IEEE Second Annual Global Engineering Education Conference

EDUCON2011

"Learning Environments and Ecosystems in Engineering Education"

Princess Sumaya University for Technology

Amman, Jordan

4-6 April 2011

Organizers

IEEE Education Society

Princess Sumaya University for Technology, Jordan

Carinthia University of Applied Sciences, Austria

Universidad Politécnica de Madrid, Spain

Draft Report
Under the Patronage of Her Royal Highness Princess Sumay bint El Hassan, Princess Sumaya University for Technology hosted the IEEE Second Engineering Education 2011 under the theme: “Learning Environments and Ecosystems in Engineering Education”, in the period 4-6 April 2011. The conference was organized in partnership and cooperation with the Institution of Electrical Engineers and Electronics IEEE. The conference is actually the second in a series of annual IEEE region (8) conferences which includes Europe, Middle East and North Africa. The conference was attended by two hundred and fifty researchers and scientists from more than sixty countries around the world who presented and discussed over 180 papers in the following topics:

**Area 1: Educational Methods and Learning Mechanisms in Engineering Education**
Rethinking Pedagogy in Engineering Education • E-Assessment and new Assessment Theories and Methodologies • Active Learning • Learning Models • Pedagogies • Lifelong Learning and Non-traditional Students • E-learning in the Workplace • K-12 Initiatives and Partnerships • Study Abroad Programs • Attracting and retaining practices in Engineering Education • Technology Enhanced Learning for students with special needs • Accessibility in On-Line and Technology Enhanced Learning • Gender and Cultural Issues in Engineering Education

**Area 2: Learning in Transition and Engineering Education Ecosystems**
Educational Ecosystems • Adaptive and Personalized Technology-Enhanced Learning • Collaborative and Social Technologies • Ambient Intelligence and Smart Environments for Learning • Affective and Pervasive Computing for Learning

**Area 3: Infrastructure and Technologies for Engineering Education**
Learning Systems Platforms and Architectures • Intelligent Learning Systems • Computer Supported Collaborative Learning • Open Source, Open Standards, and Federated Systems • Standardization, Reusability and Interoperability Issues • Learning Objects reusability and digital repositories • Experiences in OpenCourseWare Engineering Education • Computer and Web based Software • Uses of Technology in the Classroom • Semantic Web and Ontologies for Learning Systems • Web 2.0 and Social Computing for Learning and Knowledge Sharing • Data Mining and Web Mining in Education • Synchronous and Asynchronous Technologies • Wireless, Mobile and Ubiquitous Technologies for Learning • Standardization, Reusability and Interoperability Issues

**Area 4: Innovative Materials, Teaching and Learning Experiences in Engineering Education**
Laboratory Experiences: on-site and remote environments • Undergraduate Research Experiences Design Experiences • Innovative Engineering Courses and Labs • Digital Game and Intelligent Toy Enhanced Learning • Human-Centered Web Science and its Applications to Technology-enhanced Learning • E-Assessment • Virtual Worlds for Academic, Organizational, Life-long Learning and training • Innovative Competitions and Laboratories

**Area 5: Excellence in Engineering Education**
Models of Excellence in Education • Attracting, Engaging and Retaining Human Talent to Engineering • Gifted Education • Competencies, Individual Differences, Intervention and Development • Building Creative Climates

**Area 6: Knowledge and Competencies in Engineering Education**
Knowledge and Competencies Management • Accreditation Issues • Assessment and Feedback Degree Programs and Curricula • First Year Courses and Programs • General Issues in Engineering Education • Specific Engineering Disciplines • Faculty Development • Globalization: Preparing Faculty and Students • Graduate Curricula and Programs • New Frameworks for Engineering Education • Skills Development: Technical Writing, Presentation, Teamwork

The conference committees have completed initial preparations for the evaluation process of research papers. In the initial phase, 375 abstracts have been received of which 250 were accepted with a rate
of 67%. In the second phase, the evaluation process was conducted by 3 evaluators and 214 papers were accepted, with a general acceptance was 57%, which means that the conference has a high scientific value. The following are the conference committees:

Five keynote speakers were invited to the conference:
- Rob Reilly, President IEEE Education Society, USA
- Judson Harward, MIT, USA
- Arthur Edwards, University of Colima, Mexico
- Marianne Azer, National Telecommunication Institute, Egypt
- Denis Gillet, Federal Institute of Technology in Lausanne (EPFL), Switzerland

Budget (in Euros)
Income: 67306
Expenses: 55306
Surplus: 12000

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The Third IEEE Annual Global Engineering Education Conference, IEEE EDUCON 2012, will be held in Marrakech, Morocco in April 2012.