

Conference Agenda

Overview and details of the sessions of this conference. Please select a date or room to show only sessions at that day or location. Please select a single session for detailed view (with abstracts and downloads if available).

📕 Hide Presentations 🚇 Show Metadata 📳 List View 🖶 Print View with Header 🔻 More... Name. Title...

Session Overview

Workshop 2

Unan, Ozlem

Workshop 4

Learn to Design Real Systems Fast with National

Remote Experiment in Inquiry-Based Instruction

Dziabenko, Olga; Garsía-Zubía, Javier; Gillet, Denis

Instruments myRIO Workshop

Date: Wednesday, 02/Apr/2014

9:00am Registration

3:00pm

1:00pm

10:00am Workshop 1

Workshop: Using Evaluation to Support Findings for

Innovations in Engineering Education

Froyd, Jeffrey E; Lord, Susan M

1:00pm **Lunch Break**

2:00pm

2:00pm Workshop 3

5:00pm MATLAB® & Simulink® with Raspberry Pi® - A hands-on workshop on hardware support for project based learning

Tarchini, Alex

Date: Thursday, 03/Apr/2014

8:30am Registration

6:00pm

9:00am **Opening Ceremony**

9:30am

9:30am **Keynote Session I**

Chair: Okyay Kaynak, Bogazici University

11:00am

The Massive Course Meets the Personal Learner

Downes, Stephen

Re-conceptualizing Teaching and Learning in a New Educational Context

DeBoer, Jennifer

11:00am Coffee Break

11:30am

11:30am 1A: Educational **Methods and Learning**

1:00pm Mechanisms in

Engineering Education (Full Papers)

Chair: Manuel Castro,

UNED

Structure of face-toface teaching sessions for an undergraduate technology-centered computing course:

establishing a set of

hast practicas

Lightweight Ad Hoc Assessment of **Practical Programming Skills at** Scale

New Assessment

Chair: Jörg Abke,

Sciences

University of Applied

Theories (Full Papers)

Staubitz, Thomas; Jan, Renz; Christian, Willems; Jasper,

1B: E-Assessment and 1C: Innovative Materials, Teaching and Learning **Experiences (Short** Papers)

Chair: Dominik May, TU **Dortmund University**

Adapting Teaching Strategies to Global and Analytic Learning Styles by Real World **Engineering Projects**

Danasanah Wantahan

Daneti, Marllene

1D: Attracting and Retaining Practices in **Engineering Education** (Short Papers) Chair: Russ Meier, IEEE Piraeus Research **Education Society Vice**

President of Conferences

Use of cutting edge educational tools for an initial programming course

Giordano, Daniela; Maiorana, Francesco 1E: Work in Progress **Papers**

Chair: Christos Douligeris, University of

Center

Designing Robotic Avatars in Second Life - A Tool to **Complement Robotics** Education

Buiu, Catalin; Gansari,

Mihai Educational Dahatia υσοι μι αυτίυσο Baumgartner, Ilse; **Venky** Shankararaman, **Venky**

Comparison of Frontal Lecture and Workshop Learning Arrangements in a Software Engineering **Education Project**

Mottok, Juergen; Schumm, Michael; Soska, Alexander; Joseph, Saskia; Reschke, Michael; Schroll-Decker, Irmgard; Niemetz, Michael

Different types of teamwork projects in learning Multimedia technologies

Mihova, Marija; Jovanov, Mile; Stankov, Emil

Engineering practice: teaching ill-structured problem solving in an internship-like course

Bozic, Marija; Cizmic, Svetlana; Sumarac-Pavlovic, Dragana; Escalas Tramullas, M. Teresa

Jonannes; werner, Christoph

Self-Assessment of Freshmen Students' **Base Competencies** Zehetmeier, Daniela; Kuhrmann, Marco; Böttcher, Axel; Schlierkamp, Kathrin; Thurner, Veronika

Scalable and Elastic e-**Assessment Cloud** Solution

Ristov, Sasko; Velkoski, Goran; Gusev, Marjan; Armenski, Goce

A web platform for the assessment of competences in **Mobile Learning** contexts

Rayon, Alex; Guenaga, Mariluz; Núñez, Asier

kesearcn worksnop in Engineering **Education -- Draft of** new learning Jungmann, Thorsten; Ossenberg, Philipp

Competence Component of the **Project-Oriented** Training of Elite **Engineering Specialists**

Mozgaleva, Polina; Zamyatina, Oxana

Gaining and **Maintaining Student Attention Through Competitive Activities** in Cooperative Learning, A wellreceived experience in an undergraduate introductory Artificial Intelligence course

Silapachote, Piyanuch; Srisuphab, Ananta

Designing Proficient Academic Science **Education for the** Gifted Youth

Pyetan, Erez; Oni-Grinberg, Adar; Nevo. Uri; Shofty, Shira; Yankielowicz, Shimon

Improving the **Computing Program Accreditation at Post Soviet Union University**

Sachenko, Anatoly; Andrzej Rucinski, Andrzej; LaCourse, John; Markowsky, George

What Surveys and Interviews tell us Watterson, Craig Alan; Carnegie, Dale **Anthony**

Supporting Students with Special Needs at University through **Peer Mentoring** Tobajas, Félix B.;

Cabello, Ma Dolores; De Armas, Valentín; Grijalvo, Fernando

Organization of a **Lego-Robots Contest** Offered to High School Kids by Engineering Students within a **Project Based** Learning Enviroment Rothe, Irene

Seeking clues to promote the participation of women in electrical engineering studies

Alejos, Ana Vazquez; Milagros, Maria Pilar; Falcone, Francisco; Martin, Antonio Lopez; Sánchez, Manuel García

Building a shared understanding of the skills and competences in order to respond to the current global technical challenges

Friesel, Anna; Ward, Anthony; Mrozek, Zbigniew; Poboroniuc, Marian; Welzer, **Tatiana**

Educational Robotics as Learning Tools within the Teaching and Learning Practice Eteokleous, Nikleia

Exploiting the synergies between **Software Engineering** and Robotics: a project-based laboratory

Brugali, Davide

Engaging Students With a Mobile Game-**Based Learning** System in University Education

Bartel, Alexander; Hagel, Georg

Using FPGA **Development Boards** for Multi-course **Laboratory Support** Haba, Cristian-Gyozo

The EOLES Project

Gericota, Manuel; Fidalgo, Andre; Ferreira, Paulo; Barataud, Denis; Andrieu, Guillaume; De Craemmer, Renaat; Cristea, Mihai; Benachenhou, Abdelhalim; Ankrim, Mohammed; Bo...

1:00pm **Lunch Break**

2:00pm

2:00pm

3:30pm

2A: Infrastructure and **Technologies for Engineering Education** (Full Papers)

Chair: Anna Friesel, Technical University of Denmark

Student Satisfaction of e-Learning Tools for Computer Architecture and Organization Course

Armenski, Goce; Kostoska, Magdalena; Ristov, Sasko; Gusev, Marjan

The users' evaluation of newly introduced on-line collaborative activity for building ontology

Jovanov, Mile; Gusev, Marian: Mihova Mariia **New Assessment Theories (Full Papers)** Chair: Carlos Delgado Kloos, Universidad Carlos III de Madrid

Handling Re-grading of Effecting Major **Automatically Graded** Assignments in **MOOCs**

Renz, Jan; Staubitz, Thomas; Willems, Christian; Klement, Hauke; Meinel, Christoph

Intelligent Student **Profiling for Predicting** e-Assessment **Outcomes**

Simjanoska, Monika; Gusev, Marjan; Ristov, Sasko; Bogdanova, Ana Madevska

2B: E-Assessment and 2C: Graduate Curricula and Programs (Full Papers)

Chair: Dale Carnegie, Victoria University of Wellington

Changes to a First **Year University** Engineering **Programme**

Carnegie, Dale; Browne, Will

Integrating Practical CISCO CCNA Courses in the Computer **Networks' Curriculum**

Ristov, Sasko; Gusev, Marjan; Donevski, Aleksandar

Undergraduate Research Experience 2D: Knowledge and Competencies in **Engineering Education** (Short Papers) Chair: José Couto

Marques, Universidade Alexandru Deaky, do Porto - Faculdade de Engenharia

To Develope the Mandarin-Phonetic-**Symbol Communication Aid for** Children with High-**Functioning Autism**

Chu, Yung-Long; Chang, Shuping; Zhao, Yu-Xiang; Hsu, Feng-Chih; You, Jia-Sheng; Chou, Chien-Hsing

Cross-cultural Active Learning: Qualitative Results from **Americans Teaching**

2E: Software **Development for Education (Special** Session)

Chair: Bogdan-Bluemind Software / Transilvania University of Brasov

Developing Android client applications for online laboratories

Deaky, Bogdan-Alexandru; Parv, Luminita

A Robotic Arm **Simulator Software** Tool for use in **Introductory Robotics** Courses

Gonzalez, Fernando Garcia; Zalewski, .lanusz

Customized work based learning support system for less academically prepared adults in online environment

marjan, minora, marija

<u>Jakobsone, Andra;</u> Motejlek, Jiří; Cakula, Sarma

Heterogeneous Ability-Centered Team Building to Aid Enquiry Based Learning in Engineering Classroom

Shakir, Muhammad Zeeshan; Baig, Saira Dawer; Imran, Muhammad Ali; Hussain, Syed Imtiaz; Abbasi, Qammer Hussain; Qaraqe, Khalid A. E-Assessment with Interactive Images Gusev, Marjan; Ristov, Sasko; Armenski, Goce; Gusev, Pano;

Velkoski, Goran

Alla HIAGOTONA

Standard Setting in Students Assessment of Higher Education Institution in Malaysia Khatimin, Nuraini; Abd Aziz, Azrilah; Zaharim, Azami Program in Qatar

Baig, Saira Dawer; Hussain, Syed Imtiaz; Qaraqe, Khalid A.

The Role of Industrial/Academia Liaisons in the Consecution of Integral Curricula in Engineering

Falcone, Francisco; Alejos, Ana; Milagros, Maria Pllar; Sanchis, Pablo; <u>Lopez-Martin,</u> <u>Antonio</u>

The Gamification of Dynamic Spectrum Access and Cognitive Radio

Sutton, Paul; Doyle, Linda

in China

Lord, Susan M.; Wang, Jiajia; Chang, Victor W.; Kuang, Yinghui; Tang, Yongming Software Engineering in a Nutshell for

Electrical Engineers

A New Hardware-in-

Control Engineering

Usenmez, Serdar;

Yaman, Ulas; Dolen,

Melik; Koku, A. Bugra

sustainable software

developing countries

Munoz-Hernandez,

the-Loop Simulator for

von Schwerin,

Marianne

Education

Looking for

Susana

for education in

SUPER - Sustainable Perception Index for Sustainable Development regarding gender and diversity aspects Krause-Steger,

Sandra; Roski, Melanie

Preventing
Enginnering Education
Dropouts: Measuring
the Compatibility of
Personality Type and
Engineering Major

Ktoridou, Despo; Epaminonda, Epaminondas

The Effectiveness of the Junior Companies in the Vision of Engineering Students of a Brazilian University

Maria Bogo, Adelaide; Christian Schmitt, Alan; Henning, Elisa; Gehlen de Marco, Rodrigo

Engineering students and graduates on the labor market: FIM UHK case study

Poulova, Petra; Simonova, Ivana

2:00pm

IEEE Education Society Standard Committee Meeting

3:30pm

3:30pm Coffee Break

4:00pm

4:00pm

5:30pm

3A: Active Learning and 3B: Lifelong Learning new Learning Models (Full Papers) (Full Papers) Chair: Axel C.H.

Chair: **James Wolfer**, Indiana University South Applied Sciences Bend Munich

Synergistic model of content evolution in educational programs for IT industry

Shukhman, Alexander E.; Belonovskaya, Isabella D.

Teamwork competence and academic motivation in computer science engineering studies

Pérez Martínez, Jorge Enrique; <u>García Martín,</u> <u>Javier</u>; Sierra Alonso, Almudena

Postcards from the near Future: Towards

OD-1 Kelement a southern

(Full Papers)
Chair: Axel C.H.
Böttcher, University of
Applied Sciences

Munich

Design of the

Monitoring System of

Monitoring System of a Learning Organizer Manso-Vázquez, Mario; <u>Llamas-Nistal</u>, <u>Martín</u>

Using E-Journal to Improve Self-Regulated Learning in Introductory Computer programming course. Alhazbi, Saleh M.

Distance Training of Computer-based Measurements and Instrument Control Gergic, Bojan 3C: Learning Analytics and Assessment in Serious Games (Special Session)

Chair: Francesco
Bellotti, University of
Genoa

Applying learning analytics to simplify serious games deployment in the classroom

Serrano-Laguna, Ángel; <u>Fernández-</u> <u>Manjón, Baltasar</u>

The Impact of Pedagogical Agents in 3D Collaborative Serious Games

Terzidou, Theodouli; <u>Tsiatsos,</u> <u>Thrasyvoulos G.</u>

Use computer game to teach Object-Oriented

3D: Learning Systems Platforms and Architectures (Short Papers)

Chair: **Ian Grout**, University of Limerick

Approaches for Competencies Assessment in Open Source e-Learning Environments

Kostadinova, Hristina; Raykova, Mariana; <u>Tuparov, Georgi;</u> Tuparova, Daniela Ivanova

A Human-like Embodied Agent Learning Tour Guide for E-learning Systems

<u>Hasegawa, Dai;</u> Ugurlu, Yucel; Sakuta, Hiroshi

Towards Electronic

3E: Software Development for Education (Special

Session)
Chair: BogdanAlexandru Deaky,
Bluemind Software /
Transilvania University
of Brasov

Using LabVIEW for building laboratory server: pros and cons, design patterns, software architecturing and common pitfalls

Titov, Igor

Learning Analytics on federated remote laboratories: tips and techniques

Orduña, Pablo; Almeida, Aitor; Lópezde-Ipiña, Diego; García-Zubia, Javier Communicating Communications

<u>Foley, Jessica;</u> Doyle, Linda; McGettrick, Séamas

Assesment of Flipped Classrom Model in a alculus II Course kadry, seifedine A graphical approach for comparing qualifications

Gatteschi, Valentina; Lamberti, Fabrizio; Demartini, Claudio

Using the iPad as a

Pedagogical Tool to Enhance the Learning Experince for Novice Programing Students Amer, Hoda; Ibrahim, Programming in computer science course

Wong, Yoke Seng; Mohamad Yatim, Maizatul Hayati; Tan, Wee Hoe

Requirements on learning analytics for facilitated and non facilitated games Baalsrud Hauge,

Jannicke Madeleine; Bellotti, Francesco; <u>Kalverkamp, Matthias;</u> Berta, Riccardo; de Gloria, Alessandro; Barabino, Giulio Exams in Undergraduate Engineering

Richter, Thomas; Boehringer, David

Student Interactions with E-learning Systems: User and Topic Analysis Ugurlu, Yucel; Hasegawa, Dai; Sakuta, Hiroshi

Dynamical Evaluation
Of Academic
Performance In Elearning Systems
Using Neural
Networks Modeling (
Time Response
Approach)
Mustafa, Hassan M. H.

A LabVIEW based Experiment Execution Engine to Ease the Development of ISA batch Lab Servers

Garbi Zutin, Danilo; Auer, Michael

Simple and achievable educational projects by interconnecting different ICs

- <u>Faustino Andrade,</u> <u>Tiago;</u> Rodrigues Quintas, Manuel; Restivo, Maria Teresa; Caracinha, Diogo

Neural Network and Linear Regression Methods for Prediction of Students' Academic

Achievement

Mohd Arsad, Pauziah; Buniyamin, Norlida; Ab Manan, Jamalullail

Date: Friday, 04/Apr/2014

8:30am Registration

5:00pm

9:00am

10:30am

4A: Learning Systems

Platforms and Architectures (Full Papers) Chair: David

Boehringer, Universität Stuttgart

eCampus as a Platform for Ubiquitous Learning

<u>Lapuh Bele, Julija;</u> Debevc, Matjaž

CampusConnect: An Open-Source Initiative to Connect Learning Management Systems

Boehringer, David; Bernlöhr, Heiko

Interactive Tools for Teaching Electrical Engineering Vollrath, Joerg

A Notification Manager to support collaborative learning in LMS Moodle

Echeverría, Leovy; Cobos, Ruth; Morales, Mario 4B: Laboratory Experiences: on-site and remote environments (Full Papers)

Chair: **Maria Teresa Restivo**, Universidade
Porto

TTC Process Control Trainer: Motivations and the design of a laboratory trainer to meet Saudi Arabia educational needs

<u>Dabroom, Ahmed</u> <u>Mohammed;</u> Iqbal, Muhammad Javed; Tay, Tee Tiong; Shaukat, Nabil; Mahamood, Shahinshah

Integration of laboratory experiments into introductory electrical engineering courses: concept, implementation and competence-based evaluation

Block, Brit-Maren

Formation of user profile and determination of the training modes in the system "Smart lab" Makarova, Yuliya; Langmann, Reinhard;

FORGE: Enhancing

Huy Ngok

Krisilov, Viktor; Vu,

4C: Infrastructure and Technologies for Engineering Education (Full Papers)

Chair: **Igor Titov**, Bauman Moscow State Technical University (BMSTU)

Authoring Learning Designs: The Expressiveness of IMS LD and Collaboration Supports

Nurjanah, Dade

A review of webapp authoring tools for elearning

Latorre, Miguel; Robles-Gómez, Antonio; Rodríguez, Luis; Orduña, Pablo; San Cristóbal, Elio; Caminero, Agustín C.; Tobarra, Llanos; Lequerica, Irene; Ros, Salvador; Herná...

From manuals towards product embedded interactive learning environments Puchleitner, Thomas; Petrovic, Otto

Developing Moodle Plugin for Creating Learning Content with Another REST Function Call

<u>Kautsar, Irwan</u> <u>Alnarus;</u> Kubota, Shin-Ichiro; Musashi, Yasuo: Sugitani. 4D: Innovative
Materials, Teaching
and Learning
Experiences (Short
Papers)
Chair: Dale Carnegie,

Victoria University of Wellington

Learning Physics down a slide: A set of experiments to measure reality through smartphone sensors

Martínez, Lander; Garaizar, Pablo

Virtual Labs and Remote Labs: Practical experience for everyone

Kruse, Daniel; Frerich, Sulamith

Introduction to
Microcomputer
Technology with the
MSP430 Launch Pad
in Remote Labs
Versen, Martin;

Kipfelsberger, Stefan

Addressing Low-Power Electronics in a Digital System and FPGA Design Course Winzker, Marco

A topic on simulation in telecommunications engineering

Barcelo-Arroyo, Francisco; Martin4E: About MOOCs, SPOCs, and other OCs (Special Session) Chair: Carlos Delgado Kloos, Universidad Carlos III de Madrid

Experiences of Running MOOCs and SPOCs at UC3M

Delgado Kloos, Carlos; Muñoz-Merino, Pedro J.; Muñoz-Organero, Mario; Alario-Hoyos, Carlos; Pérez-Sanagustín, Mar; Parada G., Hugo A.; Ruipérez, José A.; Sanz, Juan Luis

Serious Games as edX MOOC Activities

Freire, Manuel; del Blanco, Angel; <u>Fernandez-Manjon,</u> Baltasar

Free/Open Source Software Projects as early MOOCs

Robles, Gregorio; Plaza-Garces, Hugo; González-Barahona, Jesús M.

Towards a
Collaborative
Pedagogical Model in
MOOCs

Claros, Iván; Echeverría, Leovy; Garmendía, Antonio; Cobos, Ruth

△ Practice-hased

elearning and research in ICT through remote experimentation Marquez-Barja,

Johann M.; Jourjon, Guillaume: Mikroyannidis, Alexander; Tranoris,

Christos; Domingue, John; DaSilva, Luiz A.

⊑5∪ai∪iia, i5i a€i, ∠∪ia, Kenichi **Enrica**

> **Problems Encountered in Technical Education of** the Blind, and Related Aids: Virtual **Cubarythms and 3D Drawings**

Mikulowski, Dariusz; Brzostek-Pawlowska. Jolanta

ATTUOLICE BUSIN **MOOC** for Learning **Electronics**

García, Félix; Díaz, Gabriel; Tawfik, Mohamed; Martín, Sergio; Sancristobal, Elio; Castro, Manuel

Supporting openness

of MOOCs contents through of an OER and **OCW framework** based on Linked Data technologies

Piedra, Nelson; Chicaiza, Janneth; López, Jorge; Tovar Caro, Edmundo

10:30am

Keynote Session II

Chair: Michael Auer, Carinthia Tech Institute

12:00pm

Connecting the dots: MATLAB® and Simulink® help engineering education to take advantage of new teaching agents Tarchini, Alex

Industry 4.0 & Education 4.0

Langmann, Reinhard

12:00pm Coffee Break

12:30pm

12:30pm

2:00pm

5A: Learning Systems Platforms and **Architectures (Full** Papers)

Chair: Marco Winzker, Hochschule Bonn-Rhein-Sieg

Quality despite quantity - teaching large classes in C programming and fundamentals in computer science

Vogel-Heuser, Birgit; Frank, Timo; Rehberger, Sebastian: Aicher, Thomas

Virtual-C - a programming environment for teaching C in undergraduate programming courses

Pawelczak, Dieter; Baumann, Andrea

Cloud E-learning and Benchmarking Platform for the Parallel and **Distributed Computing** Course

Ristov, Sasko; Gusev, Marjan; Velkoski, Goran

RFID in Electronic **Engineering Education**

Grout, lan; César Rodrigues da Silva, Alexandre

5B: Online Laboratories 5C: Attracting, and Architectures (Full Papers) Chair: Danilo Zutin,

Antiplagiarism in educational remote laboratories done right: technological, educational and psychological

CUAS

Titov, Igor; Glotov, Alexander: Bondarenko, Dmitry; Savkin, Sergei

implications

Deconstructing remote laboratories to create Laboratories as a Service (LaaS)

Caminero, Agustín C.; Robles-Gómez, Antonio: Ros. Salvador; Tobarra, Llanos; Hernández, Roberto; Pastor, Rafael; Castro, Manuel

Middleware Solutions for Service-Oriented Remote Laboratories: **A Review**

Tawfik, Mohamed; Sancristobal, Elio; Ros, Salvador; Hernandez, Roberto; Caminero, Agustín; Tobarra, Llanos; Garcia-Loro, Felix; Latorre, Miguel; Carro, German; Diaz...

Integrating Enquirybased Learning Pedagogies and Romoto Acces

Engaging and Retaining Papers Human Talent (Short Papers)

Chair: Sebastian Gross, do Porto - Faculdade de Regensburg University The MathWorks GmbH

To Design an Interactive Learning System for Child by integrating Blocks with Kinect

Chen, Ke-Wei; You, Jia-Sheng; Hsu, Feng-Chih; Hsieh, Yi-Zeng; Chou, Chien-Hsing

Attracting, Engaging and Retaining Students in **Engineering Programs** A Case Study

Imran, Ahmed; Nasor, Mohamed; Hayati, Fahar

An Engineering Approach to **Developing Lecture** Material for new Study Courses

Studt, Reimer; Weiß, Florian; Mottok, Jürgen

Profiling Students' Performance and Measuring their Progress in the area of Multimedia Communications

Papadakis, Andreas; Samarakou, Maria;

Tsaganou, Grammatiki

Students' Skills Perceptions for

5D: Work in Progress Chair: José Couto

Marques, Universidade Engenharia

Just-in-Time Teaching in Software **Engineering: A** Chinese-German **Empirical Case Study**

Tao, Ye; Liu, Guozhu; Mottok, Jürgen; Hackenberg, Rudi; Hagel, Georg

Preparation on cultural differences for all

Welzer, Tatjana

Student Exchange Programs in **Engineering Sciences** between USA and Germany

Strenger, Natascha; Frerich, Sulamith; Petermann, Marcus

Landscape format - a course concept to stimulate interdisciplinary dialogue Berbuir, Ute; Petermann, Marcus;

Youth interests as

Berens, Tobias;

Wagner, Pia

vehicles for the acquisition of technological competence: Insights

5E: Technical Didactics Software Engineering (Special Session) Chair: Juergen Mottok,

of Applied Sciences

Software Mangineeringment: **Teaching Project** Management from **Software Engineering** Perspective

Tomer, Amir

Identifying Base Competencies as Prerequisites for **Software Engineering** Education

Thurner, Veronika; Böttcher, Axel C.H.; Kämper, Andreas

New Sustainable Teaching Approaches in Software **Engineering Education**

Kropp, Martin; Meier, **Andreas**

Controlling Quad-Copters A Projectbased Approach in the Teaching of **Application Design** Winterfeldt, Götz; Hahne, Christina

Monitoring Students' Mobile App Coding Behavior Data

Analysis Based on IDE and Browser Interaction Logs Fuchs, Markus;

Anunciatto; Lopes,

Summative EEG Alpha

classification relates Learning Style and

Roseli de Deus

Openness

Nemote Access **Laboratories for STEM** Education

Maiti, Ananda; Maxwell, Andrew D.; Kist, Alexander A.; Orwin, Lindy

Integration of management services for remote/virtual

Tobarra-Abad, Llanos; Ros-Muñoz, Salvador; Hernández-Berlinches, Roberto; Caminero, Agustín; Robles, Antonio; Castro, Manuel; Díaz, Gabriel; Sancri...

from two participatory Engineering projects Depieri, Adriana

> Berger, Thomas; Hofstätter, Birgit; Thaler, Anita; Freitag, Daniela

Heckner, Markus; Raab, Felix; Wolff, **Christian**

laboratories

Pastor-Vargas, Rafael;

Abdul Rashid, Nazre bin; Taib, Mohd. Nasir bin; Hj. Murat, Zunairah binti; S. Abd. Kadir, Ros Shilawani binti; Sulaiman, Norizam bin; Lias, Sahrim bin

Lunch Break

3:00pm 3:00pm

2:00pm

4:30pm

6A: Educational Methods and Learning Mechanisms (Full Papers)

Chair: Mohamed Tawfik, UNED

Student perceptions and attitudes towards the Software Factory as a learning environment

Ahmad, Muhammad Ovais; Liukkunen, Kari; Markkula, Jouni

Fostering computational thinking in engineering education challenges, examples, and good practices

Gross, Sebastian; Mohtadi, Coorous; Kim, Mischa; Schlosser, Joachim; Lluch, Dan; Schneider, Dorian

The Role of Teaching **Decision Analysis for** Sustainability in **Engineering Schools** João, Isabel M.; Quadrado, José C.

FOSTERING INNOVATION IN ENGINEERING UNDERGRADUATE COURSES IN BRAZIL

Valadares, Eduardo de Campos; e Silva Junior, Leonardo Jose

6B: Web 2.0 and Social 6C: Teaching and **Computing for Learning Learning Experiences** and Knowledge **Sharing (Full Papers)** Chair: Edmundo Tovar, Universidad Politécnica de Madrid

Usefulness of information visualizations based on educational data

Tervakari, Anne-Maritta; Silius, Kirsi; Koro, Juho; Paukkeri, Jukka; Pirttilä, Olli

Towards a **Folksonomy Solution** to Support Open **Educational Activities** and Resources in Edu-**AREA**

Caeiro Rodríguez, Manuel; Santos Gago, Juan Manuel; Llamas Nistal, Martin; Lama Penín, Manuel

Social Applications in **Engineering Education** Cerna, Miloslava; Poulova, Petra

A Process and a Tool

to Assess Vocabulary **Learning for Computer Science Engineers**

Roda-García, José-Luis; Rodríquez. Romén; López de Vergara Méndez, Alejandro F.

in Engineering **Education (Full Papers)** Chair: Axel C.H. Böttcher, University of **Applied Sciences** Munich

An Experimental Study on UML Modeling Errors and their Causes in the **Education of Model Driven PLC** Programming Duschl, Kerstin

Martin; Vogel-Heuser, <u>Birgit</u> **An Industry Sponsored** Undergraduate

Christine; Obermeier,

Research (UR) Experience: **Preliminary Study on Fulfillment of Program** Outcomes and **Industry Requirements**

Kara, Ali; Kapusuz, Kamil Yavuz

University-Industry Collaboration Chairs: Initiatives at the Public **University of Navarre**

Sanchis, Pablo; Astrain, David; Lopez-Martin, Antonio; Perez-Artieda. Gurutze: Gubia, Eugenio; Ursua, Alfredo; Barrenechea, Edurne; Matias, Ignacio R.

Model quality assessment of educational services: Case of educational institutions Zipaquirá -Colombia

Medina, Victor Hugo; Gil, José Antonio

6D: Wireless, Mobile and Ubiquitous **Technologies for** Learning (Short Papers)

Chair: Dominik May, TU **Dortmund University**

Application of Remote **Experiments in Basic Education through Mobile Devices** de Lima, João Paulo

Cardoso; Rochadel, Willian; Silva, Akássio Miranda; Simão, José Pedro Schardosim; Silva, Juarez Bento da; Alves, João Bosco da Mota

Competence Based Interactive Learning with HomeLabKits: experience and work in progress

Jaanus, Martin; Umbleja, Kadri; Kukk, Vello; Udal, Andres

Recommender System for Web 2.0 Supported eLearning Holenko Dlab, Martina; Hoić-Božić, Nataša

Towards a Social E-**Learning Platform for Demanding Users** Valtolina, Stefano; Mesiti, Marco: Epifania, Francesco; Apolloni, Bruno

Work in progress -Role of learning strategies in Electrical Circuits and Analog **Electronics courses** Ramírez Echeverry,

Jhon Jairo; Olarte, Andres; García, Agata 6E: IT's and **Engineering Pedagogy** (ITEP'14)

Chair: James Wolfer, Indiana University South Bend

Chair: Bogdan-Alexandru Deaky, Bluemind Software / Transilvania University of Brasov

The color of the light: a remote laboratory that uses a smart device that connects teachers and students

Carro, German; Castro, Manuel; Sancristobal, Elio; Diaz, Gabriel; Mur, Francisco; Latorre, Miguel; Chaparro, Mercedes; López-Rey, Africa; Salzmann, Christophe; Gillet...

Matching learning styles to different type of DSP laboratory experiments

Krneta, Radojka; Milošević, Marjan; Damnjanović, Djordje; Milošević, Danijela

Topical Tapestry: Weaving Threads of Parallel Programming, Computer Graphics, and Artificial Intelligence into **Undergraduate CS** Courses

Wolfer, James

Experimental modelling vs. numerical simulation in geotechnical training

Margues, José Couto

Hoine Mobile Devices

Wiki oo o Kaawladaa

Social Media in Supporting Education

Khan, Md Munir Hayet; Chiang, Jeffrey Choong Luin wiki as a knowledge Management Tool at the Multicultural School of Athens

Kalagiakos,
Panagiotis;
Koumpouros, loannis

4:30pm

Coffee Break

5:00pm

5:00pm

6:30pm

7A: Accreditation Issues, Degree Programs and Curricula (Full Papers) Chair: Anna Friesel, Technical University of Denmark

A Model for on-line education of ABETrequired professional aspects of engineering

Barakat, Nael; Plouff, Christopher

A Framework for Designing a Market-Oriented Curriculum for the Degree of Information System Engineering

Alkazemi, Basem Yousef

A Retrospective Course Survey of Graduates to Analyse Competencies in Software Engineering Abke, Jörg; Gold, Carolin; Sedelmaier, Yvonne

Educational Policies in European Engineering

Higher Education System -Implementation of a survey

<u>Cojocaru, Dorian;</u> Popescu, Dorin; Poboroniuc, Marian; Ward, Tony 7B: Infrastructure and Technologies for Engineering Education (Full Papers) Chair: Sebastian Gross, The MathWorks GmbH

Using App Inventor and LEGO mindstorm NXT in a Summer Camp to attract High School Girls to Computing Fields

Al-Khalifa, Hend; <u>Al-Humoud, Sarah</u>; Al-Razgan, Muna; Alfaries, Auhood

Gender in Engineering Education

Pourrat, Yvonne; Béraud, André

An Arabic Ontologybased Learning System for Children with Intellectual Challenges

Saleh, Moutaz Saleh; Jaam, Jihad Mohamad

Pirus: A File Storage Service in Cloud Computing for Educational Use

Kallergis, Dimitrios; Chimos, Konstantinos; Vizikidis, Stefanos; Karvounidis, Theodoros; Basios, Michael; Douligeris, Christos

7C: Knowledge and Competencies in Engineering Education (Full Papers) Chair: Danilo Zutin, CUAS

ENVIRONMENTAL
EDUCATION AND
SUSTAINABLE
DEVELOPMENT IN
ENGINEERING FIELD:
IMPLEMENTATION AND
LEARNING OUTCOMES
Md Zain, Shahrom

Engineering Education: Time to Reform the Fragmented, Content-Overloaded Curricula Ktoridou, Despo;

Multiple-choice Testing: Knowledge, or Random Choice?

Eteokleous, Nikleia

Simonova, Ivana

Titov, Evgeny

Programming literacy level needed for modern teachers: fragile border between content creator and a programmer <u>Titov, Igor;</u> Kulmamirov, Serik;

7D: Work in Progress Papers Chair: David

Boehringer, Universität Stuttgart

A 360-degree Evaluation Framework for Doctoral Education Calatrava Moreno.

IEEE Direct to Student Program (D2S): Changing dynamics between education

and innovation

María del Carmen

Usop, Kauthar; Mandal, Subhamoy; Ong, Rainier; Gonzalez, Emmanuel; Reilly, Rob

Inclusion of teaching on self-awareness, diversity and reflection to support an engineering curriculum augmented with problem and scenario-based learning: A work in progress

<u>Tilley, Emanuela;</u>
Peters, Jan; Mitchell,
John

Stakeholders-oriented Quality of Education Assurance System for successful institutional accreditation

Moscinska, Katarzyna

ALLES ING! Count me in! Attracting human talents in providing open access to universities with focusing on individual opportunities in engineering sciences

<u>Janssen, Theresa;</u> Zeuch, Mark; Petermann, Marcus; Kilzer, Andreas

Unified, Multiple Target, Computer Engineering Learning Platform

<u>Žagar, Martin;</u> Frid, Nikolina; Knezović, Josip; Hofman, Daniel; Kovač, Mario; Sruk, Vlado; Mlinarić, Hrvoje 7E: IT's and Engineering Pedagogy (ITEP'14)

Chair: Radojka Krneta, University of Kragujevac, Faculty of Technical Sciences

Chair: **José Couto Marques**, Universidade do Porto - Faculdade de Engenharia

An Enhanced Bayesian Network Model for Prediction of Students' Academic Performance in Engineering Programs

Sharabiani, Ashkan; Sharabiani, Anooshiravan; Karim, Fazle; Atanasov, Mariya; Darabi, Houshang

Transition in Student Motivation during a Scratch and an App Inventor course (Work in Progress)

Nikou, Stavros; Economides, Anastasios

Volition-driven

Adaption - Following the individual Goals of Engineers in E-Learning Processes

Heimbuch, Alexander; Saul, Christian; <u>Lucht,</u> <u>Martina</u>

Augmented Reality to Improve STEM Motivation

Restivo, Maria Teresa; Chouzal, Fátima; Rodrigues, José; Menezes, Paulo; Lopes, J. Bernardino

Using the ChipKIT to apply a novel concept for configuring embedded online labs

<u>Deaky, Bogdan-</u> <u>Alexandru;</u> Parv, Luminita; Faustino Andrade, Tiago

Development of Information System for Students' Project Activity Management Gulyaeva, Kseniya;

Mozgaleva, Polina; Zamyatina, Oxana

8:00pm **Conference Dinner**

11:00pm

Date: Saturday, 05/Apr/2014 Registration

Sciences

8:30am

3:00pm

9:00am

10:30am

8A: Innovative Materials, Teaching and Learning Experiences in **Engineering Education** (Full Papers) Chair: Jörg Abke, University of Applied

Computer Simulation at School: Scratch and **Programming** Language Choosing Criteria

Djenjer, Vadim O.

Maintaining Quality of Software Engineering Education by a Shared Repository of Course Materials in a **Multilateral Setting**

Bothe, Klaus; Budimac, Nasir, Adnan; Zoran; Putnik, Zoran; Ivanovic, Mirjana; Cico, Betim; Stoyanov, Stanimir; Zdravkova, Katerina; Stoyanova-Doyceva, Asya; Jakimovski, Boro; Jurca...

Software Engineering **Body of Skills** (SWEBOS)

Sedelmaier, Yvonne; Landes, Dieter

Motivating Computer Science Students by **Facilitating** Inderdisciplinary **Educational Activities** Mavridis, Apostolos;

Tsiatsos, Thrasyvoulos G. 8B: Teaching and **Learning Experiences** in Engineering **Education (Full Papers)** Chair: Tiia Rüütmann, Tallinn University of Technology

Capstone Design Projects in the **Environment of Weak** Industry-Academia Interaction

Al-Bahi, Ali M.; Taha, Mahmoud A.: Turkmen, Nedim

3D Visualization to Aid **Engineering Education: Mission** A Case Study to Visualize the Impact of Wireless Signals on **Human Brain**

Sheharyar, Ali; Shakir, Muhammad Zeeshan; Qarage, Khalid; Bouhali, Othmane

Modelling potential foreign applicant flow: Case of Vidzeme **University of Applied** Sciences

Nīlanders. Kārlis: Cakula, Sarma

The insertion on the labor world: From Theory to Praxis.

Goicoechea Castaño, Itziar; Patiño Cambeiro, Faustino; Fenollera Bolibar, Maria: Patiño Barbeito. Faustino; Rodriguez Rodriguez, Francisco

8C: Infrastructure and **Technologies for Engineering Education** (Full Papers) Chair: Igor Titov, Bauman Moscow State

Technical University

(BMSTU)

A Course for Teaching **Integrated System Design to Computer Engineering Students**

Zualkernan, Imran

Payload Development and Launch of a Stratosphere Balloon

Altmann, Andreas; Birkner, Wolfgang;

Häckl, Franz Xaver; Hanner, Christopher; Liebhart, Peter; Metschl, Samuel; Weck, Florian; Farmbauer, Michael; Heiß, Manfred; Cuno...

Preparatory **Mathematics Course** for Non-Traditional **Engineering Students**

Kälberer, Nina; Böhmer, Cornelia; Tschirpke, Katrin; Beck-Meuth, Eva Maria

A web based tool for teaching hardware design based on the plain simple hardware description language Becker, Karsten

8D: Work in Progress **Papers**

Chair: Marco Winzker, Hochschule Bonn-Rhein-Siea

Are there competences every computer scientist should have?

Bröker, Kathrin; Magenheim, Johannes

Using Videoanalysis to **Evaluate Pedagogical** Content Knowledge of Computer Science **Student Teachers**

Margaritis, Melanie; Hubwieser, Peter; Magenheim, Johannes

Teaching "Design First" interleaved with **Object Oriented** Programming in a **Software Engineering**

Giordano, Daniela; Maiorana, Francesco

The Blue Track -Sustainability in the study programs of Mechanical and **Electrical Engineerig**

Gross, Iris; Roerig, Horst; Franke, Dieter; Seuser, Katharina

New Concepts of Automatic Answer Evaluation in Competence Based Learning

Umbleja, Kadri; Kukk, Vello; Jaanus, Martin; Udal, Andres

Representing **Examination Question** Knowledge into **Genetic Algorithm**

Ibrahim Teo, Noor Hasimah; Abu Bakar, Nordin; Abd Rashid, Mohamad Rezduan

8E: The Laboratory in **Modern Engineering Education (Special** Session) Chair: Claudius Terkowsky, TU

Dortmund University

Bringing The Inquiring Mind Back Into The Labs - A Conceptual Framework to Foster the Creative Attitude in **Higher Engineering** Education

Terkowsky, Claudius; Haertel, Tobias; Bielski, Emanuel; May, **Dominik**

Building an Undergraduate **Robotics Laboratory** Serving the STEM Curriculum

Zalewski, Janusz; Gonzalez, Fernando

Evaluation of Student Performance in Laboratory Applications using **Fuzzy Decision Support System Model** vildiz, zehra; baba, fevzi

Remote Laboratory for **Education in Automation Engineering** Smajic, Hasan

Can you learn better or worse when you are immersed? The effects of immersive user interfaces on learning in virtual environments

Schuster, Katharina; Bach, Ursula; Richert, Anja; Jeschke, Sabina

10:30am

Keynote Session III

Chair: Martin Llamas-Nistal, University of Vigo

12:00pm

The Vision for the Next Decade for the Engineering Education in Japan Komeda, Takashi

Presentation about EDUCON 2015 Conference

Rüütmann, Tiia

12:00pm Coffee Break

12:30pm

12:30pm

2:00pm

9A: Computer and Web 9B: Educational based Software in **Engineering Education** (Full Papers) Chair: Miloslava Cerna,

Study Materials in Online Courses. Analysis reflecting individual learning

University of Hradec

Králové

styles

Simonova, Ivana; Poulova, Petra

A tool for evaluating social media enhanced learning environment

Silius, Kirsi; Tervakari, Anne-Maritta; Pirttilä, Olli; Paukkeri, Jukka; Mäkelä, Teemu

A Field Experiment with an Animated Intelligent Tutor in **Portugal**

Santos, Gustavo; Jorge, Joaquim; Peñalvo, Francisco

Motivating programming students by Problem Based Learning and LEGO

Lykke, Marianne; Coto, Mayela; Mora, Sonia; Vandel, Niels; Jantzen, Christian

Methods and Learning Mechanisms (Full Papers)

Chair: Maria Teresa Restivo. Universidade

Engaging high school students in an engineering thermodynamics project

Preciado Babb, A. Paulino; Saar, Candace; Sharon,

Friesen; Brandon, Jim

Teaching Basic Control Concepts with a Home-made Thermal **System**

Ovalle, Diana Marcela; Combita, Luis Francisco

Teaching FPGA-based Systems

Skliarova, Iouliia; Sklyarov, Valery; Sudnitson, Alexander; Kruus, Margus

The Improvement of Confidence Level 0f **Students Learning Thermodynamics** through a Multimedia courseware

Mulop, Normah; Mohd Yusof, Khairiyah; Tasir, Zaidatun

9C: Competencies, Individual Differences. Intervention and **Development (Full** Papers)

Chair: German Arturo Urrego-Giraldo, UNIVERSIDAD DE **ANTIOQUIA** (COLOMBIA)

An Evaluation Framework based on **Timed Automata for** Malleable Learning Scenario

BenSassi, Manel; Laroussi, Mona

Web Accessibility **Evaluation of Massive Open Online Courses** on Geographical **Information Systems** Calle-Jimenez, Tania

Elizabeth; Sanchez-Gordon, Sandra Patricia; Luján-Mora, Sergio

Contextualized Development of Engineer's **Competences for** Sustainable Development

Urrego-Giraldo, German Arturo; Giraldo, Gloria Lucia

Accreditation Process for Engineering **Programs in Saudi** Arabia: Challenges and Lessons Learned Abou-Zeid, Azza; Taha, **Mahmoud**

9D: Innovative **Engineering Courses** and Labs (Short Papers)

Chair: Bogdan-Alexandru Deaky, Bluemind Software / Transilvania University of Brasov

Lecture meets Laboratory -**Experimental** experiences for large audiences: concept and implementation

Temmen, Katrin; Wehebrink, Markus: Nofen, Barbara

Experiences with Deploying VISIR at Al-Quds University

Odeh, Salaheddin; Gustavo, Riberiro Alves; Anabtawi, Mahasen; Jazi, Mahran; Arekat, Mahmoud; Gustavsson, Ingvar

Integration of simulators in virtual 3D computer science classroom

Branovic, Irina; Giorgi, Roberto; Jovanovic, Nenad; Popovic, Ranko; Zivkovic, Miodrag; Nikolic, Bosko

Cloud-based Framework for Mobile **Learning Content** Adaptation

Madjarov, Ivan

Educational software system for reasoning and decision making using Bayesian networks

Milenkovic, Katarina; Draskovic, Drazen; Nikolic, Bosko

9E: The Laboratory in Modern Engineering **Education (Special** Session)

Chair: Claudius Terkowsky, TU Dortmund University

VISIR work in progress

Gustavsson, Ingvar; Lundberg, Jenny

Developing a Graduate Level Embedded **System Programming**

Course Content by Using Blended Programming Methodologies: Text-**Based and Graphical**

Korkmaz, Hayriye; Azaklar Bal. Sezen: Cosgun, Ercan; Toker, Kenan

What should they learn? - A short comparison between different areas of competence and accreditation boards' criteria for engineering education May, Dominik; Terkowsky, Claudius

Renewable Energy Power Station as a Multidisciplinary Laboratory

Labriola, Carlos Víctor; Colon, Daniel; Isabel, Ferraris; Marcelo, Avila; Gustavo, Ludueña

Introducing CAD/CAM and CNC machining by using a feature based methodology in a manufacturing lab course, a conceptual frame work

Iqbal, Hassan; Sheikh, Anwar; Abdul Samad, Mohammad

2:00pm **Closing Ceremony and Awards Session**

3:00pm

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