



## PRELIMINARY CONFERENCE PROGRAM

### The 10<sup>th</sup> IASTED International Conference on Web-based Education (WBE 2013)

February 13 - 15, 2013  
Innsbruck, Austria

#### LOCATION

Congress und Messe Innsbruck GmbH  
Rennweg 3, 6020 Innsbruck  
Austria

#### WEB-BASED EDUCATION (WBE 2013)

#### SPONSOR

The International Association of Science and Technology  
for Development (IASTED)

#### CONFERENCE CHAIR

**Dr. Vladimir Uskov** - Professor of Computer Science and  
Information Systems and Co-Director of the InterLabs  
Research Institute Bradley University, USA

#### KEYNOTE SPEAKER

**Dr. Jean-Pierre Gerval** - ISEN-Brest, France

#### TUTORIAL PRESENTATION

**Prof. Thomas Connolly** - University of the West of  
Scotland, UK

#### COLLABORATING ORGANIZATIONS



[National Hsinchu University of Education, Taiwan](#)



Science and Education  
Research Council

[Science and Education Research Council, Brazil](#)



[Multimedia Applications Development Research Centre,  
University of Craiova, Romania](#)



[Advanced eServices for the Knowledge Society Research  
Unit \(ASK\), Greece](#)



[Center of Excellence in Command, Control,  
Communications, Computing and Intelligence at George  
Mason University, U.S.A.](#)



[Institut Supérieur de l'Electronique et du Numérique,  
France](#)



[International Trustee Fund of the Tsiolkovsky Moscow  
State Aviation Technological University, Russia](#)



[RMIT University, Australia](http://www.rmit.edu.au)

## **INTERNATIONAL PROGRAM COMMITTEE**

I. S. Ahmed – Center for Languages- International Islamic University-Malaysia, Malaysia

M. Allegra – Consiglio Nazionale delle Ricerche, Italy

L. Anido Rifon – University of Vigo, Spain

E. Barbera – Open University of Catalonia, Spain

L. Bernstein – University of Maryland University College, USA

J. Boaventura – University of Tras-os-Montes and Alto Douro, Portugal

C. J. Bouras – University of Patras, Greece

M. Braz – ICIST/ Technical University of Lisbon, Portugal

M. Bunch – Midstate College, USA

D. D. Burdescu – University of Craiova, Romania

H. Burkhart – University of Basel, Switzerland

D. Cai – Iwate Prefectural University, Japan

N. Casalino – Università degli Studi Guglielmo Marconi, Italy

C. C. Chang – National Taiwan Normal University, Taiwan

T. S. Chen – National University of Tainan, Taiwan

S. C. Cheng – Southern Taiwan University, Taiwan

E. Cheung – ITE College West, Singapore

K. O. Chow – City University of Hong Kong, PR China

M. Cole – Robert Morris University, USA

J. Conesa-i-Caralt – Universitat Oberta de Catalunya, Spain

A. Cristea – University of Warwick, UK

B. du Boulay – University of Sussex, UK

W. Fajardo – Universidad de Granada, Spain

P. Fedoruk – Precarpathian National Vasyl Stefanyk University, Ukraine

J. Flowers – Ball State University, USA

J. P. Gerval – ISEN-Brest, France

K. Getkham – Graduate School of Language and Communication, NIDA, Thailand

S. Ghawanmeh – WISE University, Jordan

C. Gomes – High School of Education Viseu, Portugal

A. Gramopadhye – Clemson University, USA

I. Hamburg – IAT, FH Gelsenkirchen, Germany

K. Henke – Ilmenau University of Technology, Germany

T. Ho – Taipei Municipal University of Education, PR China

J. M. Hsu – National Chiayi University, Taiwan

H. Jin – Huazhong University of Science and Technology, PR China

M. Y. Jong – The Chinese University of Hong Kong, PR China

G. Kambourakis – University of the Aegean, Greece

F. C. Kao – Da-Yeh University, Taiwan

D. Karayel – Sakarya University, Turkey

J. Karet – Chaffey College, USA

M. Liberzon – Tsyolkovsky Moscow Aviation Technological University, Russia

M. Llamas-Nistal – University of Vigo, Spain

R. Llamasa-Villalba – Industrial University of Santander, Colombia

J. Lonchamp – LORIA, France

H. Matthies – Hannover Medical School, Germany

P. McKimmy – University of Hawaii-Manoa, USA

E. Meyen – University of Kansas, USA

H. Mitsuhashi – The University of Tokushima, Japan

A. Molinari – University of Trento, Italy

R. Moraes – Federal University of Paraíba, Brazil

K. Moscinska – Silesian University of Technology, Poland

J. Muppala – HKUST, PR China

A. Murphy – University of Bedfordshire, UK

T. Okamoto – The University of Electro-Communications, Japan

B. O'Regan – University of Limerick, Ireland

N. Osawa – Chiba University, Japan

P. Pernias – University of Alicante, Spain

F. L. Pontecorvo – Universidad Anahuac, Mexico

V. Pougatchev – University of Technology, Jamaica, Jamaica

R. Revetria – University of Genoa, Italy

L. Ricci – Università degli Studi Guglielmo Marconi, Italy

D. Roy – University of Aizu, Japan

P. V. Rubén – CIC-IPN, Mexico

J. Rutkowski – Silesian University of Technology, Poland

D. Sampson – University of Piraeus & CERTH, Greece

C. Scharff – Pace University, USA

U. Schroeder – Aachen University, Germany

R. Schumaker – University of Maryland University College, USA

E. Sheybani – Virginia State University, USA

Y. Tamura – Sophia University, Japan

S. Trausan-Matu – University Politehnica of Bucharest, Romania

C. Vaz de Carvalho – Instituto Superior de Engenharia do Porto, Portugal

F. Wang – Microsoft Corporation, USA

Y. M. Wang – University of Alabama at Birmingham, USA

K. Wijekumar – The Pennsylvania State University, USA

H. D. Wuttke – Ilmenau University of Technology, Germany

R. Younsi – Ecole Polytechnique Montreal, Canada

A. Zamfir – Academy of Economic Studies, Romania

T. Zhang – Tsinghua University, PR China

## **ADDITIONAL PAPER REVIEWER**

N. M. Adams – Educational Testing Service, Princeton,  
N.J., USA

L. Torres-Pereira – UTAD University, Portugal

V. Uskov – Bradley University, USA

Z. Wei – Microsoft, USA

## **PLEASE NOTE**

- ❖ Paper presentations are 15 minutes in length with an additional 5 minutes for questions.
- ❖ Report to your Session Chair 15 minutes before the session is scheduled to begin.
- ❖ Presentations should be loaded onto the presentation laptop in the appropriate room prior to your session.
- ❖ End times of sessions vary depending on the number of papers scheduled.

## **PROGRAM OVERVIEW**

### **Wednesday, February 13, 2013**

- 07:30 – Registration  
(*Diesner Foyer*)
- 14:00 – WBE Welcome Address  
14:30 (*Hall New Orleans*)
- 14:30 – WBE Session 1 - Innovative Software Systems and  
Technology for Web-Based Education  
(*Hall New Orleans*)
- 15:30 – Coffee Break  
16:00 (*Diesner Foyer*)
- 16:00 – WBE Session 1 Continued  
(*Hall New Orleans*)
- 19:00 – Dinner Banquet  
(*Hall Innsbruck*)

### **Thursday, February 14, 2013**

- 09:00 – WBE Session 2 - Assessment, Control and  
Evaluation in Web-Based Education  
(*Hall Aalborg*)
- 10:30 – Coffee Break  
11:00 (*Diesner Foyer*)
- 11:00 – WBE Keynote Presentation – “Technologies make  
it possible, Services make it happen” –  
Dr. Jean-Pierre Gerval  
(*Hall Aalborg*)
- 12:00 – Lunch Break  
(*Self Catered*)
- 14:00 – WBE Tutorial Presentation – "Applying Web 2.0  
Tools in Education and the Work Place" –  
Prof. Thomas Connolly  
(*Hall Aalborg*)
- 15:30 – Coffee Break  
16:00 (*Diesner Foyer*)
- 16:00 – WBE Tutorial Presentation Continued  
(*Hall Aalborg*)

### **Friday, February 15, 2013**

- 08:30 – WBE Session 3 - Innovative Web-Based Teaching,  
Learning and Services  
(*Hall Aalborg*)
- 10:30 – Coffee Break  
11:00 (*Diesner Foyer*)
- 11:00 – WBE Session 3 Continued  
(*Hall Aalborg*)
- 12:00 – Lunch Break  
(*Self-Catered*)

## Wednesday, February 13, 2013

### 07:30 – REGISTRATION

*Location: Diesner Foyer*

### 14:00 – 14:30 WBE WELCOME ADDRESS

*Location: Hall New Orleans*

### 14:30 – WBE SESSION 1 - INNOVATIVE SOFTWARE SYSTEMS AND TECHNOLOGY FOR WEB-BASED EDUCATION

*Chairs: TBA*

*Location: Hall New Orleans*

792-023

Video-based Blended Learning Practice in Master Studies

*Mikko Myllymäki and Ismo Hakala (Finland)*

792-039

WEE: A Mashup System using Social Networks for Collaborative Environmental Monitoring Education with Spatiotemporal Analysis and Visualization

*Diep T.-N. Nguyen, Shiori Sasaki, and Yasushi Kiyoki (Japan)*

792-024

Weblab for Control Applications in Engineering Education

*Wânderson de Oliveira Assis, Alessandra D. Coelho, José Carlos de Souza Junior, Leo Kunigk, Aniel S. de Moraes, Gustavo M. Lemos, Estevão dos S. Gedraite, Eduardo K. Takahashi, and Rubens Gedraite (Brazil)*

792-038

Development of a New Museum Guidance System with a Zoomed Map Navigation

*Dawei Cai (Japan)*

792-033

Video Content Management Platform for Distance Learning in Mobile Environment

*Mikko J. Uitto (Finland)*

792-030

Towards a Recommendation Framework to Support Design of Lesson Plans in the iTEC Project

*Manuel Caeiro-Rodríguez, Rubén Míguez-Pérez, Juan Manuel Santos-Gago, Luis Anido-Rifón, and Manuel Fernández-Iglesias (Spain)*

792-029

The Easily-Handled System Synchronizing Data Results on Moodle for iOS and Android Phones

*Toru Ochi, Taku Nakasuji, Hiroyuki Dekihara, and Yusuke Kobayashi (Japan)*

792-041

Technology Enhanced Learning in an Educational Environment

*Brian Gaber and Peggy Ng (Canada)*

### 15:30 – 16:00 COFFEE BREAK

*Location: Diesner Foyer*

### 16:00 – WBE SESSION 1 CONTINUED

*Location: Hall New Orleans*

### 19:00 – DINNER BANQUET

*Location: Hall Innsbruck*

## Thursday, February 14, 2013

### 09:00 – WBE SESSION 2 - ASSESSMENT, CONTROL AND EVALUATION IN WEB-BASED EDUCATION

Chair: TBA

Location: Hall Aalborg

792-008

Computer-based Questions with Considerable Explanatory Power to Predict the English Comprehension Levels of EFL-Learners

*Atsuko Kuramoto (Japan)*

792-037

Application Mixed Diagnostic Tests in Blended Education and Training

*Anna E. Yankovskaya and Mikhail E. Semenov (Russia)*

792-042

Assessing Individual Learning and Group Knowledge in a Wiki Environment: An Empirical Analysis

*Rocco Agrifoglio, Concetta Metallo, Luisa Varriale, Maria Ferrara, Nunzio Casalino, and Marco De Marco (Italy)*

792-035

Research on Behavioral Intention for Educational Web Sites using an Extended TAM in Taiwan

*Hui-Yun Fu, How-Gao Hsu, and Dan-Pai Feng (Taiwan)*

### 10:30 – 11:00 COFFEE BREAK

Location: Diesner Foyer

### 11:00 – WBE KEYNOTE PRESENTATION – “TECHNOLOGIES MAKE IT POSSIBLE, SERVICES MAKE IT HAPPEN”

Presenter: *Dr. Jean-Pierre Gerval (France)*

Location: Hall Aalborg

For several years, higher educational institutions have worked to develop infrastructures, resources and services. The implementations of both new technologies for distance learning and digital environments for learning have brought about a new flexibility in higher educational institutions' training offer. Consequently, it offers to learners trainings which fit more and more their constraints. Either the emergence of distance or the bi-modality distant/face-to-face has also induced teachers to question themselves about new educational uses. There are more and more digital tools available to teachers and learners but today priority is still the development of the uses of these technologies in trainings.

The first part of the talk, which cannot be objectively complete, gives a state of the art of developments in the field of web technologies for learning in France and in the European Union. Therefore, we will focus on some topics;

among them digital environments for learning, initiatives in the field of remote practical activities and emergent mobile technologies.

In the second part of this talk, we explain the way we set up our digital environments for learning in our graduate school: laptops for students, choices and implementations of open-source and home-made software, in order to provide students with a unified application environment. Then, we detail the developments and the experiments which we realized, on the one hand in the framework of virtual reality technologies, on the other hand in the framework of mobile technologies. Distributed virtual reality technologies enable the implementation of virtual labs for students' practical activities. These virtual labs are "metaphors" of real labs. They enable to implement real experiments (robotics, electronics...) in virtual environments. They make easier the access to experimental work for students without any limitation of time, budget or resources availabilities as in a real lab. Concerning the practices of mobile technologies we focused on two points: making the development of educational contents that runs on smartphone easier and improving the reactivity of students. To conclude this second part, we try by taking into account our experience to point out strengths and weaknesses, both from technological and human beings points of view, concerning the implementation of web technologies for learning.

**Jean-Pierre Gerval** obtained his Doctorate in Automation from the University of Valenciennes in France, 1987. He has been Project Manager at the "Institut d'Informatique Industrielle" in Brest from 1988 to 2003 and Associate Professor of Computer Sciences at the "Ecole Nationale d'Ingénieurs de Brest" from 1993 to 2003. He is currently head of the Computer Sciences Department at the "Institut Supérieur de l'Electronique et du Numérique" (ISEN) in Brest, France. He has been working for twenty years on European and International projects mainly dedicated to New Technologies for Education. His main research interests are in the areas of Distributed Virtual Reality and Virtual Environments especially dedicated to pedagogical applications, Technologies for Mobile Learning and Web Based Education.

### 12:00 – LUNCH BREAK

*Self-Catered*

### 14:00 – WBE TUTORIAL PRESENTATION – “APPLYING WEB 2.0 TOOLS IN EDUCATION AND THE WORK PLACE”

Presenter: *Prof. Thomas Connolly (UK)*

Location: Hall Aalborg

### 15:30 – 16:00 COFFEE BREAK

Location: Diesner Foyer

**16:00 – WBE TUTORIAL PRESENTATION  
CONTINUED**

*Location: Hall Aalborg*

**Friday, February 15, 2013**

**08:30 – WBE SESSION 3 - INNOVATIVE WEB-  
BASED TEACHING, LEARNING AND SERVICES**

*Chairs: TBA*

*Location: Hall Aalborg*

792-016

Learning Linear Algebra by Combining a Virtual Game in  
Class and Web-based Learning Activities

*Hitoshi Nishizawa, Kohtaro Shimada, and Takayoshi  
Yoshioka (Japan)*

792-025

Zask: A Case Study on Online Collaborative Learning

*Xiaoyan Wang, Jinchuan Chen, and Xiaoyong Du (PR  
China)*

792-005

A Competent Post-Authentication and Non-Repudiation  
Biometric-based Scheme for M-Learning

*Georgios Kambourakis and Dimitrios Damopoulos  
(Greece)*

792-011

An European Project on Web-based Education in  
Nanoelectronics

*Slavka Tzanova (Bulgaria), Silvia Schinkte (Switzerland),  
Danilo Demarchi (Italy), and Philippe Morey-  
Chaisemartin (France)*

792-007

Research on Web-based Teaching Model for Chinese  
Language

*Yuling Zhao (PR China)*

792-012

Cooperative e-Learning Approach based on Cloud  
Computing

*Marius Marian (Romania) and Ileana Hamburg (Germany)*

792-044

Transparency, Openness and Knowledge Sharing for  
Rebuilding and Strengthening Government Institutions

*Nunzio Casalino, Filomena Buonocore, Cecilia Rossignoli,  
and Francesca Ricciardi (Italy)*

792-036

Online Scientific Dissemination of Knowledge Blended  
with Face-to-Face Learning

*Svend Tveden-Nyborg (Denmark)*

**10:30 – 11:00 COFFEE BREAK**

*Location: Diesner Foyer*

**11:00 – WBE SESSION 3 CONTINUED**

*Location: Hall Aalborg*

**12:30 – LUNCH BREAK**

*Self-Catered*

\*\*\*\*\*

**IASTED would like to thank you for attending WBE  
2013. Your participation helped make this international  
event a success, and we look forward to seeing you at  
upcoming IASTED events.**

\*\*\*\*\*