



International Conference on Engineering Education 20th – 24 th July 2015, Zagreb, Zadar (Croatia)

Conference Program

Monday - July 20, 2015			
7:00 - 17:00	Trip to Plitvice Lake		
18:00 - 19:00	Registration, ZSEM Capmus		
19:00 - 21:00	Welcome Party, ZSEM Campus		
Tuesday, July 21, 2015 - Westin Hotel			
8:00 - 9:00	Registration		
9:00 - 10:30	Opening Ceremony		
	Keynote Presentations		
10:30 - 11:00	Coffee break		
Parallel sessions			
	Parallel session TuA1	Parallel session TuB1	Parallel session TuC1
	Distance Learning, E-learning and Blended Learning 1	Best Practices in Engineering Education and Research 1	AOL, PBL and Quality Assurance 1
	171 - Kuei-Chih Chuang, Pang-Tung Liu, Yi-Tung Lin, Biing-Huei Chen and Hsia- Li Yang: "Developing E-Learning Models of Multimedia Instructional Design and Implication for Special Students"	75 - Amalia Rusu, Adrian Rusu and Mike Roer. Creating Software Engineering Entrepreneurial Awareness through Hands-on Interaction with Real Entrepreneurs	57 - Branimir Pejcinovic. Development and Uses of Iterative Systematic Literature Reviews in Electrical Engineering Education

11:00 - 13:00

130 - Kuei-Chih Chuang, Yi-Tung Lin, Chin-Tung Chen, Wen-Shan Lin and Mei-Chuan Tsai: "Exploring the Internet of Cooperative Learning Groups Using Content Analysis on Cohesive and Collaborative Tasks in E-Learning System"	12 - Desmond Adair and Martin Jaeger. Preparing Mechanical Engineering Design Students for Computational Fluid Dynamics Code Development	67 - Ivan Szendiuch , Edita Hejátková , Alexandr Otáhal and Boleslav Psota. Some Insights to Quality Improvement in Engineering Education System
33 - Marisa Venter, Riaan Van der Walt and Arthur Swart: "An investigation of the use of the Blackboard Learn Mobile App: An African perspective"	126 - Michal Musilek, Tomas Barton and Petr Musilek. A spreadsheet-based model of light reflection on thin layer to improve understanding of optical phenomena	61 - Heikki Valmu, Raisa Vartia, Eero Kupila and Tuomo Heikkinen. Significantly improved student progression results by means of course integration and collaborative pedagogy in the degree programmes of electronics, electrical engineering and automation technology of the Helsinki Metropolia UAS
89 - Ana Pavani: CREATING A COLLECTION OF ASSETS IN ELECTRICAL ENGINEERING – A PROJECT UNDER WAY	37 - Elena Trotskovsky and Nissim Sabag. How Electrical Engineering Students Understand the Accuracy Concept Concerning Digitized Signals	162 - Maria Hasenhuttl, Marilyn Kaplan and Simeon Ntafos. An evaluation of three freshman experience classes
136 - Kuei-Chih Chuang, Chin-Tung Chen, Yi-Tung Lin and Wen-Shan Lin: Developing the C-EWBST of Digital Multimedia Instruction for Vocational High School Curriculum in E-Learning System	127 - Pengxing Yi, Junfeng Wang, Tao Huang and Bo Wu. An autonomous learning ability based laboratory course for undergraduate students studying in measurement and control subjects	46 - Clara Amelia de Oliveira. Changes and Challenges in Engineering and Computer Sciences Education- Guidelines to treat Wide Themes for Beginners
144 - Glaucia N. A. Mello. WIKI-BASED PROJECT IN ENGINEERING EDUCATION: EVALUATION AND CONSIDERATIONS FOR EFFECTIVE USE	54 - Pierre Hertzog and James Swart. Freshman engineering students prefer time-on-task in a solar energy course, rather than time-in-class!	

13:00 - 14:00

Lunch

Parallel sessions

Parallel session TuA2

Parallel session TuB2

Parallel session TuC2

Best Practices in Engineering Education and Research 2

AOL, PBL and Quality Assurance 2

Globalization and Cooperation in Engineering Education

87 - Youmin Hu, Thomas Kurfess, William Singhose, David Frakes and Bo Wu. Design of a Hands-on Mechanronic Project Integrated into an Introductory course

11 - James Freeman. On the development of statistical models for assessing projects, portfolios and dissertations

28 - Timo Vaskikari and Kristiina Meltovaara. Quality matters in projects with Turku University of Applied Sciences

10

14:00 - 15:3

14 - Michael Bredol and Thilo Harth. Making "Physical Chemistry" a more interactive and cooperative experience	6 - Arthur James Swart and L Toolo. Fundamental problem-solving skills are found across the board in education: Are all power engineering students on-board?	174 - Shih-Liang Wang. An Inter-campus, Multi-disciplinary, Industry Sponsored Capstone Design Project on VTOL
4 - Nicolaas Luwes and James Swart. Student Perspectives of Practical Work done in a Laboratory – a Case Study from Logic Design 3	93 - Maja Martinović, Ana Kuštrak Korper and Martina Čaić. The Role of Marketing Strategy Simulation in Assurance of Learning	60 - Euy-Soo Lee, Juntae Kim, Hae-Jong Joo, Byung-hoon Jeon and Chee-Sun Won. LINC Project for enhancement of Industry-University cooperation in engineering education in South Korea
58 - Peter Bofah and Mohamed Chouikha. Experimental Centric-Based Instructional Pedagogy	159 - James Uhomoibhi and Maragaret Ross. Professionalism and Ethics in Engineering Education and Research: Issues of Skills Development and Future Employability	38 - Emmanuel K. Glakpe. A Model for Global Collaborative Engineering Education in Product Data Management
55 - Dunja Peric, Marta Miletic and Mladena Miletic. The effectiveness of student and professor centered learning in the geotechnical engineering introductory course	193 - Esther T. Akinlabi. A pragmatic teaching methodology in a final year module in Engineering Education	160 - David M. Bowen. Teams in Kenyan Engineering Education

15:30 - 16:00

Coffee break

Parallel sessions

16:00 - 18:00

Parallel session TuA3	Parallel session TuB3
Innovation	Information Systems and Information Society
20 - Mahbub Uddin. Inspiring Innovation	53 - Antti Hakkala and Seppo Virtanen. Virtualization of laboratory education in network security engineering
66 - Ivan Szendiuch and Edita Hejátková. Innovation in Microelectronics Assembly Technology Education	82 - Antti Hakkala and Jouni Isoaho. Defining and Measuring Key Expertise Areas in Information Security for Engineering Students
105 - Barry A. Benedict and Lilia A. Abron. INNOVATION LESSONS TO APPLY TO ENGINEERING EDUCATION	86 - Branko Sinković, Andrea Budin and Gordana Baric. Management of parallel change request processing

	47 - Tomoko Maruyama and Masahiro Inoue. Continuous Quality Improvement of Leadership Education Program through PDCA Cycle	48 - Youmna Elhissi and Abdelkrim Haqiq. Information System as a Management and Communication Device for Scientific Research at the Moroccan University
18:00 - 19:00		
19:00 - 22:00	Museum of Illusions	

Wendsday, July 22, 2015 - Westin Hotel			
8:00 - 9:00	Registration		
9:00 - 10:30	Panel Session		
10:30 - 11:00	Coffee break		
	Parallel sessions		
11:00 - 13:00	Parallel session WA1	Parallel session WB1	Parallel session WC1
	New Teaching Methods 1	Distance Learning, E-learning and Blended Learning 2	Robotics
	10 - Eduardo Oliveira Teles, Hugo Leonardo Deiró de Souza and Dante Augusto Barone. Integrated teaching methodology of Programming Logic and Statistic	173 - Mohamed Mhamdi, Hamadou Saliah-Hassane and Rafik Braham. Usability of the UML4ODP for a Technological Specification of a Distributed Teaching Embedded Systems Environment	23 - Annan Dai, Wenchang Zhang and Yiming Rong. Global Collaborative Senior Project: Engineering Design of Robot Aesthetics
	16 - Peter Willmot and Anthony Sutton. Engaged STEM learning using catapults	111 - András Benedek Dr. and György Molnár Dr.. E-Teaching and Digitalization at BME	172 - Birol Aygün. A Gentle Introduction to Robotics Software Engineering Education
	80 - Sakari Lukkarinen, Jaana Holvikivi, Peter Hjort, Mikko Mäkelä and Minna Lakkala. Creation of a collaborative study community in engineering studies	2 - Hrvoje Jerkovic. Advancement in educational collaboration – web hybrid applications in blended learning	31 - Kadri Umbleja. The first year experience of using LEGO Mindstorms robots in the Tallinn University of Technology outreach program for secondary and primary school learners
	78 - Teemu Rajala, Erno Lökkila, Rolf Lindén, Mikko-Jussi Laakso and Tapio Salakoski. Students' perceptions on collaborative work in introductory programming course	116 - Juliana Kimaghe and James Uhomoihi. Addressing Learners Challenges in Open and Distance Education with the Focus of Literacy and use of ICT Tools, Case Study Focused on the Open University of Tanzania	43 - Jau-Liang Chen. Undergraduate Curriculum in Robotics
	168 - Pnina Ari-Gur, Pavel Ikonmov, Peter Thannhauser, Daniel Litynski and Jeff Johnston. Interactive Virtual Laboratory, Game-Design Style		

13:00 - 14:00	Lunch		
14:00 - 16:00	iNEER Bord Meeting		
	Parallel sessions		
14:00 - 15:30	Parallel session WA2	Parallel session WB2	
	Best Practices in Engineering Education and Research 3	AOL, PBL and Quality Assurance 3	Workshop
	100 - Klaus Wuersig. Toward a more practical Engineering Curriculum	77 - Erkki Kaila, Einari Kurvinen, Erno Lokkila, Mikko-Jussi Laakso and Tapio Salakoski. Enhancing student-teacher communication in programming courses: a case study using weekly surveys	Teaching Technology Entrepreneurship at Engineering Universities - Experiences, Perspectives, Challenges, and Assessment Sergej Lugović
	70 - Shean-Juinn Chiou and Jhy-Cherng Tsai. Undergraduate Capstone Course for Mechanical Engineering	32 - Mohammad Ahmad and Joseph Zeaiter. New trends in Chemical Engineering Education: Personal Prospective	
	170 - Jhy-Cherng Tsai, Shean-Juinn Chiou, Ming-Chyuan Lu and Jau-Liang Chen. A National Educational Center on Machine Tool Technologies	34 - Martin Jaeger and Desmond Adair. Students' Perception of Learning Facilitation during an Interdisciplinary Engineering Design Course – A Case Study	
	64 - Eduardo Montero, Fatima E. M. Alaoui and María Jesús González-Fernández. An International Action for Cooperation in Engineering Education between Spain and Morocco	35 - Masahiro Inoue, Ichiro Sofue, Hiroshi Hasegawa, Atsuko Yamazaki and Anak Khantachawana. E-portfolio for Global Human Resource Development Program	
	163 - Tero Reunanen and Riitta Windahl. Pinpointing Core Competence and Mindset Need in Modern Engineering Studies	99 - Jon Ram Bruun-Pedersen and Lise Busk Kofoed. How Soft are the "Soft Skills" in Engineering Educations	
15:30 - 16:00	Coffee break		
	Parallel sessions		
3:00	Parallel session WA3	Parallel session WB3	
	Modeling, Simulations and Optimization	New Teaching Methods 2	Workshop
	52 - Ben Kotze. Enhancing Engineering Education by exceeding simple simulations using AnalogTM Discovery	56 - Branimir Pejcinovic and Phillip Wong. Enhancing freshman engineering instruction with in-class interaction systems and e-books	

16:00 - 18:00

40 - Natalia Serdyukova and Vladimir Serdyukov. Modeling, Simulations and Optimization Based on Algebraic Formalization of the System	146 - Reza Nekovei. Innovative engineering education through modular teaching with emphasis on design
63 - Ethiopia Nigussie, Petri Sainio, Sanaz Rahimi Moosavi, Rajeev Kumar Kanth, Seppo Virtanen and Jouni Isoaho. Uniform Teaching of Network Simulation Skills in an Engineering Curriculum	42 - Arturo Gonzalez and Enrique Covian Regales. Enhancing Student Performance through a Competitive Team Tournament
129 - Igor Gvozdanovic, Mato Njavro and Ivana Paradinovic. Portfolio Management Simulation as a Learning Tool	192 - Siniša Krunić and Sergej Lugović. Supporting education and learning with game design elements

18:00 - 19:00

19:00 - 22:00

Zagreb Tour**Thursday, July 23, 2015 - Westin Hotel**

8:00 - 9:00

Registration

9:00 - 10:30

Keynote Presentations

10:30 - 11:00

Coffee break**Parallel sessions**

Parallel session ThA1

Parallel session ThB1

Parallel session ThC1

Professional skills**Curriculum Design****Mathematics in Engineering Education**

59 - María Jesús González-Fernández and Eduardo Montero. Comparative Teamwork Skill Development in Different Engineering Topics

45 - David Ollis. The Research Proposition and Professional Development for First Year Graduate Student Preparation

17 - Janne Roslöf. Engineering Students' Perception of Studies – a Comparison Based on the Students Educational Backgrounds

65 - Petri Sainio, Seppo Virtanen, Jouni Isoaho and Johanna Isoaho. Systematic Method for Teaching Engineering Working Life Skills

161 - Milan Nikolić, Dragana Glušac, Maša Magzan, Dragica Ivin and Edit Terek. MODELS OF CANDIDATES RANKING FOR STUDIES OF SECOND AND THIRD DEGREE: MULTICRITERIA APPROACH

19 - Ira Raveh, Elena Trotskovsky and Nissim Sabag. Mathematical vs. Engineering Understanding: Engineering Students' Perceptions (Work in Progress)

3:00

11:00 - 1

155 - Kevin Doyle. Addressing the UK IT Skills Shortage: 'Tech Gold' Degrees	5 - Frode Sandnes and Hua-Li Jian. Integrating principles of Universal Design into the Engineering Education curriculum: Experiences from Norway	44 - Eusebio Jiménez-López , Gloria Isabel Morales-Bojórquez , Gabriel Luna-Sandoval , Lilia Beatriz Navarro-Fragoso, Martín Santacruz-Tirado, Ramsés Alonso Acuña-Espinosa , Rafael Durán Gibrán Amparán, Jesús Armando Cantú-Cárdenas. PROBLEM-BASED LEARNING AS A STRATEGY FOR TEACHING MATHEMATICS AT NORTHWEST LA SALLE UNIVERSITY
106 - Barry Benedict and Lilia Abron. PROFESSIONAL SKILLS FOR GRADUATES ENTERING THE CONSULTING INDUSTRY	138 - Arne Gjengedal and Tor Schive. A new introductory course in the engineering education at the University of Tromsø	76 - Einari Kurvinen, Rolf Lindén, Teemu Rajala, Mikko-Jussi Laakso and Tapio Salakoski. Using educational technology to enhance mathematics learning
140 - Pearse O'Gorman and Margaret Morgan. Student motivation in the development of professional skills	24 - Yiming Rong, Haiyan Zhao and Dan Wu. Make engineering curriculum flexible: an experimental design in China	141 - Larissa Fradkin and James Uhomobni. Can artificial intelligence help students develop their fluid and procedural intelligence?

13:00 - 14:00

Lunch

Parallel sessions

14:00 - 15:30

Parallel session ThA2	Parallel session ThB2	
IT Global Influence	Project Based Learning	Poster / Demo
91 - Gusts Linkevics and Uldis Sukovskis. Determining Agility Impact Index and generating employee based questions to assess organizational agility	13 - Nissim Sabag and Elena Trotskovsky. Comparing Characteristics of final projects: BSc students vs. Practical Engineering students – the supervisors' point of view	92 - Ana Pavani: A BLENDED LEARNING SIGNALS AND SYSTEMS COURSE
181 - Andrey V. Bystrov and Vyacheslav N. Yusim. Indicators of economic development of technologically advanced countries	41 - Steven Nijhuis, Joseph Kessels and Ruben Vrijhoef. The importance of criticality in (project management) competence research	107 - Jhy-Cherng Tsai, Shean-Juinn Chiou and Jau-Liang Chen: Development and Evolution of A Capstone Project in Mechanical Engineering – A Twenty-Year Experience from Taiwan
109 - Philip Vranešić, Karmela Aleksić-Maslač and Masha Magzan. Searching for an Online Marketing Effectiveness: The Potential for a Small Business Sector	7 - Steven Nijhuis, Ruben Vrijhoef and Joseph Kessels. Measuring learning gains in project management	15 - Kazuya Takemata, Akiyuki Minamide, Arihiro Kodaka and Hirofumi Yamada. Engineering Design Education based on the CDIO approach
121 - Maras Nela, Jurkovic Majic Olivera and Ana Kustrak Korper. E-commerce sales promotion and group buying concepts	85 - Wilfred Fritz and Deon Kallis. Real-world project management training for Small, Medium and Micro Enterprises (SMME) sustainability	62 - Su-In An , So-Hyun Park, Hayoung Park and Myoung-Souk Yeo. Development of the Leadership Course through the Case Study Evaluation and an Analysis

	153 - Goran Oblaković, Mato Njavro and Ivija Bernatović. Evolution of technology in risk management	110 - Stephen Hundley. The Attributes of a Global Engineer Project: Purpose, Process, and Findings
15:30 - 16:00	Coffee break	
16:00 - 17:00	ICEE2015 Closing Ceremony	
17:00 - 19:00		
19:00 - 22:00	Conference Gala Dinner, Dverce Palace	

	Friday - July 24, 2015	
8:00 - 20:00	Trip to Zadar	