

# CSEDU 2012

4<sup>th</sup> International Conference on  
Computer Supported Education

## Final Program and Book of Abstracts

Porto, Portugal  
16 - 18 April, 2012

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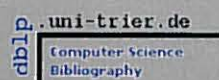
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Paper 110

09:30 - 11:30

Room Régua

Parallel Session 7 - Information Technologies

Supporting Learning

### GRAPHICAL SIMULATION OF NUMERICAL ALGORITHMS

#### An Approach based on Code Instrumentation and Java Technologies

Carlos Balsa, Luís Alves, Maria J. Pereira, Pedro J. Rodrigues and Rui P. Lopes

*Polytechnic Institute of Bragança, Bragança, Portugal*

**Keywords:** E-Learning Tool, Numerical Methods, Octave, Code Instrumentation, Inspector Functions, XML, OpenGL, Website, Servlet, Open Source.

**Abstract:** We want to create a working tool for mathematics teachers and a corresponding learning tool for students, namely a graphical simulator of mathematical algorithms (GraSma). To achieve it we try two different strategies. We started by annotating manually the original algorithm with inspector functions. Now we are testing a new approach that aims at automatically annotating the original code with inspector functions. To achieve this we are developing a language translator module that enables us to comment automatically on any code written in Octave language. The run of the annotated code gated by one of these two ways, records in a XML (eXtensible Markup Language) file everything that happened during the execution. Subsequently, the XML file is parsed by a Java application that graphically represents the mathematic objects and their behaviour during execution. The final application will be accessed on-line through a website (WebGraSma) which is currently under development. In this paper we report and discuss about the procedures followed and present some intermediate results.

Paper 214

09:30 - 11:30

Room Régua

Parallel Session 7 - Information Technologies

Supporting Learning

### NETWORKING BETWEEN LMS MOODLE AND EXTERNAL APPLICATIONS

Mikuláš Gangur

*University of West Bohemia, Pilsen, Czech Republic*

**Keywords:** Prediction Market, LMS Moodle, SQL, PHP, Evaluation, Gradebook.

**Abstract:** The contribution introduces the use of a prediction market as a support tool in the educational process and its networking with LMS Moodle. The prediction market FreeMarket has been running at

the Faculty of Economics as the part of the financial engineering courses. The quality of the predictions estimates depends on the trade activity of the market participants. That's why it's necessary to motivate students to trade on such a market. The paper presents one of the methods to increase the activity of students. The results of the market trades form a supplement to the final students' evaluation in the relevant courses in the form of credits that are added to the total score of each student. FreeMarket points that students earn on the market are transferred to the credits according to the declared rate. The interconnection between FreeMarket and LMS Moodle is described together with the description of the process that transfers FreeMarket points to LMS Moodle gradebook. These processes update the students' assignment score automatically and periodically. In the next the interconnection between LMS Moodle and application for exam report generating is explained. Finally the technological solution of networking is described.

Paper 68

09:30 - 11:30

Room Tua

Parallel Session 7 - Ubiquitous Learning

### EVALUATING AN E-LEARNING EXPERIENCE ORIENTED TOWARDS ACCESSIBLE INSTRUCTION

Félix Buendía, Alberto González-Téllez, José Vte. Benlloch-Dualde, Germán Moltó, Natividad Prieto, M. J. Castro-Bleda and Juan V. Oltra

*Universitat Politècnica de València, València, Spain*

**Keywords:** e-Learning Experience, Accessible Instruction, Quality Evaluation.

**Abstract:** e-Learning is becoming an essential tool in the field of accessible instruction. This work describes the evaluation of an experience implemented at the Universitat Politècnica de València that addressed the adaptation of its e-learning platform to make accessible its contents and resources. Such experience has been developed in the context of the EU4ALL project which provided a general framework to cope with the needs of accessible lifelong learning at a Higher Education level. The first part of the experience consisted in developing specific components in Sakai, an open-source Learning Management System that is used at UPV as the institutional e-learning platform under the name of PoliformaT. The second part dealt with the evaluation of the developed Sakai version for a set of disabled students who registered in different Engineering and Business courses at UPV and lecturers who contributed to adapt the required learning resources. The results of the evaluation showed, on the one hand, the interest of students

# Important Information

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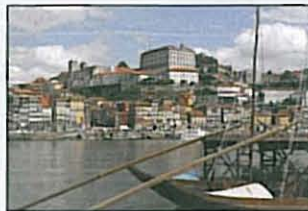
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This year's survey will be available online at <https://www.research.net/s/CSEDU2012>. Your contribution will be carefully analyzed and a serious effort to appropriately react will be made. At INSTICC we are always looking for better ways to serve you.



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