics for Engineers	3	5	Digital Logic	4	6	Computer Networks	4	7
	Machine Elements Design I	5	7	Ship Hull Forms	4	6	Electronics II	4	6	Databases	4	6
	Hydraulic Machines	3	5	Basics of Ship Production	3	5	Basic of Automatic Control	4	6	Computer Aided Measurements	3	5
	Manufacturing Technologies	4	5	Ship Construction I	4	6	Elective Course	3	4	Business Communication	2	3
	Foreign Language II	2	3	Foreign Language II	2	3	Foreign Language II	2	3	Elective course	3	4
	Professional practice		5	Professional practice		5	Professional practice		5	Professional practice		5
V	Machine Elements Design I	5	7	Seaworthiness and Stability of the Ship	5	7	Electrical Machines	5	6	Embedded Computer Systems	5	7
	Heat Engines and Devices	3	5				Power Electronics	4	6	Web Application Development	4	7
	Production Machines, Jigs, Fixtures and Tools	3	5	Ship Equipment	4	6	Signals and Systems	4	6	Computer Graphics	4	6
				Ship Construction II	4	6	Elective group course	4	7	Free course	4	5
	Welding Engineering I	3	4	Shipbuilding Technology	4	6	Elective project	3	5	Elective project	3	5
	Technological Processes	3	4	Elective project	3	5						
	Elective project	3	5									
VI	Energy Systems	3	4	Organization and Economics of Enterprises	3	4	Electrical Drives	4	5	Informacijski sustavi	4	8
	Automation	3	4				Organization and Economics of Enterprises	3	4	Organization and Economics of Enterprises	3	4
	Quality Assurance	3	4	Marine Hydrodynamics I	5	8						
	Organization and Economics of Enterprises	3	4	Free course	3	4	Elective group course	5	7	Elective course	4	4
	Free course	3	4	Free course	3	4	Free course	3	4	Free course	3	4
	Final work		10	Final Work		10	Final work		10	Final work		10

(Curricula of the described studies are presented above and in the tables below: N signifies lecturing hours per week, with B representing the number of ECTS credits and S the semester in which the subject is placed.)

PREDDIPLOMSKI SVEUČILIŠNI STUDIJ RAČUNALSTVA

Ovaj preddiplomski sveučilišni studij ima za cilj pružiti razinu znanja koje će osigurati profil stručnjaka osposobljenih za samostalno obavljanje poslova sastavljanja, održavanja i posluživanja računalnih sustava kao i njihova korištenja kao alata. Ova znanja obuhvaćaju područja računalne programske i sklopovske opreme te znanja iz područja računalnih mreža i sustava. Time se osigurava razina izobrazbe nužna za svladavanje niza stručnih poslova. Pri tome je polaznik sposoban raditi u (multidisciplinarnoj) skupini, razumije važnost učinkovite komunikacije na rješavanju određenoga inženjerskog problema, a u svojem radu poštuje profesionalne i etičke norme te zaštitu okoliša. Završeni polaznik ovog studija sposoban je uključiti se u kontinuirano obrazovanje i profesionalni razvoj te posjeduje šire obrazovanje.

DIPLOMSKI SVEUČILIŠNI STUDIJ STROJARSTVA

Na ovom studiju omogućena je specijalizacija u jednome od sljedećih područja:

- Konstruiranje i mehatronika
- Računalno inženjerstvo
- Tehnološko-informatičko inženjerstvo
- Industrijsko inženjerstvo i menadžment
- Kompjutorska analiza konstrukcija i strojeva
- Termotehnika
- Procesno i energetsko strojarstvo
- Brodostrojarstvo
- Inženjerstvo materijala

Diplomskim sveučilišnim studijem strojarstva studenti stječu potrebna uskospecijalistička

UNDERGRADUATE UNIVERSITY STUDY OF COMPUTER SCIENCE

This study program aims at providing a level of knowledge that will yield a profile of experts trained to independently perform tasks of assembling, serving and maintaining computer systems and using the same as tools. This category includes knowledge of computer software and hardware as well as knowledge in the field of computer networks and systems, ensuring the level of training required to master a number of related jobs. The student is also able to work in a group and he understands the importance of effective communication when solving specific engineering problems. His work respects professional and ethical standards and environmental protection. Upon completion of the study program, the student will be able to engage in lifelong learning and professional development. He will have acquired a broad education.

GRADUATE UNIVERSITY STUDY OF MECHANICAL ENGINEERING

In this study, specialization is enabled in one of the following fields:

- Mechanical design and mechatronics
- Computer engineering
- Technological information engineering
- Industrial engineering and management
- Computer analysis of machine elements and machines
- Thermodynamics
- Process and energy mechanical engineering
- Naval mechanical engineering
- Engineering of materials

This study enables students to obtain the necessary specialist knowledge in

znanja iz navedenih područja te su time osposobljeni za obavljanje najsloženijih inženjerskih zadaća temeljenih na znanstvenom pristupu rješavanju problema. Stječu se nova specijalistička znanja iz strojarstva i sposobnost njegove primjene, kao i poznavanje i primjena drugih specijalističkih znanja iz tehnike, matematike i računalstva. Studenti usvajaju sposobnost kontinuiranog obrazovanja i samoobrazovanja, sposobnosti samostalnog istraživanja, otkrivanja novih znanja, pripreme i izvođenja eksperimenata, te tumačenja podataka. Studijem se stječu znanja i kompetencije potrebne za projektiranje novih sustava, komponenata ili procesa te učinkovito djelovanje u ulozi vođe tima. Studijski program sličan je programima studija na inozemnim visokim učilištima uz postizanje specifičnih zahtjeva sredine za koju se prvenstveno školuju kadrovi na Tehničkom fakultetu Sveučilišta u Rijeci. U studijski program ukomponirane su preporuke iz Bolonjske deklaracije koje se odnose na način osiguranja kvalitete studijskog programa te mobilnost pri studiranju i priznavanju diploma.

the mentioned fields and to perform the most complex engineering tasks based on a scientific problem solving approach. Students acquire new specialised knowledge of mechanical engineering and the ability to implement it, as well as that of other topics in engineering, maths and computing. Students are able to continue their education and self-education, to autonomously perform research and experimental work, as well as to validate the obtained results. The study extends the knowledge and competencies necessary for designing new systems, components or processes and the efficient management of projects as team leaders. The curriculum is similar to other programs at foreign universities with some specificities tuned to the needs of the surroundings that most of the students will work in. In the study program, recommendations of the Bologna system are implemented, especially concerning quality assurance, mobility during the study, as well as diploma recognition.

DIPLOMSKI SVEUČILIŠNI STUDIJ BRODOGRADNJE

Na diplomskom sveučilišnom studiju brodogradnje osposobljavaju se budući stručnjaci koji će raditi na poslovima i zadacima projektiranja i konstruiranja različitih vrsta i tipova plovnih objekata, te razvoja i vođenja tehnoloških procesa, poglavito gradnje i održavanja plovnih objekata i objekata morske tehnologije, na poslovima klasifikacijskih i nadzornih institucija te drugim poslovima u širem području brodogradnje i inženjerstva morske tehnologije, odnosno pomorstva.

GRADUATE UNIVERSITY STUDY OF NAVAL ARCHITECTURE

In this study, professional qualifications are acquired for tasks pertaining to the design and construction of various types of vessels, the development and leading of technological processes (mainly in shipbuilding and servicing of vessels and other objects of maritime technology), qualifications pertaining to jobs in classification and supervising institutions, as well as other jobs in the wide field of naval architecture and maritime engineering.

Na ovom studiju moguće je odabrati sljedeće izborne skupine:

- Projektiranje i konstrukcija plovnih objekata
- Tehnologija i organizacija brodogradnje.

Studijski je program usklađen s preporukama u Bolonjskoj deklaraciji koje se odnose na način osiguranja kvalitete studijskog programa te mobilnost pri studiranju i priznavanju diploma.

DIPLOMSKI SVEUČILIŠNI STUDIJ ELEKTROTEHNIKE

Na ovom studiju omogućena je specijalizacija u jednom od sljedećih područja:

- Automatika
- Elektroenergetika.

In this study, it is possible to choose the following elective groups:

- Design and construction of vessels
- Technology and organization of shipbuilding

In the study program, recommendations of the Bologna system are implemented, especially concerning quality assurance, mobility during the study, as well as diploma recognition.

GRADUATE UNIVERSITY STUDY OF ELECTRICAL ENGINEERING

In this study, specialization in one of the following fields is made possible:

- Automatics
- Power engineering.

Diplomski sveučilišni studiji									
S	STROJARSTVO			BRODOGRADNJA			ELEKTROTEHNIKA		
	Predmet	N	B	Predmet	N	B	Predmet	N	B
I	Inženjerska matematika	4	6	Inženjerska matematika	4	6	Numerička i stohastička matematika	4	6
	Nauka o čvrstoći II	3	5	Čvrstoća broda	3	5	Upravljanje elektromotornim pogonima	4	6
	Nauka o toplini II	3	5	Brodska elektrotehnika	3	4	Predmet izborne skupine	4	6
	Predmet izborne skupine	4	5	Metodologija gradnje plovnih objekata	3	5	Predmet izborne skupine	4	6
	Predmet izborne skupine	3	5	Predmet izborne skupine	4	6	Predmet izborne skupine	4	6
	Predmet izborne skupine	3	4	Predmet izborne skupine	3	4			
II	Projekt I	2	5	Brodski sustavi	4	5	Projekt I	2	5
	Slobodni predmet	3	5	Projekt I	2	5	Slobodni predmet	3	5
	Stručna praksa	4	5	Slobodni predmet	3	5	Stručna praksa	4	5
	Predmet izborne skupine	4	5	Stručna praksa	4	5	Predmet izborne skupine	4	5
	Predmet izborne skupine	3	5	Predmet izborne skupine	3	5	Predmet izborne skupine	4	5
	Predmet izborne skupine		5	Predmet izborne skupine		5	Predmet izborne skupine		5
III	Projekt II	2	5	Osnivanje plovnih objekata I	4	5	Projekt II	2	5
	Slobodni predmet	3	5	Projekt II	2	5	Slobodni predmet	3	5
	Predmet izborne skupine	4	5	Slobodni predmet	3	5	Predmet izborne skupine	4	6
	Predmet izborne skupine	4	5	Predmet izborne skupine	4	5	Predmet izborne skupine	4	5
	Predmet izborne skupine	4	5	Predmet izborne skupine	4	5	Predmet izborne skupine	4	5
	Predmet izborne skupine	3	5	Predmet izborne skupine	3	5	Predmet izborne skupine	3	4
IV	Slobodni predmet	3	5	Slobodni predmet	3	5	Slobodni predmet	3	5
	Predmet izborne skupine	3	5	Predmet izborne skupine	3	5	Predmet izborne skupine	4	8
	Predmet izborne skupine	3	5	Predmet izborne skupine	3	5	Predmet izborne skupine	4	7
	Predmet izborne skupine	3	5	Predmet izborne skupine	3	5	Diplomski rad		10
	Diplomski rad		10	Diplomski rad		10			
Moduli	Konstruiranje i mehatronika Računalno inženjerstvo Tehnološko informatičko inženjerstvo Industrijsko inženjerstvo i menadžment Kompjutorska analiza konstrukcija i strojeva Termotehnika Procesno i energetsko strojarstvo Brodostrojarstvo Inženjerstvo materijala			Projektiranje i konstrukcija plovnih objekata Tehnologija i organizacija brodogradnje			Automatika Elektroenergetika		

Graduate university studies

S	MECHANICAL ENGINEERING			NAVAL ARCHITECTURE			ELECTRICAL ENGINEERING		
	Subject	N	B	Subject	N	B	Subject	N	B
I	Mathematics for Engineers	4	6	Mathematics for Engineers	4	6	Numerical and Stochastic Mathematics	4	6
	Strength of Materials II	3	5	Ship Strength	3	5	Control of Electrical Drives	4	6
	Thermodynamics II	3	5	Ships Electrical Engineering	3	4	Elective group course	4	6
	Elective group course	4	5	Methodology of Shipbuilding	3	5	Elective group course	4	6
	Elective group course	3	5	Elective group course	4	6	Elective group course	4	6
	Elective group course	3	4	Elective group course	3	4			
II	Project I	2	5	Ship Systems	4	5	Project I	2	5
	Free course	3	5	Project I	2	5	Free course	3	5
	Professional practice	4	5	Free course	3	5	Professional practice	4	5
	Elective group course	4	5	Professional practice	4	5	Elective group course	4	5
	Elective group course	3	5	Elective group course	3	5	Elective group course	4	5
	Elective group course		5	Elective group course		5	Elective group course		5
III	Project II	2	5	Ship Design I	4	5	Project II	2	5
	Free course	3	5	Project II	2	5	Free course	3	5
	Elective group course	4	5	Free course	3	5	Elective group course	4	6
	Elective group course	4	5	Elective group course	4	5	Elective group course	4	5
	Elective group course	4	5	Elective group course	4	5	Elective group course	4	5
	Elective group course	3	5	Elective group course	3	5	Elective group course	3	4
IV	Free course	3	5	Free course	3	5	Free course	3	5
	Elective group course	3	5	Elective group course	3	5	Elective group course	4	8
	Elective group course	3	5	Elective group course	3	5	Elective group course	4	7
	Elective group course	3	5	Elective group course	3	5	Graduation thesis		10
	Graduation thesis		10	Graduation thesis		10			
Modules	Mechanical Design and Mechatronics Computer Engineering Technological Information Engineering Industrial Engineering and Management Computer Analysis of Machine Elements and Machines Thermodynamics Process and Energy Mechanical Engineering Naval Mechanical Engineering Engineering of Materials			Design and Construction of Vessels Technology and Organization of Shipbuilding			Automatics Power Engineering		

Studenti stječu potrebna specijalistička znanja iz navedenih područja te su time osposobljeni za obavljanje stručnih, ali i znanstvenih poslova iz domene elektrotehnike. Student po završetku studija mora znati u potpunosti voditi samostalno istraživanje. Njegovi radni zadaci uključuju ne samo rješavanje problema na postojećim sustavima, nego i projektiranje novih sustava, komponenata ili procesa uz postavljene uvjete. Pri tome mora biti sposoban djelovati i kao vođa i kao član skupine ili istraživačkog tima. Studijski je program usklađen s preporukama u Bolonjskoj deklaraciji koje se odnose na način osiguranja kvalitete studijskog programa te mobilnost pri studiranju i priznavanju diploma.

POSLIJEDIPLOMSKI DOKTORSKI STUDIJ

Završetkom ovoga studija student stječe stupanj doktora znanosti koji prvenstveno označava da superiorno poznaje određeno znanstveno područje unutar tehničkih znanosti i da je dokazao sposobnost originalnoga znanstvenog istraživanja. Njegove kompetencije obuhvaćaju vrsno poznavanje literature i nerazjašnjenih problema iz određenog područja te sposobnost osmišljavanja i provođenja znanstvenoistraživačkog projekta do kraja, objavljivanja rezultata istraživanja te prezentiranja tih rezultata drugim znanstvenicima, izražavanja svojih stavova u prisutnosti eksperta u području (na kongresima, seminarima, gostovanjima na drugim institucijama itd.) Njegove osobine obuhvaćaju i želju da prenese svoje znanje i iskustvo na mlađe generacije studenata, kritičnost, u prvom redu prema vlastitom istraživanju, ali i radu drugih te sposobnost prilagođavanja promjenama koje dolaze.

Students acquire the necessary specialistic knowledge in the fields mentioned above, so that they are enabled to perform the most complex professional engineering tasks as well as those based on a scientific approach to problem solving in the area of electrical engineering. Students should be able to perform autonomous research. The student's tasks include not only problem solving of existing systems, but also the design of new systems, components and processes based on given specifications. Therefore, he is capable of working as a team or research group member or leader. In the study program, recommendations of the Bologna system are implemented, especially concerning quality assurance, mobility during the study, as well as diploma recognition.

POSTGRADUATE DOCTORAL STUDY

With the completion of the study, the student gains the academic degree of Doctor of Science. He has a superior knowledge of a particular scientific field within the technical sciences and he will have proven to have the capability to conduct original scientific research. His competences cover comprehension of literature and unsolved problems of a particular area and the ability to conduct a scientific project up to its completion, to publish the research results and to present these results to other scientists, the ability to express his opinion in the presence of experts in the research area (at conferences and similar gatherings). His characteristics include the desire to transfer his knowledge to the younger generations, criticism, in the first place towards his own work, but also towards the work of others and the ability to adapt to imminent changes.

Nakon završetka doktorskog studija otvaraju se brojne mogućnosti nastavka znanstvenoistraživačkog rada na matičnoj instituciji ili srodnim institucijama u Hrvatskoj ili inozemstvu, kao i postdoktorskog usavršavanja. Također otvaraju se i mogućnosti zapošljavanja u javnom i privatnom sektoru, posebno u onim gospodarskim subjektima s kojima Fakultet ima razvijenu suradnju, ali i drugdje u Hrvatskoj i inozemstvu.

Doktorski studij sastoji se od:

- provedbe znanstvenoistraživačkog rada pod nadzorom i uz pomoć mentora odnosno komentora koje rezultira izradom doktorskog rada (90 ECTS-bodova),
- polaganja obveznih i izbornih predmeta propisanih studijskim programom doktorskog studija (60 ECTS-bodova),
- boravka na drugim domaćim ili inozemnim sveučilišnim ili znanstvenim institucijama u trajanju od najmanje 4 mjeseca (20 ECTS-bodova),
- drugih aktivnosti koje obuhvaćaju prezentaciju znanstvenih rezultata na domaćim i međunarodnim znanstvenim skupovima, pisanje znanstvenih radova i sl. (30 ECTS-bodova).

Upon completion of the doctoral study, numerous possibilities for the continuation of scientific work are present at the Faculty of Engineering or other institutions in Croatia and abroad, as well as the possibility to continue education in postdoctoral study. Also, the possibility of finding an occupation in the public as well as in the private business sector becomes available (e.g. entities with whom the Faculty of Engineering has developed collaboration), as well as in other enterprises in Croatia and abroad.

The doctoral study consists of:

- scientific research work under the guidance and help of a mentor and possibly a co-mentor, which results in the completion of a doctoral thesis (90 ECTS credits),
- sitting examinations for all obligatory and elective subjects prescribed by the curriculum of the doctoral study (60 ECTS credits),
- visiting other Croatian or foreign universities or scientific institutions in the duration of at least four months (20 ECTS credits),
- other activities that include the presentation of scientific research results at national or international scientific gatherings or the writing of scientific papers (30 ECTS credits).

Nastava doktorskog programa organizirana je u sedam modula:

1. Proizvodno strojarstvo
2. Termoenergetika
3. Računalna mehanika
4. Projektiranje i gradnja plovnih objekata
5. Konstruiranje u strojarstvu
6. Osiguranje kvalitete i vođenje tehničkih sustava
7. Ekološko inženjerstvo i zaštita okoliša

The curriculum of the doctoral study comprises seven modules:

1. Production Technologies in Mechanical Engineering,
2. Thermoenergetics,
3. Computational Mechanics,
4. Design and Building of Naval Vessels,
5. Mechanical Engineering Design,
6. Quality Assurance and Technical System Management,
7. Ecological Engineering and Environmental Protection.

Poslijediplomski doktorski studij							
Zajednički predmeti	Metodologija znanstvenoistraživačkog rada Matematičko modeliranje i numeričke metode Metode optimizacije Statističke metode i stohastički procesi						
Moduli	1. Proizvodno strojarstvo	2. Termoenergetika	3. Računarska mehanika	4. Projektiranje i gradnja plovnih objekata	5. Konstruiranje u strojarstvu	6. Osiguranje kvalitete i vođenje tehničkih sustava	7. Ekološko inženjerstvo i zaštita okoliša
Predmeti po modulima	Planiranje i vođenje proizvodnje IP iz konvencionalne obrade odvajanjem čestica Deformabilnost i suvremeno oblikovanje deformiranjem Primijenjena teorija plastičnosti u procesima oblikovanja IP iz nekonvencionalnih postupaka obrade Modeliranje procesa obrade Razvojni i proizvodni menadžment CAM, CAP, CAD/NC-CIM Roboti i manipulatori IP iz fleksibilnih proizvodnih sustava Inteligentni proizvodni sustavi Metode simulacije u proizvodnji Optimizacija tehnoloških procesa IP iz ispitivanja materijala Toplinska obrada i inženjerstvo površina Kemija materijala Korozija i zaštita metala Mehanika prijeloma i umorljivost Kinetika mikrostrukturnih pretvorbi Procesi oštećivanja materijala	IP iz toplinskih znanosti Numeričko modeliranje prijelaza topline Optimizacija energetskih procesa IP iz brodskih strojnih kompleksa Termodinamička analiza procesa Eksperimentalne metode u toplinskoj tehnici i termoenergetici Termodinamika smjesa i toplinski uređaji IP iz tehnike hlađenja i tehnike niskih temperatura IP iz izmjenjivača topline IP iz grijanja i klimatizacije Obnovljivi izvori energije Racionalna potrošnja energije Numeričko modeliranje procesa izgaranja IP iz motora s unutarnjim izgaranjem Suvremene konstrukcije motora Trajnost i pouzdanost termoenergetskih sustava IP iz toplinskih turbostrojeva IP iz generatora pare IP iz brodskih energetskih postrojenja Električne mreže	Elastomehanika i plastomehanika MKE i optimizacija konstrukcija Viskoelastičnost i viskoplastičnost Stabilnost konstrukcija Nelinearna analiza konstrukcija Tankostjene konstrukcije Kontaktna mehanika IP iz termomehanike Računalno modeliranje plastičnog oblikovanja metala Vibracije i trajnost strojeva i konstrukcija Mehatronika u strojarstvu Kinematika i dinamika robota Zaštita od buke i vibracija strojeva i konstrukcija Dinamika fluida Računarska mehanika fluida Hidrodinamika turbostrojeva Turbulentno strujanje Modeliranje onečišćenja zraka Modeliranje strujanja sa slobodnom površinom Modeliranje nestacionarnog strujanja u cjevovodima	Metodologija projektiranja plovnih objekata Pomorstvenost i upravljivost plovnih objekata IP iz osnivanja plovnih objekata Optimizacija projekta broda Hidrodinamika plovnih objekata Integralna tehnologija gradnje broda IP iz metodologije gradnje plovnih objekata Ugovaranje plovnih objekata IP iz otpora plovnih objekata IP iz propulzije plovnih objekata IP iz dinamike plovnih objekata Vjerojatnosno predviđanje morskih valova Valno opterećenje plovnih objekata Projektiranje strukture plovnih objekata	IP iz hidrostatskih i pneumatskih prijenosnika Modeliranje inženjerskih konstrukcija Nauka o konstruiranju IP iz konstrukcijskih elemenata Specijalni mehanički prijenosnici Konstrukcija i optimizacija zupčastih prijenosnika IP iz prijenosnika snage Strateško planiranje IP iz transportnih sredstava u industriji Metoda rubnih elemenata Specijalni hidrostatski prijenosnici Kontaktni problemi u analizi konstrukcijskih elemenata Principi konstrukcija visokih i ultravisokih preciznosti Podatljivi elementi i mehanizmi	Upravljanje kvalitetom Planiranje i vođenje proizvodnje Statistička kontrola procesa Automatizacija postrojenja i sustava Projektiranje baze podataka Poslovno odlučivanje Modeli stohastičkih procesa informacija Pouzdanost tehničkih sustava Arhitektura računalnih sustava za vođenje Inteligentni sustavi Sustavi za podršku odlučivanju Mikroekonomija i konkurentnost Inženjerstvo kvalitete Sigurnost tehničkih sustava	IP iz zaštite okoliša Opća ekologija Zaštita mora i priobalja Trendovi i instrumenti zaštite okoliša Kemija okoliša Upravljanje održivim razvojem i zaštita okoliša Zaštita okoliša u energetici i procesnoj industriji Pravo zaštite okoliša Instrumentacija i analitičke tehnike u zaštiti okoliša Okoliš i gospodarstvo Zaštita okoliša u tehnici hlađenja Dinamika procesa

Postgraduate Doctoral Study							
Common subjects	Methodology of Science and Research Mathematical Modelling and Numerical Methods Optimization Methods Statistical Methods and Stochastic Processes						
Modules	1. Production Technologies in Mechanical Engineering	2. Termoenergetics	3. Computational Mechanics	4. Design and Building of Naval Vessels	5. Mechanical Engineering Design	6. Quality Assurance and Technical Systems Management	7. Ecological Engineering and Environmental Protection
Module Subjects	Planning and Processing of Manufacture Selected Chapters on Conventional Machining Processes Formability and Modern Forming Technology Selected Chapters on Nonconventional Machining Processes Production and Development Management CAM, CAP, CAD/NC-CIM Robots and Manipulators Selected Chapters on Flexible Production Systems Intelligent Manufacturing Systems Simulation Methods in Production Processes Plans Optimization Selected Chapters on Material testing Heat Treatment and Surface Engineering Material chemistry Corrosion and Metals Protection Fracture Mechanics and Fatigue of Materials Processes of Damaging of Materials	Selected Topics on Thermal Sciences Numerical Modeling of Combustion Process Optimization of Energy Processes Selected Topics of Marine Machinery Systems Thermodynamic Analysis of Processes Experimental Methods in Thermal and Power Engineering Thermodynamics of Mixtures and Thermal Devices Selected Copics in Refrigeration and Low-Temperature Refrigeration Selected Topics on Heat Exchangers Selected Topics on Heating and Air-Conditioning Renewable Energy Sources Rational Energy Consumption Numerical Modeling of Combustion Process Selected Topics in Internal Combustion Engines Advanced Design of Internal Combustion Engine Durability and Reliability of Thermal Energy Systems Selected Topics on Thermal Turbomachines Selected Topics Marine Energy Systems Electrical Circuits	Elastomechanics and Plastomechanics FEM and Structural Optimization Viscoelasticity and Viscoplasticity Structural Stability Nonlinear Structural Analysis Contact Mechanics Advanced Thermomechanics Vibrations and Durability of Machines and Structures Kinematics and Dynamics of Robots Protection Against Noise and Vibrations of Machines and Structures Fluid Dynamics Computational Fluid Mechanics Hydrodynamics of Turbomachines Turbulent Flow Unsteady Pipe Flow Modeling	Methodology of Floating Objects Design Seakeeping and Manoeuvrability Selected Chapter on Floating Objects Design Integrated ship Production Technology Selected Topics on Floating Objects Production Methodology Advanced Chapters of Ship Resistance Advanced Chapters of Ship Propulsion Selected Topics in Marine Dynamics Structural Design of Floating Objects	Selected chapters on Hydrostatic and Pneumatic Transmissions Modelling of Engineering Structures Design Science Selected Chapters of Machine Elements Design Special Mechanical Transmissions Mechanical Engineering Design and Optimization of Gear Transmitting Selected Chapters on Power Transmissions Strategic Planning Selected Chapters of Industrial Transport Equipment and Devices Boundary Elements Method Contact Problems in Machine Elements Analyses Principles of High and Ultra-high Precision Devices Compliant Elements and Mechanisms	Quality Management Planning and Processing of Manufacture Statistical Process Control Design of Data Base Business Decision Models of Stochastic Information Processes Reliability of Technical Systems Intelligent Systems Microeconomics and Competitiveness Quality Engineering Safety of Technical Systems	Selected Topics on Environment Protection General Ecology Sea and Coastal Protection Environmental Chemistry Management of Sustainable Development and Environmental Protection Environment Protection in Energetics and Process Industry Instrumentation and Analytical Techniques in Environment Protection Environment and Economy

STRUČNI STUDIJ STROJARSTVA

Preddiplomski stručni studij strojarstva ima za cilj osposobljavanje stručnjaka strojarstva za rad na izvršavanju složenih operativnih poslova kod razrade projekata strojarskih konstrukcija, odnosno složenih operativnih poslova planiranja, pripreme, unapređenja i kontrole tehnoloških i proizvodnih procesa i planiranja, organiziranja i vođenja proizvodnih odnosno energetskih postrojenja.

UNDERGRADUATE VOCATIONAL STUDY OF MECHANICAL ENGINEERING

The vocational study of mechanical engineering has the aim to prepare the students for their profession as mechanical engineers performing jobs that include complex operating tasks in mechanical design, planning, preparing, improvement and controlling of technological and production processes as well as planning, organizing and conducting of production or energy processes and plants.

STRUČNI STUDIJ BRODOGRADNJE

Preddiplomski stručni studij brodogradnje ima za cilj osposobljavanje stručnjaka brodogradnje za rad na izvršavanju složenih operativnih poslova pri razradi projekata

UNDERGRADUATE VOCATIONAL STUDY OF NAVAL ARCHITECTURE

The vocational study of naval architecture has the aim to prepare the students for their profession as shipbuilding engineers

plovnih objekata i objekata morske tehnologije i njihovih elemenata, odnosno složenih operativnih poslova planiranja, pripreme, unapređenja i kontrole procesa gradnje plovnih objekata.

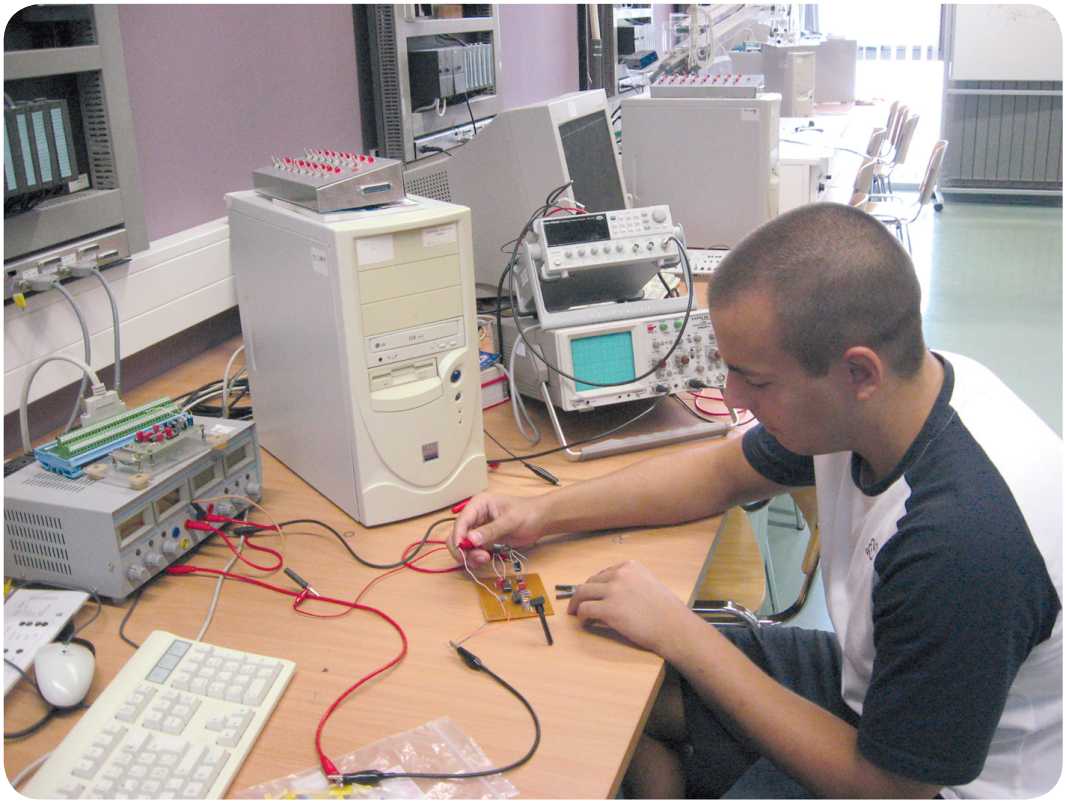
performing jobs that include complex operating tasks in designing vessels and other maritime objects and their elements as well as planning, improvement and controlling vessel building processes.

STRUČNI STUDIJ ELEKTROTEHNIKE

Preddiplomski stručni studij elektrotehnike ima za cilj osposobljavanje stručnjaka elektrotehnike za sudjelovanje u projektiranju i konstruiranju elemenata elektroenergetskih prostrojenja, odnosno telekomunikacijskih uređaja, sustava i mreža, ovisno o odabranoj izbornoj skupini predmeta.

UNDERGRADUATE VOCATIONAL STUDY OF ELECTRICAL ENGINEERING

The vocational study of electrical engineering has the aim, depending upon the chosen elective subject group, to prepare the students for their profession as electrical engineers in jobs which include designing and constructing elements of power plants, as well as telecommunication equipment, systems and networks.



Stručni studiji

S	STROJARSTVO			BRODOGRADNJA			ELEKTROTEHNIKA		
	Predmet	N	B	Predmet	N	B	Predmet	N	B
I	Matematika I	5	7	Matematika I	5	7	Matematika I	5	7
	Mehanika I	5	7	Mehanika I	5	7	Fizika	4	6
	Materijali	4	6	Materijali	4	6	Osnove elektrotehnike ST I	5	8
	Osnove elektrotehnike	3	5	Osnove elektrotehnike	3	5	Materijali i tehnološki postupci	3	4
	Primjena računala ST	3	4	Primjena računala ST	3	4	Primjena računala ST	3	4
II	Matematika II	5	7	Matematika II	5	7	Matematika II	5	7
	Mehanika II	4	6	Mehanika II	4	6	Osnove elektrotehnike ST I	5	7
	Čvrstoća	4	6	Čvrstoća	4	6	Digitalna logika ST	4	6
	Tehničko crtanje	4	6	Tehničko crtanje	4	6	Mehanika i elementi konstrukcija ST	3	5
	Tehnologija obrade I	3	4	Plovni objekti	3	4	Tehničko dokumentiranje	3	4
III	Organizacija i ekonomika	3	4	Organizacija i ekonomika	3	4	Mjerenja u elektrotehnici ST	5	7
	Mehanika fluida ST	3	5	Mehanika fluida ST	3	5	Elektroničke komponente i osnovni	5	7
	Toplina	4	6	Toplina	4	6	sklop.		
	Tehnologija obrade II	4	6	Brodske forme	4	7	Linearne električne mreže	4	7
	Elementi strojeva I	4	6	Zavarivanje	3	5	Mehatronika	4	6
	Strani jezik I	2	3	Strani jezik I	2	3	Strani jezik I	2	3
IV	Elementi strojeva II	4	6	Hidrostatika broda	4	6	Osnove energetske elektronike	5	7
	Obradni strojevi	3	5	Strukturni elementi broda	4	6	Osnove automatske regulacije	4	7
	Toplinski strojevi i uređaji I	3	5	Tehnologija brodogradnje I	3	5	Kolegij izborne skupine	5	8
	Strani jezik II	2	3	Elementi strojeva I BG	3	5	Strani jezik II	2	3
	Stručna praksa I		5	Strani jezik II	2	3	Stručna praksa I		5
	Kolegij izborne skupine	4	6	Stručna praksa I		5			
V	Mjerna tehnika ST	3	5	Mjerna tehnika ST	3	5	Organizacija i ekonomika	3	4
	Toplinski strojevi i uređaji II	3	5	Tehnologija brodogradnje II	5	6	Kolegij izborne skupine	5	7
	Hidraulički strojevi	3	5	Tehnološki procesi gradnje i remonta	5	6	Kolegij izborne skupine	4	7
	Zavarivanje	3	5	broda			Kolegij izborne skupine	4	6
	Kolegij izborne skupine	4	5	Konstrukcija broda	4	6	Kolegij izborne skupine	4	6
	Kolegij izborne skupine	4	5	Oprema broda ST	4	7			
VI	Slobodni kolegij	4	5	Gradnja i održavanje malih plovnih	4	5	Slobodni kolegij	4	5
	Stručna praksa II		10	objekata			Stručna praksa II		10
	Kolegij izborne skupine	4	5	Slobodni kolegij	4	5	Kolegij izborne skupine	4	5
	Završni rad		10	Stručna praksa II		10	Završni rad		10
				Završni rad		10			

Vocational studies

S	MECHANICAL ENGINEERING			NAVAL ARCHITECTURE			ELECTRICAL ENGINEERING		
	Subject	N	B	Subject	N	B	Subject	N	B
I	Mathematics I	5	7	Mathematics I	5	7	Mathematics I	5	7
	Mechanics I	5	7	Mechanics I	5	7	Physics	4	6
	Materials	4	6	Materials	4	6	Fundamentals of Electrical Engineering	5	8
	Fundamentals of Electrical Engineering	3	5	Fundamentals of Electrical Engineering	3	5	I VS	3	4
	Applied Computing VS	3	4	Applied Computing VS	3	4	Materials and Technological Processes	3	4
							Applied Computing VS		
II	Mathematics II	5	7	Mathematics II	5	7	Mathematics II	5	7
	Mechanics II	4	6	Mechanics II	4	6	Fundamentals of Electrical Engineering	5	7
	Strength of Materials	4	6	Strength of Materials	4	6	II VS	4	6
	Technical Drawing	4	6	Technical Drawing	4	6	Digital Logic VS	3	5
	Manufacturing Technology I	3	4	Floating Objects	3	4	Mechanics and Structural Elements VS	3	4
							Technical Documenting		
III	Organization and Economics	3	4	Organization and Economics	3	4	Electrical Measurements VS	5	7
	Fluid Mechanics VS	3	5	Fluid Mechanics VS	3	5	Electronic Components and Basic Circuits	5	7
	Thermodynamics	4	6	Thermodynamics	4	6	Linear Electric Circuits		
	Manufacturing Technology II	4	6	Ship Hull Forms	4	7	Mechatronics	4	7
	Machine Elements I	4	6	Welding Engineering	3	5	Foreign Language I	4	6
	Foreign Language I	2	3	Foreign Language I	2	3		2	3
IV	Machine Elements II	4	6	Ship Hydrostatics	4	6	Fundamentals of Power Electronics	5	7
	Machine Tools	3	5	Ship Structural Elements	4	6	Fundamentals of Automatic Regulation	4	7
	Heat Engines and Devices I	3	5	Shipbuilding Technology I	3	5	Elective group course	5	8
	Foreign Language II	2	3	Machine Elements I NA	3	5	Foreign Language I	2	3
	Professional Practice I		5	Foreign Language II	2	3	Professional practice I		5
	Elective group course	4	6	Professional practice I		5			
V	Measuring Technique VS	3	5	Measuring Technique VS	3	5	Organization and Economics	3	4
	Heat Engines and Devices II	3	5	Shipbuilding Technology II	5	6	Elective group course	5	7
	Hydraulic Machines	3	5	Technological Processes of Shipbuilding	5	6	Elective group course	4	7
	Welding Engineering	3	5	and Repair			Elective group course	4	6
	Elective group course	4	5	Ship Construction	4	6	Elective group course	4	6
	Elective group course	4	5	Ship Equipment VS	4	7			
VI	Free course	4	5	Small Craft Building and Maintenance	4	5	Free course	4	5
	Professional practice II		10	Free course			Professional practice II		10
	Elective group course	4	5	Professional practice II	4	5	Elective group course	4	5
	Final thesis		10	Final thesis		10	Final thesis		10
						10			

4. UPRAVA / DEAN'S OFFICE

Dekan / Dean:
Prof. dr. sc. / Full Prof. D. Sc. Tonči Mikac

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7. Tomo Vergić
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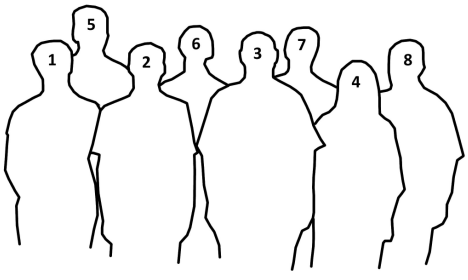

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PRODEKANI

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nastava

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Red. prof. dr. sc. Nikša Fafandjel

Red. prof. dr. sc. Vladimir Medica

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Full Prof. D. Sc. Vladimir Medica

SECRETARY GENERAL

Tomo Vergić, grad. in iur.

DEAN'S OFFICE

Željka Ljutić, grad. economist
head of dean's office

Antonela Ćaleta
vice-deans' secretary

5. ZAVODI

NA TEHNIČKOM FAKULTETU
SVEUČILIŠTA U RIJECI

DEPARTMENTS

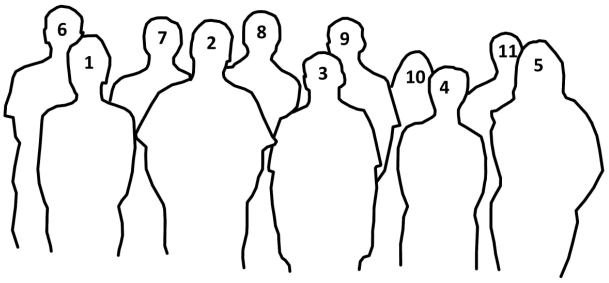
AT THE FACULTY OF ENGINEERING
UNIVERSITY OF RIJEKA

5.1. ZAVOD ZA AUTOMATIKU I ELEKTRONIKU / DEPARTMENT OF AUTOMATION AND ELECTRONICS

Predstojnik Zavoda / Department Head:
Doc. dr. sc. / Assoc. Prof. D. Sc. Saša Vlahinić

URL: http://www.riteh.uniri.hr/ustroj/zae/

1. Nicoletta Saulig
2. Viktor Sučić
3. Nino Stojković
4. Natalija Forgić
5. Željka Milanović
6. Jonatan Lerga
7. Marino Franušić
8. Miroslav Vrankić
9. Saša Vlahinić
10. Vesna Krajči
11. Dalibor Brnobić



DJELATNICI

IZVANREDNI PROFESORI

Vera Gradišnik
poluvodičke komponente, fotodetektor, fotodioda, detekcija boja, tranzijentna analiza, numeričko modeliranje, defekti, senzor slike

Nino Stojković
analogna obrada signala, analogni filtri

Viktor Sučić
vremensko-frekvencijska i statistička analiza i obrada signala

Saša Vlahinić
mjerenja u elektrotehnici, mjerenja kvalitete električne energije, elektronička i virtualna instrumentacija

DOCENTI

Miroslav Vrankić
digitalna obrada signala i slike, teorija valića, filtarski slogovi

ASISTENTI

Dalibor Brnobić
ugradbeni sustavi i sustavi za rad u stvarnom vremenu, mjerenje kvalitete električne energije, algoritmi za vođenje aktivnih filtara i izmjenjivača

Vedran Grudenić
računalni vid, obrada slike, prepoznavanje uzoraka i objekata

Vesna Krajči
automatsko upravljanje, robotika

FACULTY AND STAFF

ASSOCIATE PROFESSORS

Vera Gradišnik
semiconductor devices, photodetector, photodiode, color detection, transient analysis, numerical modeling, defects, image sensor

Nino Stojković
analog signal processing, analog filters

Viktor Sučić
time-frequency and statistical signal analysis and processing

Saša Vlahinić
electrical measurements, power quality measurements, electronic and virtual instrumentation

ASSISTANT PROFESSORS

Miroslav Vrankić
digital signal and image processing, wavelets and filter banks

ASSISTANTS

Dalibor Brnobić
embedded systems, real-time systems, power quality instrumentation, control of active filters and power converters

Vedran Grudenić
computer vision, image processing, pattern and object detection

Vesna Krajči
automatic control, robotics

ZNANSTVENI NOVACI

Marino Franušić
mjerenja u elektrotehnici, mjerenja kvalitete električne energije, elektronička i virtualna instrumentacija

Jonatan Lerga
obrada signala, vremensko-frekvencijska obrada signala, obrada slike i videa

Željka Milanović
poluvodičke komponente, fotodetektor, fotodioda, detekcija boja

Nicoletta Saulig
vremensko-frekvencijska obrada signala

ADMINISTRATIVNO OSOBLJE

Natalija Forgić
administrativna tajnica

JUNIOR RESEARCHERS

Marino Franušić
electrical measurements, power quality measurements, electronic and virtual instrumentation

Jonatan Lerga
signal processing, image processing, time-frequency signal processing

Željka Milanović
semiconductor devices, photodetector, photodiode, color detection

Nicoletta Saulig
time-frequency signal processing

ADMINISTRATIVE STAFF

Natalija Forgić
administrative secretary

NASTAVA

Nastava se izvodi iz područja automatike, robotike, elektronike, mjerenja u elektrotehnici, mjerne instrumentacije te obrade signala.

KOLEGIJI NA SVEUČILIŠNOM PREDDIPLOMSKOM STUDIJU

Automatsko upravljanje
Digitalna logika
Električne mreže
Elektronika
Elektronika I
Elektronika II
Elementi automatizacije postrojenja
Mjerenja u elektrotehnici
Modeliranje i simuliranje sustava

EDUCATION

Lectures in the field of automatic control, robotics, electronics, electrical measurements, instrumentation and signal processing.

UNDERGRADUATE COURSES

Automatic Control
Digital Logic
Electrical Circuits
Electronics
Electronics I
Electronics II
Elements of Plant Automation
Electrical Measurements
System Modelling and Simulation

Osnove regulacijske tehnike
Računalom podržana mjerenja
Signali i sustavi
Stručna praksa I

KOLEGIJI NA SVEUČILIŠNOM DIPLOMSKOM STUDIJU
Alarmni sustavi
Analogna obrada signala
Automatizacija postrojenja i procesa
Automatizirana instrumentacija
Digitalna obrada signala
Osnove robotike
Sustavi digitalnog upravljanja
Sustavi kontrole
Stručna praksa II

KOLEGIJI NA STRUČNOM STUDIJU
Digitalna logika ST
Elektroničke komponente i osnovni sklopovi
Linearne električne mreže
Mjerenja u elektrotehnici ST
Osnove automatske regulacije

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU
Električne mreže

Basic of Automatic Control
Computer Aided Measurement
Signals and Systems
Industrial Practice I

GRADUATE COURSES
Alarm systems
Analog Signal Processing
Automation of Plants and Processes
Automatic Instrumentation
Digital Signal Processing
Fundamentals of Robotics
Digital Control Systems
Control Systems
Industrial Practice II

VOCATIONAL COURSES
Digital Logic ST
Electronic Components and Basic Electronic Circuits
Linear Electrical Circuits
Electrical Measurements ST
Fundamentals of Automatic Regulation

POSTGRADUATE COURSES
Electrical Circuits

ZNANSTVENOISTRAŽIVAČKI RAD

Obrada signala, elektronika, mjerenje kvalitete električne energije

RESEARCH AND DEVELOPMENT ACTIVITIES

Signal processing, electronics, power quality measurements

PROJEKTI

Kontinuirana detekcija boja i tehnika karakterizacije piksela senzora slike, 069-0000000-3263, MZOŠ, Vera Gradišnik, 2008 - 2011, znanstvenoistraživački.

Optimizacija i dizajn vremensko-frekvencijskih distribucija, 069-0362214-1575,MZOŠ, Viktor Sučić, 2006 – 2011, znanstvenoistraživački.

E-uključiva Hrvatska, RN18-033/08, 991113, Središnji državni ured za e-Hrvatsku, Miroslav Vrankić, 2009 - 2010, stručni.

Studija električnih zaštita pretovarnih sustava (Brodoukrcivač Bakar, Kontejnerski most Metalna, Brodoprekrcivač Silos), RN31-002/10, Lučka uprava Rijeka, Saša Vlahinić, 2009 - 2010, ekspertiza.

Mjerenje i podešenje električnih zaštita pretovarnih sustava u zoni luke Bakar (prekrcajni sustav i skladišni most), RN31-006/10, Lučka uprava Rijeka, Saša Vlahinić, 2010, ekspertiza.

PROJECTS

Continuous Color Detection and Characterisation Techniques of Image Sensor Pixel, 069-0000000-3263, Ministry of science, Education and Sports of the Republic of Croatia, Vera Gradišnik, 2008 – 2011, research and scientific project.

Optimisation and Design of Time-Frequency Distributions, 069-0362214-1575, Ministry of Science, Education and Sports of the Republic of Croatia, Viktor Sučić, 2006 – 2011, research and scientific project.

E-inclusive Croatia, RN18-033/08, 991113, Central State Administrative Office for e-Croatia, Miroslav Vrankić, 2009 – 2010, professional project.

Study of electrical protection of transfer system (bulk ship loader Bakar, Gantry Crane Metalna, grain ship loader Silos), Port of Rijeka Authority, Saša Vlahinić, 2009 – 2010, expertise.

Measurement and adjustment of electrical protection of reloading systems in the area of port Bakar, RN31-006/10, Port of Rijeka Authority, Saša Vlahinić, 2010, expertise.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Brnobić, D., Vlahinić, S., Stojković, N.: The effect of IEC grouping algorithms on frequency domain noise, Measurement 43 (2010), 426-433.

Saulig, N., Sucic, V., Stojković, N.: Signal Representation Quality Enhancement by Applying Mathematical Operations on Time-Frequency Distributions, Engineering Review, Vol. 29, No.2 (2009), pp. 21-32, (ISSN 1330-9587), Rijeka

Vrankić, M., Seršić, D., Sučić, V.: Adaptive 2-D Wavelet Transform Based on the Lifting Scheme with Preserved Vanishing Moments. IEEE transactions on image processing. Vol. 19, No. 7, 2010

MEĐUNARODNI KONGRES / INTERNATIONAL CONGRESS

Gradišnik, V.: Observed similar behaviour of a-Si:H p-i-n photodiode and retina response," in Proc. IASTED BioMed 2010, 7th IASTED International Conference Biomedical Engineering (BioMed 2010), Feb., 17-19, 2010, Innsbruck, Austria, pp. 176-180.

Gradišnik V., Šverko M., Linić A.: Tehnologija sunčanih ćelija i fotodioda, u Zborniku. EIS 2010, 20-ti međunarodni simpozij "Elektroinženjerski simpozij Dani Josipa Lončara" (EIS 2010), Svibanj, 02-05, 2010, Šibenik, Hrvatska, pp. 36-41.

Lerga, J., Sučić, V.: An Instantaneous Frequency Estimation Method Based on the Improved Sliding Pair-Wise ICI Rule, 10th International Conference on Information Science, Signal Processing and Their Applications, 10th-13th May, 2010, Kuala Lumpur, Malaysia.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

School of Electrical and Computer Engineering, RMIT University, Melbourne, Australia.

Signal Processing Research and Consultancy Group, Perinatal Research Centre, University of Queensland, Brisbane, Australia.

University of New Mexico, NM, SAD.

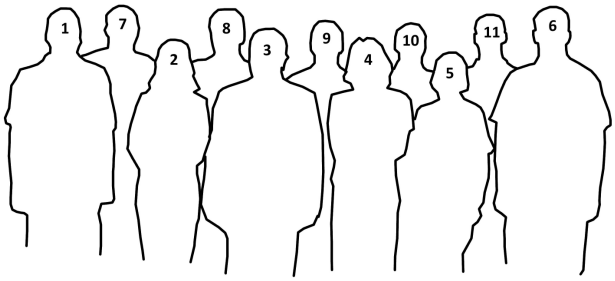
University of Sao Paulo, Brazil.

5.2. ZAVOD ZA BRODOGRADNJU I INŽENJERSTVO MORSKE TEHNOLOGIJE / DEPARTMENT OF NAVAL ARCHITECTURE AND OCEAN ENGINEERING

Predstojnik Zavoda / Department Head:
Izv. prof. dr. sc. / Assoc. Prof. D. Sc. Albert Zamarin

URL: http://www.riteh.uniri.hr/ustroj/zbimt/

1. Damir Kolić
2. Dunja Matulja
3. Nikša Fafandjel
4. Jasna Prpić-Oršić
5. Nerina Čugelj
6. Albert Zamarin
7. Anton Turk
8. Bruno Čalić
9. Roko Dejhalla
10. Marko Hadjina
11. Tin Matulja



DJELATNICI

REDOVITI PROFESORI

Bruno Čalić
plovnost i stabilitet broda, stabilitet u eksploataciji broda, osnivanje plovnih objekata I i II, objekti morske tehnologije, projektiranje malih plovnih objekata, brodske forme, hidrostatika broda, projektiranje malih plovnih objekata, metodologija projektiranja plovnih objekata, osnivanje plovnih objekata

Roko Dejhalla
hidrodinamika plovnih objekata, brodski propulzori, gradnja i održavanje malih plovnih objekata

Nikša Fafandjel
gradnja i opremanje plovnih objekata, tehnologija i organizacija brodogradnje, osnivanje brodogradilišta i proizvodnih procesa, oprema broda, upravljanje projektima u brodogradnji, analiza tržišta, tehnološko prognoziranje i ugovaranje plovnih objekata

Jasna Prpić - Oršić
pomorstvenost, njihanje i opterećenje plovnih objekata na morskim valovima, modeliranje okoliša i okolišnih opterećenja, dinamika pomorskih objekata, vibracije broda

IZVANREDNI PROFESORI

Albert Zamarin
konstrukcija broda, čvrstoća broda, strukturna analiza broda, opterećenje plovnih objekata na morskim valovima, projektiranje strukture plovnih objekata, konstrukcija malih plovnih objekata

FACULTY AND STAFF

PROFESSORS

Bruno Čalić
seaworthiness and stability of the ship, ship hull forms, ship hydrostatics, ship stability in exploitation, ship design I & II, ocean mobile and fixed structures, small craft design, methodology of floating objects design, selected chapter on floating objects design

Roko Dejhalla
marine hydrodynamics, ship propulsion devices, small craft building and maintenance

Nikša Fafandjel
ship production and outfitting, shipbuilding technology and organisation, shipyard and production process design, ship equipment, project management in shipbuilding, market analysis, technological forecasting and contacting.

Jasna Prpić - Oršić
seakeeping, motions and sea loads of ships and offshore structures, modeling of environment and environmental loads, marine structures dynamics, ship vibrations

ASSOCIATE PROFESSORS

Albert Zamarin
ship construction, ship strength, ship structural analysis, vessel structure design, sea loads of ships and offshore structures, small craft construction

DOCENTI

Marko Hadjina
gradnja plovnih objekata, tehnologija i organizacija brodogradnje, osnivanje brodogradilišta i proizvodnih procesa, simulacijsko modeliranje brodograđevnih procesa, analiza tržišta, ugovaranje i tehnološko prognoziranje.

Tin Matulja
gradnja i opremanje plovnih objekata, tehnologija i organizacija brodogradnje, osnivanje brodogradilišta i proizvodnih procesa, oprema plovnih objekata.

ASISTENTI

Damir Kolić
tehnologija i organizacija brodogradnje, vitka proizvodnja, tehnološki procesi brodogradnje, ugovaranje.

Anton Turk
plovnost i stabilitet broda, brodske forme, hidrostatika broda

ZNANSTVENI NOVACI

Iva Kolacio
dinamika broda

Dunja Matulja
hidrodinamika plovnih objekata, dinamika broda, brodski propulzori

ADMINISTRATIVNO OSOBLJE

Nerina Čugelj
administrativna tajnica

ASSISTANT PROFESSORS

Marko Hadjina
ship production and outfitting, shipbuilding technology and organisation, shipyard and production process design, shipyards' production processes simulation modelling, market analysis, contracting and technological forecasting.

Tin Matulja
ship production and outfitting, shipbuilding technology and organisation, shipyard and production process design, floating objects equipment and outfitting.

ASSISTANTS

Damir Kolić
shipbuilding technology and organisation, lean manufacturing, Technological processes of shipbuilding, contracts.

Anton Turk
seaworthiness and stability, ship hull forms, ship hydrostatics

JUNIOR RESEARCHERS

Iva Kolacio
ship dynamics

Dunja Matulja
marine hydrodynamics, ship propulsion devices

ADMINISTRATIVE STAFF

Nerina Čugelj
administrative secretary

NASTAVA

Nastava iz područja:
Projektiranje plovnih objekata, tehnologija i organizacija brodogradnje, konstrukcija plovnih objekata, hidrodinamika plovnih objekata

KOLEGIJI NA PREDDIPLOMSKOM SVEUČILIŠNOM STUDIJU

Brodske forme
Gradnja i održavanje malih plovnih objekata SV
Hidrodinamika plovnih objekata I
Konstrukcija broda I
Konstrukcija broda II
Oprema broda
Osnove dinamike broda
Osnove gradnje broda
Plovnost i stabilitet broda
Stručna praksa I
Tehnologija brodogradnje
Tehnološki procesi brodogradnje
Uvod u plovne objekte

KOLEGIJI NA SVEUČILIŠNOM DIPLOMSKOM STUDIJU

Brodski propulzori
Brodogradilišta
Čvrstoća broda
Dinamika pomorskih konstrukcija
Hidrodinamika plovnih objekata II
Konstrukcija malih plovnih objekata
Metodologija gradnje plovnih objekata
Objekti morske tehnologije
Oprema malih plovnih objekata
Opremanje i remont broda
Organizacija i poslovanje brodogradilišta
Osnivanje plovnih objekata I
Osnivanje plovnih objekata II
Pomorstvenost plovnih objekata
Projektiranje malih plovnih objekata

EDUCATION

Lectures in the field of:
vessel design, technology and organization of shipbuilding, vessel construction, marine hydrodynamics

UNDERGRADUATE COURSES

Ship Hull Forms
Small Craft Building and Maintenance SV
Marine Hydrodynamics I
Ship Construction I
Ship Construction II
Ship Equipment
Basic Ship Dynamics
Basics of Ship Production
Seaworthiness and Stability of the Ship
Industrial practice I
Shipbuilding Technology
Technological Processes of Shipbuilding
Introduction to Floating Objects

GRADUATE COURSES

Ship Propulsion Devices
Shipyards
Ship Strength
Dynamics of Offshore Structures
Marine Hydrodynamics II
Small Craft Construction
Methodology of Shipbuilding
Ocean Mobile & Fixed Structures
Small Crafts Outfitting
Ship Outfitting and Repair
Shipyards Organisation and Management
Floating Objects Design I
Floating Objects Design II
Seakeeping
Small Craft Design

Stabilitet broda u eksploataciji
Stručna praksa II
Strukturna analiza broda
Tehnološki proces gradnje broda
Ugovaranje plovnih objekata
Upravljanje projektima u brodogradnji
Vibracije broda

Ship Stability in Exploitation
Industrial practice II
Ship Structural Analysis
Technological Process of Ship Production
Ship Negotiation Process
Project Management in Shipbuilding
Ship Vibrations

KOLEGIJI NA STRUČNOM STUDIJU

Brodske forme ST
Gradnja i održavanje malih plovnih objekata
Hidrostatika broda
Konstrukcija broda
Oprema broda ST
Osnivanje plovnih objekata
Plovni objekti
Stručna praksa I
Stručna praksa II
Strukturni elementi broda
Tehnologija brodogradnje I
Tehnologija brodogradnje II
Tehnološki procesi gradnje i remonta broda

VOCATIONAL STUDY COURSES

Ship Hull Forms ST
Small Craft Building and Maintenance
Ship Hydrostatic
Ship Construction
Ship Equipment ST
Floating Objects Design
Floating Objects
Professional practice I
Professional practice II
Ship Structural Elements
Shipbuilding Technology I
Shipbuilding Technology II
Technological Processes of Shipbuilding and Repair

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Integralna tehnologija gradnje broda
IP iz metodologije gradnje plovnih objekata
Ugovaranje plovnih objekata
Metodologija projektiranja plovnih objekata
Izabrana poglavlja iz osnivanja plovnih objekata
Optimizacija projekta broda
Pomorstvenost i upravljivost plovnih objekata
Izabrana poglavlja iz dinamike plovnih objekata
Vjerojatnosno predviđanje morskih valova
Hidrodinamika plovnih objekata
Izabrana poglavlja iz otpora plovnih objekata
Izabrana poglavlja iz propulzije plovnih objekata
Projektiranje strukture plovnih objekata
Valno opterećenje plovnih objekata

POSTGRADUATE COURSES

Integrated Ship Production Technology
Selected Topics on Floating Objects Production Methodology
Ship Negotiation Process
Methodology of Floating Objects Design
Selected Chapter on Floating Objects Design
Ship Design Optimisation
Seakeeping and Manoeuvrability
Selected Topics on Marine Dynamics
Probabilistic Prediction of Ocean Waves
Marine Hydrodynamics
Advanced Chapters of Ship Resistance
Advanced Chapters of Ship Propulsion
Structural Design on Floating Objects
Wave Load on Floating Object

ZNANSTVENOISTRAŽIVAČKI RAD

Tehnologija gradnje i održavanje plovnih objekata,

Hidrodinamičko opterećenje i odziv pomorskih objekata na morskim valovima,

Sustavi i tehnologije u zaštiti podmorja, priobalja i pomorskoj sigurnosti,

Hidrodinamika plovnih objekata,

Optimizacija strukture trupa broda, projektiranje za proizvodnju.

RESEARCH AND DEVELOPMENT ACTIVITIES

Shipbuilding technology and maintenance of floating objects,

Hydrodynamic loads and response of marine objects,

Systems and technologies in sub sea, coastal zone protection and maritime security,

Marine hydrodynamics,

Ship hull structure optimization, design for production, hydrodynamic load and structure response on seaway.

PROJEKTI

Numeričko modeliranje hidrodinamičkog opterećenja i odziva pomorskih objekata, 069-0691736-1667, MZOŠ, Jasna Prpić-Oršić, 2007 - 2011, znanstvenoistraživački

Projektiranje ekološki prihvatljivih brodova, ASDEPP CD-Jep-40037-2005, Europska komisija, suradnik Jasna Prpić-Oršić, 2006 - 2010, Tempus.

PROJECTS

Numerical modeling of hydrodynamic loads and response of marine objects, 069-0691736-1667, Ministry of Science, Education and Sports of the Republic of Croatia, Jasna Prpić-Oršić, 2007.– 2010., research and scientific project.

Advanced Ship Design for Pollution Prevention, ASDEPP CD-Jep-40037-2005, European Commission – Portugal, partner Jasna Prpić-Oršić, 2006.- 2010., Tempus project.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Fafandjel, N., Zamarin, A., Hadjina, M.: Shipyard production costs structure optimisation model related to product type, International Journal of Production Research (ISSN 0020-7543), Vol.48, No.5, p. 1479-1491, Taylor&Francis, 2010.

Hadjina, M.: Simulation modelling based methodology for shipbuilding production process design, Strojarstvo (ISSN 0562-1887), 51 (6), str. 547-553, Hrvatski strojarski i brodograđevni inženjerski savez, Zagreb, 2009.

Kolacio, I., Prpić-Oršić, J., Kurilić, K.: Analiza sidrenja poluuronjive platforme Scarabeo 7, Časopis Brodogradnja, (ISSN: 0007-215X), God. 61, Br. 1, str: 34-41, Zagreb, 2010.

Kolić, D., Fafandjel, N., Čalić, B.: Determining how to apply the design for production concept in shipyards trough risk analysis, Engineering Review (ISSN 1330-9587), Tehnički fakultet Sveučilišta u Rijeci, Vol. 30, No.1, 63-72, Rijeka, 2010.

Matulja, D., Dejhalla, R., Bukovac, O.: Application of an Artificial Neural Network to the Selection of a Maximum Efficiency Ship Screw Propeller, Journal of Ship Production and Design (ISSN 8756-1417), Vol. 26, No. 3, p. 199-205, Jersey City, 2010.

Matulja, T.: Hierarchical Modeling as basis for an Optimal Shipyard Layout Design Methodology, Strojarstvo (ISSN 0562-1887), 51(6), str. 587-595, Hrvatski strojarski i brodograđevni inženjerski savez, Zagreb, 2009.

Matulja, T., Fafandjel, N., Zamarin, A.: Methodology for Shipyard Production Areas Optimal Layout Design, Brodogradnja, (ISSN 0007-215X), Vol. 60, No.4, 369-377, Brodarski institut, Zagreb, 2009.

Zamarin, A., Jelovica, J., Hadjina, M.: Multi-Objective Structural Optimization – A Review of the Genetic Algorithm Methods, Engineering Review (ISSN 1330-9587), Tehnički fakultet Sveučilišta u Rijeci, Vol. 29, No.2, 87-100, Rijeka, 2009.

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Bajič, D., Prpić-Oršić, J.: Comparison of various classification societies requirements, ASDEPP Workshop, str. 65-69, (ISBN: 978-0-415-58477-7), Split, Croatia, 2010.

Fafandjel, N., Dobrinić, J., Hadjina, M., Čavrak, M.: Pristup upravljanju balastnim vodama primjenom metode kontinuiranog propuštanja, III. savjetovanje o morskoj tehnologiji - in memoriam adakemiku Zlatku Winkleru, Rijeka, 30. studenog - 1. prosinca 2009.

Hadjina, M., Fafandjel, N., Šimundić, S., Kolić, D.: Metoda simulacije za projektiranje brodograđevnog proizvodnog procesa. XIX Simpozij teorija i praksa brodogradnje. 07. – 09. 10. 2010. Lumbarda-Korčula, Hrvatska.

Kolacio, I., Guedes Soares, C., Prpić-Oršić, J.: Effect of water depth on ship dynamic behaviour in waves; ASDEPP Workshop, str. 55-63, (ISBN: 978-0-415-58477-7), Split, Croatia, 2010.

Matulja, D., Dejhalla, R., Bukovac,. O.: Neural Network Selection of a Maximum Efficiency Ship Screw Propeller, 13th International Congress IMAM 2009, (ISBN: 978-975-561-355-0), p. 447-451, Istanbul, 2009.

Matulja, T., Fafandjel, N., Markovina, R., Zamarin, A., Kolić, D.: Projektiranje optimalnog rasporeda proizvodnih površina brodogradilišta. XIX Simpozij teorija i praksa brodogradnje. 07. – 09. 10. 2010. Lumbarda-Korčula, Hrvatska.
Nabergoj, R., Prpić-Oršić, J., Kolacio, I.: Ship-pipe interaction during laying operation, The 13th Congress IMAM 2009., pp. 717-722, (ISBN: 978-975-561-355-0), Istanbul, Turkey, 2009.

Prpić-Oršić, J., Faltinsen, O.M.: Speed loss calculation in a Seaway, The 13th Congress IMAM 2009., pp. 393-400, (ISBN: 978-975-561-355-0), Istanbul, Turkey, 2009.

Ribeiro e Silva, S., Guedes Soares, C., Turk, A., Prpić-Oršić, J., Uzunoglu, E.: Experimental assessment of the parametric rolling on a c11 class containership, Proceedings of HYDRALAB III Joint Transnational Access User Meeting– February 2010, pp. 267-270, (ISBN: 978-3-00-030141-4), Hanover, Germany, 2010.

Rubeša, R., Fafandjel, N., Matulja, T.: New approach to pipeline design and its onboard installation drawings usage (ISBN Set 978-975-561-355-0, ISBN Vol.II 978-975-561-357-4), Vol. II, 723-728, ITU Faculty of Naval Architecture and Ocean Engineering, Istanbul, 2009.

Turk, A., Prpić-Oršić J., Ribeiro e Silva, S., Guedes Soares, C.: The estimation methods for parametric rolling prediction, ASDEPP Workshop, str. 43-54, (ISBN: 978-0-415-58477-7), Split, Croatia, 2010.

Turk, A., Ribeiro e Silva, S., Guedes Soares, C., Prpić-Oršić, J.: An investigation of dynamic instabilities caused by parametric rolling of C11 class containership, The 13th Congress IMAM 2009., pp. 167-175, (ISBN: 978-975-561-355-0), Istanbul, Turkey, 2009.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Helsinki University of Technology, Espoo-Helsinki, Finland/Finska.

Norwegian University of Science and Technology, Center of Ships and Ocean Structures, Norwegian Center of Excelence, Trondheim, Norway/Norveška.

Technical University of Lisbon, Instituto Superior Tecnico, Lisabon, Portugal.

University of Technology, Krakow/Krakov, Poland/Poljska.

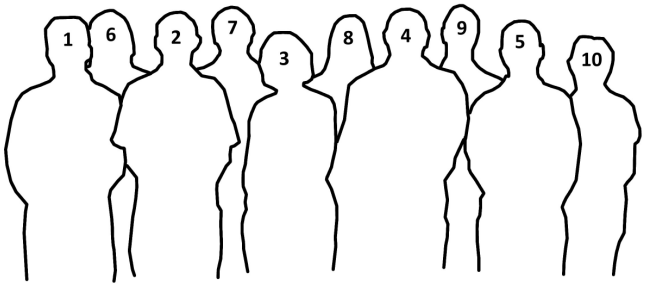
University of Trieste, Department of Naval Architecture and Ocean Engineering, Trieste/Trst, Italy/Italija.

5.3. ZAVOD ZA ELEKTROENERGETIKU / DEPARTMENT OF ELECTRICAL POWER ENGINEERING

Predstojnik Zavoda / Department Head:
Doc. dr. sc. / Assist. Prof. D. Sc. Srđan Skok

URL: http://www.riteh.uniri.hr/ustroj/zee/

1. Vibor Belašić
2. Juraj Šimunić
3. Dragica Jurin
4. Srđan Skok
5. Dubravko Franković
6. Aleksandra Kalinić
7. Livio Šušnjić
8. Andrea Andrijašević
9. Vedran Kirinčić
10. Marijana Živić Đurović



DJELATNICI

REDOVITI PROFESORI

Juraj Šimunić
osnove elektrotehnike, elektroenergetska postrojenja, vođenje elektroenergetskog sustava, procesna informatika, istosmjerni razvodi EEP-a

IZVANREDNI PROFESORI

Livio Šušnjić
električni strojevi, elektromagnetski proračuni, analiza konačnim elementima

DOCENTI

Srđan Skok
zaštita elektroenergetskog sustava, električna postrojenja, stabilnost elektroenergetskog sustava, nadzor i vođenje elektroenergetskog sustava u realnom vremenu, sustavi besprekidnih napajanja, obnovljivi izvori energije, brodska elektrotehnika

VIŠI PREDAVAČI

Branka Dobraš
nadzor i vođenje elektroenergetskog sustava, modeliranje procesnih informacija, objektno orijentirano modeliranje

Marijana Živić Đurović
kvaliteta električne energije, pouzdanost, mikromreže

VIŠI ASISTENTI

Dubravko Franković
elektroenergetika, električna postrojenja, projektiranje, uzemljenje

FACULTY AND STAFF

PROFESSORS

Juraj Šimunić
fundamentals of electrical engineering, electrical power plant, electric power management systems, process informatics of electrical power system, DC distribution

ASSOCIATE PROFESSORS

Livio Šušnjić
electrical machines, electromagnetic calculation, finite element analysis

ASSISTANT PROFESSORS

Srđan Skok
power system protection, electric facilities, power system stability, power system real time monitoring and control, uninterruptible power supplies, renewable energy sources, ship electrical engineering

SENIOR LECTURER

Branka Dobraš
electric power system control, process information modelling, object oriented modelling

Marijana Živić Đurović
quality of electricity supply, reliability, microgrids

SENIOR ASSISTANTS

Dubravko Franković
power engineering, electric installations, electrical design, grounding

ASISTENTI

Vedran Kirinčić
zaštita elektroenergetskog sustava, električna postrojenja, stabilnost elektroenergetskog sustava

Saša Sladić
energetska elektronika, elektromotorni pogoni, mehatronika, nove tehnologije i obnovljivi izvori energije

ZNANSTVENI NOVACI

Vibor Belašić
sustavi automatizacije elektroenergetskih postrojenja, *web design, gis, scada,* procesne informacije

Aleksandra Kalinić
vođenje elektroenergetskog sustava, tržište električnom energijom, poslovanje električnog sustava i trgovanje energijom

Andrea Andrijašević
akustika prostora, elektroakustički pretvarači

ADMINISTRATIVNO OSOBLJE

Dragica Jurin
administrativna tajnica

ASSISTANTS

Vedran Kirinčić
power system protection, electric facilities, power system stability

Saša Sladić
power electronic, electric drives, mechatronics, new technologies and renewable energy sources

JUNIOR RESEARCHERS

Vibor Belašić
power system automation, web design, gis, scada, processing informations

Aleksandra Kalinić
power system operation, electricity market, system management and energy trading

Andrea Andrijašević
room acoustics, electroacoustic transducers

ADMINISTRATIVE STAFF

Dragica Jurin
administrative secretary

NASTAVA

Nastava se izvodi iz područja osnova elektrotehnike, elektroenergetike i elektrostrojarstva.

KOLEGIJI NA SVEUČILIŠNOM PREDDIPLOMSKOM STUDIJU

Električna postrojenja
Električni strojevi
Elektroenergetske mreže
Elektromotorni pogoni
Elektrotehnika R
Energetska elektronika
Osnove elektrotehnike I
Osnove elektrotehnike II

KOLEGIJI NA SVEUČILIŠNOM DIPLOMSKOM STUDIJU

Brodska elektrotehnika
Elektrane
Elektroenergetski sustavi
Modeliranje procesne informatike električnih postrojenja
Numerička analiza u elektromagnetizmu
Prijenos i distribucija električne energije
Projektiranje električnih postrojenja
Teorijska elektrotehnika
Upravljanje elektromotornim pogonima
Vođenje elektroenergetskog sustava
Zaštita i automatika električnih postrojenja

KOLEGIJI NA STRUČNOM STUDIJU

Električne energetske mreže
Elektroenergetska postrojenja
Elementi elektroenergetskih postrojenja
Izgradnja i održavanje elektroenergetskih postrojenja
Osnove električnih strojeva
Osnove elektrotehnike
Osnove elektrotehnike ST I

EDUCATION

Lectures in the field of electrical engineering fundamentals, power engineering and electrical machines and drives

UNDERGRADUATE COURSES

Electric Power Substations
Electrical Machines
Electric Power Networks
Electrical Drives
Electrical Engineering R
Power Electronics
Fundamentals of Electrical Engineering I
Fundamentals of Electrical Engineering II

GRADUATE COURSES

Ships Electrical Engineering
Power Plants
Electric Power Systems
Modeling of Process Informatics in Power System
Numerical Analysis in Electromagnetics
Electrical Power Transfer and Distribution
Electric Power Substation Design
Theoretical Electrical Engineering
Control of Electrical Drives
Power System Control
Power System Protection and Automation

VOCATIONAL COURSES

Electrical Power Networks
Electrical Power System
Electric Power Station Equipment
Electric Power Plant Building and Maintenance
Fundamentals of Electrical Machines
Fundamentals of Electrical Engineering
Fundamentals of Electrical Engineering ST I
Fundamentals of Electrical Engineering ST II
Fundamentals of Power Electronics

Osnove elektrotehnike ST II
Osnove energetske elektronike
Osnove projektiranja elektroenergetskih postrojenja
Stručna praksa I
Stručna praksa II
Zaštita električnih postrojenja

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU
Automatizacija postrojenja i sustava
Modeli stohastičkih procesa informacija

Fundamentals of Electric Power Substation Design
Professional practice I
Professional practice II
Protective System in Electrical Power System

POSTGRADUATE COURSES
Plant and System Automatization
Models of Stochastic Information Processes

PROJEKTI

Otvoreno tržište i nove tehnologije u procesnom informacijskom sustavu EES-a, 069-0361557-1615, MZOŠ, Juraj Šimunić, 2007 - 2012, znanstvenoistraživački.

Nadzor, zaštita i vođenje širokog područja elektroenergetskog sustava u okruženju dereguliranog i liberaliziranog tržišta električne energije, 0114-24/110-2006, NZZ, HEP, Srđan Skok, 2006 - 2009, znanstvenoistraživački.

Dinamička analiza pogona dijela elektroenergetskog sustava Prijenosnog područja Rijeka zasnovana na sinkroniziranim mjerenjima, HEP, Srđan Skok, 2009 - 2010, elaborat.

PROJECTS

Open market and new technologies in EPS process information system, 069-0361557-1615, Ministry of Science, Education and Sports of the Republic of Croatia, Juraj Šimunić, 2007.- 2012., research and scientific project.

Wide Area Monitoring, Protection and Control of Power System in Deregulated and Liberalized Energy Market, 0114-24/110-2006, The National Foundation for Science, Higher Education and Technological Development of the Republic of Croatia; HEP Group, Srđan Skok, 2006.- 2009., research and scientific project.

Dynamic analysis of the operation of the part of the electric power system in the transmission area Rijeka based on the synchronized measurements, HEP Group, Srđan Skok, 2009.- 2010., study.

Inteligentni sustavi u prijenosnoj elektroenergetskoj mreži, SIPS, NZZ, HEP, Srđan Skok, 2010. - 2013., znanstveno-istraživački.

Izrada matematičkog modela, algoritama i proračuna vezanih uz dizajniranje i konačnu izradu arhitekture WAM - Wide area monitoring sustava, Končar-KET, Srđan Skok, 2010 - 2011, elaborat.

Intelligent systems in the transmission electric power network, SIPS, The National Foundation for Science, Higher Education and Technological Development of the Republic of Croatia, HEP Group, Srđan Skok, 2010.- 2013, research and scientific project.

Development of mathematical model, algorithms and calculations related to design and final architecture of WAM - Wide area monitoring system, Končar-KET, Srđan Skok, 2010-2011, study.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Belašić, V., Šimunić, J., Dobraš, B.: Substation Process Information Modeling due to Technological Achievements, Standardization and Liberalization, Engineering Review, Vol. 30, No. 1, 1-131, 35-47, 2010

Skok, S., Kirincic, V., Frlan, K.: Dynamic analysis of wind farm operation integrated in power system based on synchronized measurements, Engineering Review, July 2010

Šušnjić L.: Elektromagnetski proračun i konstrukcijska izvedba beskontaktnog uzbudnog sustava, Energija, 5 (2009)

Terzija, V., Valverde, G., Cai, D., Regulski, P., Madani, V., Fitch, J., Skok, S., Begovic, M., Phadke, A.: Wide Area Monitoring, Protection and Control of Future Electric Power Networks, Proceedings of IEEE "IEEE Special Issue", June 2010

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Skok, S.: Why PMUS in Small Countries, iPCGrid 2010, San Francisco, USA, March 2010

Sladić S, Zajec P., Nedeljković D.: Transformerless Connections of Low Voltage DC Sources to Single-Phase Shunt Active Power Filter with Adaptive Filter Capacitor Voltage, SPEEDAM 2010, Pisa, 14. - 16. 06. 2010.

Šimunić J., Dobraš B., Belašić V.: Tokovi procesnih informacija EES-a u okruženju novih tehnologija i standarda, 9. savjetovanje HRO CIGRÉ, Cavtat, 8. - 12. 11. 2009.

POZVANA PREDAVANJA / INVITED LECTURES

Skok, S.: Why PMUS in Small Countries, iPCGrid 2010, San Francisco, USA, March 2010

Skok, S.: Why PMUS in Small Countries, Recent Trends in Power Grid Monitoring, London, UK, April 2010

Skok, S.: Zašto nadzor elektroenergetskog sustava na osnovi sinkroniziranih mjernih jedinica u "malim" zemljama?, MIPRO 2010, Opatija, Hrvatska, svibanj 2010.

DOMAĆI KONGRESI / DOMESTIC CONGRESSES

Skok, S., Kirinčić, V., Dereani, D.: Podešenja zaštita u kompleksu tvornica „Dalmacijacement", CIRED 2010, Umag, Hrvatska, May 2010

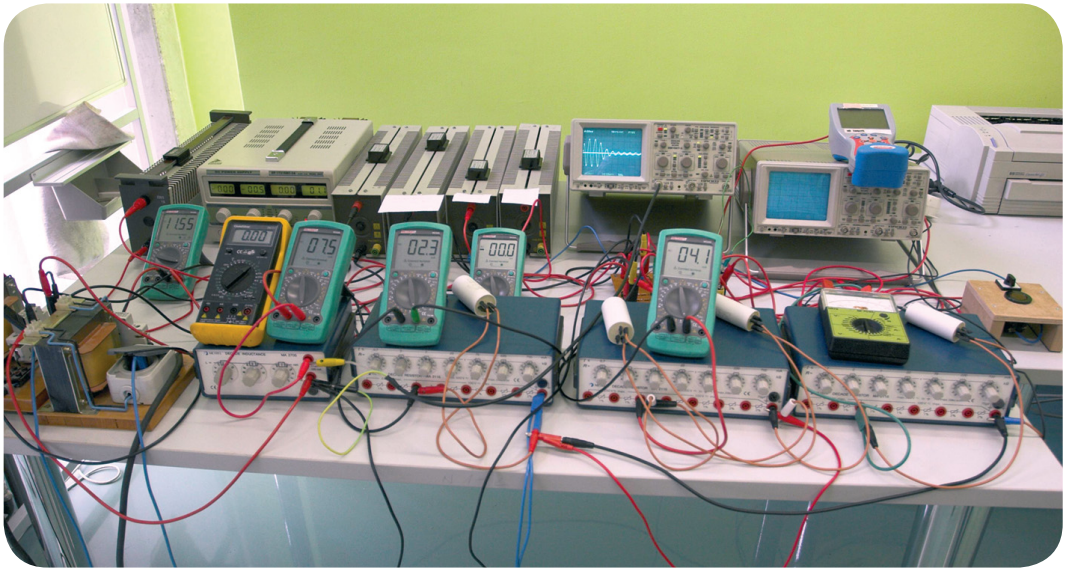
Živić Đurović, M., Kezele, B., Škrlec, D.: Primjenjivost mikromreža u distribucijskoj mreži HEP ODS-a, 2. savjetovanje HO CIRED, Umag, Hrvatska, 16. - 19. 05. 2010.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Cedrat Group, Grenoble, France/Francuska

Quanta Technology, Raleigh, USA/SAD

The University of Manchester, Manchester, UK/Velika Britanija

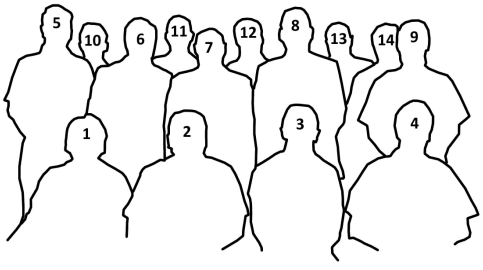


5.4. ZAVOD ZA INDUSTRIJSKO INŽENJERSTVO I MANAGEMENT / DEPARTMENT OF INDUSTRIAL ENGINEERING AND MANAGEMENT

Predstojnik Zavoda / Head of Department:
Izv. prof. dr. sc. / Assoc. Prof. D. Sc. Mladen Perinić

URL: http://www.riteh.uniri.hr/ustroj/ziim/

1. Vesna Franelić
2. Tomislav Meštrović
3. Sven Maričić
4. Hrvoje Radelja
5. Duško Pavletić
6. Milan Ikonić
7. Tonči Mikac
8. Mladen Perinić
9. Zlatan Car
10. Sandro Doboviček
11. Marko Kršulja
12. Samir Žic
13. Branimir Barišić
14. Zoran Jurković



DJELATNICI

REDOVITI PROFESORI

Zlatan Car
umjetne inteligencije, inteligentni sustavi, robotika, CNC/NC obradni strojevi, alati i naprave

Goran Cukor
napredni obradni sustavi i tehnologije, modeliranje i optimiranje obradnih procesa

Branko Katalinić
automatizacija, robotika

Tonči Mikac
organizacija i ekonomika proizvodnje, proizvodni menadžment, projektiranje proizvodnih sustava, vođenje proizvodnje računalom, CIM

IZVANREDNI PROFESORI

Branimir Barišić
mjerna tehnika i mjerna kontrola, mjerna i regulacijska tehnika, računalom podržana mjerenja, tehnologija oblikovanja deformiranjem, računalna simulacija proizvodnih procesa, modeliranje procesa obrade, deformabilnost i suvremeno oblikovanje deformiranjem, MKE u tehnologiji oblikovanja deformiranjem, neuronske mreže u tehnologiji oblikovanja deformiranjem, nehomogeno tečenje materijala.

Milan Ikonić
organizacija rada, ekonomika poslovnih sustava, projektiranje proizvodnih sustava, razvojni, projektni i proizvodni menadžment

FACULTY AND STAFF

PROFESSORS

Zlatan Car
artificial intelligence, intelligent systems, robotics, CNC/NC machines, jigs/fixtures and tools

Goran Cukor
advanced manufacturing systems and technology, modelling and optimisation of machining processes

Branko Katalinić
automation, robotics

Tonči Mikac
organization and economics of production, production management, production systems planning, computer aided production control, CIM

ASSOCIATE PROFESSORS

Branimir Barišić
measuring technique and measuring inspection, measuring and regulation technique, computer aided measuring, forming technology, computational simulation of production processes, modeling of machining processes, formability and modern forming technology, FEM in the forming technology, neural network in forming technology, nonhomogenous yielding of materials.

Milan Ikonić
work and production organization, business economy, designing of production systems, development management, project management and production management

Duško Pavletić
upravljanje kvalitetom, osiguranje i nadzor kvalitete, sustavi kvalitete, zavarivačko inženjerstvo

Mladen Perinić
projektiranje tehnoloških procesa, CAM, CAP, CAD/NC-CIM, modeliranje, simulacija i optimizacija tehnoloških procesa

DOCENTI

Zoran Jurković
alatni strojevi i oprema; CAD/CAM/CAE; dizajn alata i naprava; modeliranje, simulacija i optimizacija procesa obrade; planiranje eksperimenta.

ASISTENTI

Sandro Doboviček
projektni menadžment, proizvodni menadžment, projektiranje proizvodnih sustava, proizvodni sustavi

Hari Hadžić
proizvodni menadžment, znanstveni menadžer

Sven Maričić
simulacija i optimizacija tehnoloških procesa

Hrvoje Radelja
osnove tehnoloških procesa, CAD/CAPP/CAM

Samir Žic
organizacija i ekonomika poslovnih sustava, organizacija i ekonomika, planiranje i upravljanje proizvodnjom

ZNANSTVENI NOVACI

Igor Džambas
vođenje proizvodnje računalom, CIM, organizacija i ekonomika proizvodnje, računalom integrirana proizvodnja,

Duško Pavletić
quality management, quality assurance and control, quality systems, welding engineering

Mladen Perinić
process planning, CAM, CAP, CAD/NC-CIM, modeling, simulation and processes plans optimization

ASSISTANT PROFESSORS

Zoran Jurković
machine tools & equipment; CAD/CAM/CAE; design of tools and fixtures; modeling, simulation and optimization of machining processes; design of experiments.

ASSISTANTS

Sandro Doboviček
project management, production management, manufacturing systems project, manufacturing systems

Hari Hadžić
production management, scientific manager

Sven Maričić
simulation and process planning optimization

Hrvoje Radelja
basics of technological processes, CAD/CAPP/CAM

Samir Žic
organization and economics of enterprises, organization and economics, production planning and management

JUNIOR RESEARCHERS

Igor Džambas
computer aided manufacturing, CIM, manufacturing economics and organization,

organizacija i upravljanje proizvodnjom

Marko Kršulja
mjerna tehnika, tehnologija oblikovanja, tehnologija obrade II

Tomislav Meštrović
napredni obradni sustavi i tehnologije, modeliranje i optimiranje obradnih procesa

Aleksandar Vuković
projektiranje proizvodnih sustava, proizvodni sustavi, projektni menadžment, proizvodni menadžment

ADMINISTRATIVNO OSOBLJE

Vesna Franelić
administrativna tajnica

computer integrated manufacturing, organization and production management

Marko Kršulja
measurement techniques, technology of forming, technology of processing II

Tomislav Meštrović
advanced manufacturing systems and technologies, modelling and optimization of machining processes

Aleksandar Vuković
manufacturing systems project, manufacturing systems, project management, manufacturing management

ADMINISTRATIVE STAFF

Vesna Franelić
administrative secretary

NASTAVA

Nastava iz područja: mjerne tehnike i sustava kvalitete, organizacije i operacijskog menadžment, proizvodne tehnologije, proizvodne opreme i robotike, projektiranja procesa

KOLEGIJI NA SVEUČILIŠNOM PREDDIPLOMSKOM STUDIJU

Automatizacija
Mjerna tehnika
Organizacija i ekonomika poslovnih sustava
Osiguranje kvalitete
Poslovno komuniciranje
Proizvodne tehnologije
Proizvodni strojevi, alati i naprave
Tehnološki procesi
Zavarivanje I

KOLEGIJI NA SVEUČILIŠNOM DIPLOMSKOM STUDIJU

CAD/CAPP/CAM
CNC/NC obradni strojevi
Fleksibilni i inteligentni sustavi
Industrijska robotika
Management i organizacijski razvoj
Marketing
Mjerna i regulacijska tehnika
Napredni proizvodni postupci
Obrada odvajanjem čestica
Organizacija proizvodnje
Planiranje i upravljanje proizvodnjom
Poslovno računovodstvo
Primjena umjetne inteligencije
Proizvodni management
Projektiranje proizvodnih sustava
Projektiranje tehnoloških procesa
Projektni management
Računalna simulacija proizvodnih procesa
Računalom integrirana proizvodnja

EDUCATION

Lectures in the field of: measuring technique and quality systems, organization and operational management, manufacturing technologies, manufacturing equipments and robotics, process planning

UNDERGRADUATE COURSES

Automation
Measuring Technique
Organization and Economics of Enterprises
Quality Assurance
Business Communication
Manufacturing Technologies
Production Machines, Jigs, Fixtures and Tools
Technological Processes
Welding Engineering I

GRADUATE COURSES

CAD/CAPP/CAM
CNC/NC Machine Tools
Flexible and Intelligent Systems
Industrial Robotics
Management and Organizational Development
Marketing
Measuring and Regulation Technique
Advanced Manufacturing Processes
Machining Processes
Production Organization
Production Planning and Management
Accounting
AI Implementation
Production Management
Designing of Production Systems
Process Planning
Project Management
Computer Simulation of Production Processes
Computer Integrated Manufacturing

Revizija i analiza poslovanja
Tehnička logistika
Tehnologija oblikovanja
Upravljanje kvalitetom
Zavarivanje II

Review and Analyzing of Business
Technical Logistics
Forming Technology
Quality Engineering
Welding Engineering II

KOLEGIJI NA STRUČNOM STUDIJU

Alati i naprave
Automatizacija ST
Mjerna tehnika ST
Obradni strojevi
Organizacija i ekonomika
Organizacija i upravljanje proizvodnjom
Osiguranje kvalitete ST
Proizvodni sustavi
Tehnologija obrade I
Tehnologija obrade II
Tehnološki procesi ST
Zavarivanje

VOCATIONAL COURSES

Tools, Jigs and Fixtures
Automation ST
Measuring Technique ST
Machine Tools
Organization and Economics
Organization and Production Management
Quality Assurance ST
Production Systems
Manufacturing Technology I
Manufacturing Technology II
Technological Processes ST
Welding Engineering

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Deformabilnost i suvremeno oblikovanje deformiranjem
Primjenjena teorija plastičnosti u procesima oblikovanja
Modeliranje procesa obrade
Planiranje i vođenje proizvodnje
Razvojni i proizvodni management
Strateško planiranje
Izabrana poglavlja iz fleksibilnih proizvodnih sustava
IP iz nekonvencionalnih postupaka obrade
IP iz konvencionalne obrade odvajanjem čestica
Metode simulacije u proizvodnji
Inteligentni proizvodni sustavi
IP iz fleksibilnih proizvodnih sustava
Upravljanje kvalitetom
Inženjerstvo kvalitete
CAM, CAP, CAD/NC-CIM
Optimizacija tehnoloških procesa

POSTGRADUATE COURSES

Formability and Modern Forming Technology
Application of Plasticity Theory in Forming Processes
Modeling of Machining Processes
Planning and Processing of Manufacture
Production and Development Management
Strategic Planning
Chosen Chapters on Flexible Production Systems
Selected Chapters on Nonconventional Machining Processes
Selected Chapters on Conventional Machining Processes
Simulation Methods in Production
Intelligent Manufacturing Systems
Selected Chapters on Flexible Manufacturing Systems
Quality Management
Quality Engineering
CAM, CAP, CAD/NC-CIM
Processes Plans Optimization

ZNANSTVENOISTRAŽIVAČKI RAD

Industrijsko inženjerstvo: mjerna tehnika i mjerna kontrola, mjerna i regulacijska tehnika, računalom podržana mjerenja, tehnologija oblikovanja deformiranjem, računalna simulacija proizvodnih procesa, modeliranje procesa obrade, deformabilnost i suvremeno oblikovanje deformiranjem, primijenjena teorija plastičnosti u procesima oblikovanja, MKE u tehnologiji oblikovanja deformiranjem, neuronske mreže u tehnologiji oblikovanja deformiranjem, nehomogeno tečenje materijala.

Organizacija rada, projektiranje proizvodnih sustava, menadžment.

Proizvodno strojarstvo i druge temeljne tehničke znanosti.

Primjena umjetne inteligencije u strojarstvu, inteligentni i fleksibilni sustavi, simulacija, optimizacija i automatizacija procesa i sustava, robotika, računalno upravljani sustavi i strojevi, optimizacija dizajna alata i naprava.

Projektiranje tehnoloških procesa.

RESEARCH AND DEVELOPMENT ACTIVITIES

Industrial engineering: Measuring Technique and Measuring Inspection, Measuring and Regulation Technique, Computer Aided Measuring, Forming Technology, Computational Simulation of Production Processes, Modeling of Machining Processes, Formability and Modern Forming Technology, Application of Plasticity Theory in Forming Processes, FEM in the Forming Technology, Neural Networks in the Forming Technology, Nonhomogenous Yielding of Materials.

Mechanical engineering design, Designing of production systems, Management

Production engineering and other fundamental technical sciences.

AI in mechanical engineering, Intelligent and flexible systems; simulation, optimization and automation of processes and systems, robotics, computer controlled systems and machines, design optimization of jigs, fixtures and tools.

Process planning.

PROJEKTI

Savjetovanje pri uspostavi sustava upravljanja kvalitetom prema normi ISO 9001, TOME d.o.o., Duško Pavletić, 2008 - 2011, savjetodavni.

Istraživanje visokoproduktivnih obrada na inteligentnim obradnim sustavima, 069-0692976-1738, MZOŠ, suradnik Goran Cukor, 2007 - 2012, znanstvenoistraživački.

PROJECTS

Quality management system implementation in accordance with the ISO 9001, TOME d.o.o., Duško Pavletić, 2008.- 2011., consulting project.

Investigation of high productivity machining on intelligent machining systems, 069-069-2976-1738, Ministry of Science, Education and Sports of the Republic of Croatia, partner Goran Cukor, 2007-2012, research and

Projektiranje modela organizacijskih struktura kooperacijskih mreža, 069-0000000-3264, MZOŠ, Goran Cukor, 2008 - 2011, znanstvenoistraživački.

Numeričko modeliranje, simulacija i optimizacija u oblikovanju lima, 069-1201787-1754, MZOŠ, Branimir Barišić, 2007 - 2011, znanstvenoistraživački.

Modeliranje naprednih proizvodnih struktura kod inteligentne proizvodnje, 069-0692976-1740, MZOŠ, Tonči Mikac, 2007 - 2010, znanstvenoistraživački.

Obrazovanje i obučavanje ustanova u upravljanju kvalitetom i mjeriteljstvu, IB_JEP-41120-2006, Europska komisija, suradnik Duško Pavletić, 2007 - 2010, Tempus.

Projekt utvrđivanja normi manipulacija za trgovačko društvo Luka Rijeka d.d., RN 23-001/05, Luka Rijeka d.d., Tonči Mikac, 2005 - 2010, elaborat.

WBC – Mreža korisnika virtualne proizvodnje – potpora cjelovitosti trokuta znanja, 144684-Tempus-2008-RS-JPHES, Europska komisija, suradnik Zoran Jurković, 2009 - 2012, Tempus IV.

scientific project.

Designing models of the organization structures of co-operative networks, 069-0000000-3264, Ministry of Science, Education and Sports of the Republic of Croatia, Goran Cukor, 2008.– 2011, research and scientific project.

Numerical modelling, simulation and optimization in sheet metal forming, 069-1201787-1754, Ministry of Science, Education and Sport of the Republic Croatia, Branimir Barišić, 2007.-2011., research and scientific project.

The modeling of advanced production structures at intelligent production, 069-0692976-1740, Ministry of Science, Education and Sport of the Republic of Croatia, Tonči Mikac, 2007.- 2010., research and scientific project.

Education and Training of Institutions in Quality Management and Metrology, IB_JEP-41120-2006, European Commission, partner Duško Pavletić, 2007.- 2010., Tempus project.

Measuring and setting of time norms for cargo manipulation in Port of Rijeka, Port of Rijeka inc., Tonči Mikac, 2005.- 2010., study.

WBC Virtual Manufacturing Network - Fostering an Integration of the Knowledge Triangle 144684-Tempus-2008-RS-JPHES, European Commission, partner Zoran Jurković, 2009.- 2012., Tempus IV project.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Barišić, B., Mamuzić, I., Nastran, M.: Improvement in Sheet Metal Forming Technology due to the Use of Different Software Aproaches, Transactions of FAMENA, 34 (2010), 1; 29-38

Car, Zlatan; Barišić, Branimir; Ikonić, Milan, GA Based CNC Turning Center Exploitation Process Parameters Optimization., Metalurgija. 48 (2009) , 1; 47-50

Car, Zlatan; Barišić, Branimir; Rucki, Miroslaw: Emergent Synthesis Based Multi-Objective Design of the Manufacturing System Shop-Floor, Strojniški vestnik. 55 (2009) , 9; 523-530

Car, Z., Ohkura, K., Barišić, B.: Application of Multi-Agent Technology and Heterarhical Architecture for Production Scheduling; Engineering review : znanstveni Časopis za nove tehnologije u strojarstvu, brodogradnji i elektrotehnici (1330-9587), 29 (2009), 1; 1-10

Jermak, C. J., Barišić, B., Rucki, M.: Correction of the Metrological Properties of the Pneumatic Length Measuring Gauges through Changes of the Measuring Nozzle Head Surface Shape, Measurement, (2010)

Jurković, Z., Brezočnik, M., Grizelj, B., Mandić, V.: Optimization of Extrusion Process by Genetic Algorithms and Conventional Techniques, Tehnički vjesnik/Technical Gazette, Vol. 16, No. 4, 2009, pp. 27-33, ISSN 1330-3651, Strojarski fakultet u Slavonskom Brodu, Elektrotehnički fakultet u Osijeku, Građevinski fakultet u Osijeku, Slavonski Brod

Matysiak, W., Barišić, B., Mamuzić, I.: Elaboration of The Technology of Forming a Conical Product of Sheet Metal, Metalurgija, 49 (2010) , 1; 13-18

Rucki, M., Barišić, B., Varga, G.: Air Gauges as a Part of the Dimensional Inspection Systems, Measurement, 43 (2010) , 1; 83-91

Sekulić, M., Jurković, Z., Hadžistević, M., Gostimirović, M.: »The Influence of Mechanical Properties of Workpiece Material on the Main Cutting Force in Face Milling«, Metalurgija/Metallurgy, Vol. 49, No. 4, 2010, pp. 339-342, ISSN 0543-5846, Hrvatsko metalurško društvo (HMD), Zagreb.

Sekulić, M., Kovač, P., Gostimirović, M., Jurković, Z., Savković, B.: »A New Thrust Force Model for Drilling Process«, Journal of Production Engineering, Kovač, P. (Ed.), vol.13, No.1, 2010, pp. 19-22, ISSN 1821-4932, Faculty of Technical Sciences, Department of Production Engineering, Novi Sad, Serbia.

Trbojević, N., Ikonić, M., Džambas, I.: Description for analysing and model of noise reduction in the turbine facility of hydroelectric power plant, Engineering review: znanstveni časopis za nove tehnologije u strojarstvu, brodogradnji i elektrotehnici. 29 (2009) , 2; 63-68

Žic, S., Hadžić, H., Ikonić, M.: Portfolio analysis – a useful management tool, Tehnički vjesnik: znanstveno-stručni časopis tehničkih fakulteta Sveučilišta u Osijeku. 16 (2009) , 4; 101-105

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Barišić, B., Rucki, M., Čep, R., Čepová, L., Náprstková, N.: Application of Total Station for Measuring Purpose in Shipbuilding Industry, New Technology Knowledge and Information, Náprstková, Natasa ; Novák, Martin (ur.). Ústi nad Labem : Department of Technology and Material Engineering, Faculty of Production Technology and Management, J.E. Purkyne University in Ústi nad Labem, Czech Republic., 2010.

Bukša, T., Pavletić, D., Soković, M.: Unapređenje osiguranja kvalitete izrade cijevi u bordogradnji primjenom FMEA metode, The 7th International Convention on Quality - JUSK 2010, Beograd, svibanj/lipanj 2010.

Buljan, S., Jurković, Z.: Dependence of Hardness of the Material from the Detonation Velocity in the Deep Drawing Explosion, Annals of DAAAM for 2009, Proceedings of the 20th International DAAAM Symposium, Volume 20, No.1, ISSN 1726-9679, ISBN 978-3-901509-70-4, Published by DAAAM International, Vienna, Austrija, EU, 2009, 4th International Conference UPS-2009 - Business Systems Management, Majstorović, V. & Katalinić, B. (Ed.), pp. 1817-1818, Mostar, Bosnia and Herzegovina, December 03-05th, 2009, DAAAM International, Vienna-Mostar, Austria-Bosnia and Herzegovina.

Deluka-Tibljaš, A., Pavletić, D.: Development of the quality assurance system at the University of Rijeka, Creativity and Diversity Challenges for quality assurance beyond 2010, Proceedings, Copenhagen, Denmark, 19. – 21. November, 2009.

Hohnjec, M., Soković, M., Pavletić, D.: Identifying and selecting six sigma projects, Fifth International Working Conference Total quality management - advanced and intelligent approaches, Proceedings, Belgrade, Serbia, May 31st - June 4th, 2009., str. 405-409.

Jurković, Z., Brezočnik, M., Sekulić, M.: Optimization of Cutting Conditions for Surface Roughness Based on Orthogonal Arrays, 13th International Research/Expert Conference - Trends in the Development of Machinery and Associated Technology TMT 2009, Vivancos, J., Ekinović, S. & Yalcin, S. (Ed.), pp. 41-44, ISSN 1840-4944, Hammamet, Tunisia, October 16-21st, 2009, Faculty of Mechanical Engineering, Escola Tecnica Superior D'Enginyeria Industrial de Barcelona, Bahçeşehir University Istanbul, Zenica-Barcelona-Istanbul

Kršulja, M., Barišić, B., Kudlaček, J.: Assembly setup for modular fixture machining process, CADAM, Advanced Engineering, 3(2009)1, ISSN 1846-5900

Kršulja, M., Barišić, B., Kudlaček, J.: Comprehensive study of strip selection and weld errors in a steel tube ERW welding process The 20th International DAAAM Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28th November 2009, Vienna, Austria

Maričić, S., Radelja, H., Perinić, M.: Comparison and Analyze of 3D Digital Model, The 9th International Conference Modern Technologies in Manufacturing MTeM 2009, Romania.

Maričić, S., Kovačević Pavičić, D., Gržić, R.: Analysis of Mandible Structure Geometry by Different Numerical Methods, 2. Međunarodni kongres Hrvatskog društva za stomatološku protetiku I Hrvatske stomatološke komore - DENTEX, 11. – 12th December 2009, Zagreb, Croatia.

Maričić, S., Perinić, M., Gržić, R., Kovačević Pavičić, D.: Comparison of Different Mesh Density Parameters on Mandible Segment, The 88th International Association for Dental Research Congress, 14 – 17th July 2010., Barcelona, Spain.

Maričić, S., Perinić, M., Kovačević Pavičić, D., Gržić, R.: Classification and Elimination of Errors During the Radiological Recording, The 3rd International Conference on Additive Technologies – iCAT 2010, 22 – 24th September 2010, Nova Gorica, Slovenia.

Mandić, V., Adamović, D., Jurković, Z., Stefanović, M., Živković, M., Ranđelović, S., Marinković, T.: »CAE Analysis of Ironing Process with Experimental Verification«, International Scientific Conference MOTSP 2010 - Management of Technology – Step to Sustainable Production, Ćosić, P, Dolinšek, S., Barić, G., Đukić, G. (Ed.), pp. 255-256, ISBN: 978-953-7738-09-9, Rovinj, Croatia, June 2-4th, 2010, Faculty of Mechanical Engineering and Naval Architecture University of Zagreb, Croatia & Faculty of Management University of Primorska, Koper, Slovenia.

Pavletić, D., Soković, M.: Quality improvement model at the manufacturing process preparation level, 4th International Conference ICQME 2009, Proceedings, Paris, France, 27.-28. August 2009., str. 414. – 422.

Pavletić, D., Soković, M., Bukša, T.: Application of Risk Assessment Tool in Shipyard Quality Management, 13th International Congress, International Maritime Association of Mediterranean, IMAM2009, Istanbul, Turkey, 12-15 October 2009., str. 1099-1106.

Pavletić, D., Šuman, S.: Utjeca implementacije sustava za upravljanje voznim parkom na kvalitetu poslovanja, 11. međunarodni Simpozij o kvaliteti "Kvaliteta, konkurentnost i održivost", Sv. Martin na Muri, ožujak 2010.

Segan, D., Kršulja, M., Barišić, B., Gyenge, Cs.: Flexible Program for continuous Temperature Monitoring with the Use of a Thermocouple, The 9th International Conference Modern Technologies in Manufacturing MTeM 2009.

Sekulić, M., Kovač, P., Gostimirović, M., Jurković, Z., Savković, B.: The Thrust Force Structure in Drilling, 10th International Scientific Conference on Flexible technologies - MMA 2009, Ćosić, I. (Ed.), pp. 72-75, ISBN 978-86-7892-223-7, Novi Sad, Serbia, October 9-10th, 2009, Department of Production Engineering, Faculty of Technical Sciences, Novi Sad

Sokovic, M., Buksa, T., Pavletic, D.: Shipbuilding Pipeline Production Quality Improvement, Achievements in Mechanical and Materials Engineering, Gliwice-Wieliczka-Zakopane, June 2010.

Soković, M., Pavletić, D.: Seven quality tools in continuous improvement process,, Fifth International Working Conference Total quality management - advanced and intelligent approaches, Proceedings, Belgrade, Serbia, May 31st - June 4th, 2009., str. 229-236.

Vučković, Ž., Vidolin, T., Štimac, S, Pavletić, D.: Naprave za pripremu spojeva za zavarivanje u brodogradnji, Zbornik, 5. Međunarodno znanstveno-stručno savjetovanje Robotizacija i automatizacija u zavarivanju i ostalim tehnikama, Slavonski Brod, 11. – 13. studenoga, 2009.

Žic, S., Mikac, T., Doboviček, S.: Application of ADL matrix in developed industrial companies, Annals of DAAAM for 2009 & Proceedings The 20th International DAAAM Symposium "Intelligent Manufacturing & Automation: Theory, Practice & Education" 25-28th November 2009, Vienna, Austria / Katalinić, Branko (ur.). Vienna : DAAAM International, Vienna, 2009. 677-678

Žic, Samir; Ikonić, Milan; Gljuščić, Milan: Human resource management and NHS scheme of job evaluation // Proceeding of International Conference on Innovative Technologies, In-Tech 2010 / Kudlaček, Jan; Barišić, Branimir; Velay, Xavier; Ohkura, Kazuhiro (ur.). Prague: Kudlaček, Jan, 2010. 231-233 (međunarodna recenzija, objavljeni rad, znanstveni).

MONOGRAFIJE / MONOGRAPHS

Barišić, B.: Concurrent Product and Technology Development, ISBN: 978-953-96899-9-3, Fintrade & Tours d. o. o, Rijeka, 2009

Mandić, V., Jurković, Z., ... [et al.]: WBC Regional Model of University-Enterprise Cooperation, Mandić, V. (Ed.), pp.125, ISBN:978-86-81037-27-0, University of Kragujevac, Kragujevac, 2010

KNJIGE / BOOKS

J. Novak-Marcinčin, I. Kuric, T. Mikac, B. Barišić: Computer Support for Improvement of Engineering and Manufacturing Activities, TU Košice, Faculty of Manufacturing Technology in Prešov, Prešov, ISBN 978-953-6326-63-1, 2009.

T. Mikac, M. Ikonić: Proizvodni management, Tehnički fakultet Sveučilišta u Rijeci, Fintrade & Tours d.o.o. Rijeka, Rijeka, ISBN 978-953-6326-57-0, 2010.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Budapest University of Technology and Economics, Department of Manufacturing Engineering, Budapest/Budimpešta, Hungary/Mađarska.

Department of Electrical and Electronic Engineering, Faculty of Engineering, Setsunan University Poznan Institut für Fertigungstechnik, Vienna University of Technology.

Kielce University of Technology, Chair of Mechanical Technology and Metrology, Kielce, Poland/ Poljska.

Manufacturing Systems Laboratory, Graduate School of Engineering, Hiroshima University/ Japan.

Poznan University of Technology, Institute of Measurement, Poznan/Poznanj, Poland/Poljska.

Research into Artifacts, Center for Engineering, The University of Tokyo/Japan.

Technical University in Košice, Faculty of Manufacturing Technologies with seat in Preshov, Slovakia/Slovačka.

University of Ljubljana, Faculty of Mechanical Engineering, Ljubljana, Slovenia/Slovenija.

University of Novi Sad, Department for Material Forming Technologies and Surface Engineering, Novi Sad, Serbia/Srbija.

University of Novi Sad, Faculty of technical sciences, Department of production engineering, Novi Sad, Serbia/Srbija.

University of Technology, Institute of Mechanical Technology, Poznan/Poznanj, Poland/Poljska.

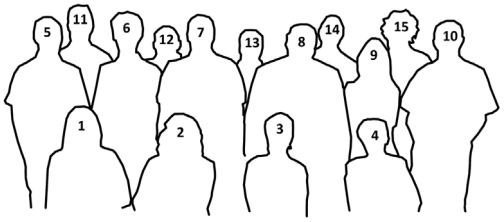
University of Žilina, Department. of Machining and Automation, Zilina/Žilina, Slovakia/ Slovačka.

5.5. ZAVOD ZA KONSTRUIRANJE U STROJARSTVU / DEPARTMENT OF MECHANICAL ENGINEERING DESIGN

Predstojnik Zavoda / Department Head:
Red. prof. dr. sc. / Full Prof. D. Sc. Saša Zelenika

URL: http://www.riteh.uniri.hr/ustroj/zks/

1. Marina Franulović
2. Marija Kura
3. Dubravka Siminiati
4. Gordana Marunić
5. Robert Basan
6. Branimir Rončević
7. Saša Zelenika
8. Boris Obsieger
9. Tea Marohnić
10. Neven Lovrin
11. Vladimir Glažar
12. Sanjin Troha
13. Željko Vrcan
14. Goran Gregov
15. David Blažević



DJELATNICI

REDOVITI PROFESORI

Božidar Križan
konstrukcijski elementi, konstruiranje i oblikovanje proizvoda

Gordana Marunić
inženjerska grafika, dokumentiranje, tehničko crtanje, oblikovanje pomoću računala, inženjerska vizualizacija

Boris Obsieger
konstrukcijski elementi, konstrukcijski elementi robota, prijenosnici snage, tribologija, metoda rubnih elemenata, numeričke metode u konstruiranju

Dubravka Siminiati
elementi strojeva, prijenosnici snage, hidraulika i pneumatika

Saša Zelenika
precizno inženjerstvo, tehnologija mikrosustava, MEMS i NEMS, sustavi žetve energije, mjerni sustavi, konstrukcijski elementi

IZVANREDNI PROFESORI

Neven Lovrin
konstrukcijski elementi, mehanički prijenosnici snage, transportna sredstva u industriji, inženjerska etika

DOCENTI

Robert Basan
konstrukcijski elementi, mehatronika, CAE, zamor materijala

Marina Franulović
konstrukcijski elementi, konstruiranje

FACULTY AND STAFF

PROFESSORS

Božidar Križan
machine elements, systematic product design

Gordana Marunić
engineering graphics, documenting, technical drawing, modelling by computer, engineering visualization

Boris Obsieger
machine elements, construction elements of robots, power transmitting, tribology, boundary elements method, numerical methods in mechanical engineering design

Dubravka Siminiati
machine elements, mechanical power transmissions, hydraulics and pneumatics

Saša Zelenika
precision engineering, micro-systems technologies, MEMS and NEMS, energy scavenging devices, measurement systems, machine elements

ASSOCIATE PROFESSORS

Neven Lovrin
machine elements, mechanical power transmissions, industrial transport equipment and devices, engineering etics

ASSISTANT PROFESSORS

Robert Basan
machine elements, mechatronics, CAE, material fatigue

Marina Franulović
machine elements, design in mechanical engineering

ASISTENTI

Kristina Buljanović
konstrukcijski elementi

Vladimir Glažar
inženjerska grafika, dokumentiranje, tehničko crtanje, oblikovanje pomoću računala, inženjerska vizualizacija

Tea Marohnić
konstrukcijski elementi

Branimir Rončević
konstrukcijski elementi

Sanjin Troha
inženjerska grafika, dokumentiranje, tehničko crtanje, oblikovanje pomoću računala

ASSISTANTS

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machine elements

Vladimir Glažar
engineering graphics, documenting, technical drawing, modelling by computer, engineering visualization

Tea Marohnić
machine elements

Branimir Rončević
machine elements

Sanjin Troha
engineering graphics, documenting, technical drawing, modelling by computer

ZNANSTVENI NOVACI

David Blažević
precizno inženjerstvo, tehnologija mikrosustava, sustavi žetve energije, mjerni sustavi, konstrukcijski elementi

Goran Gregov
inženjerska grafika, dokumentiranje, tehničko crtanje, oblikovanje pomoću računala, inženjerska vizualizacija

Željko Vrcan
konstrukcijski elementi, mehanički prijenosnici snage, transportna sredstva u industriji

JUNIOR RESEARCHERS

David Blažević
precision engineering, micro-systems technologies, energy scavenging devices, measurement systems, machine elements

Goran Gregov
engineering graphics, documenting, technical drawing, modelling by computer, engineering visualization

Željko Vrcan
machine elements, mechanical power transmissions, industrial transport equipment and devices

ADMINISTRATIVNO OSOBLJE

Marija Kura
administrativna tajnica

ADMINISTRATIVE STAFF

Marija Kura
administrative secretary

NASTAVA

Nastava se izvodi iz područja: konstruiranje u strojarstvu, konstrukcijski elementi, mehanički prijenosnici snage, zupčani prijenosnici, tribologija, transportna sredstva u industriji, tehnička logistika, mehatronika, precizno inženjerstvo, tehnologija mikrosustava, MEMS i NEMS, mjerni sustavi, inženjerska grafika i dokumentiranje, oblikovanje pomoću računala.

KOLEGIJI NA SVEUČILIŠNOM PREDDIPLOMSKOM STUDIJU

Inženjerska grafika
Inženjerska grafika i dokumentiranje
Konstrukcijski elementi I
Konstrukcijski elementi II
Oblikovanje pomoću računala
Osnove konstruiranja
Osnove konstrukcijskih elemenata
Izborni projekt - Konstrukcijski elementi I
Izborni projekt - Konstrukcijski elementi II

KOLEGIJI NA SVEUČILIŠNOM DIPLOMSKOM STUDIJU

Brodski palubni strojevi
CAE u razvoju proizvoda
Elementi transportne tehnike
Hidraulika i pneumatika I
Hidraulika i pneumatika II
Inženjerska vizualizacija
Konstruiranje i oblikovanje
Konstrukcijski elementi III
Konstrukcijski elementi robota
Laboratorijske vježbe A
Laboratorijske vježbe B
Mehanički prijenosnici snage
Mehatronički sustavi
Metodičko konstruiranje
Mikro i nano elektromehanički sustavi

EDUCATION

Lectures in the field of: design in mechanical engineering, machine elements, mechanical power transmissions, gear transmissions, tribology, industrial transport equipment and devices, technical logistics, mechatronics, precision engineering, micro-systems technologies, MEMS and NEMS, measurement systems, engineering graphics and documenting, modelling by computer.

UNDERGRADUATE COURSES

Engineering Graphics
Engineering Graphics and Documenting
Machine Elements Design I
Machine Elements Design II
Modelling by Computer
Fundamentals of Engineering Design
Fundamentals of Machine Elements Design
Elective project - Machine Elements Design I
Elective project - Machine Elements Design II

GRADUATE COURSES

Ship's Deck Machinery
CAE in Product Development
Elements of the Transport Technic
Hydraulics and Pneumatics I
Hydraulics and Pneumatics II
Engineering Visualization
Designing and Product Shaping
Machine Elements Design III
Robot Elements Design
Laboratory excercises A
Laboratory excercises B
Mechanical Power Transmissions
Mechatronics Systems
Systematic Engineering Design
Micro and Nano Electromechanical Systems
Hydraulics and Pneumatics I
Numerical Methods in Mechanical

Numeričke metode u konstruiranju
Osnove konstruiranja
Precizne konstrukcije i tehnologija mikro sustava
Tehnička logistika
Trajnost strojeva i konstrukcija
Transportni sustavi
Projekt I - Hidraulika i pneumatika I
Projekt I - Inženjerska vizualizacija
Projekt I - Konstrukcijski elementi III
Projekt I - Konstrukcijski elementi robota
Projekt I - Mehanički prijenosnici snage
Projekt I - Metodičko konstruiranje
Projekt I - Numeričke metode u konstruiranju
Projekt II – Elementi transportne tehnike
Projekt II - Hidraulika i pneumatika II
Projekt II – Konstruiranje i oblikovanje
Projekt II–Precizne konstrukcije i tehnologija mikro sustava

Engineering Design
Fundamentals of Engineering Design
Precision Engineering and Micro-Systems Technologies
Technical Logistics
Durability of Machines and Structures
Transport Systems
Project I - Hydraulics and Pneumatics I
Project I - Engineering Visualization
Project I - Machine Elements Design III
Project I - Robot Elements Design
Project I - Mechanical Power Transmissions
Project I - Systematic Engineering Design
Project I - Numerical Methods in Mechanical Engineering Design
Project II – Elements of the Transport Technic
Project II - Hydraulics and Pneumatics II
Project II - Designing and Product Shaping
Project II - Precision Engineering and Micro-Systems Technologies

KOLEGIJI NA STRUČNOM STUDIJU

Elementi strojeva I
Elementi strojeva II
Elementi strojeva I BG
Hidraulika i pneumatika
Konstruiranje
Mehatronika
Osnove mehatronike
Tehničko crtanje
Tehničko dokumentiranje

VOCATIONAL COURSES

Machine Elements I
Machine Elements II
Machine Elements I NA
Hydraulics and Pneumatics
Mechanical Engineering Design
Mechatronics
Fundamentals of Mechatronics
Technical Drawing
Technical Documenting

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

IP iz hidrostatskih i pneumatskih prijenosnika
Izabrana poglavlja iz konstrukcijskih elemenata
Izabrana poglavlja iz prijenosnika snage

POSTGRADUATE COURSES

Selected Chapters on Hydrostatic and Pneumatic Transmissions
Selected Chapters on Machine Elements Design
Selected Chapters on Power Transmission

IP iz transportnih sredstava u industriji
Konstrukcija i optimizacija zupčastih prijenosnika
Kontaktni problemi u analizi konstrukcijskih elemenata
Metoda rubnih elemenata
Modeliranje inženjerskih konstrukcija
Nauka o konstruiranju
Podatljivi elementi i mehanizmi
Principi konstrukcija visokih i ultravisokih preciznosti
Specijalni mehanički prijenosnici

Selected Chapters on Industrial Transport Equipment and Devices
Mechanical Engineering Design and Optimization of Gear Transmitting
Contact Problems in Machine Elements Analyses
Boundary Elements Method
Modelling of Engineering Structures
Design Science
Compliant Elements and Mechanisms
Principles of High and Ultra-High Precision Devices
Special Mechanical Transmissions

ZNANSTVENOISTRAŽIVAČKI RAD

Konstrukcijsko strojarstvo: modeliranje, zupčasti prijenosnici, planetarni prijenosi, evolventno ozubljenje s velikim stupnjem prekrivanja profila, zamor materijala, alternativni hidraulički sustavi, hibridni pogoni.

Precizno inženjerstvo: podatljivi mehanizmi, strukturna analiza, integracija u mehatroničke sustave, mjerne tehnike, oprema za sinkrotronsko zračenje.

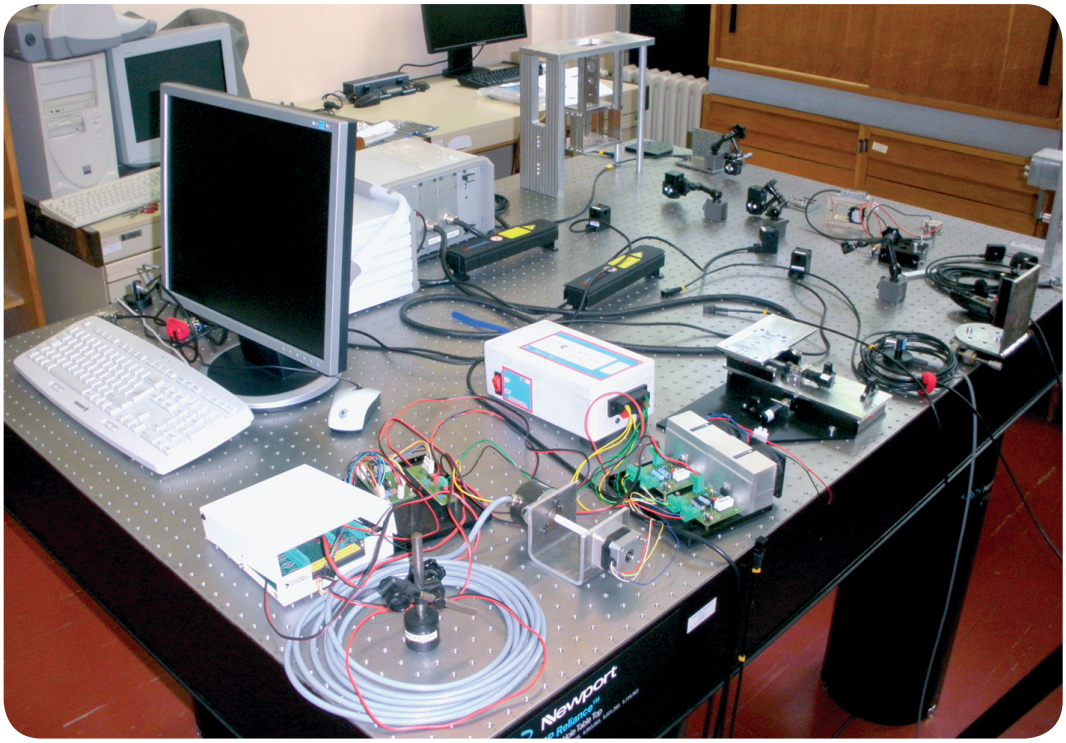
Tehnologija mikrosustava: MEMS, manipulacija, montaža i pakiranje, skalirajući učinci, proizvodnja mikrostruktura, prikupljanje otpadne energije iz okoline.

RESEARCH AND DEVELOPMENT ACTIVITIES

Mechanical engineering design: modelling, gear transmissions, planetary gears, high transverse contact ratio gears, material fatigue, alternative hydraulic systems, hybrid drives.

Precision engineering: compliant mechanisms, structural analysis, integration into mechatronics devices, measurement techniques, equipment for synchrotron radiation.

Micro-systems technologies: MEMS, handling, assembly and packaging, scaling effects, micro-fabrication, energy scavenging.



PROJEKTI

Podatljivi uređaji ultravisoke preciznosti za uporabu u mikrotehnologiji i nanotehnologiji, 069-0692195-1792, MZOŠ, Saša Zelenika, 2007 - 2012, znanstvenoistraživački.

Istraživanje dušikovih efekata u složenim poluvodičkim spojevima, 009-0982886-0542, MZOŠ, suradnik Saša Zelenika, 2007 - 2012, znanstvenoistraživački.

Materijali, trajnost i nosivost suvremenih zupčastih prijenosnika, 069-0692195-1796, MZOŠ, Božidar Križan, 2007 - 2012, znanstvenoistraživački.

Razvoj matematičkog modela nastanka i rasta zamornih pukotina u uvjetima kotrljajno-kliznog kontakta, MZOŠ, Robert Basan, 2010 - 2011, kolaborativni.

Konstrukcija i optimizacija prijenosnika snage, 069-0692195-1793, MZOŠ, Boris Obsieger, 2007 - 2012, znanstvenoistraživački.

PROJECTS

Ultra-high precision compliant devices for micro and nanotechnology applications, 069-0692195-1792, Ministry of Science, Education and Sports of the Republic of Croatia, Saša Zelenika, 2007-2012, research and scientific project.

Analysis of nitrogen-related defects in compound semiconductors, 009-0982886-0542, Ministry of Science, Education and Sports of the Republic of Croatia, partner Saša Zelenika, 2007-2012, research and scientific project.

Materials, Durability and Load Capacity of Modern Gear Transmissions, 069-0692195-1796, Ministry of Science, Education and Sports of the Republic of Croatia, Božidar Križan, 2007- 2012, research and scientific project.

Development of a mathematical model of rolling-sliding-contact fatigue crack initiation and growth, Ministry of Science, Education and Sports of the Republic of Croatia, Robert Basan, 2010-2011, collaborative project.

Design and optimization of power transmissions, 069-0692195-1793, Ministry of Science, Education and Sports of the Republic of Croatia, Boris Obsieger, 2007-2012, research and scientific project.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Basan, R., Franulović, M., Smokvina Hanza, S.: Estimation of cyclic stress-strain curves for low-alloy steel from hardness, Metalurgija. 49 (2010) , 2; 83-86

Basan, R., Rubeša, D., Franulović, M., Križan, B.: A novel approach to the estimation of strain life fatigue parameters, Procedia Engineering, 2 (2010), 1; 417-426; doi:10.1016/j.proeng.2010.03.046.

Benasciutti, D., Moro, L., Zelenika S., Brusa E.: Vibration energy scavenging via piezoelectric bimorphs of optimized shapes, Microsystems Technologies, 16 (2010) 5;. 657-668 (doi:10.1007/s00542-009-1000-5)

Franulović, M., Basan, R., Kunc, R., Prebil, I.: Automation of LCF material model parameters' identification, Computational materials science. 48 (2010) ; 529-536

Glažar, V., Prelec, Z.: Analysis of the Efficiency of Heat Generator System Depending on Type and Load, Strojarstvo: Časopis za teoriju i praksu u strojarstvu 51 (2), 143-150, 2009.

Gregov, G., Lovrin, N., Vrcan, Ž.: Volume and mass comparison of two-stage coaxial reduction gears with single-stage and two-stage planetary reduction gears, Transactions of FAMENA. 34 (2010) , 1; pp. 59-70

Gregov, G., Marunić, G., Glažar, V.: Spur Gear Tooth Root Stresses According to Different Calculation Methods, Engineering Review, 30/1 (2010), 49-63.

Lovrin, N., Franulović, M., Vrcan, Ž.: Some considerations of the load capacity of internal high transverse contact ratio involute gearing, Engineering Review, Vol. 29-2(2009), 53-61

Lovrin, N., Križan, B., Vrcan, Ž.: Photoelastic investigation into stresses in high transverse contact ratio gears, Transactions of FAMENA (1333-1124) 33 (2009), 4; 31-40

Lovrin, N., Vrcan, Ž.: Some Considerations About Engineering Ethics, Strojarstvo (0562-1887) 51 (2009), 3; 239-248

Marunić, G.:Rim Deformations of Thin-Rimmed Gear with Middle Web Structure, Transactions of the VŠB-Technical University of Ostrava, 3 (2009), 141-144.

Marunić, G., Glažar, V., Gregov, G.: 3D Solid Modelling Inclusion in Engineering Graphics Course, Strojarstvo 51(6) 2009, 667-675.

Marunić, G.: Distribution of Displacements over Thin-Rimmed Gear Rim, Advanced Engineering, 3 (2009) 1, 61-66.

Rončević, B., Siminiati, D.: Two dimensions receding contact analysis with NX Nastran, Advanced Engineering 4 (2010) 1, 69-74.

Vrcan, Ž., Lovrin, N., Genetic Algorithm Based Optimisation of Conveyor Belt Material Cross Section Area, Tehnički vjesnik 17(2) 2010, 137-143.

Zelenika, S., Munteanu, M. Gh., De Bona F.: Optimized flexural hinge shapes for microsystems and high precision applications, Mechanisms and Machine Theory, 44 (2009) 10; 1826-1839 (doi:10.1016/j.mechmachtheory.2009.03.007)

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Basan, R., Franulović, M.: Evolution of Stress Components at Involute Gears Teeth Flanks During the Mesh, Proceedings of the 3rd International Conference Power Transmissions '09, Thessaloniki (Greece), 2009., 83-86.

Basan, R., Franulović, M., Križan, B.: On estimation of Basquin-Coffin-Manson fatigue parameters of low-alloy steel AISI4140, Proceedings of the 14th International Research/Expert Conference „Trends in the development of machinery and associated technology" (TMT 2010), 2010., 453-456.

Basan, R., Franulović, M., Prebil, I., Kunc, R.: Strain-life behavior of different groups of metallic materials, 9th International Conference on Multiaxial Fatigue and Fracture (ICMFF9) Parma (Italy), June 2010

Basan, R., Rubeša, D., Franulović, M., Križan, B.: A novel approach to the estimation of strain life fatigue parameters, Proceedings of the 10th International Fatigue Congress (Fatigue 2010), Prague (Czech Republic), June 2010.

Blažević D. and Zelenika S.: Characterisation of vibration energy harvesters, Proceedings of the 20th International DAAAM Symposium, Vienna (Austria), November 2009, 1837-1838.

Blažević, D., Zelenika, S., Gregov, G.: Experimental characterisation of off-the-shelf vibration energy scavengers, Proceedings of the 10th International Conference of the European Society for Precision Engineering and Nanotechnology - vol II, Delft (The Netherlands), June 2010, 290-294.

Blažević, D., Zelenika, S., Gregov, G.: Mechanical analysis of piezoelectric vibration energy harvesting devices, Proceedings of the 33rd International Convention on Information and Communication Technology, Electronics and Microelectronics - Mipro 2010; Microelectronics, Electronics and Electronic Technology (MEET) & Grid and Visualization Systems (GVS), Opatija (Croatia), May 2010, 148-152.

Franulović, M., Basan, R.: Objective function in genetic algorithm for material behaviour modeling, Proceedings of the 14th International Research/Expert Conference „Trends in the development of machinery and associated technology" (TMT 2010), 2010., 117-120.

Franulović, M., Basan, R., Kunc, R., Prebil, I.: Automation of LCF Material Model Parameters' Identification, Finite Plasticity and Visco-plasticity of Conventional and Emerging Materials / Khan, Akhtar S., Farrok, Babak (ur.). St Kitts: NEAT Press, 2010, 169-171

Franulović, M., Basan, R., Kunc, R., Prebil, I.: Numerical modelling of fatigue damage in gears tooth root, 9th International Conference on Multiaxial Fatigue and Fracture (ICMFF9). Parma (Italy), June, 2010

Franulović, M., Križan, B., Basan, R.: Residual Stresses in Gear Tooth Root, Proceedings of the 3rd International Conference Power Transmissions '09, Thessaloniki (Greece), 2009., 279-284.

Lovrin, N., Vrcan, Ž.: Energy saving in modern gearboxes using HCR gears, MOTSP 2010 International Scientific Conference - Management of Technology – Step to Sustainable Production, Conference Proceeddings / Ćosić, P., Barić, G., Đukić, G. (ur.). Zagreb : Faculty of Mechanical Engineering and Naval Architecture Zagreb (Croatia), 2010.

Marunić, G.: Effects of Rim and Web Thickness on Gear Rim Deformation, Proceedings of International Conference of General Machine Design, Ruse (Bulgaria), October 2009, 105-108.

Moro, L., Benasciutti, D., Brusa, E., Zelenika, S.: Caratterizzazione sperimentale di „energy scavengers piezoelettrici ottimizzati, Proceedings of the 38th AIAS Conference, Turin (Italy), September 2009, paper no. 083.

POZVANA PREDAVANJA / INVITED LECTURES

Siminiati, D.: Hydraulic hybrid technology – State and challenges, International Conference on Computer Aided Design and Manufacturing CADAM'09, Stari grad – Hvar (Croatia), September 2009.

KNJIGE / BOOKS

Križan, B., Basan, R.: Polimerni konstrukcijski elementi, Rijeka, Zigo - Rijeka, Tehnički fakultet Sveučilišta u Rijeci, 2009., ISBN 978-953-7142-43-8, 978-953-6326-41-9

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Elettra, Trieste/Trst, Italy/Italija.

Slovak University of Technology in Bratislava, Slovakia/Slovačka.

University of Applied Sciences of Southern Switzerland, Lugano, Switzerland/Švicarska.

University of Applied Sciences, Graz, Austria/Austrija.

University of Leoben (Montanuniversität Leoben), Austria/Austrija.

University of Ljubljana, Faculty of Mechanical Engineering, Slovenia/Slovenija.

University of Maribor, Faculty of Mechanical Engineering, Slovenia/Slovenija.

University of Miskolc, Faculty of Mechanical Engineering and Informatics, Hungary/Mađarska.

University of Udine, Italy/Italija.

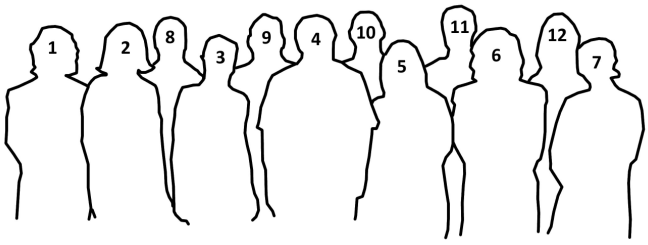
University of West Bohemia, Faculty of Mechanical Engineering, Plzen, Czech Republic/Češka Republika.

5.6. ZAVOD ZA MATEMATIKU, FIZIKU, STRANE JEZIKE I KINEZIOLOGIJU / DEPARTMENT OF MATHEMATICS, PHYSICS, FOREIGN LANGUAGES AND KINESIOLOGY

Predstojnik Zavoda / Department Head:
Red. prof. dr. sc. / Full Prof. D. Sc. Julijan Dobrinić

URL: http://www.riteh.uniri.hr/ustroj/zmfsjk/

1. Mira Bobanović
2. Ksenija Mance
3. Nelida Črnjarić-Žic
4. Julijan Dobrinić
5. Katica Jurasić
6. Marta Žuvić Butorac
7. Elisa Velčić Janjetić
8. Bojan Crnković
9. Ivan Dražić
10. Mirko Bađim
11. Luka Mandić
12. Loredana Simčić



DJELATNICI

REDOVITI PROFESORI

Julijan Dobrinić
prirodne znanosti – fizika, tehničke znanosti – temeljne tehničke znanosti (inženjerstvo okoliša)

DOCENTI

Nelida Črnjarić-Žic
numerička matematika, matematičko modeliranje, računalne simulacije u tehnici

Marta Žuvić-Butorac
biofizika i biomedicina, statističke metode obrade medicinskih podataka, e-učenje

VIŠI PREDAVAČI

Mirko Bađim
kineziologija

Katica Jurasić
euklidska i neeuklidska geometrija, metodika nastave matematike

Ksenija Mance
anglistika

PREDAVAČI

Elisa Velčić Janjetić
germanistika

ASISTENTI

Ivan Dražić
parcijalne diferencijalne jednadžbe, numerička analiza, metodika nastave matematike

Loredana Simčić
kombinatorika

FACULTY AND STAFF

PROFESSORS

Julijan Dobrinić
natural sciences – physics, technical sciences – fundamental technical sciences (environmental engineering)

ASSISTANT PROFESSORS

Nelida Črnjarić-Žic
numerical mathematics, mathematical modelling, computer simulations in engineering

Marta Žuvić-Butorac
biophysics and biomedicine, biostatistics, e-learning

SENIOR LECTURERS

Mirko Bađim
Kinesiology

Katica Jurasić
euclidean and noneuclidean geometry, mathematics education

Ksenija Mance
English studies

LECTURERS

Elisa Velčić Janjetić
German studies

ASSISTANTS

Ivan Dražić
partial differential equations, numerical analysis, mathematics education

Loredana Simčić
combinatorics

Melita Štefan-Trubić
numerička matematika

ZNANSTVENI NOVACI

Nataša Glavan Vukelić
optička spektroskopija

ADMINISTRATIVNO OSOBLJE

Mira Bobanović
administrativna tajnica

Melita Štefan-Trubić
numerical mathematics

JUNIOR RESEARCHERS

Nataša Glavan Vukelić
optical spectroscopy

ADMINISTRATIVE STAFF

Mira Bobanović
administrative secretary

NASTAVA

Nastava matematičkih kolegija izvodi se za inženjere s odabranim poglavljima iz područja linearne algebre, matematičke analize, diferencijalnih jednadžbi, vjerojatnosti i statistike te numeričke i stohastičke matematike.

Teme iz klasične, relativističke i kvantne fizike te model harmoničkog oscilatora, primijenjeni su kod mehaničkih i elektromagnetskih titranja na poglavlje o građi tvari te interakciji zračenja i materije. Zaštita okoliša obrađuje ekološku problematku i interakciju tehnoloških sustava s okolišem.

Nastava kolegija Engleski jezik ili Njemački jezik obuhvaća obrađivanje odabranih poglavlja iz područja strojarstva, brodogradnje, elektrotehnike i računalstva te usavršavanje stručnog vokabulara i gramatičkih struktura jezika tehnike.

EDUCATION

Mathematical lectures for engineers with selected chapters in the field of: linear algebra, mathematical analysis, differential equations, probability and statistics, numerical and stochastic mathematics.

Topics on classical, relativistic and quantum physics as well as the model of a harmonious oscillator are applied in mechanical and electromagnetic vibrations, in the chapter of the structure of matter, and in an interaction between radiation and matter. Environmental protection deals not only with the problem of ecology but also with an interplay between technical systems and the environment.

The English and German Language courses of study: the analysis of selected chapters in the field of Mechanical Engineering, Naval Architecture, Electrical Engineering and Computer Science as well as the enhancement of professional-technical vocabulary and grammar.

Nastava tjelesne i zdravstvene kulture izvodi se po osnovnom i posebnom programu, a izborni programi su za studente viših studijskih godina.

KOLEGIJI NA PREDDIPLOMSKOM SVEUČILIŠNOM STUDIJU

Engleski jezik I
Engleski jezik II
Fizika I
Fizika II
Inženjerska matematika ET
Inženjerska statistika
Matematika I
Matematika II
Njemački jezik I
Njemački jezik II
Osnove fizike za biomedicinu
Tjelesna i zdravstvena kultura I
Tjelesna i zdravstvena kultura II
Uvod u modernu fiziku
Zaštita okoliša

KOLEGIJI NA DIPLOMSKOM SVEUČILIŠNOM STUDIJU

Inženjerska matematika
Metode operacijskih istraživanja
Numerička i stohastička matematika

KOLEGIJI NA STRUČNOM STUDIJU

Engleski jezik I
Engleski jezik II
Fizika
Matematika I
Matematika II
Njemački jezik I
Njemački jezik II
Tjelesna i zdravstvena kultura I
Tjelesna i zdravstvena kultura II

Lectures of physical and health education are carried out both according to a basic and special program, whereas an optional program is designed for students of higher level grades.

UNDERGRADUATE COURSES

English Language I
English Language II
Physics I
Physics II
Mathematics for Engineers ET
Statistics for Engineers
Mathematics I
Mathematics II
German Language I
German Language II
Fundamentals of Physics for Biomedicine
Physical and Health Education I
Physical and Health Education II
Introduction to Modern Physics
Environment Protection

GRADUATE COURSES

Mathematics for Engineers
Operations Research Methods
Numerical and Stochastic Mathematics

VOCATIONAL COURSES

English Language I
English Language II
Physics
Mathematics I
Mathematics II
German Language I
German Language II
Physical and Health Education I
Physical and Health Education II

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Statističke metode i stohastički procesi
Matematičko modeliranje i numeričke metode
Metode optimizacije
Metodologija znanstvenoistraživačkog rada
Izabrana poglavlja iz zaštite okoliša

POSTGRADUATE COURSES

Statistical Methods and Stochastic Processes
Mathematical Modeling and Numerical Methods
Optimization Methods
Methodology of Scientific Work and Research
Selected Topics on Environment Protection

ZNANSTVENOISTRAŽIVAČKI RAD

KATEDRA ZA PRIMIJENJENU MATEMATIKU:

parcijalne diferencijalne jednadžbe, numerička matematika, matematičko modeliranje, optimizacija, operacijska istraživanja, statističke metode, diferencijalna geometrija

KATEDRA ZA FIZIKU I ZAŠTITU OKOLIŠA:

optička spektroskopija onečišćene morske vode, spektroskopija rendgenskog zračenja u analizi uzoraka okoliša, analiza elemenata u tragovima

KATEDRA ZA STRANE JEZIKE:

interdisciplinarno znanstvenoistraživački pristup području antropologije i temama kulture (znanstvena grana anglistika, područje lingvistike), istraživanje pojma tehnike uopće kao i njegove prisutnosti u izabranim romanima njemačke književnosti weimarskog doba (1918–1933) (znanstvena grana germanistika, područje književnosti)

RESEARCH AND DEVELOPMENT ACTIVITIES

CHAIR OF APPLIED MATHEMATICS:

partial differential equations, numerical mathematics, mathematical modelling, optimisation, operational research, statistical methods, differential geometry

CHAIR OF PHYSICS AND ENVIRONMENT PROTECTION:

optical spectroscopy of polluted sea water, x-ray spectroscopy in environmental sample analysis, trace elements analysis

CHAIR OF FOREIGN LANGUAGES:

interdisciplinary scientific-research approach to the field of anthropology and cultural themes (scientific branch English studies, field Linguistics), research of the term technics and its presence in selected novels of the German literature of the Weimar period (1918–1933) (scientific branch German studies, field Literature)

PROJEKTI

Istraživanje metoda sprječavanja onečišćenja mora od objekata morske tehnologije, 069-0691668-3007, MZOŠ, Julijan Dobrinić, 2007 - 2010, znanstvenoistraživački.

PROJECTS

Research of methods for prevention of sea pollution by marine technology objects, 069-0691668-3007, Ministry of Science, Education and Sports of the Republic of Croatia, Julijan Dobrinić, 2007.- 2010., research and scientific project.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Družeta, S., Sopta, L., Maćešić, S., Črnjarić-Žic, N.: Investigation of the Importance of Spatial Resolution for Two-Dimensional Shallow-Water Model Accuracy, Journal of Hydraulic Engineering 135 (11), pp. 917-925, ASCE, 2009.

Jelovica Badovinac, I., Orlić, N., Lofrumento, C., Dobrinić, J., Orlić, M.: Spectral analysis of postage stamps and banknotes from the region of Rijeka in Croatia, Nucl. Instr. And Meth. A, (2009)

Mady Maričić, B., Legović, M., Šlaj, M., Lapter Varga, M., Žuvić Butorac, M., Kapović, M.: Presence of Third Molar Germs in Orthodontic Patients with Class II/2 and Class III Malocclusions. Coll. Antropol. 33 (2009) 4: 1171-1175

Protić, A., Turina, D., Matanić, D., Španjol, J., Žuvić-Butorac, M., Šustić, A.: Effect of preoperative feeding on gastric emptying following spinal anesthesia: a randomized controlled trial. Wien Klin Wochenschr (2010) 122, 1-4.

Škifić, J., Maćešić, S., Črnjarić-Žic, N.: Nonconservative Formulation of Unsteady Pipe Flow, Journal of Hydraulic Engineering (0733-9429) 136, 8; 483-492, (2010)

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Črnjarić-Žic, N., Crnković, B.: Maćešić, S.: Practical analysis of SSP time integration methods for hyperbolic conservation laws, Sixth Conference on Applied Mathematics and Scientific Computing, Zadar, 2009.

Dražić, I., Mujaković, N.: The Cauchy problem for one-dimensional flow of a compressible viscous fluid: Stabilization of the solution. Sixth Conference on Applied Mathematics and Scientific Computing. Zadar, 2009.

Fafandjel, N., Dobrinić, J., Hadjina, M., Čavrak, M.: Pristup upravljanju balastnim vodama primjenom metode kontinuiranog propuštanja, III. savjetovanje o morskoj tehnologiji - in memoriam adakemiku Zlatku Winkleru, Rijeka, 30. studenog - 1. prosinca 2009.

Fafandjel, N., Dobrinić, J., Hadjina, M., Matulja, T., Čavrak, M.: Continuous Flow-Through Method for Ship Water Ballast Management. III. Savjetovanje o morskoj tehnologiji, Tehnicki fakultet Rijeka, Rijeka, 2009. 66-71.

Glavan Vukelić, N., Milošević, S., Dobrinić, J.: Primjena fluorescentne spektroskopije u cilju detekcije onečišćenja naftom i njenim derivatima priobalnog morskog područja, III. savjetovanje o morskoj tehnologiji - in memoriam akademiku Zlatku Winkleru, Rijeka, 30. studenog - 1. prosinca 2009.

Glavan-Vukelić, N., Milošević, S., Dobrinić, J.: Primjena fluorescentne spektroskopije u cilju detekcije onečišćenja naftom, Zbornik radova 3. savjetovanja o morskoj tehnologiji, Tehnički fakultet, Rijeka, 2010., str. 110.-116.

Ivče, R., Bonato, J., Dobrinić, J.: Mogućnost primjene metode kontinuirane izmjene vodenog balasta tijekom plovidbe broda, III. savjetovanje o morskoj tehnologiji - in memoriam akademiku Zlatku Winkleru, Rijeka, 30. studenog - 1. prosinca 2009.

Ivče, R., Bonato, J., Dobrinić, J.: Mogućnosti primjene kontinuirane izmjene balasta, Zbornik radova 3. savjetovanja o morskoj tehnologiji, Tehnički fakultet, Rijeka, 2010., str. 55.-66.

KNJIGE / BOOKS

Dobrinić, J., Bonato, J.: Fizika, Pomorski fakultet, Rijeka, 2009.

OSTALO / OTHER

Dražić, I., Jurasić, K.: Seminarski rad kao metoda ocjenjivanja u nastavi matematike. Didaktička dokimologija, Branka Antunović-Piton (ur.), Hrvatsko matematičko društvo - Podružnica Istra, 2009. 91-97.

Jurasić, K., Dražić, I., Bolonjski proces i promjene u ocjenjivanju matematičkih kolegija. Didaktička dokimologija, Branka Antunović-Piton (ur.), Hrvatsko matematičko društvo - Podružnica Istra, 2009. 91-97.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Katholike Universitat Leuven, Belgija.

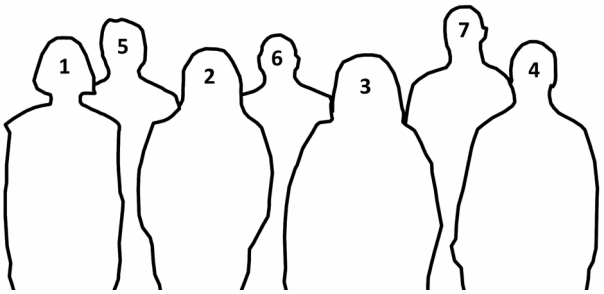
Valencia University of Technology, Španjolska.

5.7. ZAVOD ZA MATERIJALE / DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING

Predstojnik Zavoda:
Red. prof. dr. sc. Božo Smoljan

URL: http://www.riteh.uniri.hr/ustroj/zm/

1. Sunčana Smokvina Hanza
2. Mirjana Mihaljević-Vukelić
3. Loreta Pomenić
4. Neven Tomašić
5. Domagoj Rubeša
6. Božo Smoljan
7. Dario Iljkić



DJELATNICI

REDOVITI PROFESORI

Loreta Pomenić
materijali, tehnologija materijala, materijali i tehnološki postupci, nemetalni materijali, zaštita materijala, ljevarstvo, karakterizacija materijala, selekcija materijala, kemija materijala, korozija i zaštita metala

Domagoj Rubeša
metalni materijali, mehanika materijala, mehanika prijeloma, selekcija materijala, mehanika prijeloma i umorljivost, procesi oštećivanja materijala

Božo Smoljan
materijali, tehnologija materijala, materijali i tehnološki postupci, ispitivanje materijala, metalni materijali, toplinska obrada metala i inženjerstvo površina, ljevarstvo, karakterizacija materijala, kinetika mikrostrukturnih pretvorbi

Ivan Katavić
(profesor emeritus)

ZNANSTVENI NOVACI

Dario Iljkić
materijali, tehnologija materijala, materijali i tehnološki postupci, ljevarstvo, ispitivanje materijala, karakterizacija materijala

Sunčana Smokvina Hanza
materijali, tehnologija materijala, materijali i tehnološki postupci, metalni materijali

Neven Tomašić
materijali, tehnologija materijala, materijali i tehnološki postupci, postupci toplinske obrade

FACULTY AND STAFF

PROFESSORS

Loreta Pomenić
materials, technology of material, materials and technological processes, nonmetal materials, materials protection, casting, materials characterisation, materials selection, materials chemistry, corrosion and metals protection

Domagoj Rubeša
metallic materials, materials mechanics, fracture mechanics, materials selection, fracture mechanics and fatigue of materials, processes of damaging of materials

Božo Smoljan
materials, technology of material, materials and technological processes, materials testing, metallic materials, metals heat treatment and surface engineering, casting, materials characterisation, kinetics of microstructure transformations

Ivan Katavić
(professor emeritus)

JUNIOR RESEARCHERS

Dario Iljkić
materials, technology of material, materials and technological processes, casting, materials testing, materials characterisation

Sunčana Smokvina Hanza
materials, technology of material, materials and technological processes, metallic materials

Neven Tomašić
materials, technology of material, materials and technological processes, processes of heat treatment

ADMINISTRATIVNO OSOBLJE

Mirjana Mihaljević-Vukelić
administrativna tajnica

ADMINISTRATIVE STAFF

Mirjana Mihaljević-Vukelić
administrative secretary

NASTAVA

Nastava iz područja: materijali, tehnologija materijala, materijali i tehnološki postupci, metalni materijali, nemetalni materijali, ispitivanje materijala, toplinska obrada metala i inženjerstvo površina, ljevarstvo, zaštita materijala, karakterizacija materijala, mehanika materijala, mehanika prijeloma i umorljivost, procesi oštećivanja materijala, selekcija materijala, kinetika mikrostrukturnih pretvorbi, kemija materijala, korozija i zaštita metala

KOLEGIJI NA PREDDIPLOMSKOM SVEUČILIŠNOM STUDIJU

Materijali I
Materijali II
Postupci toplinske obrade
Tehnologija materijala
Izborni projekt – Materijali I
Izborni projekt – Materijali II

KOLEGIJI NA DIPLOMSKOM SVEUČILIŠNOM STUDIJU

Ispitivanje materijala
Karakterizacija materijala
Ljevarstvo
Mehanika materijala
Mehanika prijeloma
Metalni materijali
Nemetalni materijali
Selekcija materijala
Toplinska obrada metala i inženjerstvo površina

EDUCATION

Lectures in the field of: materials, technology of material, materials and technological processes, metallic materials, nonmetallic materials, materials testing, metals heat treatment and surface engineering, casting, materials protection, materials characterisation, materials mechanics, fracture mechanics and fatigue of materials, processes of damaging of materials, materials selection, kinetics of microstructure transformations, materials chemistry, corrosion and metals protection

UNDERGRADUATE COURSES

Materials I
Materials II
Processes of Heat Treatment
Technology of Materials
Elective project – Materials I
Elective project – Materials II

GRADUATE COURSES

Materials Testing
Materials Characterisation
Casting
Materials Mechanics
Fracture Mechanics
Metallic Materials
Nonmetallic Materials
Materials Selection
Metals Heat Treatment and Surface Engineering
Materials Protection

Zaštita materijala
Projekt I – Toplinska obrada metala i inženjerstvo površina
Projekt I – Zaštita materijala
Projekt II – Mehanika materijala

KOLEGIJI NA STRUČNOM STUDIJU

Materijali
Tehnologija obrade I
Materijali i tehnološki postupci

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Izabrana poglavlja iz ispitivanja materijala
Toplinska obrada i inženjerstvo površina
Kemija materijala
Korozija i zaštita metala
Mehanika prijeloma i umorljivost
Kinetika mikrostrukturnih pretvorbi
Procesi oštećivanja materijala

Project I – Metals Heat Treatment and Surface Engineering
Project I – Materials Protection
Project II – Materials Mechanics

VOCATIONAL COURSES

Materials
Manufacturing Technology I
Materials and Technological Processes

POSTGRADUATE COURSES

Selected Chapters on Material Testing
Heat Treatment and Surface Engineering
Materials Chemistry
Corrosion and Metals Protection
Fracture Mechanics and Fatigue of Materials
Kinetics of Microstructure Transformations
Processes of Damaging of Materials

ZNANSTVENOISTRAŽIVAČKI RAD

Znanstvenoistraživački rad iz znanstvenog područja tehničke znanosti, znanstvenih polja strojarstvo i temeljne tehničke znanosti, znanstvenih grana proizvodno strojarstvo i materijali.

RESEARCH AND DEVELOPMENT ACTIVITIES

Research and development activities in the scientific area of Technical Sciences, scientific fields of Mechanical Engineering and Fundamental Engineering Sciences, scientific branches of Mechanical Production Engineering and Materials.

PROJEKTI

Optimiranje parametara i predviđanje rezultata toplinske obrade metala, 069-1201780-2986, MZOŠ, Božo Smoljan, 2007 - 2011, znanstvenoistraživački.

PROJECTS

Optimisation of parameters and prediction of metals heat treatment results, 069-1201780-2986, Ministry of Science, Education and Sports of the Republic of Croatia, Božo Smoljan, 2007.- 2011., research and scientific project.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Smoljan, B., Iljkić, D., Tomašić, N.: Computer simulation of mechanical properties of quenched and tempered steel specimen, Journal of achievements in materials and manufacturing engineering. 40 (2010) , 2; 155-159

Smoljan, B., Iljkić, D., Traven, F.: Predictions of Mechanical Properties of Quenched and Tempered Steel, Strojniški vestnik, 56 (2010); 115-120.

Smoljan, B., Iljkić, D., Traven, F.: An Application of Computer Simulation in Optimization of Quenching and Tempering of Steel Workpiece, Journal of the Chinese Society of Mechanical Engineers. (2010)

Basan, R., Franulović, M., Smokvina Hanza, S.: Estimation of cyclic stress-strain curves for low-alloy steel from hardness, Metalurgija. 49 (2010) , 2; 83-86

Basan, R., Rubeša, D.: Franulović, M., Križan, B.: A novel approach to the estimation of strain life fatigue parameters, Procedia Engineering. 2 (2010), 1; 417-426; doi:10.1016/j.proeng.2010.03.046.

Liščić, B., Singer, S., Smoljan, B.: Prediction of Quench-Hardness within the Whole Volume of Axially Symmetric Workpieces of Any Shape, Journal of ASTM International, 7 (2010), 2; 1-17.

Liščić, B., Singer, S., Smoljan, B.: Prediction of quench-hardness within the whole volume of axially-symmetric workpieces of any shape, Strojniški vestnik, 56 (2010), 2; 109-114.

Smoljan, B.: An Analysis of Relationships Between Behavior and Microstructure Constitution of Hot-Work Tool Steel, Materials and manufacturing processes. 24 (2009) , 7; 786-790

Smoljan, B., Iljkić, D., Smokvina Hanza, S., Traven, F.: An Analysis of Modified Jominy-test (JMC®-test), Archives of Computational Materials Science and Surface Engineering. 1 (2009) , 2; 120-124

Smoljan, B., Smokvina Hanza, S., Iljkić, D., Totten, G.E., Felde, I.: Computer Simulations of Mechanical Properties of Steel Dies, Materials and manufacturing processes. 24 (2009) , 7; 714-717

Smoljan, B., Iljkić, D., Smokvina Hanza, S.: Computer simulation of working stress of heat treated steel specimen, Journal of Achievements in Materials and Manufacturing Engineering 34/2 (2009) 152-156.

Smoljan, B., Iljkić, D., Smokvina Hanza, S., Mrša, J., Felde, I.: Prediction of Working Stress of Quenched and Tempered Steel, Journal of the Japan Society for Heat Treatment 49 (2009); 733-736.

Felde, I., Reti, T., Sarmiento, G., Smoljan, B., Deus, A.: Analysis of a numerical method developed

for estimation of the heat transfer coefficient obtained during quenching, Journal of the Japan Society for Heat Treatment. 49 (2009) ; 816-819

PLENARNA IZLAGANJA / PLENARY LECTURES

Smoljan, B., Iljkić, D., Tomašić, N.: Computer simulation of mechanical properties of quenched and tempered steel specimen, 18th International Scientific Conference on "Achievements in Mechanical and Materials Engineering AMME`2010, 13-16. 06. 2010, Gliwice-Wieliczka-Zakopane, Poljska.

Smoljan, B.. Iljkić, D., Traven, F.: An Application of Computer Simulation in Optimization of Quenching and Tempering of Steel Workpiece, International Conference on Advanced Manufacturing, ICAM2010, Shih-Chieh, Lin, Shaw, Dein (ur.), KengTing, 2st-5rd February 2010, Kenting, Taiwan. 173-177

Smoljan, B., Iljkić, D., Smokvina Hanza, S.: Computer simulation of working stress of heat treated steel specimen, 17th International Scientific Conference on "Achievements in Mechanical and Materials Engineering AMME`2009, 14-17. 06. 2009, Gliwice-Gdansk, Poljska.

Smoljan, B., Iljkić, D., Traven, F.: Computer simulation of mechanical properties of quenched and tempered steel shaft, 1st Mediterranean Conference on Heat Treatment and Surface Engineering in the Manufacturing of Metallic Engineering Components, 1st-3rd December 2009, Sharm El-Sheikh, Egypt.

Smoljan, B., Iljkić, D., Traven, F.: Computer simulation of mechanical properties of quenched and tempered steel, 17. Konferenca o materialih in tehnologijah : program in knjiga povzetkov, 17th Conference on Materials and Technology: Program and book of abstracts, Jenko, Monika (ur.), Ljubljana: Inštitut za kovinske materiale in tehnologije, 16-18 November 2009, Portorož, Slovenia.

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Smoljan, B., Iljkić, D., Tomašić, N.: Svojstva čeličnog lijeva GS-42 CrMo 4, Proceedings book of 10 th International Foundrymen Conference, Unkić, Faruk (ur.), - Sisak: Metalurški fakultet (ur.), Zagreb, 10-12. 06. 2010, Opatija, Hrvatska.

Smoljan, B., Iljkić, D., Traven, F.: Računalna simulacija kaljenja i popuštanja čelične osovine, Proceedings of MATRIB 2009, 24-26. 06. 2009, Vela Luka, Hrvatska.

POGLAVLJA U KNJIZI / BOOK CHAPTERS

Smoljan, B.: Mechanical Metallurgy of Thermal Processing, Handbook of Thermal Process Modeling of Steels, Gür Cemil Hakan, Pan, Jiansheng (ur.), Boca Raton, CRC Press, Taylor & Francis Group, str. 121-183, 2009.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Bay Zoltan Institute for Materials Science and Technology, Budimpešta, Mađarska.

Faculty of Mechanical Engineering, University of Ljubljana, Ljubljana, Slovenija.

Faculty of Mechanical Engineering, State University of Campinas, Campinas, Brazil.

Institute of Metals and Technology, Ljubljana, Slovenija.

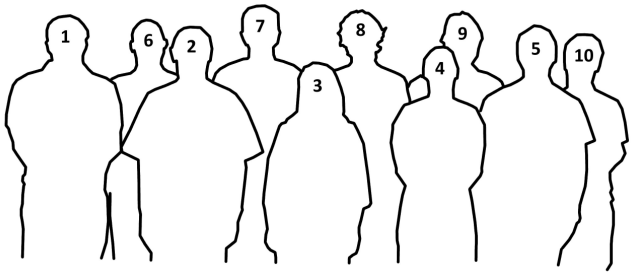
Materials Engineering, Silesian University of Technology in Gliwice, Gliwice, Poljska.

5.8. ZAVOD ZA MEHANIKU FLUIDA I RAČUNARSKO INŽENJERSTVO / DEPARTMENT OF FLUID MECHANICS AND COMPUTATIONAL ENGINEERING

Predstojnik Zavoda / Department Head:
Red. prof. dr. sc. / Full Prof. D. Sc. Luka Sopta

URL: http://www.riteh.uniri.hr/ustroj/zmfri/

1. Zoran Čarija
2. Zoran Mrša
3. Senka Maćešić
4. Adrijana Radošević
5. Lado Kranjčević
6. Marko Čavrak
7. Luka Sopta
8. Siniša Družeta
9. Jerko Škifić
10. Stefan Ivić



DJELATNICI

REDOVITI PROFESORI

Senka Maćešić
strujanje u cjevovodima, strujanje u otvorenim vodotocima, optimizacija tehničkih sustava, numeričke metode, programiranje tehničkih aplikacija

Zoran Mrša
strujanja u hidrauličkim strojevima, optimizacija oblika dijelova hidrauličkih strojeva, analiza i optimizacija režima rada hidroelektrana, modeliranje onečišćenja zraka, parametarska optimizacija industrijskih dimnjaka

Luka Sopta
rashladni sustavi termoelektrana, strujanje u priobalnom području, polaganje cjevovoda, strujanje u otvorenim vodotocima, računalne simulacije u tehnici

DOCENTI

Zoran Čarija
strujanja u hidrauličkim strojevima, optimizacija oblika dijelova hidrauličkih strojeva, parametarska optimizacija industrijskih dimnjaka, programiranje tehničkih aplikacija, strujanje s prijenosom topline

Lado Kranjčević
strujanje u otvorenim vodotocima, paralelno programiranje, programiranje tehničkih aplikacija

Siniša Družeta
strujanje sa slobodnom površinom, strujanje u priobalnom području, rashladni sustavi termoelekrana

FACULTY AND STAFF

PROFESSORS

Senka Maćešić
pipe flow, open channel flow, optimization of technical systems, numerical methods, programming technical applications

Zoran Mrša
hydraulic machinery flow, hydraulic parts shape optimization, hydropower plant operation analysis and optimization, air quality modelling, optimization of industrial chimneystack parameters

Luka Sopta
thermal power plant cooling systems, coastal flow, pipe laying, open channel flow, computer simulations in engineering

ASSISTANT PROFESSORS

Zoran Čarija
hydraulic machinery flow, hydraulic parts shape optimization, optimization of industrial chimneystack parameters, programming technical applications, thermal flow simulations

Lado Kranjčević
open channel flow, parallel programming, programming technical applications

Siniša Družeta
free surface flow, coastal flow, thermal power plant cooling systems

Jerko Škifić
hidraulički tranzijenti, hidraulički udar, programiranje tehničkih aplikacija, računalne simulacije u tehnici, računalna vizualizacija, rashladni sustavi termoelektrana

Jerko Škifić
hydraulic transients, water hammer, programming technical applications, computer simulations in engineering, computer visualisation, thermal power plant cooling systems

ZNANSTVENI NOVACI

Marko Čavrak
simulacije strujanja fluida u industrijskim pogonima, modeliranje onečišćenja zraka, parametarska optimizacija industrijskih dimnjaka, programiranje tehničkih aplikacija

Stefan Ivić
programiranje tehničkih aplikacija, polaganje cjevovoda, optimizacija tehničkih sustava

Adrijana Radošević
strujanje u priobalnom području, rashladni sustavi termoelektrana, programiranje tehničkih aplikacija

JUNIOR RESEARCHERS

Marko Čavrak
industrial flow simulations, air quality modelling, optimization of industrial chimneystack parameters, programming technical applications

Stefan Ivić
programming technical applications, pipe laying, optimization of technical systems

Adrijana Radošević
coastal flow, thermal power plant cooling systems, programming technical applications

ADMINISTRATIVNO OSOBLJE

Tanja Veljčić
administrativna tajnica

ADMINISTRATIVE STAFF

Tanja Veljčić
administrative secretary

NASTAVA

Nastava iz područja: mehanika fluida, hidraulički strojevi, računalne metode, numeričko modeliranje, optimizacija

KOLEGIJI NA SVEUČILIŠNOM PREDDIPLOMSKOM STUDIJU

Hidraulički strojevi
Mehanika fluida
Primjena računala
Primjena računalnih metoda
Računalne simulacije u tehnici

EDUCATION

Lectures in the field of: fluid mechanics, hydraulic machines, computational methods, numerical modelling, optimization

UNDERGRADUATE COURSES

Hydraulic Machines
Fluid Mechanics
Applied Computers
Applied Computational Methods
Computer Simulations in Engineering

KOLEGIJI NA DIPLOMSKOM SVEUČILIŠNOM STUDIJU

Dinamički sustavi
Dinamika fluida
Modeliranje u tehnici
Numeričko modeliranje hidrauličkih strojeva
Optimizacije u tehnici
Primjena paralelnog računanja
Primjena računalne grafike
Programiranje tehničkih aplikacija I
Programiranje tehničkih aplikacija II
Računalom podržano mjerenje
Računalna mehanika fluida
Računalne metode
Računalno inženjerstvo u industriji
Upoznavanje industrijskih postrojenja

KOLEGIJI NA STRUČNOM STUDIJU

Hidraulički strojevi ST
Mehanika fluida ST
Primjena računala ST

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Dinamika fluida
Hidrodinamika turbostrojeva
Turbulentno strujanje
Modeliranje onečišćenja zraka
Računalna mehanika fluida
Modeliranje strujanja sa slobodnom površinom
Modeliranje nestacionarnog strujanja u cjevovodu

GRADUATE COURSES

System Dynamics
Fluid Dynamics
Models in Engineering
Numerical Modelling of Hydraulic Machines
Optimization in Technics
Applied Parallel Computing
Applied Computer Graphics
Programming of Technical Applications I
Programming of Technical Applications II
Computer Aided Measurement
Computational Fluid Dynamics
Computational Methods
Computational Engineering in Industry
Insight to Industrial Facilities

VOCATIONAL COURSES

Hydraulic Machines ST
Fluid Mechanics ST
Applied Computers ST

POSTGRADUATE COURSES

Fluid Dynamics
Hydrodynamics of Turbomachines
Turbulent Flow
Air Quality Modeling
Computational Fluid Mechanics
Free Surface Flow Modeling
Unsteady Pipe Flow Modeling

ZNANSTVENOISTRAŽIVAČKI RAD

Rashladni sustavi termoelektrana, strujanje u priobalnom području, strujanje o otvorenim vodotocima, hidraulički tranzijenti, strujanje u cjevovodima, strujanja u hidrauličkim strojevima, optimizacija oblika dijelova hidrauličkih strojeva, analiza i optimizacija režima rada hidroelektrana, modeliranje onečišćenja zraka, parametarska optimizacija industrijskih dimnjaka

RESEARCH AND DEVELOPMENT ACTIVITIES

Thermal power plant cooling systems, coastal flow, open channel flow, hydraulic transients, pipe flow, hydraulic machinery flow, hydraulic parts shape optimization, hydropower plant operation analysis and optimization, air quality modelling, optimization of industrial chimneystack parameters

PROJEKTI

Numeričko modeliranje i optimizacija strujanja fluida, 069-0693014-3015, MZOŠ, Luka Sopta, 2007 – 2010, znanstvenoistraživački.

Superračunalne simulacije u zaštiti okoliša i obnovljivim izvorima energije, 069-0693014-3013, MZOŠ, Zoran Mrša, 2007 - 2010, znanstvenoistraživački.

PROJECTS

Fluid flow numerical modeling and optimization, 069-0693014-3015, Ministry of Science, Education and Sports of the Republic of Croatia, Luka Sopta, 2007.– 2010., research and scientific project.

Supercomputer simulations in evironment protection and sustainable energy sources, 069-0693014-3013, MZOŠ, Zoran Mrša, 2007.-2010., research and scientific project.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Družeta, S., Sopta, L., Maćešić, S., Črnjarić-Žic, N.: Investigation of the Importance of Spatial Resolution for Two-Dimensional Shallow-Water Model Accuracy, Journal of Hydraulic Engineering 135 (11), pp. 917-925, ASCE, 2009.

Pavković, B., Čarija, Z.: Površinski ugrađeni sustavi grijanja i hlađenja s dizalicama topline: analiza učinkovitosti i lagodnosti, KGH - naučno-stručni ćasopis za klimatizaciju, grejanje i hlađenje Društva za KGH Saveza mašinskih i elektrotehničkih inženjera i tehničara Srbije. 2010 (2010) , 1; 75-86

Škifić, J., Maćešić, S., Črnjarić-Žic, N.: Nonconservative Formulation of Unsteady Pipe Flow, Journal of Hydraulic Engineering (0733-9429) 136, 8; 483-492, (2010)

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Belobrajić, Radivoj; Čarija, Zoran; Šiško Kuliš, Marija: Poboljšanje sustava ventilacije hidrogeneratora hlađenih zrakom, 9. savjetovanje HRO CIGRE, Cavtat, Hrvatska, 8.-12.11.2009

Čarija, Z., Pavković, B., Franković, B.: Numerical Analysis of Air-Flow in Air-Conditioned Space of Significant Height, Interklima 2009, Andrassy, Mladen (ur.). Zagreb : Fakultet strojarstva i brodogradnje Sveucilišta u Zagrebu, 2009. 60-66

Čarija, Z., Sinožić, M., Fućak, S., Mrša, Z., Čavrak, M.: Fluid flow simulation of a Crossflow turbine // Annals of DAAAM for 2009 & Proceedings of the 20th International DAAAM Symposium / Katalinic, Branko (ur.). Vienna : DAAAM International Vienna, 2009. 1921-1922

Čavrak, Marko; Mrša, Zoran; Čarija, Zoran: On the potential of hydropower plant draft tube hydraulic loss decrease, Proceedings of the 20th International DAAAM Symposium, Katalinic, Branko (ur.). Vienna : DAAAM International Vienna, 2009. 1849-1850

Črnjarić-Žic, N., Crnković, B.: Maćešić, S.: Practical analysis of SSP time integration methods for hyperbolic conservation laws, Sixth Conference on Applied Mathematics and Scientific Computing, Zadar, 2009.

Fafandjel, N., Dobrinić, J., Hadjina, M., Matulja, T., Čavrak, M.: Continuous Flow-Through Method for Ship Water Ballast Management. III. Savjetovanje o morskoj tehnologiji, Tehnički fakultet Rijeka, Rijeka, 2009. 66-71.

Fućak, Sanjin; Čarija, Zoran; Mrša, Zoran: Reducing channel flow energy losses using deflectors, Proceedings of the 6th International Congress of Croatian Society of Mechanics, Smojver, Ivica ; Soric, Jurica (ur.). Zagreb : Hrvatsko društvo za mehaniku, 2009. 1-9

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

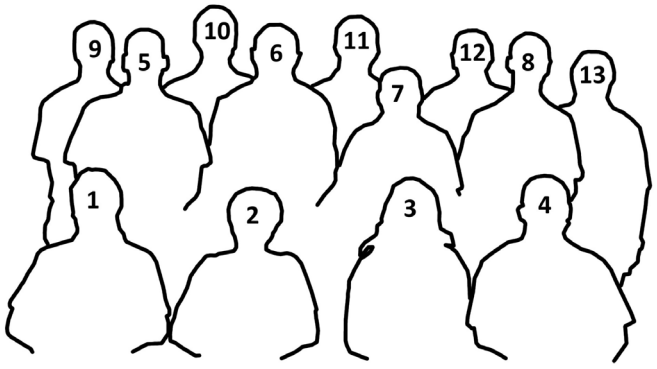
Univerza na Primorskem – Primorski inštitut za naravoslovne in tehnične vede, Slovenija

Sveučilište u Mostaru, Bosna i Hercegovina

5.9. ZAVOD ZA RAČUNALSTVO / DEPARTMENT OF COMPUTER ENGINEERING

Predstojnik Zavoda / Department Head:
Doc. dr. sc. / Assist. Prof. D. Sc. Miroslav Joler

URL: http://www.riteh.uniri.hr/ustroj/zr/



1. Sandi Ljubić
2. Natalija Forgić
3. Tihana Galinac
4. Miroslav Joler
5. Kristijan Lenac
6. Željko Jeričević
7. Ivo Ipšić
8. Ivan Štajduhar
9. Mladen Tomić
10. Damir Arbula
11. Damir Malnar
12. Damir Nemčanin
13. Antun Sok

DJELATNICI

REDOVITI PROFESORI

Ivo Ipšić
umjetna inteligencija, raspoznavanje uzoraka, govorne tehnologije

IZVANREDNI PROFESORI

Željko Jeričević
znanstveno računanje, bioračunalstvo, razvoj algoritama, digitalna obrada slika

DOCENTI

Miroslav Joler
bežične komunikacije, računalni elektromagnetizam, biomedicinske aplikacije elektromagnetizma, mobilne aplikacije

Kristijan Lenac
mobilna robotika, operacijski sustavi, razvoj algoritama, ugradbeni sustavi

PROFESORI VISOKE ŠKOLE

Antun Sok
računalstvo, informatika, informacijska tehnologija, ICT edukacija

VIŠI ASISTENTI

Tihana Galinac
programsko inženjerstvo, inženjerski menadžment

Ivan Štajduhar
umjetna inteligencija, strojno učenje

Mladen Tomić
digitalna obrada signala i slike, teorija valića, filtarski slogovi

FACULTY AND STAFF

PROFESSORS

Ivo Ipšić
artificial intelligence, pattern recognition, speech technologies

ASSOCIATE PROFESSORS

Željko Jeričević
scientific computing, biocomputing, algorithm development, digital image processing

ASSISTANT PROFESSORS

Miroslav Joler
wireless communications, computational electromagnetics, biomedical applications of electromagnetics, applications for mobile

Kristijan Lenac
mobile robotics, operating systems, algorithm development, embedded systems

LECTURERS

Antun Sok
computer science, informatics, information technology, ICT education

SENIOR ASSISTANTS

Tihana Galinac
software engineering, engineering management

Ivan Štajduhar
artificial intelligence, machine learning

Mladen Tomić
digital signal and image processing, wavelets and filter banks

ASISTENTI

Zoran Nebić
sustavi e-učenja, evolucijsko računalstvo, otkrivanje znanja u podacima

Damir Nemčanin
e-učenje, umjetna inteligencija, informacijski sustavi

ZNANSTVENI NOVACI

Damir Arbula
bežične mreže osjetila, raspodijeljeni algoritmi, lokalizacija

Sandi Ljubić
interakcija čovjeka i računala, razvoj aplikacija za mobilne uređaje, sustavi e-učenja i m-učenja

Damir Malnar
elektromagnetsko modeliranje, adaptivne antene, ugradljivi sustavi

ADMINISTRATIVNO OSOBLJE

Natalija Forgić
administrativna tajnica

ASSISTANTS

Zoran Nebić
e-learning, evolutionary computing, knowledge discovery in databases

Damir Nemčanin
e-learning, artificial intelligence, information systems

JUNIOR RESEARCHERS

Damir Arbula
wireless sensor networks, distributed algorithms, localization

Sandi Ljubić
human–computer interaction (HCI), mobile device applications development, e-learning and m-learning systems

Damir Malnar
electromagnetic modelling, adaptive antennas, embedded systems

ADMINISTRATIVE STAFF

Natalija Forgić
administrative secretary

NASTAVA

Nastava se izvodi iz područja računalnog i komunikacijskog inženjerstva koja uključuju tehnike programiranja, programske jezike, operacijske sustave, baze podataka, testiranje koda, razvoj algoritama, računalne mreže, radiokomunikacije, svjetlovodne mreže i telekomunikacijske uređaje.

EDUCATION

The teaching covers the fields of computer- and communication - engineering, comprising programming techniques and languages, operating systems, databases, algorithm development and testing, computer networks, artificial intelligence, radiocommunications, optical- and telecommunication - networks and devices.

KOLEGIJI NA PREDDIPLOMSKOM SVEUČILIŠNOM STUDIJU

Algoritmi i strukture podataka
Baze podataka
Dijagnostičke metode u medicini I
Dijagnostičke metode u medicini II
Građa računala
Informacijski sustavi
Operacijski sustavi
Osnove znanstvenog računanja
Primjena računala R
Programsko inženjerstvo
Programiranje
Računalne mreže
Razvoj web-aplikacija
Ugradbeni računalni sustavi
Uvod u računalstvo

UNIVERSITY PROGRAM UNDERGRADUATE COURSES

Algorithms and Data Structures
Databases
Diagnostic Methods in Medicine I
Diagnostic Methods in Medicine II
Computer Architecture
Information Systems
Operating Systems
Foundations of Scientific Computation
Applied Computing R
Software Engineering
Programming
Computer Networks
Web Applications Development
Embedded Systems
Introduction to Computer Engineering

KOLEGIJI NA DIPLOMSKOM SVEUČILIŠNOM STUDIJU

Građa računala
Komunikacija čovjek-stroj
Radiokomunikacije

UNIVERSITY PROGRAM GRADUATE COURSES

Computer Architecture
Human-Machine Interaction
Radiocommunications

KOLEGIJI NA STRUČNOM STUDIJU

Digitalna računala
Informacije i komunikacije
Primjena računala ST
Računalne mreže ST
Radiokomunikacije
Svjetlovodne mreže
Telekomunikacijski uređaji i mreže

VOCATIONAL PROGRAM COURSES

Digital Computers
Information and Communication
Applied Computing ST
Computer Networks ST
Radiocommunications ST
Optical Networks
Telecommunication Devices and Networks

ZNANSTVENOISTRAŽIVAČKI RAD

Algoritmi u obradi informacija i biomedicini, interakcija čovjeka i stroja, računalni elektromagnetizam, bežične komunikacije, upravljanje u programskom inženjerstvu, kvaliteta programskog proizvoda, pouzdanost i performanse mreža.

RESEARCH AND DEVELOPMENT ACTIVITIES

Algorithms in information processing and life sciences, human-computer interaction, computational electromagnetics, wireless communications, software engineering management, software quality, network reliability and performance.

PROJEKTI

Klasifikacija proteina metodama eigen-analize, 062-0000000-3179, Ministarstvo znanosti, obrazovanja i športa, Željko Jeričević, 2008 - 2011, znanstvenoistraživački projekt

Razvoj matematickih metoda za opis strukture, dinamike i reaktivnosti molekula, 098-0982915-2942, Ministarstvo znanosti, obrazovanja i športa, D. Babić, suradnik Željko Jeričević, 2008 - 2011; znanstvenoistraživački projekt

Višefunkcijske antene u komunikacijskim i radarskim sustavima, Ministarstvo znanosti, obrazovanja i športa Republike Hrvatske, suradnik: Miroslav Joler, br. projekta: 036-0361566-1573, voditelj: Juraj Bartolić.

PROJECTS

Protein Classification using Eigen-Analysis Methods, 062-0000000-3179, Ministry of Science, Education, and Sports, Željko Jeričević, 2008-2011, scientific research project.

Mathematical description molecular structure, dynamics and reactivity, Ministry of Science, Education, and Sports, D. Babić, collaborator: Željko Jeričević, 2008-2011, scientific research project.

Multifunctional Antennas in Communication and Radar Systems, Ministry of Science, Education, and Sports, collaborator: Miroslav Joler, project no.: 036-0361566-1573, PI: Juraj Bartolić

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Galinac, T., Empirical Evaluation of Selected Best Practices in Implementation of Software Process Improvement, Information and Software Technology, Vol. 51, No. 9, 2009, str. 1351-1364.

Kožar, I., Lozzi-Kožar, D., Jeričević, Ž.: A note on the reservoir routing problem, European Journal of Mechanics - B/Fluids 29 (2010) 522-533, DOI: 10.1016/j.euromechflu.2010.06.005

Kožar, I., Jeričević, Ž., Pecak, T., Approximate modal analysis using Fourier decomposition, IOP Conference Series: Materials Science and Engineering, 10 (2010) 1-8, DOI: 10.1088/1757-899X/10/1/012119

Sok, A.: ECDL testing of students for the purpose of informatics education at the Faculty of Engineering in Rijeka, Engineering Review, Vol. 29-2, pp. 101-108, Rijeka, 2009.

Stojković, N., Joler, M., Lenac, K.: Graduate University Study of Computer Engineering at the Faculty of Engineering of the University of Rijeka, Engineering Review, Faculty of Engineering, University of Rijeka, vol. 30, no. 1 (2010), UDK 62(05)=163.42=111, ISSN 1330-9587, Rijeka, Croatia, July, 2010.

Štajduhar, I., Dalbelo Bašić, B.: Learning Bayesian networks from survival data using weighting censored instances, Journal of Biomedical Informatics, in press, doi:10.1016/j.jbi.2010.03.005

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Al Zuraiqi, E., Joler, M., Christodoulou, C.G.: Neural Networks FPGA Controller for Reconfigurable Antennas, 2010 IEEE AP-S International Symposium on Antennas and Propagation and 2010 USNC/CNC/URSI Meeting, Toronto, ON, Canada, 11-17 July, 2010, pp. 1-4.

Jeričević, Ž.: In-Depth Analysis of Seismic Algorithm for Surface Multiple Attenuation, MIPRO 2010, 33rd International Convention, MEET & GVS Proceedings / Biljanović, Petar ; Skala, Karolj (ur.). - Rijeka : Croatian Society for Information and Communication Technology, Electronics and Microelectronics - MIPRO , 2010. 241-243 (ISBN: 978-953-233-051-9).

Jeričević, Ž., Kožar, I., Pecak, T.: Modeling of Linear Algebra System with the Fourier Transform, MIPRO 2010, 33rd International Convention, MEET & GVS Proceedings / Biljanović, Petar ; Skala, Karolj (ur.). - Rijeka : Croatian Society for Information and Communication Technology, Electronics and Microelectronics - MIPRO , 2010. 231-235 (ISBN: 978-953-233-051-9).

Joler, M., Malnar, D., Barbin, S.E.: Real-Time Performance Considerations of an FPGA-Embedded Genetic Algorithm for Self-Recovery of an Antenna Array, 2010 ICECom, 20th International Conference on Applied Electromagnetics and Communications, Dubrovnik, Croatia, 20-23 September, 2010.

Joler, M., Malnar, D., Barbin, S.E.: An FPGA-enhanced genetic algorithm for mitigation of a flawed array radiation, 2010 ICEAA, International Conference on Electromagnetics in Advanced Applications, Sydney, Australia, 20-24 September, 2010. Accepted for Presentation.

Kožar, I., Jeričević, Ž., Pecak, T.: Approximate modal analysis using Fourier decomposition, WCCM/APCOM 2010, July 23-28, Sydney, Australia.

Kožar, I., Torić, N., Jeričević, Ž.: The Finite Strip as a Spectral Element for Moving Load Analysis, Tenth International Conference on Computational Structures Technology, Valencia, Spain 14-17 September 2010.

Kožar, I., Jeričević, Ž., Pecak, T.: Approximate solution of eigenvalue problem for modal analysis, 6th International Congress of Croatian Society of Mechanics, Dubrovnik 30.09-02.10.2009.

Malnar, D., Joler, M., Christodoulou, C.G.: Embedding an Array Self-Recovery Algorithm into an FPGA Controller, 2010 IEEE AP-S International Symposium on Antennas and Propagation and 2010 USNC/CNC/URSI Meeting, Toronto, ON, Canada, 11-17 July, 2010, pp. 1-4.

Nebić, Z., Mahnič, V.: Data warehouse for an e-learning platform, 14th WSEAS International Conference on COMPUTERS, Latest trends on computers (Volume II), WSEAS Press, 2010, pg 415-420. (ISSN: 1792-4251, ISBN: 978-960-474-201-1).

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

University of New Mexico, Electrical and Computer Engineering Department, Albuquerque, NM, USA/SAD

University of Sao Paulo, Telecommunications and Control Engineering Department, Sao Paulo, Brasil/Brazil

University of Trieste, Department of Electrical and Electronics Engineering, Trieste, Italy/Italija

University of Nantes, Polytech Nantes, Nantes, France/Francuska

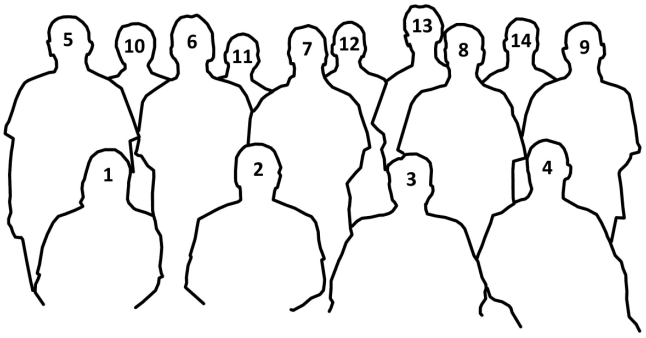
Indian Institute of Technology at Roorkee, India/Indija

5.10. ZAVOD ZA TEHNIČKU MEHANIKU / DEPARTMENT OF ENGINEERING MECHANICS

Predstojnik Zavoda / Department Head:
Red. prof. dr. sc. / Full Prof. D. Sc. Josip Brnić

URL: http://www.riteh.uniri.hr/ustroj/ztm/

1. Mirjana Mihaljević-Vukelić
2. Goran Turkalj
3. Josip Brnić
4. Sanjin Braut
5. Roberto Žigulić
6. Ante Skoblar
7. Sanjin Kršćanski
8. Domagoj Lanc
9. Igor Pešić
10. Edin Merdanović
11. Marino Brčić
12. Goran Vukelić
13. Marko Čanađija
14. Neven Munjas



DJELATNICI

REDOVITI PROFESORI

Josip Brnić
statika, nauka o čvrstoći, metoda konačnih elemenata, optimizacija konstrukcija

Marko Čanađija
statika, metoda konačnih elemenata, termomehanika, eksperimentalna ispitivanja u mehanici konstrukcija i strojeva

Goran Turkalj
nauka o čvrstoći, mehanika konstrukcija, stabilnost konstrukcija, tankostjene konstrukcije

Roberto Žigulić
kinematika, dinamika, dinamika strojeva i robota, mehatronika, eksperimentalna ispitivanja u mehanici konstrukcija i strojeva

IZVANREDNI PROFESORI

Sanjin Braut
kinematika, dinamika, vibracije, regulacija i upravljanje dinamičkim sustavima, trajnost strojeva i konstrukcija

Domagoj Lanc
teorija elastičnosti i plastičnosti, čvrstoća

ASISTENTI

Ante Skoblar
kinematika, dinamika, vibracije, akustika

ZNANSTVENI NOVACI

Marino Brčić
statika, čvrstoća, labor. vježbe, metoda konačnih elemenata

Sanjin Kršćanski
statika, čvrstoća

FACULTY AND STAFF

PROFESSORS

Josip Brnić
statics, strength of materials, finite element method, structural optimization

Marko Čanađija
statics, finite element method, thermomechanics, experimental methods in mechanics of structures and machines

Goran Turkalj
strength of materials, structural mechanics, structural stability, thin-walled structures

Roberto Žigulić
kinematics,dynamics, dynamics of robots and machines, mechatronics, experimental testing of structures and machines

ASSOCIATE PROFESSORS

Sanjin Braut
kinematics, dynamics, vibration, dynamic system control, durability of machines and structures

Domagoj Lanc
elasticity and plasticity theory, strength of materials

ASSISTANTS

Ante Skoblar
kinematics,dynamics, vibration, acoustics

JUNIOR RESEARCHERS

Marino Brčić
statics, strength of materials, labor. execises, finite element method

Sanjin Kršćanski
statics, strength of materials

Edin Merdanović
statika, čvrstoća, mehanika i elementi konstrukcija, labor. vježbe

Neven Munjas
statika, termomehanika

Igor Pešić
statika, čvrstoća, mehanika i elementi konstrukcija, labor. vježbe

Goranka Štimac
kinematika, dinamika, regulacija, aktivni magnetski ležajevi

Goran Vukelić
statika, čvrstoća

ADMINISTRATIVNO OSOBLJE

Mirjana Mihaljević-Vukelić
administrativna tajnica

Edin Merdanović
statics, strength of materials, mechanics and structural elements, labor. execises

Neven Munjas
statics, thermomechanics

Igor Pešić
statics, strength of materials, mechanics and structural elements, labor. execises

Goranka Štimac
kinematics,dynamics, control, active magnetic bearings

Goran Vukelić
statics, strength of materials

ADMINISTRATIVE STAFF

Mirjana Mihaljević-Vukelić
administrative secretary

NASTAVA

Nastava se izvodi iz područja primijenjene mehanike. Ta područja uključuju: statiku, čvrstoću i dinamiku krutih i deformabilnih tijela, zatim stabilnost, vibracije i optimizaciju konstrukcija. Analiza konstrukcija u spomentim se područjima provodi analitički, numerički i eksperimentalno.

KOLEGIJI NA PREDDIPLOMSKOM SVEUČILIŠNOM STUDIJU

Dinamika
Nauka o čvrstoći I
Kinematika
Mehanika i elementi konstrukcija
Osnove primjene metode konačnih elemenata (MKE)
Statika

EDUCATION

Courses are running in the field of applied mechanics. This includes courses in the fields of statics, strength of materials and dynamics of rigid and deformable bodies as well as theory of stability, vibration and optimal structural design. Structural analysis is carried out analytically, numerically and experimentally.

UNDERGRADUATE COURSES

Dynamics
Strength of Materials I
Kinematics
Mechanics and Structural Elements
Introduction to Finite Element Method (FEM)
Statics

KOLEGIJI NA DIPLOMSKOM SVEUČILIŠNOM STUDIJU

Dinamika strojeva i robota
Eksperimentalna ispitivanja u mehanici konstrukcija i strojeva
Elastomehanika i plastomehanika
Mehanika konstrukcija
MKE u mehanici čvrstog tijela
Nauka o čvrstoći II
Optimalni dizajn konstrukcija
Regulacija i upravljanje dinamičkim sustavima
Stabilnost konstrukcija
Tankostjene konstrukcije
Termomehanika
Trajnost strojeva i konstrukcija
Vibracije

KOLEGIJI NA STRUČNOM STUDIJU

Čvrstoća
Mehanika I
Mehanika II
Mehanika i elementi konstrukcija ST
Stručna praksa I
Stručna praksa II

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Elastomehanika i plastomehanika
MKE i optimizacija konstrukcija
Viskoelastičnost i viskoplastičnost
Stabilnost konstrukcija
Nelinearna analiza konstrukcija
Tankostjene konstrukcije
Kontaktna mehanika
IP iz termomehanike
Računalno modeliranje plastičnog oblikovanja metala
Vibracije i trajnost strojeva i konstrukcija
Mehatronika u strojarstvu
Kinematika i dinamika robota
Zaštita od buke i vibracija strojeva i konstrukcija

GRADUATE COURSES

Dynamics of Machines and Robots
Experimental Testing in Mechanics of Structures and Machines
Elasto-Plastomechanics
Structural Mechanics
FEM in Solid Mechanics
Strength of Materials II
Optimal Design of Structure
Dynamic Systems Control
Structural Stability
Thin-Walled Structures
Thermomechanics
Durability of Machines and Structures
Vibration

VOCATIONAL COURSES

Strength of Materials
Mechanics I
Mechanics II
Mechanics and Structural Elements ST
Professional practice I
Professional practice II

POSTGRADUATE COURSES

Elastomechanics and Plastomechanics
FEM and Structural Optimization
Viscoelasticity and Viscoplasticity
Structural Stability
Nonlinear Structural Analysis
Thin-Walled Structures
Contact Mechanics
Advanced Thermomechanics
Computer Modeling of Metal Forming Plasticity
Vibrations and Durability of Machines and Structures
Mechatronics in Mechanical Engineering
Kinematics and Dynamics of Robots
Protection against Noise and Vibrations of Machines and Structures

ZNANSTVENOISTRAŽIVAČKI RAD

Primijenjena mehanika: numerička analiza konstrukcija i strojeva, optimalni dizajn konstrukcija, stabilnost konstrukcija, vibracije, vibroakustika, dinamika strojeva i konstrukcija, mehatronika, termomehanika, nanomehanika.

RESEARCH AND DEVELOPMENT ACTIVITIES

Applied mechanics: numerical analysis of structures and machines, optimal structural design, structural stability, vibrations, vibroacoustics, dynamics of structures and machines, mechatronics, termomechanics, nanomechanics.

PROJEKTI

Mjerenje vibracija na više elektromotora smještenih u INA - Rafinerija nafte Rijeka, Urinj b.b., RN 33-014/10, Siemens d.d., Roberto Žigulić, 2010 - 2010, elaborat.

Redukcija vibracija i buke mehatroničkim pristupom, 069-0691736-1733, MZOŠ, Roberto Žigulić, 2007 - 2011, znanstvenoistraživački.

Numerička analiza odziva konstrukcija za određena područja eksploatacije, 069-0691736-1737, MZOŠ, Josip Brnić, 2007 - 2011, znanstvenoistraživački.

Konačnoelementni modeli za analizu stabilnosti grednih konstrukcija, 069-0691736-1731, MZOŠ, Goran.Turkalj, 2007 - 2012, znanstvenoistraživački.

Ponašanje metalnih legura pri različitim okolišnjim uvjetima: testiranja i numeričke simulacije, MP-06, MZOŠ, Ministarstvo znanosti NR Kine, Josip Brnić i Jitai Niu, 2009 - 2011, kolaborativno/ znanstvenoistraživački.

PROJECTS

Vibration measurement on the several electric motors located in INA d.d. company, Urinj plant, RN 33-014/10, Siemens d.d., Roberto Žigulić, 2010.- 2010., study.

Mechatronic Approach to the Reduction of Machinery Vibration and Noise, 069-0691736-1733, Ministry of Science, Education and Sports of the Republic of Croatia, Roberto Žigulić, 2007.- 2011., research and scientific project.

Numerical analysis of structural response for particular service conditions, 069-0691736-1737, Ministry of Science, Education and Sports of the Republic of Croatia, Josip Brnić, 2007.- 2011., research and scientific project.

Finite element models for stability analysis of beam-type structures, 069-0691736-1731, Ministry of Science, Education and Sports of the Republic of Croatia, Goran Turkalj, 2007.- 2012., research and scientific project.

Metals alloys behaviour at different environmental conditions: testing and numerical simulations, MP-06, Ministry of Science, Education and Sports of the Republic of Croatia and Ministry of Science and Technology of the People's Republic of China, Josip Brnić and Jitai Niu, 2009.- 2011., collaborative/ research and scientific project.

Ekološki prihvatljivo korištenje energije, 991111, ASO - Austrijski ured za inicijaciju suradnje u znanosti i istraživanju, suradnik Sanjin Braut, 2008.- 2009., znanstveno-istraživački.

Dinamika temelja turboagregata snage 21 MW u INA RNR Urinj, RN 33-026/09, Tehnokom d.o.o. Roberto Žigulić, 2009., elaborat

Environmentally Usage of Power, 991111, ASO - Austrian Science and Research Liaison Office, partner Sanjin Braut, 2008.- 2009., research and scientific project.

Dynamics of Turbine Generator Foundation, 21 MW located in INA RNR Urinj, RN 33-026/09, Tehnokom d.o.o. Roberto Žigulić, 2009., study

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Bandera, N. Braut, S., Žigulić, R.: Design of the rotordynamic testbed with active magnetic bearings, Engineering review, Vol. 29 No. 1 (2009), pp 37-46.

Božić, Ž., Vujica, D., Braut S.: Effect of secondary bending on fatigue crack growth in stiffened panels, Engineering review, Vol. 30, No. 1 (2010), 13-21.

Brčić, M., Čanađija, M.: Stress and strain analysis of an axial bellow, Engineering review (1330-9587), 29 (2009), 1, 61-70.

Brčić, M., Čanađija, M., Brnić, J., Lanc, D., Kršćanski, S., Vukelić, G.: FE modelling of multi-walled carbon nanotubes, Estonian Journal of Engineering (1736-6038) 15 (2009) , 2; 78-86.

Brnić, J., Čanađija, M., Turkalj, G., Lanc, D.: 50CrMo4 Steel-Determination of Mechanical Properties at Lowered and Elevated Temperatures, Creep Behavior and Fracture Toughness Calculation, Journal of engineering materials and technology (0094-4289) 132 (2010), 2; 021004-1 - 021004-6.

Brnić, J., Čanađija, M., Turkalj, G., Lanc, D.: Comparison of Mechanical Properties and Creep Responses of HSLA Steels. // Transactions of FAMENA. 33 (2009) , 1; 23-30

Brnić, J., Čanađija, M., Turkalj, G., Lanc, D.: Structural Steel ASTM A709-Behavior at Uniaxial Tests Conducted at Lowered and Elevated Temperatures, Short-Time Creep Response, and Fracture Toughness Calculation. // Journal of engineering mechanics. 136 (2010) , 9; 1083-1089

Brnić, J., Čanađija, M., Turkalj, G., Lanc, D., Pepelnjak, T., Barišić, B., Vukelić, G., Brčić, M.: Tool material behavior at elevated temperatures. // Materials and manufacturing processes. 24 (2009) , 7&8; 758-762

Brnić, J., Lanc, D., Turkalj, G., Čanađija, M.: Comparison of Both Creep Resistance and Material Properties of High-Strength Low-Alloy Steel and Stainless Steel, Journal of Testing and Evaluation (0090-3973) 37 (2009), 4; 358-363.

Brnić, J., Niu, J., Čanađija, M., Turkalj, G., Lanc, D.: Behavior of AISI 316L steel subjected to uniaxial state of stress at elevated temperatures. // Journal of Materials Science and Technology. 25 (2009) , 2; 175-180

Brnić, J., Niu, J., Turkalj, G., Čanađija, M., Lanc, D.: Experimental determination of mechanical properties and short-time creep of AISI 304 steel at elevated temperatures, International Journal of Minerals, Metallurgy and Materials (1674-4799) 17 (2010), 1; 39-45.

Brnić, J., Turkalj, G., Čanađija, M.: Shear stress analysis in engineering beams using deplanation field of special 2-D finite elements, Meccanica (0025-6455) 45 (2010), 2; 227-235.

Brnić, J., Turkalj, G., Čanađija, M., Lanc, D.: Creep behavior of high strength low-alloy steel at elevated temperatures. // Materials Science and Engineering A - Structural Materials Properties Microstructure and Processing. 499 (2009) , 1-2 Special Issue; 23-27

Cazin, D., Braut, S., Žigulić R.: Fatigue Life Analysis of the Damaged Steam Turbine Blade, Engineering review, Vol. 29, No. 2 (2009), 33-43.

Čanađija, M., Brnić, J.: A dissipation model for cyclic non-associative thermoplasticity at finite strains, Mechanics research communications (0093-6413) 37 (2010), 510-514.

Čanađija, M., Brnić, J.: Nonlinear kinematic hardening in coupled thermoplasticity, Materials Science and Engineering: A (0921-5093), 499 (2009) , 1-2, 275-278.

Čanađija, M., Munjas, N.: Limit state analysis of a pressure vessel, Engineering review (1330-9587), 29 (2009) 2, 69-80.

Žigulić, R., Kršćanski, S., Braut, S.: A numerical analysis of the behaviour of a vehicle model with driver's seat at the road bump, Transactions of FAMENA (1333-1124) 33 (2009), 4; 19-30.

MEĐUNARODNI KONGRESI / INTERNATIONAL CONGRESSES

Braut, S., Žigulić, R., Skoblar, A., Štimac, G.: Compensation for Encoder Geometry in Time Interval Torsional Vibration Measurement, Simulation and Experiment, Proceedings of the 6th International Congress of Croatian Society of Mechanics, Dubrovnik, Croatia, 2009. (CD edition), 1 - 8.

Braut, S., Žigulić, R., Štimac, G., Skoblar, A.: Contribution to compensation for encoder geometry in time interval torsional vibration measurement, simulation and experiment, Proceedings of the 8th IFToMM International Conference on Rotordynamics, September 12-15, 2010, KIST, Seoul, Korea, pp. 890-897.

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Brnić, J., Čanađija, M., Turkalj, G., Lanc, D., Vukelić, G., Brčić, M.: Response of structural steel subjected to uniaxial stress at lowered and elevated temperatures, Proceedings of the 6th International Congress of Croatian Society of Mechanics, Dubrovnik, September 31 – October 3, 2009, (CD-ROM).

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Turkalj, G., Merdanović, E., Lanc, D.: A beam model for nonlinear stability analysis of beam-type, Proceedings of the IV European Congress on Computational Mechanics (ECCM IV): Solids, Structures and Coupled Problems in Engineering, Palais des Congrès, Paris, France, May 16-21, 2010, Abstract 263, (CD ROM).

Štimac, G., Braut, S., Žigulić, R., Skoblar, A.: Improvement of Active Magnetic Bearings System Response Using Fuzzy Logic Control, Proceedings of the 6th International Congress of Croatian Society of Mechanics, Dubrovnik, Croatia, 2009. (CD edition), 1 - 8.

KNJIGE / BOOKS

Brnić, J., Čanađija, M.: Analiza deformabilnih tijela metodom konačnih elemenata. Fintrade & Tours d.o.o., Rijeka, 2009.

MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

Civil Engineering Faculty, University of Maribor, Slovenia/Slovenija

GKSS Forschungszentrum, Geesthacht, Germany/Njemačka

Harbin Institute of Technology, Harbin, China/Kina.

Interuniversity Network in Central Europe, PAMM-Centre, Budapest University of Technology and Economics, Budapest/Budimpešta, Hungary/Mađarska.

Structural Stability Research Council (SSRC), Missouri University of Science and Technology, Rolla, MO, USA/SAD.

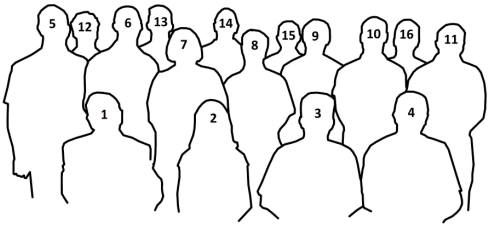
Technische Universität Darmstadt, FB Maschinenbau, Fachgebiet Mechatronik im Maschinenbau, Darmstadt, Germany/Njemačka.

5.11. ZAVOD ZA TERMODINAMIKU I ENERGETIKU / DEPARTMENT OF THERMODYNAMICS AND ENERGY ENGINEERING

Predstojnik Zavoda / Department Head:
Red. prof. dr. sc. / Full Prof. D. Sc. Bernard Franković

URL: http://www.riteh.uniri.hr/ustroj/zte/

1. Bernard Franković
2. Anica Trp
3. Zmagoslav Prelec
4. Vladimir Medica
5. Aleksandar Božunović
6. Tomislav Mrakovčić
7. Radojka Praprotnik
8. Igor Wolf
9. Igor Bonefačić
10. Tomislav Senčić
11. Boris Delač
12. Paolo Blecich
13. Viktor Dragičević
14. Vedran Mrzljak
15. Kristian Lenić
16. Ozren Bukovac



DJELATNICI

REDOVITI PROFESORI

Bernard Franković
termodinamika, izmjenjivači topline, plinska tehnika, obnovljivi izvori energije

Vladimir Medica
motori s unutarnjim izgaranjem, toplinski strojevi, brodski pogonski strojevi, numeričko modeliranje, numeričke simulacije izgaranja

Špiro Milošević
(professor emeritus)

Branimir Pavković
tehnika hlađenja, mjerenja u termotehnici, kompresori, procesna oprema, dizalice topline, energetska učinkovitost, obnovljivi izvori energije

Zmagoslav Prelec
energetski sustavi, energetski i procesni uređaji, inženjerstvo zaštite okoliša

Branko Staniša
energetika, toplinske turbine, energetska postrojenja

Anica Trp
termodinamika, izmjenjivači topline, numeričko modeliranje prijenosa topline i tvari, obnovljivi izvori energije

Ivan Viličić
termotehnička oprema i sustavi, toplinska ugodnost, kvaliteta zraka u prostoru, obnovljivi izvori energije, centralni sustavi nadzora i upravljanja, optimizacija sustava

FACULTY AND STAFF

PROFESSORS

Bernard Franković
thermodynamics, heat exchangers, gas technology, renewable energy sources

Vladimir Medica
internal combustion engines, heat engines, ship propulsion machinery, numerical modelling, numerical simulations of combustion

Špiro Milošević
(Professor Emeritus)

Branimir Pavković
refrigeration, thermal measurements, compressors, process equipment, heat pumps, energy efficiency, renewable energy sources

Zmagoslav Prelec
energy systems, energy and process facilities, environmental engineering

Branko Staniša
energetrics, heat turbines, energy plants

Anica Trp
thermodynamics, heat exchangers, numerical modeling of heat and mass transfer, renewable energy sources

Ivan Viličić
thermo-technical equipment and systems, thermal comfort, indoor air quality, renewable energy sources, central management and control systems, system optimization

IZVANREDNI PROFESORI

Kristian Lenić
termodinamika, izmjenjivači topline, numeričko modeliranje prijenosa topline i tvari, obnovljivi izvori energije

Tomislav Mrakovčić
brodski energetski sustavi, brodski pogonski sustavi, brodski pomoćni strojevi, numeričko modeliranje prijenosa topline i tvari

VIŠI ASISTENTI

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motori s unutranjim izgaranjem, termodinamika, toplinski strojevi, numeričko modeliranje

Igor Wolf
termotehnička oprema i sustavi, toplinska ugodnost, kvaliteta zraka u prostoru, obnovljivi izvori energije, centralni sustavi nadzora i upravljanja, optimizacija sustava

ASISTENTI

Igor Bonefačić
termodinamika, numeričko modeliranje procesa izgaranja, prijenosa topline i tvari, obnovljivi izvori energije

Viktor Dragičević
energetski sustavi, energetski i procesni uređaji, inženjerstvo zaštite okoliša

ZNANSTVENI NOVACI

Paolo Blecich
termodinamika, numeričko modeliranje prijelaza topline i izmjene tvari, obnovljivi izvori energije

ASSOCIATE PROFESSORS

Kristian Lenić
thermodynamics, heat exchangers, numerical modeling of heat and mass transfer, renewable energy sources

Tomislav Mrakovčić
marine energy systems, marine propulsion systems, marine auxiliary machinery, numerical modeling of heat and mass transfer

SENIOR ASSISTANTS

Tomislav Senčić
internal combustion engines, thermodynamics, heat engines, numerical modeling

Igor Wolf
thermo-technical equipment and systems, thermal comfort, indoor air quality, renewable energy sources, central management and control systems, system optimization

ASSISTANTS

Igor Bonefačić
thermodynamics, numerical modelling of combustion, heat and mass transfer, renewable energy sources

Viktor Dragičević
energy systems, energy and process facilities, environmental engineering

JUNIOR RESEARCHERS

Paolo Blecich
thermodynamics, numerical modelling of heat and mass transfer, renewable energy sources

Aleksandar Božunović
tehnika hlađenja

Ozren Bukovac
motori s unutranjim izgaranjem, termodinamika, toplinski strojevi, numeričko modeliranje, neuronske mreže

Sanjin Fućak
termodinamika, numeričko modeliranje prijelaza topline i izmjene tvari, obnovljivi izvori energije

Vedran Mrzljak
motori s unutranjim izgaranjem, termodinamika, toplinski strojevi, numeričko modeliranje

Aleksandar Božunović
refrigeration

Ozren Bukovac
internal combustion engines, thermodynamics, heat engines, numerical modeling, neural networks

Sanjin Fućak
thermodynamics, numerical modelling of heat and mass transfer, renewable energy sources

Vedran Mrzljak
internal combustion engines, thermodynamics, heat engines, numerical modeling

STRUČNI SURADNIK

Boris Delač
stručni rad iz područja grijanja, ventilacije i klimatizacije

RESEARCH ASSISTANT

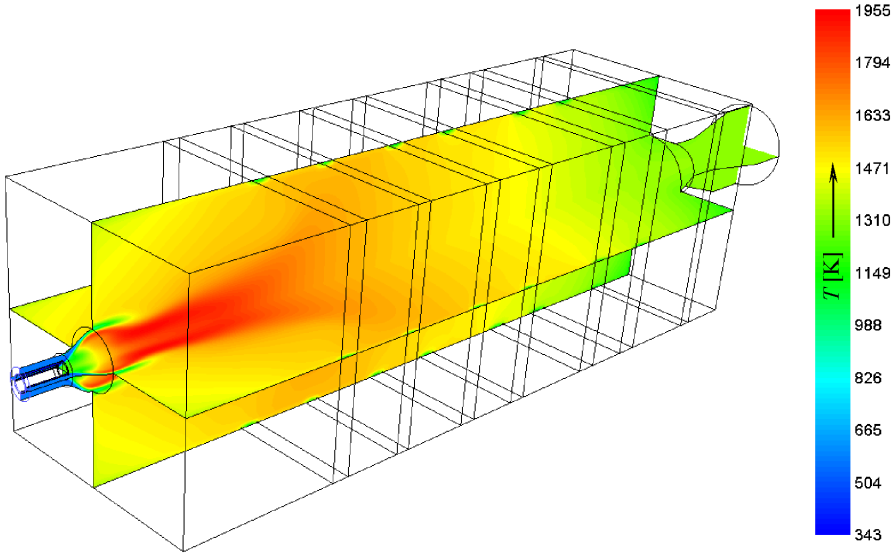
Boris Delač
technical activity in the field of heating, ventilation and air-conditioning.

ADMINISTRATIVNO OSOBLJE

Radojka Praprotnik
administrativna tajnica

ADMINISTRATIVE STAFF

Radojka Praprotnik
administrative secretary



Slika 1. Raspodjela temperatura u IFRF ložištu

NASTAVA

Nastava iz područja znanstvenih polja strojarstva i drugih temeljnih tehničkih znanosti, znanstvenih grana procesnoga energetskog strojarstva i brodskog strojarstva te termodinamike, energetike i zaštite okoliša.

KOLEGIJI NA PREDDIPLOMSKOM SVEUČILIŠNOM STUDIJU

Energetski sustavi
Izvori energije
Nauka o toplini I
Termodinamika BG
Termodinamika i energetika
Toplinski strojevi i uređaji

KOLEGIJI NA DIPLOMSKOM SVEUČILIŠNOM STUDIJU

Automatizacija i regulacija u sustavima klimatizacije
Brodski energetski uređaji
Brodski pogonski strojevi
Brodski pomoćni strojevi i uređaji
Brodski sustavi
Brodski termotehnički sustavi
Energetska postrojenja
Energetski i procesni uređaji
Goriva i maziva
Inženjerstvo zaštite okoliša
Kompresori
Laboratorijske vježbe u termotehnici
Motori
Nauka o toplini II
Numeričko modeliranje u termodinamici
Obnovljivi izvori energije
Oprema procesnih postrojenja
Plinska tehnika
Pogonski i radni strojevi
Procesno inženjerstvo

EDUCATION

Lectures in the field of the scientific fields of Mechanical Engineering and other fundamental Engineering Sciences, the scientific branches of Process Energy Engineering and Marine Engineering as well as of Thermodynamics, Energy Engineering and Environmental Protection.

UNDERGRADUATE COURSES

Energy Systems
Energy Sources
Thermodynamics I
Thermodynamics BG
Thermodynamics and Energy
Heat Engines and Devices

GRADUATE COURSES

Automatic HVAC Control Systems.
Ship Energy Facilities
Ship Propulsion Devices
Marine Auxiliary Machinery
Ship Systems
Marine HVAC&R Systems
Energy Plants
Energy and Process Devices
Fuels and Lubricants
Environmental Engineering
Compressors
Laboratory Practice in Thermal Engineering
Internal Combustion Engines
Thermodynamics II
Numerical Modelling in Thermodynamics
Renewable Energy Sources
Equipment of Process Plants
Gas Technology
Energy Conversion Engines
Process Engineering

Tehnički izmjenjivači topline
Tehnika grijanja i klimatizacije
Tehnika hlađenja
Termodinamika smjesa
Termoenergetska postrojenja
Toplinska mjerenja
Toplinske turbine

Heat Exchangers
HVAC Systems
Refrigeration
Thermodynamics of Mixtures
Thermal Energy Plants.
Thermal Measurements
Heat Turbines

KOLEGIJI NA STRUČNOM STUDIJU

Brodski sustavi, pomoćni strojevi i uređaji
Energetika u procesnoj industriji
Grijanje i klimatizacija
Procesna oprema i uređaji
Tehnološki procesi u procesnoj industriji
Toplina
Toplinski strojevi i uređaji I
Toplinski strojevi i uređaji II
Zaštita okoliša i radne sredine

VOCATIONAL COURSES

Ship Systems and Auxiliaries
Energetic in Process Industry
Heating and Air-Conditioning Systems
Process Equipment and Devices
Technological Processes in Process Industry
Thermodynamics
Heat Engines and Devices I
Heat Engines and Devices II
Protection of Environment and Working Space

KOLEGIJI NA POSLIJEDIPLOMSKOM (DOKTORSKOM) STUDIJU

Eksperimentalne metode u toplinskoj tehnici i termoenergetici
Izabrana poglavlja iz toplinskih znanosti
Izabrana poglavlja iz brodskih strojnih kompleksa
Izabrana poglavlja iz tehnike hlađenja i tehnike niskih temperatura
Izabrana poglavlja iz izmjenjivača topline
Izabrana poglavlja iz grijanja i klimatizacije
Izabrana poglavlja iz motora s unutarnjim izgaranjem
Izabrana poglavlja iz toplinskih turbostrojeva
Izabrana poglavlja iz brodskih energetskih postrojenja
Numeričko modeliranje prijelaza topline
Numeričko modeliranje procesa izgaranja
Obnovljivi izvori energije
Okoliš i gospodarstvo
Optimizacija energetskih procesa
Racionalna potrošnja energije

POSTGRADUATE COURSES

Experimental Methods in Thermal and Power Engineering
Selected Topics on Thermal Sciences
Selected Topics of Marine Machinery Systems
Selected Topics in Refrigeration and Low-Temperature Refrigeration
Selected Topics on Heat Exchangers
Selected Topics on Heating and Air-Conditioning
Selected Topics in Internal Combustion Engines
Selected Topics on Thermal Turbomachines
Selected Topics Marine Energy Systems
Numerical Modeling of Heat Transfer
Numerical Modeling of Combustion Process
Renewable Energy Sources
Environment and Economy
Optimization of Energy Processes
Rational Energy Consumption

Suvremene konstrukcije motora
Termodinamička analiza procesa
Termodinamika smjesa i toplinski uređaji
Trajnost i pouzdanost termoenergetskih sustava
Trendovi i instrumenti zaštite okoliša
Zaštita okoliša u tehnici hlađenja
Zaštita okoliša u energetici i procesnoj industriji

PROGRAMI CJELOŽIVOTNOG OBRAZOVANJA

Program stručnog osposobljavanja osoba koje provode energetske preglede i/ili energetsko certificiranje zgrada s jednostavnim tehničkim sustavom (Modul 1)

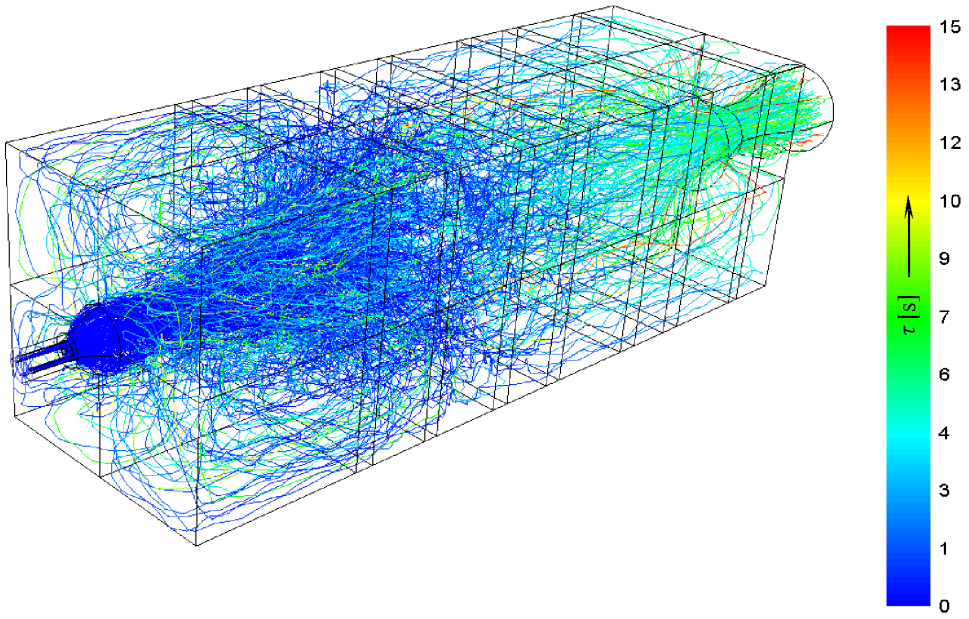
Program stručnog osposobljavanja osoba koje provode energetske preglede i/ili energetsko certificiranje zgrada sa složenim tehničkim sustavom (Modul 2)

Advanced Design of Internal Combustion Engine
Thermodynamic Analysis of Processes
Thermodynamics of Mixtures and Thermal Devices
Durability and Reliability of Thermal Energy Systems
Trends and Instruments of Environmental Protection
Environmental Refrigeration
Environment Protection in Energetics and Process Industry

LIFELONG LEARNING PROGRAMMES

Education of persons who are to perform energy audits and/or energy certification of buildings with a simple technical system (Module 1)

Education of persons who are to perform energy audits and/or energy certification of buildings with a complex technical system (Module 2)



Slika 2. Putanje čestica ugljene prašine u IFRF ložištu u bojama vremena prostrujavanja

ZNANSTVENOISTRAŽIVAČKI RAD

Istraživanja na toplinskim aparatima i uređajima, izmjenjivačima topline i toplinskim spremnicima koja obuhvaćaju teorijska i laboratorijska istraživanja prijelaza topline, prijenosa mase te izmjene topline pri promjeni faza; istraživanja i optimizacija sustava grijanja i klimatizacije te sustava za korištenje obnovljivih izvora energije; istraživanja na području rashladne tehnike koja obuhvaćaju kompresijske i apsorpcijske rashladne uređaje i dizalice topline; istraživanja u području energetske učinkovitosti i optimizacija termotehničkih sustava grijanja, hlađenja i klimatizacije; istraživanja utjecaja parametara vlažne pare na proces erozije rotorskih lopatica toplinskih turbina; istraživanja erozije korozije protočnog dijela parnih turbina; istraživanja mogućnosti smanjenja emisije štetnih tvari motora s unutarnjim izgaranjem uz zadržavanje niske specifične potrošnje goriva te s ciljem povećanja specifične snage i pouzdanosti u preuzimanju naglih opterećenja snage kod motora s prednabijanjem; istraživanja iz brodskog strojarstva s ciljem optimalnog i energetski racionalnog vođenja brodskih pogonskih sustava; istraživanja na području optimizacije energetskih procesa; istraživanja na području smanjenja emisija štetnih sastojaka iz energetskih i procesnih postrojenja.

RESEARCH AND DEVELOPMENT ACTIVITIES

Research on heat devices, heat exchangers and heat storages which encompass theoretical and laboratory research of heat and mass transfer, as well as heat transfer during phase change processes; research and optimization of heating and cooling systems, as well as of renewable energy systems; research into the field of refrigeration which embraces compression and absorption cooling devices and heat pumps; research into energy efficiency and optimization of HVAC&R systems; research into influence of wet steam parameters on the erosion process of rotor turbine blades; research into erosion - corrosion in the flowing part of steam turbines; research into reducing pollution species emission of internal combustion engines while retaining low specific fuel consumption and aiming at increasing specific power and reliability by sudden overload of a super charged engine; research to field of marine engineering aiming at the optimizing ships power plant control; investigation into optimization of energy processes; investigation into the field of emission reduction from energy and process facilities.

PROJEKTI

Program pregleda i ispitivanja tlačnih posuda i cjevovoda u TE-PLOMIN I, Narudžba br. 99/2010, HEP, Zmagoslav Prelec, 2010, elaborat.

Istraživanje i razvoj komponenata i sustava obnovljivih izvora energije, 069-0692972-3112, MZOŠ, Bernard Franković, 2007 - 2012, znanstvenoistraživački.

Numeričke simulacije i optimizacije brodskih dizelskih motora, 069-0691668-1725, MZOŠ, Vladimir. Medica, 2007 - 2012, znanstvenoistraživački.

Primijenjena istraživanja rashladnih sustava s novim radnim tvarima, 069-0692972-2203, MZOŠ, Branimir Pavković, 2007 - 2012, znanstvenoistraživački.

Energetski pregledi javnih građevina grada Zagreba, RN 11-036/08, UNDP Hrvatska, Branimir Pavković, 2008 - 2009, 7 zasebnih elaborata.

Energetski pregledi bolnica KDB Zagreb i Merkur Zagreb, RN 11-031/09, UNDP Hrvatska, Branimir Pavković, 2008 - 2009, 2 zasebna elaborata.

Projekt soha za motorni brod "Neraida", RN 13-013/09, BROSS d.o.o., Tomislav Mrakovčić, Vladimir Medica, 2009 - 2010, stručni projekt.

Preliminarno izvješće o uzroku havarije na Postrojenju polietilena u DINA Petrokemija d.d. na Krku, Božidar Smoljan, Vladimir Medica, Tehnički fakultet Rijeka, 2009, elaborat.

PROJECTS

Inspection and testing programme of pressure vessels and pipelines in power plant Plomin I, Order. No. 99/2010, HEP, Zmagoslav Prelec, 2010., study.

Research and development of renewable energy components and systems, 069-0692972-3112, Ministry of Science, Education and Sports of the Republic of Croatia, Bernard Franković, 2007.- 2012, research and scientific project.

Numerical simulation and optimization of marine diesel engines, 069-0691668-1725, Ministry of Science, Education and Sports of the Republic of Croatia, Vladimir Medica, 2007.- 2012., research and scientific project.

Applied research of refrigeration systems with new refrigerants, 069-0692972-2203, Ministry of Science, Education and Sports of the Republic of Croatia, Branimir Pavković, 2007.- 2012., research and scientific project.

Energy audits of public buildings in City of Zagreb, RN 11-036/08, UNDP Hrvatska, Branimir Pavković, 2008.- 2009., 7 separate studies.

Energy audits of hospitals KDB Zagreb and Merkur Zagreb, RN 11-031/09, UNDP Hrvatska, Branimir Pavković, 2008.- 2009., 2 separate studies.

Motor ship "Neraida" davit project, RN 13-013/09, BROSS d.o.o., Tomislav Mrakovčić, Vladimir Medica, 2009.- 2010., professional project.

Preliminary report on the cause of damage to the polyethylene plant in the DINA Petrokemija Inc. on the Krk island, Božidar Smoljan, Vladimir Medica ,Faculty of Engineering, Rijeka, 2009., study.

Projekt klimatizacije zgrade Hrvatskog narodnog kazališta Ivana pl. Zajca u Rijeci, Bernard Franković, 2007 - 2010, stručni projekt.

Projekt klimatizacije zgrade Građevinskog fakulteta na Sveučilišnom kampusu u Rijeci, Bernard Franković, 2006 - 2010, stručni projekt.

Projekt klimatizacije poliklinike Medico u Agatićevoj ulici u Rijeci, 2009, Branimir Pavković, stručni projekt br. 929/09.

Projekt sustava klimatizacije hotela u Puli, 2009, Branimir Pavković, stručni projekt br. 932/09.

Projekt toplovodne kotlovnice osnovne škole Veli Vrh Pula, Branimir Pavković, stručni projekt br. 919/09.

Projekt sustava klimatizacije objekta B - Thalassotherapia Crikvenica, Branimir Pavković, stručni projekt br. 929/09.

Analiza razloga neispravnog rada sustava centralnog grijanja za građevinu Cavtatska 2 u Rijeci, Branimir Pavković, stručna ekspertiza br. 943/10.

Izrada elaborata - uvjeti, mogućnosti i primjenjivost korištenja drvne biomase (peleta) za grijanje prostora osnovnih škola: Mrkopalj u Mrkoplju, Ivan Goran Kovačić u Delnicama, Petar Zrinski u Čabru i Ivan Goran Kovačić u Vrbovskom te za PŠ u Moravicama, Primorsko-goranska županija, Viktor Dragičević, 2009 - 2010.

Projekt rekonstrukcije kotlovnice OŠ I.G.Kovačić Delnice za korištenje drvne biomase kao goriva, Primorsko-goranska županija, Viktor Dragičević, 2010.

Projekt rekonstrukcije kotlovnice OŠ Mrkopalj za korištenje drvne biomase kao goriva, Primorsko-goranska županija, Viktor Dragičević, 2010.

Project of air conditioning for building of Theatar Ivana pl. Zajca in Rijeka, Bernard Franković, 2007.- 2010, professional project.

Project of air conditioning for the building of the Faculty of Civil Engineering at Campus of the University of Rijeka, Bernard Franković, 2006- 2010, professional project.

Project of air-conditioning of polyclinic Medico in Agatićeva street in Rijeka, Branimir Pavković, professional project No 929/09.

Project of air-conditioning systems for the hotel in Pula, Branimir Pavković, professional project No. 932/09.

Project of the boiler plant for the elementary school Veli Vrh Pula, Branimir Pavković, professional project No. 919/09.

Project of air-conditioning systems for object B - Thalassotherapia Crikvenica, Branimir Pavković, professional project No. 929/09.

Analysis of operation failures for the central heating system of the building in Cavtatska 2 street in Rijeka, Branimir Pavković, professional expertise No. 943/10.

Conditions, possibilities and applicability of biomass as a fuel for heating elementary schools in Mrkopalj, Delnice, Čabar and Moravice in the Gorski kotar county, Primorsko-goranska county, Viktor Dragičević, 2009. - 2010.

Project of reconstruction of the heating plant for the use of biomass as a primary fuel in the elementary school Delnice , Primorsko-goranska county, Viktor Dragičević, 2010.

Project of reconstruction of the heating plant for the use of biomass as a primary fuel in the elementary school Mrkopalj, Primorsko-goranska county, Viktor Dragičević, 2010.

PUBLIKACIJE / PUBLICATIONS

RADOVI U ČASOPISIMA / JOURNAL PAPERS

Glažar, V., Prelec, Z.: Analysis of the Efficiency of Heat Generator System Depending on Type and Load, Strojarstvo: Časopis za teoriju i praksu u strojarstvu 51 (2), 143-150, 2009.

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Medica, V., Račić, N., Radica, G.: Simulation of performance of ship propulsion system with slow-speed diesel engine under aggravated conditions, Strojarstvo, 51 (3) 199-212 (2009)

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Franković, B.: Renewable Energy Sources in the Adriatic Region, , Proc. of the Congress Energy and Environment, Vol. I, Opatija 2010

Pavković, B.: Numerical Simulation Models of Heat Pumps for HVAC Applications, Proc. of the 8th International Scientific Conference on Advanced Engineering, Computer Aided Design and

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Medica, V.: Ukupni parametri motora SUI i procesi izgaranja, Seminar o naprednim tehnologijama - Numeričke simulacije, Hrvatska komora inženjera strojarstva, Slavonski Brod, 10.09.2010.

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MEĐUNARODNA SURADNJA / INTERNATIONAL COLLABORATIONS

ASHRAE – American Society of Heating, Refrigerating and Air-Conditioning Engineers.

California Institute of Technology, USA/SAD.

Dipartimento di fisica tecnica, Universita' degli studi di Padova, Italy/Italija.

EAEC – European Automobile Engineers Cooperations.

Ente per le Nuove tecnologie, l'Energia e l'Ambiente, ENEA, Roma, Italy/Italija.

Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia/Slovenija.

Faculty of Mechanical Engineering, University of Ljubljana, Slovenia/Slovenija.

Faculty of Mechanical Engineering, University of Maribor, Slovenia/Slovenija.

Fakulta strojna, VUT Brno, Czech Republic/Češka Republika.

FISITA – International Federation of Automotive Engineering Societes.

GREThh, Bâtiment Lynx, SavoieTechnolac, Le Bourget du Lac – Cedex, France/Francuska.

Institut Jožef Božek, ČVUT Prague, Czech Republic/Češka Republika.

Institute for Resource Efficient and Sustainable Systems, Graz University of Technology, Austria/Austrija.

International Institute of Refrigeration, Paris, France/Francuska.

ISES – The International Solar Energy Society, Freiburg, Germany/Njemačka.

Laboratory for Heating, Sanitary and Solar Technology, University of Ljubljana, Slovenia/ Slovenija.

Mannheim University of Applied Sciences, Germany (Fachhochschule Mannheim), Germany/ Njemačka.

Politecnico di Milano, Italy/Italija.

Research and Development Center, Compagnie Industrielle d'Aplications Thermiques (CIAT), Culoz, France/Francuska.

Szent Istvan University, Gödollo, Hungary/Mađarska.

6. STRUČNE SLUŽBE

PROFESSIONAL AND ADMINISTRATIVE STAFF

6.1. KNJIŽNICA / LIBRARY

Voditeljica / Head:
Sanja Heberling Dragičević, prof., dipl. knjiž.

URL: http://www.riteh.uniri.hr/ustroj/knjiznica

1. Sanja Heberling Dragičević
2. Mario Šlosar-Brnelić
3. Vesna Peršić-Rukonić
4. Anka Glavan

Knjižnica Tehničkog fakulteta Sveučilišta u Rijeci, sa svojim knjižnično-informacijskim uslugama, dio je znanstvene, istraživačke i obrazovne djelatnosti Fakulteta. Obavlja poslove oblikovanja i izgradnje knjižničnog fonda (nabava, stručna obrada...), pružanja knjižničnih usluga korisnicima (posudba i korištenje građe, informacijsko-edukacijska djelatnost...) te ostale poslove koji proizlaze iz tih procesa.

DJELATNICI

Sanja Heberling Dragičević, prof.,
dipl. knjižničar

mr. sc. Mario Šlosar-Brnelić,
dipl. knjižničar

Vesna Peršić-Rukonić, dipl. oecc.,
knjižničar

Anka Glavan,
knjižničar

OPĆI PODACI

Vrsta knjižnice:
Fakultetska knjižnica

Smještaj:
prizemlje desno (vrata br. 0-23)

Površina i smještaj:
403 m^2 na dvije etaže

Korisnički prostor:
130 m^2 na dvije etaže

Čitaonica:
30 mjesta (bežični pristup internetu)

The library of the Faculty of Engineering of the University of Rijeka, with its library-information services, is part of the scientific, research and educational Faculty activity. The library performs activities of form and construction library funds (acquisition, professional processing,...) to provide library services to users (borrowing and the use of material, information-educational activities,...) and other tasks arising from these processes.

STAFF

Sanja Heberling Dragičević,
prof., grad. librarian

M.sc. Mario Šlosar-Brnelić,
grad. librarian

Vesna Peršić-Rukonić,
grad. economist, librarian

Anka Glavan,
librarian

GENERAL INFORMATION

Type of library:
Faculty library

Position:
ground right (door no.0-23)

Area:
403 m^2 on two floors

Space for users:
130 m^2 on one floor

Reading room:
30-seat sections (wireless Internet access)

Računalna čitaonica:
24 mjesta s 12 računala s pristupom internetu i 1 umreženim pisačem

Otvorenost za korisnike:
38 sati tjedno

Computers reading room:
24-seat capacity equipped with 12 computers with Internet access and 1 networked printer

Openness to users:
38 hour per week

USLUGE KNJIŽNICE:

Korištenje i posudba knjižnične građe

Korištenje prostora čitaonice i računalne čitaonice

Pristup informacijama o knjižničnom fondu i ostalim knjižničnim resursima

Informacijske i edukacijske usluge

Posebne usluge za zaposlenike Fakulteta (međuknjižnična posudba, klasifikacija stručnih i znanstvenih radova i sl.)

LIBRARY SERVICES:

Using and borrowing of library materials

Using the reading room and computers reading room

Access to information about the library fund and other library resources

Information and education services

Special services for employees of the Faculty (interlibrary loan, classification of professional and scientific papers, etc.)

Web-stranice:
Pristup katalozima, bazama podataka, online časopisima, zbirkama akademskih radova i ostalim knjižničnim informacijama
http://www.riteh.uniri.hr/zav_katd_sluz/knjiznica/index.html

Library web site:
Access to catalogues, databases, online e-journals, collection of academic papers and other library information
http://www.riteh.uniri.hr/zav_katd_sluz/knjiznica/index.html

Online katalog:
OPAC (Online Public Access Catalog) „Crolist-Tehnički fakultet Rijeka“
http://crolist.riteh.uniri.hr/

Online Catalogue:
OPAC (Online Public Access Catalog) „Crolist-Faculty of Engineering Rijeka“
http://crolist.riteh.uniri.hr/

Baze podataka:
Baze podataka za akademsku i znanstvenu zajednicu (Centar za online baze podataka)
http://www.riteh.uniri.hr/zav_katd_sluz/knjiznica/tf_baze.html

Databases:
Databases for academic and scientific community (Center for online databases)
http://www.riteh.uniri.hr/zav_katd_sluz/knjiznica/tf_baze.html

Knjižnični program:
„Crolist - Aladin“

Library software:
„Crolist - Aladin“

Katalogizacija i klasifikacija građe:
U skladu s međunarodnim propisima i standardima (UDK – Univerzalna decimalna klasifikacija) – UNIMARC format

Uključenost knjižnice u udruge, zajednice i sl.:
Sustav umreženih knjižnica riječkog Sveučilišta
Udruga knjižnica Konzorcij Crolist
Zajednica knjižnica sveučilišta Hrvatske

Cataloging and classification:
According to the International regulations and standards (UDC – Universal Decimal Classification) - UNIMARC Bibliographic Format

Library involvement in associations, communities etc.:
Library network system of the University of Rijeka
Coalition of Library Consortium Crolist
University Library Association of Croatia

SUSTAV UPRAVLJANJA KVALITETOM:

ISO 9001:2000

QUALITY MANAGAMENT SYSTEM:

ISO 9001:2000

PODACI O FONDU I KORISNICIMA

Aktivni članovi knjižnice:
972 članova

Knjige, doktorske disertacije:
20.360 komada

Ostala knjižnična građa:
8.785 komada

Arhiv časopisa:
723 naslova

***Online*-katalog:**
17.485 zapisa

Webpac statistika:
24.104 upita (2009.)

INFORMATION ABOUT THE FUND AND USERS

Active members of library:
972 members

Books, dissertations...:
20.360 units

Other library materials:
8.785 units

Journal arhive:
723 titles

Online Catalogue:
17.485 record

Webpac statistics:
24.104 search (2009.)

NOVE KNJIGE I ČASOPISI

Kupljene knjige:
150 svezaka

Donacije:
109 svezaka

NEW BOOKS AND JOURNALS

Bought books:
150 units

Donations:
109 units

Tempus projekt:
14 svezaka

Novi naslovi:
161 naslov

Kupljeni hrvatski časopisi:
13 naslova

Donacije:
24 naslova

Kupljeni strani časopisi:
2 naslova (tiskani)

Donacije:
9 naslova (tiskano)

Tempus projekt:
5 naslova
(2 tiskana, 2 tiskana + online, 1 online)

Tempus project:
14 units

New titles:
161 titles

Bought croatian journals:
13 titles

Donations:
24 titles

Bought foreign journals:
2 titles (print)

Donations:
9 titles (print)

Tempus project:
5 titles
(2 print, 2 print + online, 1 online)

KORIŠTENJE KORISNIČKOG PROSTORA

Korištenje prostora:
9.305 korisnika

Čitaonica i računalna čitaonica za učenje, pretraživanje web-stranica (kataloga, baza podataka...):
40 korisnika dnevno

USAGE OF THE USER AREA

Usage of the user area:
9.305 users

Reading room and computers reading room for study, web search (catalogues, databases...):
40 users daily

POSUDBA GRAĐE I DRUGE USLUGE ZA KORISNIKE (INFORMACIJSKE, EDUKACIJSKE)

Posudba knjiga i časopisa:
6.051 svezak u godini

Međuknjižnična posudba:
12 knjiga i 19 članaka

CIRCULATION AND OTHER CUSTOMER SERVICE (INFORMATIONAL, EDUCATIONAL...)

Circulation (books and journals):
6.051 units per year

Interlibrary loan service:
12 books and 19 papers

Informacije o knjižnici, knjižničnim resursima, literaturi, pretraživanju informacija:
Svakodnevno – individualno

Edukacija studenata 1. godine o knjižnici, knjižničnim resursima, pretraživanju informacija:
2 tjedna u listopadu svaki dan od 9 do10 sati

Klasifikacija stručnih članaka:
91 članak

Iskorišteni ISBN brojevi za publikacije izdane na Tehničkom fakultetu:
6 brojeva

Information about library, library resource, information retrieval:
Every day – individual

Education of students in the 1. year study of the programme related to library, library resource, information retrieval:
2 weeks in October every day from 9,00-10,00

Classification of professional papers:
91 paper

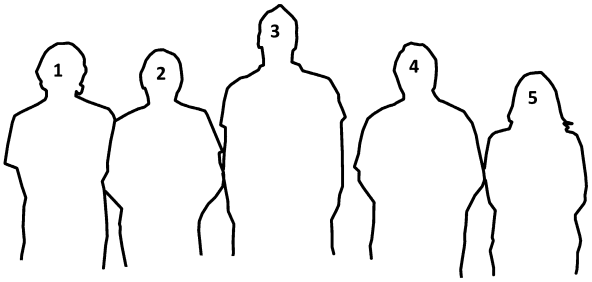
ISBN numbers in use for publications edited at the Faculty of Engineering:
6 numbers

6.2. RAČUNALNI CENTAR / COMPUTER CENTER

Voditelj / Head:
Prof. v. šk. / College Professor Antun Sok

URL: http://www.riteh.uniri.hr/ustroj/rc/

1. Domagoj Crljenko
2. Siniša Vukotić
3. Dario Maršanić
4. Antun Sok
5. Tatjana Škorjanc



DJELATNICI

VODITELJ

Antun Sok

STRUČNI SURADNICI

Tatjana Škorjanc
web-administrator

Domagoj Crljenko
mrežni administrator

Dario Maršanić
mail-administrator

OPERATER

Siniša Vukotić
održavanje računala

RAČUNALNI KABINETI

Računalni kabinet 1: 15 + 1 računalo
Računalni kabinet 2: 20 + 1 računalo
Računalni kabinet 3: 20 + 1 računalo
Računalni kabinet 4:16 + 1 računalo
Računalni kabinet 5: 12 računala
Računalni kabinet 6: 18 računala
Računalni kabinet 7: 20 + 1 računalo

PROJEKTI

Akademija Cisco – obrazovni program za projektiranje računalnih mreža. U akademskoj godini 2009/10. program CCNA pohađalo je 32 polaznika.

Testni centar ECDL – obrazovni program i provjera informatičke pismenosti u svrhu dobivanja Europske računalne diplome. U akademskoj godini 2009/10. u centru su obavljena 372 testiranja u okviru osnovnih i naprednih programa.

STAFF

HEAD

Antun Sok

RESEARCH ASSISTANTS

Tatjana Škorjanc
web administrator

Domagoj Crljenko
network administrator

Dario Maršanić
mail administrator

COMPUTER OPERATOR

Siniša Vukotić
computer servicing

COMPUTER CLASSROOMS

Computer Classroom 1: 15 + 1 computers
Computer Classroom 2: 15 + 1 computers
Computer Classroom 3: 20 + 1 computers
Computer Classroom 4: 16 + 1 computers
Computer Classroom 5: 12 computers
Computer Classroom 6: 18 computers
Computer Classroom 7: 20 + 1 computers

PROJECTS

Cisco Networking Academy – training program for designing computer networks. In 2009/10 32 candidates attended the CCNA program.

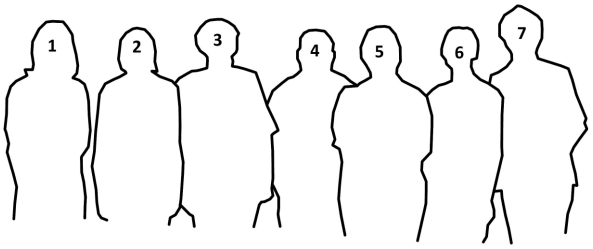
ECDL Test Centar – training program and testing of informatic literacy for reaching European Computer Driving License. In 2009/10 372 tests within basic and advanced programs were made.

6.3. FINANCIJSKA SLUŽBA / ACCOUNTING DIVISION

Voditeljica službe / Office Head:
Branka Cesarec, dipl. oec.

URL: http://www.riteh.uniri.hr/ustroj/strucne/index.html

1. Ana Mirković Pavlović
2. Branka Cesarec
3. Davorka Medanić
4. Petar Gudac
5. Nada Kožul
6. Sanja Prpić
7. Dragica Kola



Financijska služba obavlja financijske, računovodstvene, komercijalne poslove i poslove ekonomata i nabave.

Accounting division performs financial and accounting and commercial activities as well as supply and purchasing services.

DJELATNICI

VODITELJICA FINANCIJSKE SLUŽBE:

Branka Cesarec, dipl. oec.

Ana Mirković Pavlović, dipl. oec.
računovodstveni poslovi

Milica Šubić-Calcich
financijski poslovi

Davorka Medanić
financijski poslovi

VODITELJICA ODJELA NABAVE:

Sanja Prpić, dipl. oec.
komercijalni poslovi i poslovi nabave

Petar Gudac
ekonom za inventar

Dragica Kola
ekonom za potrošni inventar

Nada Kožul
ekonom za prodaju publikacija

STAFF

HEAD OF THE ACCOUNTING DIVISION:

Branka Cesarec
grad. economist

Ana Mirković Pavlović
grad. economist –accounting activities

Milica Šubić-Calcich
financial activities

Davorka Medanić
financial activities

HEAD OF SUPPLY DIVISION:

Sanja Prpić
grad. economist – commercial activies as well as supply and purchasing sevrisec

Petar Gudac
economist for inventory

Dragica Kola
economist for conskume inventory

Nada Kožul
economist for sall publication

6.4. SLUŽBA OPĆIH I KADROVSKIH POSLOVA / GENERAL AND PERSONNEL OFFICE

Voditeljica službe / Office Head:
Lenka Štajduhar, oec.

URL: http://www.riteh.uniri.hr/ustroj/strucne/index.html

1. Nevenka Lilić-Pekas
2. Marica Gnjatović
3. Mira Bobanović
4. Dragica Jurin
5. Marija Kura
6. Natalija Forgić
7. Dragica Alempić
8. Snježana Mikuličić Marunić
9. Nerina Čugelj
10. Franjo Brozović
11. Vesna Franelić
12. Senka Jedrejčić
13. Mirjana Mihaljević Vukelić
14. Mirjana Košpić
15. Radojka Praprotnik
16. Lovorka Malinić
17. Fahira Horozović
18. Lenka Štajduhar
19. Lidija Petričić

DJELATNICI

VODITELJ OPĆE I KADROVSKE SLUŽBE:

Lenka Štajduhar, oec.

VODITELJ KADROVSKOG ODSJEKA:

Snježana Mikuličić Marunić

Janja Rožić
referent

Lidija Petričić
referent

Mira Bobanović, Nerina Čugelj, Natalija Forgić, Vesna Franelić, Dragica Jurin, Marija Kura, Mirjana Mihaljević - Vukelić, Radojka Praprotnik, Tanja Veljčić
tajnice zavoda

Lovorka Malinić
vratar-telefonist

Franjo Brozović
domar-kućepazitelj

Dragica Alempić, Lidija Antunović, Snježana Ban, Marica Gnjatović, Fahira Horozović, Senka Jedrejčić, Nevenka Lilić-Pekas, Mirjana Košpić
spremačice

STAFF

GENERAL AND PERSONAL OFFICE HEAD:

Lenka Štajduhar, oec.

PERSONNEL OPERATION MANAGER:

Snježana Mikuličić Marunić

Janja Rožić
Registry clerk

Lidija Petričić
Registry clerk

Mira Bobanović, Nerina Čugelj, Natalija Forgić, Vesna Franelić, Dragica Jurin, Marija Kura, Mirjana Mihaljević - Vukelić, Radojka Praprotnik, Tanja Veljčić
department secretary

Lovorka Malinić
Porter-telephone operator

Franjo Brozović
Major-domo

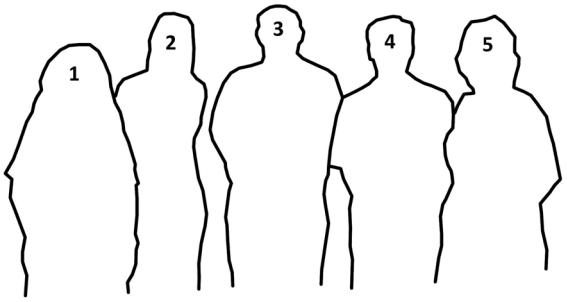
Dragica Alempić, Lidija Antunović, Snježana Ban, Marica Gnjatović, Fahira Horozović, Senka Jedrejčić, Nevenka Lilić-Pekas, Mirjana Košpić
Cleaning ladies

6.5. SLUŽBA STUDENTSKE EVIDENCIJE / STUDENTS' REGISTAR AND AFFAIRS OFFICE

Voditelj službe / Office Head:
Žarko Burić

URL: http://www.riteh.uniri.hr/ustroj/strucne/index.html

1. Ivona Balzani
2. Bruna Martinović
3. Žarko Burić
4. Darko Vidučić
5. Đurđica Linardić



Služba studentske evidencije fakulteta obavlja sve poslove vezane uz potrebe studenata. Zaprima i obrađuje dokumentaciju za razredbeni postupak, obavlja upis studenata u prvu i u više studijske godine, priprema dokumentaciju studenata za završni ili diplomski ispit, organizira promocije završenih studenata, prima i izdaje razne zahtjeve, uvjerenja i potvrde, izrađuje izvješća i stručne analize za potrebe Fakulteta te vodi potrebnu korespondenciju i daje izvješća zainteresiranim strankama.

The students' Registar and Affairs Office is in charge of all the issues pertaining to students' needs. It collects and manages documentation for the admission exams, manages the enrolment of students to all the study years, prepares students' documents for the graduation exams, organizes the commencement of graduates, receives and delivers various requests and certificates, produces reports and analyses as per Faculty need, manages the necessary correspondence and gives reports to interested parties.

DJELATNICI

Žarko Burić, mag. ing.
voditelj službe

Ivona Balzani

Đurđica Linardić

Bruna Martinović, oec.

Darko Vidučić, mag. ing.

STAFF

Žarko Burić, mag. ing.
office head

Ivona Balzani

Đurđica Linardić

Bruna Martinović, economist

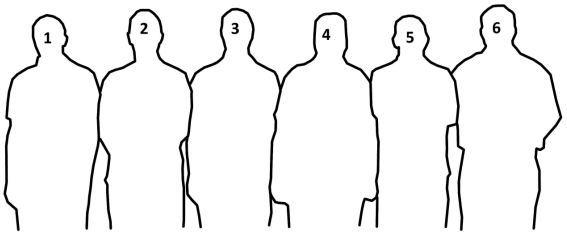
Darko Vidučić, mag. ing.

6.6. TEHNIČKA SLUŽBA / TEHNICAL AND MAINTENANCE SERVICES

Voditelj službe / Head of service:
Nevio Poniš, dipl. ing.

URL: http://www.riteh.hr/ustroj/strucne/index.html

1. Ivo Vičić
2. Igor Mihalljević
3. Josip Jurasić
4. Nevio Poniš
5. Serđo Mišić
6. Bernardo Badurina



Tehnička služba obavlja poslove održavanja, zaštite na radu i zaštite od požara. U sastavu Tehničke službe su i laboranti koji pod nadzorom nastavnika sudjeluju u pripremi, odnosno izvedbi dijela nastave.

DJELATNICI

Nevio Poniš, dipl. ing
voditelj službe

Bernardo Badurina

Josip Jurasić

Igor Mihaljević

Serđo Mišić

Ivo Vičić

The Tehnical and Maintenance Services perform activities pertaining to maintenance, work safety and fire protection. Involved in the Technical Services are also laboratory tehnicians that, under supervision of teaching staff, participate in the preparation of performing parts of lectures.

DJELATNICI

Nevio Poniš, graduate engineer
office head

Bernardo Badurina

Josip Jurasić

Igor Mihaljević

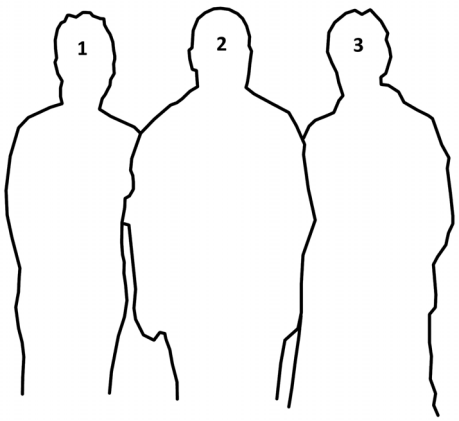
Serđo Mišić

Ivo Vičić

MARENDARIJ /CAFETERIA "PIPI"

Vlasnica / Owner:
Ivanka Jurasić

1. Željka Ivančić
2. Mario Jurasić
3. Ivanka Jurasić



7. STUDENTSKI ZBOR

STUDENT COUNCIL

STUDENTSKI ZBOR TEHNIČKOG FAKULTETA / STUDENT COUNCIL AT THE FACULTY OF ENGINEERING

Studentski zbor je najviše predstavničko tijelo studenata unutar fakulteta. Studentski zbor čini deset članova koji su i članovi fakultetskog vijeća Tehničkoga fakulteta. Članovi SZ-a aktivno sudjeluju i surađuju u kreiranju politike fakulteta, studijskih programa te nastave na fakultetu. Studentski zbor brani interese studenata, upozorava na nepravilnosti i nepravde te sufinacira rad studentskih udruga i organizacija na fakultetu. Studentski zbor Tehničkoga fakulteta u okviru svojih mogućnosti i sufinanciranja od fakulteta i sveučilišta raspolaže određenim sredstvima koja su predviđena za trošak studentskih projekata, rad njihovih udruga i organizacija. Studentski zbor preko svojega ovlaštenog predstavnika sudjeluje i u tijelima odlučivanja unutar Sveučilišta u Rijeci. Studentski zbor podržava daljnji razvoj svih studentskih organizacija, pokretanje novih inicijativa za bolje i kvalitetnije studiranje na Tehničkom fakultetu. Pored Studentskog zbora kao krovne studentske organizacije studenti se organiziraju i svoj rad obavljaju i u okviru studentskih udruga. One su ustrojene kao strukovne udruge koje djeluju na području jednog ili više sličnih fakulteta. Udruge koje postoje i djeluju na Tehničkom fakultetu su: IAESTE, EESTEC, IEEE, SSD NO LIMIT, FORMULA STUDENT.

The Students council (SC) is the highest student representative body of the Faculty. It consists of ten members who hold membership at the Faculty council. The members of the SC actively participate in developing faculty politics, student programs and the curriculum. The SC defends the interests of students, points to irregularities and injustices, and helps to finance the work of student associations and student organizations at the Faculty. In the framework of its responsibilities the SC, in conjunction with the financial help of the Faculty and university, decides how to distribute funds intended for student projects and the activities of their associations and organizations. The SC, as an authorized representative, participates in decision-making bodies of the University of Rijeka. It supports further development of all student organizations; launches new initiatives for better and higher quality studies at the Faculty of Engineering. Alongside the SC as the supreme student organization, students also organize and carry out their activities in the framework of the student associations. These student organizations were created as the professional associations within one or more faculties. These organizations are: IAESTE, EESTEC, IEEE, SSD NO LIMIT, FORMULA STUDENT.

ČLANOVI STUDENTSKOG ZBORA TEHNIČKOG FAKULTETA

1. **Preddiplomski sveučilišni studij strojarstva i brodogradnje.**
   - Tea Jevtić (tea.jevtic@gmail.com)
   - Sanja Zrinšćak (sanja.zrinscak@gmail.com)

2. **Preddiplomski sveučilišni studij elektrotehnike i računarstva.**
   - Leon Valić (valic.riteh007@gmail.com)
   - Jan Varljen (jan.varljen@hotmail.com)

3. **Stručni studij brodogradnje, elektrotehnike i strojarstva.**
   - Elvis Karahasanović (elvisk@riteh.hr)
   - Sandra Mikulić (sandra.mikulic@riteh.hr)

4. **Diplomski i dodiplomski sveučilišni studij brodogradnje, elektrotehnike i strojarstva.**
   - Tea Arrigoni (tea.arrigoni@gmail.com)
   - Sandro Erceg (erceg.sandro@gmail.com)
   - Ivan Roje (ivan.roje@gmail.com)

5. **Poslijediplomski doktorski studij.**
   - David Blažević (dblazevi@gmail.com)
   - Sandro Dobroviček (sandro.dobovicek@gmail.com)
   - Damir Kolić (damir.kolic@riteh.hr)

MEMBERS OF THE STUDENT COUNCIL AT THE FACULTY OF ENGINEERING

1. **Undergraduate university study of mechanical engineering and naval architecture.**
   - Tea Jevtić (tea.jevtic@gmail.com)
   - Sanja Zrinšćak (sanja.zrinscak@gmail.com)

2. **Undergraduate university study of electrical engineering and computer science.**
   - Leon Valić (valic.riteh007@gmail.com)
   - Jan Varljen (jan.varljen@hotmail.com)

3. **Undergraduate vocational study of naval architecture, electrical engineering and mechanical engineering.**
   - Elvis Karahasanović (elvisk@riteh.hr)
   - Sandra Mikulić (sandra.mikulic@riteh.hr)

4. **Graduate university study of naval architecture, electrical engineering and mechanical engineering.**
   - Tea Arrigoni (tea.arrigoni@gmail.com)
   - Sandro Erceg (erceg.sandro@gmail.com)
   - Ivan Roje (ivan.roje@gmail.com)

5. **Postgraduate doctoral study.**
   - David Blažević (dblazevi@gmail.com)
   - Sandro Dobroviček (sandro.dobovicek@gmail.com)
   - Damir Kolić (damir.kolic@riteh.hr)

IEEE

IEEE je neprofitna organizacija osnovana 1884. s ciljem promicanja razvoja tehničkih znanosti u cijelome svijetu. Danas je vodeći autoritet na tom području uz čiju su pomoć ostvarena brojna nova dostignuća i definirani standardni industrije. Članovi su studenti, inženjeri iz gospodarstva, fakultetski profesori i ostali pripadnici akademske zajednice tehničkih znanosti. IEEE broji više stotina tisuća članova diljem svijeta. Mi smo studentski ogranak koji djeluje na Tehničkom fakultetu. Naše aktivnosti uključuju:

"Success stories" - Predavanja u kojima lokalni poduzetnici prenose studentima iskustva stečena na putu od fakulteta do poslovnog uspjeha i odgovaraju na njihova pitanja.

"Movie nights" - Filmske večeri na kojima se prikazuju dokumentarci iz područja tehničkih znanosti. Večeri su otvorenog tipa za cijelu akademsku zajednicu.

"LinuxLab" - Interesna skupina koja se bavi promocijom Linux OS-a te u sklopu toga održava edukativna predavanja (i izvan prostorija fakulteta) i pruža pomoć pri prijelazu na slobodni softver.

Također smo organizirali radionice robotike i programiranja te osigurali studentima Sveučilišta mogućnost sudjelovanja na „IEEEXtreme" 24-satnom natjecanju iz programiranja. Kada financije dopuštaju, sudjelujemo na međunarodnim kongresima

IEEE is a nonprofit international organization founded in 1884. with a goal of promoting development of technical sciences. Today IEEE is the leading authority in this field, enabling a large number of technical advances and defining industry standards. Members of IEEE are students, engineers from the businesssector, university professors and other members of technical sciences academy. IEEE has more than a hundred thousand members worldwide. We are a student branch based on the Faculty of Engineering. Our activities include:

"Success stories" – Lectures held by local entrepreneurs, in which they talk about their experiences on getting from university to successful businesses, and answer students questions.

"Movie nights" – Evening gatherings showing documentaries from fields of technical sciences. The activity is open for the whole academic society.

"LinuxLab" – Interest group with goals of promoting the Linux OS, witch hosts educational lectures and helps with migrating to free software.

Our student branch also hosted workshops in robotics and programming, and made possible for our students to participate in "IEEEXtreme" 24-hour programming competition. With adequate available finances we participate

i radionicama gdje predstavljamo svoj ogranak, fakultet i zavičaj.

Rad je u udruzi volonterski te sami članovi osim iskustva nemaju nikakvih financijskih dobiti.

Nažalost, kako bismo organizirali što više kvalitetnijih događaja, posjeta i sličnih aktivnosti, financijska su nam sredstva neophodna.

in international congresses and workshops where we promote our student branch, our faculty and our country.

All the work done in our organization is based on volunteering, and all our members don't get any financial benefits, only experience.

Unfortunately, if we want to be able to organize a lot of high quality events, trips and similar activities we need financial aid.

PONEŠTO O NAJVAŽNIJIM PROJEKTIMA U PROŠLOJ GODINI:

RADIONCA SMARTGRID:

Radionica na kojoj smo ugostili studente iz Osijeka, Splita i Sarajeva, a sve je realizirano uz pomoć sponzora (Tehnički fakultet, Studentski zbor Tehničkog fakulteta,

A SHORT REVIEW OF THE MOST IMPORTANT PROJECTS FROM THE LAST YEAR:

SMART GRID WORKSHOP

In this workshop we hosted students from Osijek, Split and Sarajevo, and the project was realized with the help of our sponsors (University of engineering, Engineering students council, Transmission Towers,

Dalekovod, Erste banka, Rockwool, Zaklada Sveučilišta u Rijeci).

Velik broj predavanja, ciljani posjeti i velika stručnost predavača osigurali su velik transfer znanja prema sudionicima radionice. Od posebne važnosti je posjet vjetroparku Vrataruša, prvom velikom vjetroparku u Hrvatskoj i užoj regiji, koji zbog svojih karakteristika mikrolokacije i karaktera vjetra može poslužiti kao model pri izgradnji budućih vjetroparkova na ovim prostorima. Poseban fokus predavanja stavljen je na izazove čije će prelaženje omogućiti predstojeće uvođenje SmartGrid koncepta u prijenosne sustave u Europi: znatniju integraciju obnovljivih izvora energije, ublažavanje zagušenja u prijenosnoj mreži i sprečavanje velikih raspada sistema. Pored toga diskutiralo se o upotrebi drugih novih tehnologija u EES-ima, a posebno o izazovima priključenja i vođenja VE Vrataruša kao prvoga velikog vjetroparka u Hrvatskoj. Radionica je bila kvalitetno organizirana uz veliku pozornost posvećenu sudionicima i njihovu što ugodnijem boravku na seminaru. Inicijativa za organiziranje ovakvih radionica je podržana i izražena je zahvala organizatoru na mogućnosti da se prisustvuje nizu veoma kvalitetnih predavanja i stručnih posjeta.

LINUXLAB KONFERENCIJA LINUX KORISNIKA

Dana 21. svibnja 2010. održana je prva LinuxLab konferencija Linux korisnika. Konferencija je održana na Tehničkom fakultetu, odslušalo ih je četrdesetak posjetilaca i trajala je 6 sati. Održano je 8 predavanja.

Erste bank, Rockwool, University of Rijeka foundation).

A big number of lectures, trips and a high level of expertise provided a big learning opportunity for all the participants of this workshop. The visit to the wind-park Vrataruša, the first big wind-park in Croatia and the nearby region, which can be used as a model for the building of future wind-parks because of the characteristics of its micro-location and wind characteristics. A special focus in the lectures was put on the challenges that need to be overcome to successfully introduce the SmartGrid concept in Europe's mobile systems: a significant integration of renewable energy sources, diminishing the congestion in the mobile network and prevention of major system collapse. There were also discussions about the usage of new technologies in EES, and especially about the challenges of connecting and leading VE Vrataruša, the first major wind-park in Croatia. The workshop was professionally organized, with great care given to participants and their comfort during the stay in Rijeka. The initiative for organizing similar workshops was supported and demanded, and we thank the organizers for the opportunity to attend a series of high quality lectures and professional trips.

LINUXLAB LINUX USERS CONFERENCE

On Friday, 21. of May, 2010. first LinuxLab Linux Users Conference (LinuxLab Konferencija Linux Korisnika) was held. It was held on premises of Faculty of Engineering, and lasted for 6 hours. 8 lectures have been held, in front of the audience of around forty people.

Održana su sljedeća predavanja:

1. Domagoj Margan (HULK-Ri): What's new in Fedora 13
2. Vedran Miletić (Odjel za informatiku): The future is open.
3. David Dubrović (LinuxLab): Linux audio
4. Dr. sc. Željko Jeričević: Otvoreni novi svijet
5. Dr. sc. Ivica Kožar: Neke napomene o financijskom aspektu prelaska na Open Source
6. Maja Perušić (Odjel za informatiku): GIMP
7. Dr. sc. Kristijan Lenac: Subversion sustav za upravljanje inačicama
8. Armando Vega: Python i GTK: Multiplatform RAD toolset

Zainteresiranost pristutnih za predavanja bila je primjetna, a pojavilo se i nekoliko posjetilaca zainteresiranih za daljnju suradnju, tako da smatramo da je LKLK 2010. prošla uspješno te planiramo nastaviti i sljedeće godine.

Lectures that were held:

1. Domagoj Margan (HULK-Ri): What's new in Fedora 13
2. Vedran Miletić (Odjel za informatiku): The future is open.
3. David Dubrović (LinuxLab): Linux audio
4. Dr. sc. Željko Jeričević: Otvoreni novi svijet (Open New World)
5. Dr. sc. Ivica Kožar: Neke napomene o financijskom aspektu prelaska na Open Source (Financial aspects of transitioning to open source)
6. Maja Perušić (Odjel za informatiku): GIMP
7. Dr. sc. Kristijan Lenac: Subversion sustav za upravljanje inačicama (Subversion version control system)
8. Armando Vega: Python i GTK: Multiplatform RAD toolset

Audience seemed to be interested, and there were some collaboration proposals, so we consider LKLK 2010 as a success, and are working on continuing next year.

EESTEC

EESTEC (*Electrical Engineering Students European Association*) međunarodna je studentska organizacija koja okuplja studente elektrotehnike i računalstva. Trenutačno broji 49 lokalnih odbora u ukupno 25 europskih država i ima više od 1700 članova. LC (Local Committee) Rijeka djeluje pri Tehničkom fakultetu u Rijeci od 1999. godine te broji 92 člana. Ciljevi udruge su poticanje, pomaganje i razvoj elektrotehnike, informatike i srodnih grana znanosti, ostvarivanje međunarodne suradnje, kontakata i poveznica s europskim zemljama s ciljem promicanja i vrednovanja cjelovite europske baštine. Udruga se bavi organizacijom skupova studenata elektrotehnike u Europi radi druženja i stručnog usavršavanja, nadalje održava komunikaciju sa studentima elektrotehnike širom Europe, organizira znanstvene manifestacije na području Primorsko-goranske županije, izdavanje publikacija, suradnju s drugim organizacijama, organizira međunarodne skupove u svrhu poznavanja različitih društvenih, kulturnih i jezičnih obilježja te razmjene ideja, ciljeva i stavova, sudjeluje na međunarodnim susretima i tribinama te razvija razne druge kulturne i društvene aktivnosti.

EESTEC (Electrical Engineering Students European association) is an international student organization that brings together students of Electrical Engineering and Computer Science. It has currently 49 local committees, in a total of 25 European countries with more than 1700 members. The LC (Local Committee) Rijeka has been working within the Faculty of Engineering since 1999, and counts 92 members. The objectives of the association are to encourage and assist the development of electrical engineering, information technology and related branches of the science, achieving international cooperation, contacts and connections with other European countries, with the aim of promoting and completing the evaluation of European heritage. The activities of the organizations include: organization of gatherings and training, European electrical engineering students, communication with electrical engineering students across Europe, organization of scientific events in the region of Primorsko - Goranska county, the issuing of publications, cooperation with other organizations, organization of international conferences in order to get to know the different social, cultural and linguistic characteristics and

EESTEC Lokalni odbor Rijeka organizirao je 2 događaja u akademskoj godini 2009/2010.

Rijeka Carnival Exchange
(11. – 15. 2. 2010.)
– studentska razmjena i sudjelovanje u glavnoj karnevalskoj povorci u sklopu grupe Fakulteta (15 sudionika)

Rijeka Summer Exchange
(20. – 26. 7. 2010.)
– ljetna razmjena na kojoj je 20 sudionika upoznato s našom kulturnom baštinom, poviješću i prirodnim ljepotama.

the exchange of ideas, goals and attitudes, participation in international meetings and stands, and developing various other cultural and social activities.

During the previous academic year, the EESTEC local comittee Rijeka organized two events:

Rijeka Carnival Exchange (11. – 15.2.2010..)
– Student carnival exchange.

Rijeka Summer Exchange (20. – 26.7.2010.)
–summer event, with 20 participants, who got to know Croatia's history, cultural heritage and natural beauties.

IAESTE

IAESTE (*The International Association for the Exchange of Students for Technical Experience*) najveća je svjetska udruga za razmjenu studenata tehničkih i prirodnih znanosti. Udruga je utemeljena 1948. godine na *Imperial Colledge of London* i danas organizirano djeluje u više od 70 zemalja svijeta. U Hrvatskoj djeluje još od 1952. godine, a od 1992. kao međunarodna udruga za razmjenu stručnih praksi tehničkih i prirodnih znanosti IAESTE Croatia. Udruga već godinama uspješno djeluje i na Sveučilištu u Rijeci i to zahvaljujući volonterskom radu svojih članova, uglavnom studenata Tehničkog fakulteta. Od osnivanja 1952. godine, 1.294 hrvatska studenta dobila su priliku svoju stručnu praksu odraditi u inozemstvu, dok smo mi u Hrvatsku na stručnu praksu primili 1118 studenata iz cijelog svijeta. Posljednjih je desetak godina više od 400 studenata hrvatskih sveučilišta obavilo stručnu praksu

IAESTE (The International Association for the Exchange of Students for Technical Experience) is the world's largest association for the exchange of students of technical and natural sciences. The Association was founded in 1948 at the Imperial College of London, and the organization today operates in more than 70 countries around the world. It has been in Croatia since 1952 and since 1992 it has existed as an international association for the exchange of professional practice in technical and natural sciences. The Association has successfully operated within the University of Rijeka, thanks to the volunteer members which are mostly students of the Faculty of Engineering. Since its foundation in 1952, 1.294 Croatian students have gotten the opportunity to practice their profession abroad and also during the same time, Croatia has hosted 1118 students from around the world. During

posredstvom udruge IAESTE, od čega gotovo 40 studenata Tehničkog fakulteta Sveučilišta u Rijeci. Naši su studenti na stručnom usavršavanju bili u Portugalu, Njemačkoj, Mađarskoj, Velikoj Britaniji, Nizozemskoj, Grčkoj, Finskoj, Švedskoj, Japanu itd. Svima se njima pružila prilika da vide i upoznaju nove zemlje i kulture te steknu ne samo praktična i životna iskustva već i prijatelje. U istom je razdoblju lokalni odbor Rijeka ugostio više od četrdeset stranih studenata koji su na stručnom usavršavanju boravili na riječkom području. Za strane se studente svakoga ljeta organizira druženje i putovanja naših i stranih studenata pod nazivom GETT (GET Together days). Studenti Tehničkog fakulteta, članovi udruge, također su aktivni sudionici mnogobrojnih međunarodnih susreta, kongresa i seminara.

the last ten years more than 400 students of Croatian universities have performed professional practice through IAESTE Association, of which nearly 40 students are from the Faculty of Engineering University of Rijeka. Our students were in professional training in Portugal, Germany, Hungary, Great Britain, the Netherlands, Greece, Finland, Sweden, Japan, etc. They were all given the opportunity to see and learn about new countries and cultures as well as to acquire not only practical and life experiences, but also to make friends. In the same period LC Rijeka hosted more than 40 foreign students. For foreign students, every summer social events and excursions are organized which is referred to as GETT (GET Together days). Students of the Faculty of Engineering as members of the association are also active participants in numerous international meetings, conferences and seminars.

SSD NO LIMIT

Udruga SSD NO LIMIT pod vodstvom Siniše Krunića od osnutka pa do danas ima niz projekata koje su financirali ili matični fakultet ili sponzori ili su pak financirani vlastitim izvorima. Spomenut ćemo neke projekte koje je udruga odradila u organizaciji te one koji su odrađeni u suorganizaciji. Za razliku od prošle godine ove godine udruga je porasla za nekoliko članova koji su se javili i obavezali udruzi da će joj pomoći u radu kako na projektima tako i na promidžbi sporta na Tehničkom fakultetu. Iz toga se jasno vidi da udruga radi na edukaciji kako starijih tako i novih članova. Studentska galerija "PRTEČAC" djeluje više godina, gotovo možemo reći da je to najstariji projekt udruge. Obuhvaća izlaganje, knjiga, fotografija, slika (svih tehnika), kipova, statua itd. Udruga omogućava mladim neafirmiranim umjetnicima i umjetnicama izlaganje svojih radova u prostorijama fakulteta i na taj način promiče fakultet i udrugu. Također pruža predstavljanje radova mladih umjetnika i umjetnica kako bi se za njih čulo. Od dosadašnjih prezentacija možemo spomenuti fotografa Marina Franulića te jednu mladu akademsku slikaricu. U budućnosti planira se predstavljanje knjiga mladog pisca pripovijetki, kolumna te predstavljanje mlade akademske umjetnice iz Zagreba. Svake godine udruga organizira sportske susrete na Dane fakulteta, kao što su malonogometni turnir unutar fakulteta povodom Dana Tehničkog fakulteta.

The association, SSD NO LIMIT, under the leadership of Siniša Krunić since its establishment to the present has had a number of projects financed by the Faculty, by sponsors and their own sources of funding. We will mention some projects that the association organized by itself, and some which were organized in cooperation with others. In contrast to last year, this year the organization has received a couple of new members who have committed themselves to helping the association with its projects as well as to promote sports at the Faculty of Engineering. This clearly shows that the association is working on education for old and new members. The student gallery "PRTEČAC " has operated for many years, we can almost say that this is the oldest project of the association. It includes expositions, books, photographs, paintings (all techniques), statues, etc. The association provides young artist members who exhibit their works in the premises of the faculty and this thus promotes the association. It also provides a presentation of the works of the young artists so that they could receive some recognition. From the previous presentations we can mention Marina Franulić's photographs. Our plan for the future is to promote a young writer's book of short stories and columns, and the presentation of a young academic artist from Zagreb.

KUP TEHNIČKOG FAKULTETA

Prigodom obilježavanja dana Tehničkog fakulteta, u subotu 21.11.2009. na igralištima Sportskog centra Ronjgi održan je prvi kup Tehničkog fakulteta. Paralelno su održana 2 turnira od kojih je prvi bio za studente - na njemu je sudjelovalo 15 ekipa; a drugi za profesore, asistente i tvrtke na kojem je sudjelovalo 10 ekipa. Turnir za studente započeo je u 8 sati ujutro, a čast da odigraju prvu utakmicu pripala je ekipama Fudbaleri i BBB, dok su prvu utakmicu drugog turnira započele ekipe zavoda za elektroenergetiku i CIMOS-a. Nakon cjelodnevnog nadmetanja došlo je vrijeme za finalne utakmice. Kod studenata pobjedu je odnijela ekipa Flashdance koja je u finalu pobijedila ekipu Smrikve, dok je na drugom turniru u finalu ekipa ELCON-a uzela titulu pobjednika ispred Zavoda za industrijsko inženjerstvo i menadžment. Po završetku turnira ekipe su se preselile u restoran koji se nalazi u sklopu sportskog centra, u kojem je uslijedila dodjela pehara i nagrada najboljima. Treba naglasiti da je turnir bio izvrsno organiziran, za što se pobrinuo SSD No Limit na čelu sa Sinišom Krunićem. Ovo je bio tek prvi kup, nadamo se da će se ta tradicija nastaviti. Do sljedeće godine lijep pozdrav. SSD No Limit.

RITEH RACING TEAM

Formula Student međunarodno je natjecanje koje je inicirala međunarodna organizacija FISITA kako bi se studentske timove potaklo na timski rad. Zadatak je timova da projektiraju trkaće vozilo kao jednosjed po strogim pravilima, da prikupe sredstva, da ga izrade, da se s njime natječu i da ga uspješno predstave mogućim investitorima. U pravilu se iz takvih timova kasnije regrutiraju budući stručnjaci koje zapošljava automobilska industrija.

Riteh Racing Team je kao prvi studentski tim Formule Student Sveučilišta u Rijeci osnovan na Tehničkom fakultetu u siječnju 2008. godine. Tim je iste godine sudjelovao s projektom vozila u klasi Formula Student na svjetskom natjecanju na stazi Silverstone u Engleskoj. Natjecao se u klasi 3 u kojoj nastupaju timovi koji se prvi puta natječu i koji još nemaju izrađeno vozilo ili njegove dijelove. Natjecanje se sastojalo od ocjene tehničkog projekta, ocjene troškova izrade vozila i ocjene poslovne prezentacije pred potencijalnim investitorima. Riteh Racing Team osvojio je na natjecanju 3. mjesto u ukupnom plasmanu uz posebne pohvale sudačkih timova. Tako dobar plasman uz vrlo skromna ulaganja ohrabrio je članove tima i tim se posvetio izradi vozila radi sudjelovanja u glavnoj klasi, tj. u klasi 1 u kojoj nastupaju timovi s vlastitim vozilom kojim se natječu i u utrkama.

Formula Student is an international event initiated by international organizations FISITA in order to encourage student teams to team work. The task of the team is to design a single-seater racing car according to strict rules, to raise funds, to make the vehicle, to compete with it and to present the product successfully to potential investors. Members from those teams are later recruited as experts employed by the automotive industry.

Riteh Racing Team was, as the first student team of the Formula Student at the University of Rijeka, established in January 2008 at the Faculty of Engineering. The same year, team had participated with the project of the vehicle in the class 3 on the world competition Formula Student at Silverstone track in England. Competition in Class 3 is intended for teams which are competing for the first time and who do not yet have made the vehicle or its parts. The competition is comprised of the evaluations in technical project of the vehicle, its costs and business presentation to potential investors. Riteh Racing Team has won the competition in third place overall, with special praise from the judges. Such a good result with a very modest investment encouraged members of the team and the team was dedicated to make vehicle for participation in the main class, i.e, Class 1, where teams compete with their own vehicle.

Riteh Racing Team uz velike je napore i odricanja uspio izraditi svoje vozilo. Tim je sudjelovao svojim izrađenim vozilom na međunarodnom natjecanju Formula Student 2010 u Engleskoj na stazi Silverstone od 15. 7. - 18. 7. 2010. Tim je u ukupnom poretku zauzeo 33. mjesto od 100 prijavljenih timova iz cijelog svijeta na natjecanje u klasi 1, u kojoj se natječu timovi s novim bolidom za tu godinu. Da bi se vozilo smjelo natjecati, ono mora proći stroge testove sigurnosti, tehničke ispravnosti, razine buke, kočnica i mogućeg propuštanja tekućina pri bočnom nagibu od 60°. Natjecanje se sastoji u od statičkih dijelova (ocjena tehničkog projekta, ocjena troškova i ocjena poslovne prezentacije) te od dinamičkih testova (ocjena ubrzanja na dionici od 75 m, ocjena vožnje osmica, ocjena sprinta i ocjena izdržljivosti). Utrka sprinta predstavlja kvalifikacijsku utrku za glavno natjecanje u izdržljivosti vozila. Prva tri natjecanja u pravilu voze po dva vozača, svaki s dva pokušaja. Utrku izdržljivosti u ukupnoj dužini od 22 km voze dva vozača,

Riteh Racing Team had managed to make their vehicle with great efforts and sacrifices. The team has participated with his first made car in the international Formula Student competition in England in 2010 on the track of Silverstone from July 15 to July 18, 2010. The team is ranked 33rd overall place of 100 teams from around the world registered to compete in Class 1, in which teams compete with the new car for that year. To be a vehicle allowed to compete, it must pass stringent tests of safety, technical safety, noise, brakes and possible fluid leak in the lateral inclination of 60 degrees. The competition consists of the static parts (technical evaluation of the project, costs and evaluation of business presentation), and the dynamic tests (grade acceleration on a section of 75 m, skid-pad driving, sprint race and endurance race). The sprint race is a qualifying race for the main event in the endurance race of the vehicle. The first three competitions were typically driven by two drivers, each with two tries. Endurance race with a total length of 22

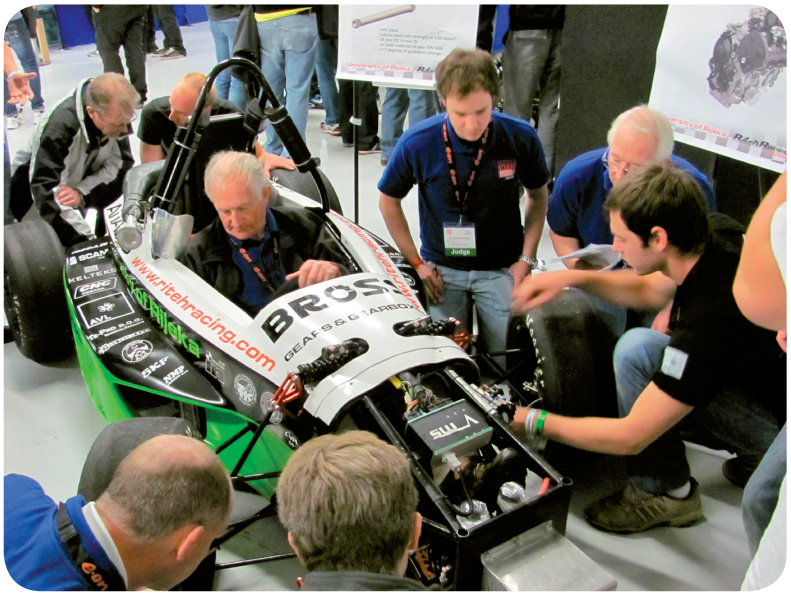
Tim u Silverstone-u / Team in Silverstone

s time da svaki od njih vozi polovicu puta. Najduže vrijeme za zamjenu vozača i ponovno pokretanje vozila je 3 minute. Maksimalni broj bodova koji se može prikupiti u svim natjecanjima je 1000. Za svaki dio natjecanja vodi se posebna rang-lista i prvima se dodjeljuje nagrada. Glavna je nagrada za prvo mjesto u ukupnom plasmanu. Velik broj timova otpada već na tehničkom pregledu, brojnim timovima se tijekom natjecanja događaju kvarovi ili lomovi, tako da tek manji broj prijavljenih timova uspijeva sudjelovati u svim natjecanjima.

Riteh Racing Team na natjecanju u Silverstoneu uspio je proći uspješno sve testove i sudjelovati u svim natjecanjima. Zbog problema s ponovnim startanjem motora nije dovršena u cijelosti utrka izdržljivosti. Da je tim uspio do kraja odvoziti utrku izdržljivosti, ukupni plasman bio bi mnogo bolji. S obzirom na to da je tim prvi put sudjelovao na takvu natjecanju, ukupna ocjena na kraju je bila da je tim vrlo uspješno sudjelovao, osobito

km had to be driven by two drivers, each of them drives a half way. The longest time to replace the driver and restart the vehicle is 3 minutes. The maximum number of points that can be collected in all competitions is 1000. For each part of the competition a separate ranking and the first to be awarded prizes is kept. The main prize is for the first place in overall ranking. A large number of teams are excluded already at the technical inspections, a number of teams during the competition due to faults or fractures, so that only a few number of teams managed to participate in all competitions.

Riteh Racing Team at the event at Silverstone succeeded to successfully pass all tests and participate in all competitions. Due to the problems with restarting the engine, the team did not drive in a whole race of endurance. In case that the team had succeeded to end the endurance race, the team overall rank would have been much better. Since the team for the first time participated in this competition,



Ocjena tehničkog projekta, Silverstone / Evaluation of vehicle design, Silverstone

kada se uzme u obzir da su se, prema svojim željama, uspjeli plasirati u prvu trećinu svih prijavljenih timova. Tim je na natjecanju pokazao pravi timski duh. Po brojnosti bio je najmanji tim sa svega osam članova i s vrlo jeftinim bolidom u usporedbi s ostalima koji su se natjecali. Niska cijena nije išla na račun kvalitete i performansi bolida, tako da je tim vrlo umješno riješio brojne probleme na vrlo domišljate načine. Tijekom ispitivanja vozila radi podešavanja prebacivanja brzina došlo je do oštećenja vilice prednjeg kotača, no u roku od svega tri sata izrađena je nova vilica kako bi se bolid mogao nastaviti natjecati.

Riteh Racing Team također je sudjelovao na međunarodnom Formula Student natjecanju u Njemačkoj na stazi Hockenheim od 4. 8. do 8. 8. 2010. Tim je na tom natjecanju osvojio prvo mjesto u ocjeni troškova, za što je primio posebno priznanje. U ukupnom poretku tim je zauzeo 39. mjesto od 80 timova iz cijelog svijeta koji su se prijavili na natjecanje u klasi 1 za bolide na pogon benzinskim motorom.

overall impression at the end was that the team successfully took part in the competition, especially when taking into account that their wish was to qualify in the first third of all registered teams. The team had showed true team spirit in the competition. The team was the smallest team at the competition counting only eight members, and their car was very cheap compared to others who have competed. The low price did not come at the expense of quality and performances, so the team had very cleverly solved many problems in a very ingenious ways. During the test of adjusting the gear switching, the vehicle underwent damage to the front wheel fork. Within just three hours, the team made a new fork so that the car was able to continue to compete.

Riteh Racing Team also participated in the international Formula Student competition in Hockenheim track in Germany from August to August 8, 2010. The team won first place in the assessment of costs in this competition, for which they received special recognition.

Natjecanje na stazi Hockenheim / Competition on the Hockenheim track

Tim je na tom natjecanju imao velikih problema prije samog natjecanja jer im je dan prije odlaska na natjecanje otkazao motor. Tim je u Rijeci prije odlaska na natjecanje uspio zamijeniti motor, ali ga nije uspio ispitati. Prvi dan samog natjecanja prošao je uz velike probleme s motorom, gdje se pokazalo da je potrebno zamijeniti koljenasto vratilo, koje je preuzeto s ranijeg motora. Tim je uspio osposobiti bolid te ga pripremiti za tehnički pregled koji mora svaki bolid proći da bi se mogao natjecati. Uz sve te probleme tim je uspješno odradio statička natjecanja. U ocjeni troškova tim je morao uvjeriti suce kako je njihov bolid najpovoljniji te da ima najbolji omjer cijene i kvalitete. Suci su bili oduševljeni prezentacijom troškova i za to je dobivena prva nagrada. Suci su bili oduševljeni kako je uopće tim s toliko malo članova uspio izraditi bolid.

U dinamičkom dijelu natjecanja tim je imao problema s ovjesom vozila. Tim je to uspješno otklonio, ali nije imao vremena da uspije s oba

The team was ranked overall at 39th place of 80 registered teams from around the world in Class 1 of the cars driven by gasoline engine.

The team had big problems in this competition before the events. The day before leaving for Germany, they got problems with malfunctioning engine. The team had replaced the failed engine before leaving for Germany, but due to lack of time they failed to prove the new engine. The first day of the competition went to the big problems with the engine, where it was shown that it was necessary to replace the crankshaft, which was dismantled from the previous engine. The team was able to train and prepare the car for technical inspection which every car has to pass in order to compete. With all these problems the team has successfully performed static events. In evaluation of costs the team had to convince the judges that their car is best one and that it has the best ratio of price and quality. The judges

Dodjela nagrade za prvo mjesto u ocjeni troškova, Hockenheim / Prize award for the first place in evaluation of costs, Hockenheim

vozača odvoziti testove ubrzanja i test ovjesa, pa je odlučeno da samo jedan od vozača vozi jer se ionako računa samo najbolje vrijeme za plasman. Popodne je održana utrka sprinta za plasman u utrci izdržljivosti.

Zadnji dan natjecanja vožena je utrka izdržljivosti na 22 km. Tim nije imao sreće jer je prije njihova nastupa počela padati kiša tako da su vremena bila poprilično sporija od timova koji su ranije vozili po suhoj stazi. Riteh Racing Team zadovoljan je nastupom jer je cilj bio završiti utrku što im je, za razliku od nastupa u Engleskoj, pošlo za rukom. Samu utrku izdržljivosti završilo je manje od polovice prijavljenih timova.

U večernjim satima slijedila je dodjela nagrada, na kojoj je tim primio nagradu za prvo mjesto osvojeno u prezentaciji troškova.

Tim zahvaljuje svim sponzorima koji su im pomogli na bilo koji način.

Članovi tima: Robert Blažić, Igor Felc, Ivan Maglica, Velibor Vučković, Hrvoje Novak, Goran Tomac, Danijela Turk i Andrea Arbula, te mentor prof. dr. sc. Vladimir Medica

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were delighted with the presentation of costs and for that it is obtained the first prize. The judges were impressed by the fact that inspite of having few people, they managed to make a competitive car.

In the dynamic part of the competition the team had problems with vehicle suspension. The team successfully solved these problems but had no time to participate in the races for acceleration and skid-pad with both drivers. It was decided that only one of the drivers could drive the race because they already realised that only the best time won. In the afternoon, the sprint race was driven to qualify for the endurance race.

The last day of the competition 22 km endurance race was driven. The team had no luck because before their performance it began to rain so that the time was a lot slower than of the teams that had previously raced on dry track. Riteh Racing Team is satisfied with the overall performance because the goal was to finish the race as they had finally succeeded. Endurance race was completed by less than half of all the registered teams.

During the evening followed the awards ceremony, the team received the award for winning the first place in the presentation of costs.

The team would like to thank all the sponsors who have helped them in any way.

Team members are: Robert Blažić, Igor Felc, Ivan Maglica, Velibor Vučković, Hrvoje Novak, Goran Tomac, Daniela Turk and Andrea Arbula. Faculty advisor is Professor Vladimir Medica.

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Kilimanjaro
AFRICA 2010
PRVA HRVATSKA SVEUČILIŠNA EKSPEDICIJA

Članovi riječkog Sveučilišta boravili su u Africi od 14. rujna do 6. listopada 2010., što je predstavljalo ostvarenje višemjesečnih priprema za pothvat Prve alpinističke ekspedicije Sveučilišta u Rijeci „Kilimanjaro-Africa 2010".

Središnji cilj ekspedicije bio je osvajanje Uhurua, 5895 metara visokog vrha planine Kilimandžaro. Vrh je osvojen 21. rujna oko 9 sati ujutro, nakon petodnevnog uspona. Vršnom usponu prethodio je težak aklimatizacijski dan u trajanju od oko 9 sati, a sam uspon započeo je oko 0:30. Napredak članova Ekspedicije otežavali su velika visina, rijetki zrak i niska temperatura, što bi mnoge natjeralo na povratak bez osvajanja vrha. Svih šest članova ipak stupaju na vrh Crnog Kontinenta i ponosno vijore, između ostalog, i zastavu Tehničkog fakulteta.

Six members of the University of Rijeka stayed in Africa from 14th September till 6th October 2010, as a realization of months-long preparation for the venture of the First alpine expedition of the University of Rijeka "Kilimanjaro-Africa 2010".

The main goal of the expedition was to conquer Uhuru, 5895 meters high peak of Mount Kilimanjaro. The peak was summited at 9AM on the 21st of September, after five days of ascent. The ascent to the top was preceded by a hard, nine-hour-long acclimatization climb, after which the conquest of the peak itself started at half past midnight. The progress was hindered by several factors: high altitude, thin air and low temperature - the combination of which would drive many to quit. Despite the problems, all six members of the expedition managed to reach the top of the Old Continent and proudly fly the flag of

Cijeli je pothvat bio motiviran i idejom promicanja Sveučilišta u Rijeci kao mladog sveučilišta otvorenog novim zamislima i samim izazovom Kilimandžara kao najvišeg vrha Afrike. Osim Tehničkog fakulteta najveći pokrovitelji ekspedicije bili su Grad Rijeka i Fakultet za menadžment u turizmu i ugostiteljstvu.

Kilimandžaro je najviša samostojeća planina na zemlji. Kroz povijest Kilimandžaro je bio mnogima izvor nadahnuća, među kojima se mnogi sjete Hemingwaya, koji Kili u svojem djelu „Snjegovi Kilimandžara" predstavlja kao posljednji cilj svojega junaka i put u besmrtnost. Afrika sa svojim egzotičnim kulturama, florom i faunom mnogima predstavlja dječački san. Da bismo se mogli popeti na gotovo 6000 metara, hodati stotinama kilometara od usijanih afričkih ravnica, kroz džungle, šume i kamenjar, do snježnog i ledenog kratera Kibo, gdje se nalazi vrh vulkana Kilimandžaro, ekspediciji su prethodile naporne psihofizičke pripreme:

the Faculty of Engineering, among others.

The whole endeavor was motivated by the idea of promoting the University of Rijeka as a young university open to new ideas, as well as by the challenge of Kilimanjaro, as the highest point of Africa. Along with the Faculty of Engineering, the main supporters of the expedition were the City of Rijeka and the Faculty of Tourism and Hospitality Management.

Kilimanjaro is the highest free-standing mountain on Earth. Throughout history, it has been a source of inspiration for many, among which Hemingway first comes to mind with his work "The Snows of Kilimanjaro", where the main character sees Kilimanjaro as his final goal and way to immortality. Africa, with its exotic cultures, plant and animal life, is a childhood dream to many. In order to be able to climb to the altitude of almost 6000 meters, to walk hundreds of kilometers from the scorching African plains, through the jungle, woods and barren lands, all the way to the ice and snow covered crater of Kibo,

Nebojša Nikolajev, Sandro Erceg, Zoran Nebić, Vitomir Maričić, Siniša Knežević, Ivan Fućak na Uhuruu

usponi na Breithorn (4,164 m), Gran Paradiso (4,061 m), Dinaru, Velebit, Triglav, nastupi na triatlonima (Kostrena, Rab), kao i mnogi zajednički treninzi. Osim u sportskom dijelu vrlo je zahtjevan bio i organizacijski aspekt projekta.

Tehnički fakultet od samog je početka uključen u projekt, samom činjenicom što su od šest članova dvojica povezana s Fakultetom: Sandro Erceg diplomirao je na studiju brodogradnje neposredno prije polaska za Afriku, a Zoran Nebić asistent je na Zavodu za računalstvo. Tehnički fakultet veliku je podršku projektu iskazao i organizacijskom i financijskom potporom i bez Fakulteta izvedba bi cijelog projekta bila puno teža. Pored Sandra i Zorana ekspediciju su činili studenti još triju fakulteta Sveučilišta u Rijeci: Vitomir Maričić (voditelj ekspedicije), Siniša Knežević, Ivan Fućak i Nebojša Nikolajev. Svojim životopisom i karakteristikama predstavljaju pravi presjek onoga što čini jedno sveučilište, pritom pokazujući da su i najsloženiji projekti ostvarivi uz trud i rad.

Ekspedicija je tijekom svojega boravka u Africi posjetila i tanzanijske i kenijske nacionalne parkove, nastambu Masaija i izbjeglički kamp u Keniji, kamo su dostavili pakete humanitarne pomoći iz Hrvatske. Osim toga posjetili su Zanzibar - otok u Indijskom oceanu i Istanbul.

location of the top of Kilimanjaro, members of the expedition went through exhausting psycho – physical preparations: summiting Breithorn (4164 m), Gran Paradiso (4061 m), Dinara, Velebit, Triglav, competing at triathlons (Kostrena, Rab), as well as performing numerous joint exercises. Besides the sport part of the project, the organizational aspect was also very demanding.

The Faculty of Engineering participated in the project from the very beginning, starting from the fact that two of the six members of the expedition are connected to the Faculty: Sandro Erceg graduated in Naval Architecture shortly before leaving for Africa, while Zoran Nebić is a teaching assistant at the Department of Computer Engineering. The Faculty of Engineering has also provided substantial organizational and financial support to the project, without which the project would be much more difficult to execute. Along with Sandro and Zoran, other expedition members were: Vitomir Maričić (expedition leader), Siniša Knežević, Ivan Fućak i Nebojša Nikolajev. With their life experiences and personal traits they present the true image of what makes a university, while proving that the most complicated of projects are achievable through effort and hard work.

While in Africa, the expedition visited Tanzanian and Kenyan national parks, a Masai tribe and a refugee camp in Kenya, where they delivered packages of humanitarian aid from Croatia. They also visited Zanzibar – the island in the Indian Ocean, and the city of Istanbul.