CONTENTS

INVITED SPEAKERS

KEYNOTE SPEAKERS

CLOUD COMPUTING IN EDUCATION - The Intersection of Challenges and Opportunities
Ivan Ivanov

COMPUTER EDUCATION JOURNALS - Leading or Following Research Trends
Rachelle Heller

WHY, WHAT AND HOW ARE WE DOING OUR RESEARCH?
Lauri Malmi

AUGMENTED KNOWLEDGE COMMUNICATION SPACES
Friedrich Hesse

LEARNING/TEACHING METHODOLOGIES AND ASSESSMENT

FULL PAPERS

TEACHING GLOBAL SOFTWARE ENGINEERING AND INTERNATIONAL PROJECT MANAGEMENT - Experiences and Lessons Learned from Four Academic Projects
Florian Matthes, Christian Neubert, Christopher Schulz, Christian Lescher, José Contreras, Robert Laurini, Béatrice Rumpler, David Sol and Kai Warendorf

ICT ENHANCED LEARNING EXPERIENCE FOR AN INTRODUCTORY OBJECT ORIENTED PROGRAMMING COURSE - A Case Study
Olivier Camp and Richard Woodward

IMPROVEMENT OF A LECTURE GAME CONCEPT - Implementing Lecture Quiz 2.0
Bian Wu, Alf Inge Wang, Erling Andreas Barresen and Knut Andre Tidemann

eGRADER - The Programming Solutions’ Grader in Introductory Java Courses
Fatima AlShamsi and Ashraf Elnagar

TOWARDS EFFECTIVE BLENDED LEARNING WITH 3D MUVE - An Analysis of Use Case Implementations for 3D MUVE Learning
Indika Perera, Colin Allison, John McCaffery and Alan Miller

TECHNOLOGICAL PEDAGOGICAL CONTENT KNOWLEDGE OF UNIVERSITY PROFESSORS WHO ADOPTED AN ONLINE AUTHORING TOOL IN THEIR EDUCATIONAL PRACTICES - A Case Study of blended Learning Experiences in Health Science Education
Miriam Struchiner, Tais Rabetti Giannella and Marina Bazzo de Espíndola

SHORT PAPERS

AN EDUCATIONAL TOOL BASED ON SEMANTIC TABLEAUX FOR VERIFICATION AND DEBUGGING OF ALGORITHMS - Experiences and Results
Rafael del Vado Virseda, Fernando Pérez Morente and Sergio Esquembri Martínez

ICT/ ELEARNING FOR DEVELOPING VISUAL SPATIAL THINKING IN UNIVERSITY SCIENCE TEACHING
E. Marcia Johnson, Elaine Khoo, Bronwen Cowie, Willem de Lange and Rob Torrens

XV
SOCIAL CONTEXT AND LEARNING ENVIRONMENTS

FULL PAPERS

SMARTPHONE BASED E-LEARNING
Anandha Gopalan, Spyridon Karavanis, Thomas Payne and Morris Sloman 161

AFRICAN LANGUAGES AND ICT EDUCATION - Attitudes of Black University Students
Lorenzo Dalvit, Sarah Murray and Alfredo Terzoli 171

SHORT PAPERS

SOCIAL MECHANISMS TO MOTIVATE LEARNING WITH REMOTE EXPERIMENTS - Design Choices to Foster Online Peer-based Learning
Thieme Hennis and Heide Lukosch 183

COLLABORATIVE LEARNING IN HETEROGENEOUS CLASSES - Towards a Group Formation Methodology
Liana Razmerita and Armelle Brun 189

ONLINE MEDIA IN FAVOUR OF THE DIGITAL INCLUSION - A Case Study with Elderly People in Brazil
Antonia Lucinelma Pessoa Albuquerque and Placido Rogério Pinheiro 195

ONLOCED - Finding Learning Resources and Communities
Mohd Anwar, Hassan A. Karimi and Jessica G. Benner 204

POSTER

TOWARD A COMPREHENSIVE QUALITY ASSURANCE FRAMEWORK FOR CONTINUING EDUCATION IN UNIVERSITIES
Hsin-Ke Lu and Chia-Hui Lo 213

DOMAIN APPLICATIONS AND CASE STUDIES

FULL PAPER

EXPERIMENTAL RESEARCH VALIDATION FOR THE USE OF 3D IN TEACHING HUMAN ANATOMY
Nady Hoyek, Christian Collet, Aymeric Guillot, Patrice Thiriet and Emmanuel Sylvestre 225

SHORT PAPERS

SIMULATION ELECTROMAGNETIC WAVES WEB AS INNOVATIVE METHODOLOGY TO IMPROVE THE QUALITY OF ELECTRONIC AND COMPUTER ENGINEERING FORMATION
Pilar Martinez Jimenez, Gerardo Pedro Perez, Marta Varo, Mª Carmen Garcia Martinez, David Muñoz Rodriguez, Elena Varo-Martinez and Juan Luna Rodriguez 231

USING INTERACTION TRACES FOR EVOLUTIONARY DESIGN SUPPORT - Application on the Virtual Campus VCiel
Karim Sehaba and Stéphanie Mailles-Viard Metz 237
EVALUATION OF A COMPUTER SUPPORT-BASED CROSS DISCIPLINE RESEARCH CONSORTIUM 243
Reghu Anguswamy and William B. Frakes

ON OPERATIONAL SCHEME FOR REMOTE LECTURES IN INTER-UNIVERSITY DISTANCE LEARNING PROJECT 249
Noriatsu Kudo, Koitaro Kataoka and Jun Murai

POSTER
CHALLENGES IN TRAINING AND ASSESSMENT OF MINIMALLY INVASIVE SURGICAL SKILLS 261
Magdalena K. Chmarra, Sharon P. Rodrigues, Frank-Willem Jansen and Jenny Dankelman

QUALITY, EVALUATION AND ACCREDITATION POLICIES

FULL PAPERS
THE DEVELOPMENT OF MAPQFTOOL - A Software Tool for National Qualifications Frameworks 273
Philippos Pouyioutas, Harald Gjermundrod and Ioanna Dionysiou

A SCENARIO FOR PORTFOLIO-BASED ACCREDITATION OF TEACHERS' COMPETENCES IN ESTONIAN CONTEXT 280
Kairit Tammets, Kai Pata and Mart Laanpere

SHORT PAPERS
QUALITY ASSURANCE IN DISTANCE LEARNING - A Study in Higher Education 293
Gianna Oliveira Bogossian Roque, Gilda Helena Bernardino de Campo and Marcus Vinicius de Araújo Fonseca

ASSESSMENT MODEL FOR IMPROVING EDUCATIONAL CURRICULUM MATERIALS BASED ON THE DANP TECHNIQUE WITH GREY RELATIONAL ANALYSIS 299
Cheng-Hsinung Chen and Gwo-Hshiung Tzeng

POSTERS
ESTABLISHING RELATIONSHIP BETWEEN PERCEIVED QUALITY OF LMS SYSTEM AND E-COURSE DELIVERY 311
Matjaž Debevc, Martina Breg and Julija Lapuh Bele

PROCON - A Tool for Curricula Accreditation 316
Dainis Dosbergs

A PROGRESSIVE DATA WAREHOUSE OF INSTITUTIONAL RESEARCH WITH WEB API AND MASHUP VISUALIZATION 323
Masao Mori, Toshie Tanaka and Sachio Hirokawa

AN EVALUATION FRAMEWORK FOR M-LEARNING 330
Gerald C. Gannod and Kristen M. Bachman
SPECIAL SESSION ON COLLABORATIVE E-LEARNING SYSTEMS

**Short Papers**

**ENHANCING ADAPTIVITY AND INTELLIGENT TUTORING IN DISTRIBUTED PAIR PROGRAMMING SYSTEMS TO SUPPORT NOVICE PROGRAMMERS**
Despina Tsompanoudi and Maya Satratzemi

**THE USE OF PROJECT MANAGEMENT TOOLS TO SUPPORT THE COORDINATION OF COLLABORATIVE LEARNING**
Marcelo Augusto Rauh Schmitt and Liane Margarida Rockenbach Tarouco

**PEDAGOGICAL FRAMEWORK TO IMPROVE THE QUALITY OF LEARNING OBJECTS IN COLLABORATIVE E-LEARNING SYSTEMS**
Ali Alharbi, Frans Henskens and Michael Hannaford

**PROJECT-BASED COLLABORATIVE LEARNING WITH ARGUMENTS - Flexible Integration of Digital Resources**
Gert Faustmann

**Posters**

**COLLABORATIVE E-LEARNING BY MEANS OF ASYNCHRONOUS DISCUSSION FORUMS AND GROUP TUTORIALS COMBINATION**
Lorenzo Salas-Morera, Antonio Arauzo-Azofra and Laura Garcia-Hernández

**A THEORETICAL ACCESSIBLE APPROACH FOR COLLABORATIVE LEARNING IN MOBILE DEVICES**
Rocio Calvo, Ana Iglesias and Lourdes Moreno

**SPECIAL SESSION ON ASSESSMENT TOOLS AND TECHNIQUES FOR E-LEARNING**

**Full Papers**

**EXPERIENCES WITH ONLINE RESPONSE TECHNOLOGIES IN EDUCATION OF ENGINEERS**
Gabrielle Hansen-Nygard, Kjetil L. Nielsen, John B. Stav, Trond M. Thorseth and Ketil Arnesen

**AN OPEN-ENDED ASSESSMENT PLATFORM IN A HOSTED E-LEARNING PORTAL**
Patrick Stalljohann

**FORMATIVE AND SUMMATIVE ASSESSMENT OF CLASS DIAGRAMS - Development and Evaluation of a Prototype**
Narasimha Bolloju, Ken W. K. Lee and Probir K. Banerjee

**Short Papers**

**MEASURING THE LEARNING PROGRESS IN A “LEARNING BY AUTHORING” SEMANTIC WEB SERVICES BASED ECOSYSTEM**
Ivo Hristov, Gennady Agre and Danail Dochev

**PCN: QUANTIFYING LEARNING ACTIVITY FOR ASSESSMENT BASED ON TIME-SERIES COMMENTS**
Kazumasa Goda and Tsunenori Mine

---

XIX
PERSONALIZED ASSESSMENT OF HIGHER-ORDER THINKING SKILLS
Christian Saul and Heinz-Dietrich Wuttke

REMOTE MANAGEMENT OF FACE-TO-FACE WRITTEN AUTHENTICATED THOUGH ANONYMOUS EXAMS
Giampaolo Bella, Gianpiero Costantino, Lizzie Coles-Kemp and Salvatore Riccobene

VERSATILE TOOL FOR COMPETENCE MANAGEMENT - An e-Portfolio Management System for Higher Education in Applied Sciences
Jouni Huotari, Mirja Pulkkinen and Annu Niskanen

ADAPTIVE ASSESSMENT BASED ON LEARNING STYLES AND STUDENT KNOWLEDGE LEVEL
Boyan Bontchev and Dessislava Vassileva

POSTERS

MSL_AR TOOLKIT: AR WITH INTERACTIVE FEATURE FOR NEXT GENERATION EDUCATION
Jinwook Shim, Jonghoon Seo and Tack-don Han

DESIGNING WITH AND FOR THE VISUALLY IMPAIRED: VOCABULARY, SPELLING AND THE SCREEN READER
Verena Stein, Robert Nejblruth, Jan Alexandersson and Johannes Tröger

TOWARD A NEW MODEL FOR ASSESSING QUALITY TEACHING PROCESSES IN E-LEARNING
Neila Rjaibi and Latifa Ben Arfa Rabai

ADAPTIVE ASSESSMENT BASED ON DECISION TREES AND DECISION RULES
Irena Nančovska Šerboc, Alenka Žerovnik and Jože Rugelj

SPECIAL SESSION ON UBQUITOUS E-LEARNING

SHORT PAPERS

LEADER-FOLLOWER FORMATION CONTROL OF NON-HOLONOMIC ROBOTS IN A REMOTE LABORATORY
Daniel Neamtu, Bart Wyns, Robin De Kayser and Clara Ionescu

THE FEASIBILITY OF UBQUITOUS COMPUTING IN SCHOOL - Longitudinal Study in 1:1 Classes Suggests — Time Matters
Spektor-Levy Orn, Keren Menashe and Doron Esty

LEARNING OF ALGORITHMS ON MOBILE DEVICES THROUGH BLUETOOTH, SMS AND MMS TECHNOLOGY
Ricardo José dos Santos Barcelos and Liane Margarida Rokembach Tarouco

POSTERS

CAMELL - Towards a Ubiquitous Multilingual e-Learning System
Maria Virvou and Christos Troussas

IMPLEMENTATION OF WIZARD TECHNOLOGY INTO THE LEARNING MANAGEMENT SYSTEM OPAL
Ariane Heller, Sven Schneider and Wolfram Hardt

XX