Table of Contents

01 Organization
11 Conference Information
13 How to Reach the Conference Venue
14 Conference Venue Map
15 Presentation Guidelines
17 Edutainment 2011 at a Glance
19 Edutainment 2011 Conference Program
Organization

**Honorary Chairs**
Tak-Wai Chan, National Central University, Taiwan
Kuo-En Chang, National Taiwan Normal University, Taiwan
Kinhuk, Athabasca University, Canada
Fong-Lok Loe, The Chinese University of Hong Kong, Hong Kong
Zhigang Pan, Zhejiang University, China
Demetrios G. Sampson, University of Piraeus, Greece
Chin-Chung Tsai, National Taiwan University of Science and Technology, Taiwan

**Advisory Chairs**
Chien Chou, National Chiao Tung University, Taiwan
Yueh-Min Huang, National Cheng Kung University, Taiwan
Gwo-Jen Hwang, National Taiwan University of Science and Technology, Taiwan
Shian-Shyong Tseng, Asia University, Taiwan
Stephen Jenn-Hwa Yang, National Central University, Taiwan

**Conference General Chairs**
Gwo-Dong Chen, National Central University, Taiwan
Nian-Shing Chen, National Sun Yat-Sen University, Taiwan
Michtaka Hirose, The University of Tokyo, Japan
Jimmy Ho-Man Lee, The Chinese University of Hong Kong, Hong Kong

**Program Chairs**
Maiga Chang, Athabasca University, Canada
Ming-Puu Chen, National Taiwan Normal University, Taiwan
Wu-Yu Hwang, National Central University, Taiwan
Wolfgang Mueller, University of Education Weingarten, Germany

**Local Organization Chairs**
Guo-Li Choi, National Chiao Tung University, Taiwan
Huei-Tse Hou, National Taiwan University of Science and Technology, Taiwan
Ji-Lung Hsieh, National Taiwan Normal University, Taiwan

**Exhibition Chair**
Mu-Chun Su, National Central University, Taiwan

**Panel Chair**
Ju-Ling Shih, National University of Tainan, Taiwan

**Poster Chair**
Rustam Shadiev, National Central University, Taiwan

**Workshop Chair**
Eric Zhi-Feng Liu, National Central University, Taiwan
Chun-Yi Shen, Tamkang University, Taiwan

**Workshop Organizers**
Gwo-Dong Chen, National Central University, Taiwan
Huei-Tse Hou, National Taiwan University of Science and Technology, Taiwan
Chung-Yuan Hsu, National Pingtung University of Science and Technology, Taiwan
Eric Zhi-Feng Liu, National Central University, Taiwan
Chin-Feng Lai, National I-Lan University, Taiwan
Minoru Nakazawa, Kanazawa Institute of Technology, Japan
Zhigeng Pan, Zhejiang University, China
Vincent Ru-Chu Shih, National Pingtung University of Science and Technology, Taiwan
Shian-Shyong Tseng, Asia University, Taiwan
Chin-Yeh Wang, National Central University, Taiwan
Tosh Yamamoto, Kansai University, Japan
Program Committee
Wilfried Admiraal, University of Amsterdam, The Netherlands
Vincent Aleva, Carnegie Mellon University, USA
Chee Siang Ang, University of Kent, UK
Taeko Ariya, Doshisha Women’s College, Japan
Inmaculada Amedillo-Sánchez, Trinity College, Ireland
Juha Arrasuuri, Nokia Research, Finland
Roger Azevedo, University of Memphis, USA
Youngkyun Baek, Korea National University of Education, Korea
Ryan Baker, Worcester Polytechnic Institute, USA
Anup Basu, University of Alberta, Canada
Catherine Beavis, Griffith University, Australia
Tony Brooks, Aalborg University Esbjerg, Denmark
Martin Brynskov, University of Aarhus, Denmark
Leah Buchley, MIT Media Lab, USA
Daniel Burgos, ATOS Origin, Spain
Winslow Burleson, Arizona State University, USA
Nergiz Ercil Cagiltay, Attilim University, Turkey
Yiyu Cai, Nanyang Technological University, Singapore
Marc Cavazza, Teesside University, UK
Keith Chan, Hong Kong Polytechnic University, Hong Kong
Ben Chang, National Chiai University, Taiwan
Chun-Yen Chang, National Taiwan Normal University, Taiwan
Maiga Chang, Athabasca University, Canada
Kuo-En Chang, National Taiwan Normal University, Taiwan
John P. Charlton, University of Bolton, UK
Chao-Hsiao Chen, National Chiao Tung University, Taiwan
Chiu-Jung Chen, National Chia-Yi University, Taiwan

Gwo-Dong Chen, National Central University, Taiwan
Hao-Jan Chen, National Taiwan Normal University, Taiwan
Ming-Chung Chen, National Chiayi University, Taiwan
Ming-Puu Chen, National Taiwan Normal University, Taiwan
Sherry Y. Chen, National Central University, Taiwan
Zhi-Hong Chen, National Central University, Taiwan
Yi-Chia Chang, Tamkang University, Taiwan
Guey-Shya Cheng, National Taichung University of Education, Taiwan
Shu-Chen Cheng, Southern Taiwan University, Taiwan
Chien Chou, National Chiao Tung University, Taiwan
Chryso Christodoulou, Digipro Computer Consultants Ltd., Cyprus
Carol H.C. Chu, Soochow University, Taiwan
Tsung-Yen Chuang, National University of Tainan, Taiwan
Douglas Clark, Arizona State University, USA
Angela Colvert, Roehampton University, UK
Sue Cramer, Futurelab Education, UK
Giuliana DeGroot, The Institute for Educational Technology, Italy
Yi-Luen Do, Georgia Institute of Technology, USA
Yuji Dong, Northeast Normal University, China
Jayitus T. Doswell, The Juxtopia Group, USA
Been-Lin Duh, National University of Singapore, Singapore
Simon Egerfeldt-Nielsen, IT University of Copenhagen, Denmark
Michael Eisenberg, University of Washington, USA
Jessica Ensvold, Lund University, Sweden
Guangzheng Fei, Communication University of China, China
Russell Francis, Oxford University, UK
Sara de Freitas, Coventry University, UK
Seth Giddings, University of the West of England, UK
Ashok K. Goel, Georgia Institute of Technology, USA
Peter Goodyear, The University of Sydney, Australia
Mark D. Gross, Carnegie Mellon University, USA
Toshihiro Hayashi, Kagawa University, Japan
Carrie Heeter, Michigan State University, USA
Jia-Sheng Huh, Chung-Yuan Christian University, Taiwan
Jan Herrington, Murdoch University, Australia
Makoto Hirayama, Kanazawa Institute of Technology, Japan
Paul Hollins, Institute for Educational Cybernetics, UK
Huei-Tse Hou, National Taiwan University of Science and Technology, Taiwan
Sherry Hsi, University of California, Berkeley, USA
Hsien-Sheng Hsiao, National Taiwan Normal University, Taiwan
Yu-Chen Hsu, National Tsing Hua University, Taiwan
Yueh-Min Huang, National Cheng-Kung University, Taiwan
Pi-Hsia Hung, National University of Tainan, Taiwan
Fu-Kwun Hwang, National Taiwan Normal University, Taiwan
Gwo-Jen Hwang, National Taiwan University of Science and Technology, Taiwan
Wu-Yun Hwang, National Central University, Taiwan
Chiaki Iwasaki, Kansai University, Japan
Mingfong Jan, National Institute of Education, Singapore
Carsten Jessen, The Danish University of Education, Denmark
Stine Liv Johansen, Aarhus University, Denmark
Lewis Johnson, University of Southern California, USA
Bn-Shyan Jong, Chung-Yuan Christian University, Taiwan
Helle Skovbjerg Karoff, The Danish University of Education, Denmark
Yoichiro Kawaguchi, The University of Tokyo, Japan
Kinshuk, Athabasca University, Canada

Hwa-Wei Ko, National Central University, Taiwan
Rob Koper, Open University of the Netherlands, The Netherlands
Bor-Chen Ku, National Taichung University of Education, Taiwan
Chen-Wo Ku, National Palace Museum, Taiwan
Ching-Hwa Kuo, Tamkang University, Taiwan
Rita Li-Ping Kuo, Mingdao University, Taiwan
Harushige Kusumi, Kansai University, Japan
Lam-For Kwok, City University of Hong Kong, Hong Kong
Ah-Fur Lai, Taipei Municipal University of Education, Taiwan
Chih-Hung Lai, National Dong Hwa University, Taiwan
Yu-Ju Lan, National Taiwan Normal University, Taiwan
H. Chad Lane, University of Southern California, USA
Fang-Ying Yang, National Taiwan Normal University, Taiwan
Jie-Chi Yang, National Central University, Taiwan
Stephen Jenn-Hwa Yang, National Central University, Taiwan
Yao-Ming Yeh, National Taiwan Normal University, Taiwan
Fu-Yun Yu, National Cheng-Kung University, Taiwan
Pac-Ta Yu, National Chung Cheng University, Taiwan
Li Zhang, University of Teesside, UK
Xiaopeng Zhang, Chinese Academy of Sciences, China
Yangjiang Zhong, Northeast Normal University, China
Fong-Lok Lee, The Chinese University of Hong Kong, Hong Kong
Jimmy Ho-Man Lee, The Chinese University of Hong Kong, Hong Kong
Silvia Wen-Yu Lee, National Chianghua University of Education, Taiwan
James Lester, North Carolina State University, USA
Chun-Te Li, National Chiao Tung University, Taiwan
Tzu-Chien Li, National Central University, Taiwan
Jyh-Chong Liang, National Taiwan University of Science and Technology, Taiwan
Anthony Y. H. Liao, Asia University, Taiwan
Fanny Lignon, University Claude Bernard Lyon 1, France
Robin Chiu-Pin Lin, National Hsinchu University of Education, Taiwan
Xiao Zhong Liu, Northeast Normal University, China
Eric Zhi-Feng Liu, National Central University, Taiwan
Pei-Lin Liu, National Chia-Yi University, Taiwan
Tzu-Chien Liu, National Central University, Taiwan
Daniel Livingston, University of the West of Scotland, UK
Rosemary Luckin, University of London, UK
Rikke Magnussen, University of Aarhus, Denmark
Noboru Matsuda, Carnegie Mellon University, USA
Jane McGonigal, University of California at Berkeley, USA
Genaro Rebollo-Mendez, Serious Games Institute, Coventry University, UK
Ling-Fu Meng, Chang Gung University, Taiwan
David Metcalfe, University of Central Florida, USA
Marcelo Mirad, Linnaeus University, Sweden
Akiyuki Minamide, Kanazawa Institute of Technology, Japan
Makoto Miura, Kansai University, Japan
Yuhay Mor, University of Haifa, UK
Elena Moschini, London Metropolitan University, UK
Yasunori Motomura, Kansai University, Japan
Minoru Nakazawa, Kanazawa Institute of Technology, Japan
Richard Noss, University of London, UK
Hiroaki Ogata, The University of Tokushima, Japan
Yoshihiro Okada, Kyushu University, Japan
Claire O'Malley, The University of Nottingham, UK
Kuo-Liang Ou, National Hsinchu University of Education, Taiwan
Martin Owen, Independent eLearning researcher, UK

Antonio Padilla-Meléndez, University of Málaga, Spain
Zhigeng Pan, ZheJiang University, China
Marina Papastergiou, University of Thessaly, Greece
Caroline Pelletier, University of London, UK
Ir. Peter (P.J.F.) Peters, Technische Universiteit Eindhoven, The Netherlands
Eva Petersson, Aalborg Universitet, Denmark
Lydia Picman, University of Stirling, UK
Rui Prada, Technical University of Lisbon, Portugal
Andy Pulman, Bournemouth University, UK
Clark Quinn, Quinnovation, USA
Chris Quintana, University of Michigan, USA
Leonie Ramondt, Anglia Ruskin University, UK
Janet Reed, University of Central Lancashire, UK
Abdennour El Rhalibi, Liverpool John Moores University, UK
Dometrios G. Sampson, University of Piraeus, Greece
Manthos Sartorinou, Athens School of Fine Arts, Greece
Maggi Savin-Baden, Coventry University, UK
Kamran Sedig, University of Western Ontario, Canada
Neil Selwyn, IOE, University of London, UK
David Shaffer, Columbus University Medical Center, USA
David Williamson Shaffer, University of Wisconsin-Madison, USA
Jennifer G. Sheridan, BigDog Interactive, UK
Ju-Ling Shih, National University of Tainan, Taiwan
Lori Shyba, Montana Tech of the University of Montana, USA
Kurt Squire, University of Wisconsin-Madison, USA
Jun-Ming Su, National University of Tainan, Taiwan
Masanori Sugimoto, The University of Tokyo, Japan
Kazuyuki Sunaga, Kansai University, Japan
Yao-Ting Sung, National Taiwan Normal University, Taiwan
Kazuya Takemata, Kanazawa Institute of Technology, Japan
Hiroyuki Tarumi, Kagawa University, Japan
Siobhan Thomas, University of East London, UK
Chin-Chung Tsai, National Taiwan University of Science and Technology, Taiwan
Meng-Jung Tsai, National Taiwan University of Science and Technology, Taiwan
Ming-Hsin Tsai, Asia University, Taiwan
Shian-Shyong Tseng, Asia University, Taiwan
Hakan Tuzun, Hacettepe University, Turkey
Shinichi Ueshima, Kansai University, Japan
Bodo Urban, Fraunhofer Institut fuer Graphische Datenverarbeitung, Germany
Andrea Valente, Aalborg University Esbjerg, Denmark
Erik H. Vick, Rochester Institute of Technology, USA
Maria Vrvou, University of Piraeus, Greece
Maggie Minhong Wang, The University of Hong Kong, Hong Kong
Shu-ling Wang, National Taiwan University of Science and Technology, Taiwan
Yangsheng Wang, Chinese Academy of Sciences, China
Dunwei Wen, Athabasca University, Canada
David White, University of Oxford, UK
David Wilbie, National Central University, Taiwan
Simon Winter, Växjö University, Sweden
Niall Winters, IOE, University of London, UK
Beverly Woolf, University of Massachusetts, USA
Hsiao-Kuang Wu, National Central University, Taiwan
Ting Fang Wu, National Taiwan Normal University, Taiwan
Tung-Kuang Wu, National Cheng-Hua University of Education, Taiwan
Wen-Hsiung Wu, National Kaohsiung University of Applied Sciences, Taiwan

Ying-Tien Wu, National Central University, Taiwan
Yoshio Yamagishi, Kanazawa Institute of Technology, Japan
Tosh Yamamoto, Kansai University, Japan
Chih-Kang Yang, National Don Hwa University, Taiwan
Hsin-I Yung, National Taipei University of Technology, Taiwan
Conference Information

Date
September 7-9, 2011

Venue
Howard International House Taipei, Taiwan

Registration/Information Desk
Location and Opening Hours
- September 7-8, 2011 07:30-12:00
  The Registration/Information Desk is located at the 1F conference room area of Howard International House Taipei
- September 7, 2011 13:00-17:00
- September 9, 2011 08:00-15:00
  The Registration/Information Desk is located at the 1F/2F meeting room area of Howard International House Taipei

Services
- Distribution of Conference Materials
- On-site Registration
- Conference Activities Information
- Attendance Certificate

Secretariat Room
The secretariat room is located at the 2F-204 meeting room will have computer access and laser printer. Wireless Internet will be available in the secretariat room.

Regular Registration Fee
The registration fee will include the following items:
- The registration fee allows participants to attend all sessions
- Daily lunch and mid-session refreshments form September 7 to 9
- Welcome Reception on September 7
- Banquet on September 8
- Meeting Badge

Name Badges
You will receive your name badge after you register at the Registration Desk. A name badge is required for admission to the Conference and the social events. Please wear your name badge all times while attending the Conference.

Computer/Internet Service
Wireless Internet accounts are limited offer during the conference. If you need to get on the Internet, please ask for the account and password from the Registration Desk. A laptop for presentation with the Internet connection is installed in all session rooms.

Lunches
Lunches from September 7-8 will be served at the 2F meeting rooms of Howard International House Taipei

Social Program
Welcome Reception
Date: September 7, 2011
Time: 18:00-20:00
Venue: 1F Garden Cafeteria, Howard International House Taipei

Banquet
Date: September 8, 2011
Time: 18:00-20:00
Venue: 2F Yueshing Restaurant, Howard International House Taipei
How to Reach the Conference Venue

Conference Venue: Howard International House
Taipei
No. 30, Sec. 3, Shin-Sheng South Road, Taipei, 106, Taiwan, R.O.C.

**BUS**
- a. Longan Elementary School - Bus No: 52, 253, 280, 284, 290, 311, 505, 907, 0 South, Zhinan 1
- b. Daan Forest Park – Bus No: 3, 15, 18, 52, 72, 74, 211, 235, 237, 278, 295, 626
- c. Heping-Xinsheng Intersection – Bus No: 253, 280, 290, 311, 505, 642, 0 South, Zhinan 1
- d. Wenzhou Street Corner – Bus No: 3, 15, 18, 74, 235, 254, 278, 295, 907, 291, 672
- e. Civil Service Development Institute – Bus No: 52, 253, 280, 284, 290, 311, 505, 642, 907, 0 South, Zhinan 1

**MRT**
- a. Taipower Building Station: Exit No. 2, turn left outside station and walk along Xinhai Road. Turn left to Xinheng South Road and the Hotel is on your left.
- b. Gongguan Station: Exit No. 3, walk along Roosevelt Road, turn right to Xinheng South Road and walk along it until you pass Xinhai-Xinsheng Intersection. The Hotel is on your left.

---

Conference Venue Map

*Xin-sheng South Road*

*Xinhai Road*
Presentation Guidelines

Full Paper (F)
20 minutes presentation + 5 minutes QA

Short Paper (S)
10 minutes presentation + 5 minutes QA

Workshop (W)
10 minutes presentation + 5 minutes QA

Paper Presentation Instruction
1. We have prepared the following equipment for presentation which are available in all conference rooms: LCD projector, a microphone, a laser pointer and a laptop.
2. The schedule assigned for each presenter has to be followed strictly; be sure to leave enough time to set up your presentation equipment.
3. Please set up your presentation on conference computers before the session.
4. You are strongly advised to bring some kind of USB memory for your presentation as a backup; if you are planning to use your own laptop computer, you should check the connection with the projector before the session.
5. Since electric current in Taiwan is 110 V, 60 Hz and plug for wall socket is flat blade it is recommended that conference participants bring power converters or adapters for their own electric equipment.

Poster Presentation Instruction
1. The poster presentation session is scheduled at 16:00–17:30, September 8 at the Room 204 of 2F, Howard International House Taipei, Taiwan.
2. The posters will be open for set up from 8:00 in the morning on September 7.
3. The poster size is A1 size (25 inch wide and 35 inch high).
4. The poster should be removed from the poster-board immediately after 15:00 of September 9.
## Edutainment 2011 at a Glance

<table>
<thead>
<tr>
<th>Time</th>
<th>Wednesday, September 7</th>
<th>Thursday, September 8</th>
<th>Friday, September 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:30-08:45</td>
<td>Registration</td>
<td>Asia-Pacific Summit Forum</td>
<td>Registration</td>
</tr>
<tr>
<td>08:45-09:00</td>
<td>Open Ceremony (1F-Conference Room)</td>
<td>e-Learning Research Trends Forum</td>
<td>Keynote Speech II (1F -103)</td>
</tr>
<tr>
<td>09:00-10:00</td>
<td>Keynote Speech I (1F-Conference Room)</td>
<td>Panel Discussion (1F-Conference Room)</td>
<td>Tea/Coffee Break (1F)</td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Tea/Coffee Break (1F)</td>
<td>Lunch (2F-202, 203, 205)</td>
<td>Tea/Coffee Break (1F&amp; 2F-204)</td>
</tr>
<tr>
<td>10:30-12:00</td>
<td>World Summit Forum</td>
<td>e-Learning Research Trends Forum</td>
<td>Session #9</td>
</tr>
<tr>
<td>12:00-12:30</td>
<td>Lunch (2F-202, 203, 205)</td>
<td>Future Classroom (2F-203)</td>
<td>Session #10</td>
</tr>
<tr>
<td>12:30-13:30</td>
<td>Session #1 Session #2 Session #3</td>
<td>Game-based Learning/Training (2F-205)</td>
<td>Session #11</td>
</tr>
<tr>
<td>13:30-15:00</td>
<td>Effectiveness of Virtual Reality for Education (2F -202)</td>
<td>Ubiquitous games and ubiquitous technology &amp; Learning (Part 1 (2F-202))</td>
<td>Workshop on Learning with Robots and Robotic Education (1F -103)</td>
</tr>
<tr>
<td>15:00-15:30</td>
<td>Workshop on VR and Edutainment (2F-202)</td>
<td>Ubiquitous games and ubiquitous technology &amp; Learning (Part 2 (2F-202))</td>
<td>Lunch (1F -103, 2F-202, 203)</td>
</tr>
<tr>
<td>15:30-16:00</td>
<td>Tea/Coffee Break (2F-204)</td>
<td>E-Learning Platforms and Tools (Part 2) (2F -203)</td>
<td>Session #14</td>
</tr>
<tr>
<td>16:00-17:00</td>
<td>Workshop on Educational Robots and Toys (2F -203)</td>
<td>Workshop on Trend, Development and Learning process of Educational Mini Games (2F -203)</td>
<td>Workshop</td>
</tr>
<tr>
<td>17:00-18:00</td>
<td>TELDCA (2F-205)</td>
<td>Poster Session (2F-204)</td>
<td>Workshop on Game-Assisted Language Learning (2F -203)</td>
</tr>
<tr>
<td>16:00-20:00</td>
<td>Welcome Reception (1F Garden Cafeteria)</td>
<td>Augmented and Mixed Reality in Education (2F-202)</td>
<td>Workshop on the Game-based Testing and Assessment (1F -103)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Workshop on the Game-based Testing and Assessment (1F -103)</td>
<td>Closing Ceremony (1F -103)</td>
</tr>
</tbody>
</table>
Edutainment 2011 Conference Program

Wednesday, September 7

07:30-08:45 Registration
08:45-09:00 Opening Ceremony (2F-Conf Room)
09:00-10:00 Keynote Speech 1 (2F-Conf Room)
    Chair: Prof. Chia-Hsuan Tai, National Chiao Tung University, Taiwan
    Keynote Title: "Educational Games and Virtual Reality as Disruptive Technologies"
    Dr. Robert W. Lussier, BBN Technologies, USA

10:00-10:30 Tea/Coffee Break (1F)

10:30-12:30 World Summit Forum – e-Learning Research Trends (2F-Conf Room)
    Topic: Grand Challenges & Research Directions in e-Learning for the 21st Century
    Speaker: Dr. Nick Bawden, Conenion Technologies, UK
    Chair: Prof. Stephen J.H. Yang, National Central University, Taiwan

Speaker: Dr. Chih-Chung Tsai, National Taiwan University of Science and Technology, Taiwan
    Chair: Prof. Ming-Puu Chen, National Taiwan Normal University, Taiwan

Speaker: Dr. Michael Scapce, University of Georgia, USA
    Chair: Prof. Chen Chou, National Chiao Tung University, Taiwan

Speaker: Dr. Konshuk, Athabasca University, Canada
    Chair: Prof. Chin-Yen Chang, National Taiwan Normal University, Taiwan

12:30-13:30 Lunch (2F 202, 203, 205)

2F 202

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 1: Effectiveness of Virtual Reality for Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>69F</td>
<td>Effects of Multi-symbols on Enhancing Virtual Reality Based Collaborative Design</td>
</tr>
<tr>
<td>83F</td>
<td>A Virtual Computational Paper Folding Environment Based on Computer Algebraic System</td>
</tr>
<tr>
<td>45S</td>
<td>Physically-Based Virtual Glove Puppet</td>
</tr>
<tr>
<td>51F</td>
<td>Constructing a 2D Virtual World for Foreign Language Learning Based on Open Source Freeware</td>
</tr>
</tbody>
</table>

2F 203

13:30-15:30

Paper 1: Game Design and Development
    Chair: Jimmy H.M. Lee, The Chinese University of Hong Kong, Hong Kong

17F      | ACTA - A Course Design Approach to Game Design Theory     | Chun-Tai Wu, Shu-Ming Chang and Shou-Shian Chang |

Paper 2: A Cloud and Agent Based Architecture Design for an Educational Mobile SNS Game
    Chair: Jun Lin, Chuyuan Mao and Han Yu

26F      | A Cloud and Agent Based Architecture Design for an Educational Mobile SNS Game | Jun Lin, Chuyuan Mao and Han Yu |

29S      | Facilitating Computational Thinking through Game Design   | Min-Lun Wu and Kari Richards |

52S      | The Embarrassing Situation of Chinese Educational Game | Ke Ji and Suiping Zhang |

94S      | Towards an Open Source Game Engine for Teaching and Research | Florian Berger and Wolfgang Müller |

35F      | Game Design Considerations when Using Non-Touch Based Natural User Interface | Mohd Faiszal Shamsuddin and Kok Wei Wong |

2F 205

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 3: Learning by Playing (Part 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>91F</td>
<td>Students Practice Minimally Invasive Surgery through Game-Based Assisted Learning</td>
</tr>
<tr>
<td>24S</td>
<td>The Study of Developing Spatial Ability by Applying Game-Based Learning</td>
</tr>
<tr>
<td>59F</td>
<td>A Study of Cooperative and Collaborative Online Game-based Learning Systems</td>
</tr>
<tr>
<td>46F</td>
<td>Investigating the Effects of an Adventure Video Game on Foreign Language Learning</td>
</tr>
</tbody>
</table>
### Wednesday, September 7

**15:30-16:00**

**Coffee Break (2F 204)**

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 4: Educational Robots and Toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>85F</td>
<td>Effects of Learning English Maxim through M-learning with Different Content Representation</td>
</tr>
<tr>
<td></td>
<td>Chiu Jung Chen and Pui Lee Liu</td>
</tr>
</tbody>
</table>

**2F 202**

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 4: Educational Robots and Toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>47F</td>
<td>Stylized Textile Image Pattern Classification using SIFT Keypoint Histograms</td>
</tr>
<tr>
<td></td>
<td>Hui Zhang, Zhigang Pan and Min-Min Zhang</td>
</tr>
<tr>
<td>W</td>
<td>Direct Lighting under Dynamic Local Area Light Sources</td>
</tr>
<tr>
<td></td>
<td>Jie Guo and Jiaqiu Pan</td>
</tr>
<tr>
<td>W</td>
<td>A Group-based Load Balancing Approach for the Multi-service Distributed Virtual Environment</td>
</tr>
<tr>
<td></td>
<td>Yan Zhaowang and Jiaqiu Pan</td>
</tr>
<tr>
<td>W</td>
<td>Research of Emotion Promoting Teaching Interaction in Virtual Learning Community - A Case Study of Virtual Learning Community Based on Blackboard</td>
</tr>
<tr>
<td></td>
<td>Zhongwei Zhou, Shaochun Wang, Jixue Lin, Min Zhou and Peng Xu</td>
</tr>
</tbody>
</table>

**16:00-17:30**

**2F 203**

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 4: Educational Robots and Toys</th>
</tr>
</thead>
<tbody>
<tr>
<td>82F</td>
<td>Learning Robots: Teaching Design Students in Integrating Intelligence</td>
</tr>
<tr>
<td></td>
<td>Emilie Barakova and Jun Xu</td>
</tr>
<tr>
<td>72F</td>
<td>Applying ARCS Model for Enhancing and Sustaining Learning Motivation in Using Robots as Teaching Assistant</td>
</tr>
<tr>
<td></td>
<td>Li-Chen Huang, Ling Li, Kuo-Jen Chao and Nian-Shing Chen</td>
</tr>
</tbody>
</table>

**2F 205**

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Workshop on VR and Edutainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>84F</td>
<td>Cage-based Tree Deformation</td>
</tr>
<tr>
<td></td>
<td>Chau Zhu, WeiZhang Meng, Binghe Wang and Xianpeng Zhang</td>
</tr>
<tr>
<td>W</td>
<td>Workshop on VR and Edutainment</td>
</tr>
<tr>
<td></td>
<td>Chair: Zhigang Pan, Zhejiang University, China</td>
</tr>
</tbody>
</table>

**17:00-18:30**

**2F 205**

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Workshop on the e-Portfolio and ICT-enhanced Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>82F</td>
<td>Paradigm Shift in Education with the Use of e-Portfolio: Showcases of e-Portfolio at Work at the various Levels of Education - Introduction &amp; Showcase 1: K-12 e-Portfolio Involving All Stakeholders</td>
</tr>
<tr>
<td></td>
<td>Tosh Yamasato</td>
</tr>
<tr>
<td>W</td>
<td>Collaboration and Communication Using e-Portfolio among Junior-High/High School Students from Japan, Taiwan, and the United Kingdom</td>
</tr>
<tr>
<td></td>
<td>Takashi Tokuhama and Tomoka Higuchi</td>
</tr>
<tr>
<td>W</td>
<td>Use of e-Portfolio in Effective Career Advising: Case of Ritsumeikan University</td>
</tr>
<tr>
<td></td>
<td>Tomoka Higuchi and Takashi Tokuhama</td>
</tr>
<tr>
<td>W</td>
<td>Portfolio Intelligence System at Graduate School Level</td>
</tr>
<tr>
<td></td>
<td>Minoru Nishizawa</td>
</tr>
</tbody>
</table>

**18:00-20:00**

**Welcome Reception (1F Gardens Cafeteria)**
Thursday, September 8

08:00-09:00 Registration

Asia-Pacific Summit Forum - e-Learning Research Trends (1F-Conference Room)

Topic: Research Directions in e-Learning for the 21st Century
Speaker: Dr. Chiu Cheng Shih, National Taiwan Normal University, Taiwan
Chair: Prof. Yao-Ting Sung, National Taiwan Normal University, Taiwan

Speaker: Dr. Hiroshi Osazu, Tohoku University, Japan
Chair: Prof. Tsuru-ken Hwang, National Taiwan University of Science and Technology, Taiwan

Speaker: Dr. Cher Ping Lim, The Hong Kong Institute of Education, Hong Kong
Chair: Prof. Yu-Jen Huang, National Cheng Kung University, Taiwan

09:00-10:00

Tea/Coffee Break (1F)

Panel Discussion - e-Learning Research Trends Forum (1F-Conference Room)

Chairs: Prof. Chen-Yun Chou, National Taiwan Normal University, Taiwan
Prof. Nian-Sheng Chen, National Sun Yat-sen University, Taiwan

Panelists (in alphabetical order)

Dr. Chih-Ming Liao, Athabasca University, Canada
Dr. Robert W. Lawler, IBM Technologies, USA
Dr. Dr. W. Li, The Hong Kong Polytechnic University, Hong Kong
Dr. Cher Ping Lim, The Hong Kong Institute of Education, Hong Kong
Dr. Hiroshi Osazu, Tohoku University, Japan
Dr. Nick Rabbett, Coventia Technologies, UK
Dr. Chiu Cheng Shih, National Taiwan University of Science and Technology, Taiwan
Dr. Michael Spector, University of Georgia, USA
Dr. Chen-Chung Tsai, National Taiwan University of Science and Technology, Taiwan

10:00-10:30

Lunch (2F 202, 203, 205)

09:00-10:30

Session 5: Ubiquitous games and ubiquitous technology & Learning (Part 1)
Chair: Chun-Yi Shen, Tamkang University, Taiwan

16F Analysis of Brainwave Characteristics for Playing Heterogeneous Computer Games
Pu-Chen Hsu, Hsin-Chen Hu and Wei-Yi Li

44F Game-based Mobile Learning System for Campus on Android Platform
Li Wang, Xiaozhong Wang, Qing Huang, Quanfei Hu, Minwei Li and Lei Zhang

18F Bayesian Network to Manage Learner Model in Context-Aware Adaptive System in Mobile Learning
Vei Choo Ngiew and San Cong Pham

9S Educational Affordances of Ubiquitous Learning
Tsz Hung Leung, San-Mei Tam and Shu-Hung Lin and Yu Ling Chu

71S A Service Platform for Logging and Analyzing Mobile User Behaviors
Pu-Ming Chen, Chuang-Ho Chen, Wen-Hsing Liu and Yau-Yi Li

20F Paper ID: 202

09:00-10:30

Session 6: Future Classroom
Chair: Wolfgang Mueller, University of Education Weingarten, Germany

20F A Method for Determining Classroom Seating Arrangements by Using Bioinformatics
Kazutoshi Tsubaki and Hiroshi Ikeda

19F Explore the Next Generation of Cloud-Based E-Learning Environment
Chen-Chun Ko and Shelley Shieh Ching Young

56F Research on Recognition and Mobile Learning of Birds Base on Network under the Condition of Human-machine Collaboration
Yi Lin and Yue Liu

77S Blue Sky Flying Camp - a Relief Project to Facilitate Pupils’ Understanding and Converting Aeronautics
Shuyan Lu, 3 Chung Lu and Lony Fish

76S Peer Feedback in Online Writing System
We-Ting Lu, Jen-Hung Wang, Shih-Hsun Hsu and Tuk-Wai Chau

13:30-15:30

Session 7: Game-based Learning/Training
Chair: Chia-Hsuen Hwang, National Central University, Taiwan

38F Effects of Type of Learning Approach on Novices’ Motivation, Flow, and Performance in Game-based Learning
Li-Chun Wang and Ming-Pin Chen

49F Behavioral Traits of the Online Parent-Child Game Players: A Case Study and Its Inspirations
Su-Jui Zhang and Feng Li

21S The Evaluation Criteria of Computer-Based Vocabulary Learning Games
Wen-Feng Chen and Shu-Juan Lo

41S Investigating the Impact of Integrating Self-Explanation into an Educational Game: A Pilot Study
Chung-Yuan Hsu and Chieh-Chung Tsai

15:30-16:00

Coffee Break (2F 204)
Thursday, September 8

2F 202

16:00-17:30

Paper ID | Session 8: E-Learning Platforms and Tools (Part 1)
|---|
| 27F | A Novel Approach of Learning English with ROBOT for Elementary School Students
| Nian-Sheng Chen, Benazir Quasif and Daniel C. Teng |
| 13F | Mobile Terminal-based Tennis Instruction Support System for Beginners
| Kiyoshi Nonu, Akira Geshima, Takeyuki Immamura and Kenji Mitsumoto |
| 50F | Developing a Complexity Problem-Based E-Learning Model: A Longitudinal Qualitative Case Study of a Six-Year Course Blog
| I-Tian Chang and Mei-Li Chen |

2F 203

16:00-17:30

Paper ID | Workshop on Trend, Development and Learning process of Educational Mini Games
|---|
| W | Using Game-Based Learning and Interactive Peer Assessment to Improve Career Goals and Objectives for College Students
| I-Tian Chang, Ru-Chun Hsu, Eric Zhi-Feng Liu and Alex Jen-Yen Lee |
| I-Hou Chung and Ying-Tien Wu |
| W | A Review on the Concepts and Instructional Methods of Mini Digital Physics Games of PHYSICSGAMES.NET
| Yen-Hung Shih, Haor-Tze Hsu and Ying-Tien Wu |
| W | A Flash-based Game for Employee Doing On-the-Job Training
| Edwardo Werner and Matteo Chang |
| W | The Construction of Text-based and Game-based Teacher Career Aptitude Tests and Validity Comparisons
| Kuo-Hung Chao and Zi-Yang Chao |
| W | Investigating Different Instructional Approaches Adopted in Educational Games
| Chung-Yuan Hsu |

Thursday, September 8

2F 202

16:00-20:00

Poster Session

Paper ID | Poster Session
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>37F</td>
</tr>
</tbody>
</table>
| 64F | Design and Application of the Augmented Reality with Digital Museum and Digital Heritage
| Tiang-Hsun Lee, Kuei-Shun Hsu, Long-Jyi Yeh |
| 15F | Potential of Second Life for Psychological Counseling: A Comparative Approach
| Pa-Yun Yu, Hsiao-Ting Hsieh, Ben Chang |
| 75F | My-Avatar: Using Self-Competition to Enhance Students’ Learning
| Zhi-Hong Chen, Tzu-Chao Chien and Tak-Wai Chan |
| 32F | The Importance and Use of Targeted Content Knowledge in Educational Simulation Games
| Pu-Hsing Tsai, Charles Jin, Kuo-Hsuan Hung, Cheng-Ling Alice Chen and I-Ying Hsu |
| 36F | Development of Training System for Finger Dexterity: Use in Rehabilitation for Upper Body Paralysis
| Kazuyo Takemoto, Suoio Nakamura, Akiyuki Minamide and Shin Takesuchi |
| 68F | My-Bookstore: a Game-based Follow-up Activity to Support Modeled Sustained Silent Reading
| Tzu-Chao Chien, Zhi-Hong Chen and Tak-Wai Chan |
| 40F | An Investigation of Using Educational Toys into Science Instruction for 4th Graders
| Ching-San Lai and Fang-Chu Wang |
| 93F | Web Programming Education through Developing Online Shop Web Application
| Makoto I. Hayasaka and Toshiyuki Yamamoto |
| 65F | e-Advisor: A Web-based Academic Support System for High School Students
| Hsi-Mei Chen and Yu-Tien Hsu |
| 22F | Live Python-based Visualization Laboratory
| Chu-Ching Huang, Tsian-Hsiu Kuo, Shiao-Hsuan Chin |

Banquet (2F Yuexing Restaurant)
### Friday, September 9

#### 08:00-09:00
**Registration**

#### 09:00-10:00
**Keynote Speech II (1F-103)**
Chair: Dr. Zhongru Pan, Professor, Zhejiang University, China
**Keynote Title:** "Pedagogical Effect of E-learning Technology on Student Learning Behaviour"  
Dr. H. Li, The Hong Kong Polytechnic University, Hong Kong

<table>
<thead>
<tr>
<th>Time</th>
<th>Paper ID</th>
<th>Session 9: Learning by Playing (Part 2)</th>
</tr>
</thead>
</table>
| 09:00-10:00| 1F-103  | Employing Software Maintenance Techniques via a Tower-Defense Serious Computer Game
Adrian Rosa, Robert Russell, Edward Burton and Andrew Firth
| 09:00-10:00| 2F-202 | Playing Webcomic-Based Game on Facebook for Learning Chinese Festivals
Wei-Chen Hung and Shelley Shun-Ching Young
| 09:00-10:00| 2F-203 | Old Dogs Can Learn New Tricks: Exploring Effective Strategies to Facilitate Somatosensory Video Games for Institutionalized Older Veterans
I-Tun Chiang
| 09:00-10:00| 1F-103 | Learning English with Online Game: A Preliminary Analysis of the Status of Learners’ Learning, Playing and Interaction
Hsing-Yi Hsu

### Afternoon Session

#### 12:00-13:30
**Session 12: Ubiquitous games and ubiquitous technology & Learning (Part 2)**
Chair: Chin-Yi Shen, Tamkang University, Taiwan

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 12: Ubiquitous games and ubiquitous technology &amp; Learning (Part 2)</th>
</tr>
</thead>
</table>
| 67F      | Development of a Mobile Rhythm Learning System Based on Digital Game-Based Learning Companion
Ching-Yu Wang and Ao-Fen Lai
| 56S      | Motivations for Game-playing on Mobile Devices - Using Smartphone as an Example
Tzu-Ming Lin, Sheng-Chih Chen and Pei-Jung Kao
| 27S      | A Walk-Balay Support System using Two-Dimensional Codes and Mobilephones
Tetsuo Miyawaki, Yoshihisa Yamaguchi and Shin Mizuno

#### 13:30-15:00
**Session 13: E-Learning Platforms and Tools (Part 2)**
Chair: Ji-Liang Huang, National Taiwan Normal University, Taiwan

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Session 13: E-Learning Platforms and Tools (Part 2)</th>
</tr>
</thead>
</table>
| 70S      | HuayuNav: A Mobile Chinese Learning Application Based on Intelligent Character Recognition
Jen-Yi Kuo, Cheng-Ming Huang, Wen-Hung Liaw and Chun-Chieh Houang
| 69F      | WebPage-Based and Video Summarization-Based Learning Platform for Online Multimedia Learning
Wen-Hsiang Chang, Yu-Chieh Wu and Jie-Chi Yang
| 61S      | An Online Summary Writing System Combining with Concept Mapping and Annotation Sharing
Wan-Chun Lee, Shih-Po Huang, Yuan-Chen Liu, Sheng-Ken Wang and Wei-Chun Hsu
| 63S      | Constructing Directed Semantic Relationships between Concepts for Training Semantic Reasoning
Ming-Chi Liu, Tsui-Min Huang, Kishachi and Danwei Wei

#### 15:00-16:30
**Workshop on Learning with Robots and Robotics Education**
Chair: Chen-Yeh Wang, National Central University, Taiwan

<table>
<thead>
<tr>
<th>Paper ID</th>
<th>Workshop on Learning with Robots and Robotics Education</th>
</tr>
</thead>
</table>
| 103W     | A Pilot Study of Taiwan Elementary School Students Learning Motivation and Strategies in Robotics Learning
Chen-Hung Lin and Eric Chi-Feng Lin
| 103W     | A Survey on Storytelling with Robots
Gwo-Dong Chen, Norahumail and Chen-Yeh Wang
| 103W     | Design a Partner Robot with Emotions in the Mixed Reality Learning Environment
Gwo-Dong Chen, Yu-Ling Chi, Chi-Wen Huang, Cheng-Ju Fang and Chieh-Jung Wu
| 103W     | The Human-like Emotions Recognition using Mutual Information and Semantic Cues
Hou-Chuang Keung Lin, Min-Chih Hsu and Wei-Jie Wang

**Conference Day 3**

Coffee Break (2F 204 & 1F 103)
### Friday, September 9

#### 15:30-17:00

| Paper ID | Session 14: Augmented and Mixed Reality in Education  
Chair: Kwei-Fang Hsiao, Ming-Chuan University, Taiwan |
|----------|----------------------------------------------------------------|
Kwok-Ying Park and Woon-Suk Won |
|          | 75F The Development of the AR-Fitness System in Education  
Kwei-Fang Hsiao and Nian-Shiang Chen |
|          | 34F ARMate: An Interactive AR Character Responding to Real Objects  
Chang-Yu Kang and Woon-Suk Won |
|          | 80S The Application of Augmented Reality to Design Education  
Chih-Hsiang Ko, Ying-Chia Chang, Yung-Hsuan Chen and Li-Hsiu Hsu |

#### 17:00-17:30

| Paper ID | Workshop on Game-Assisted Language Learning (GALL)  
Chair: Ru-Chu Shih, National Pingtung University of Science and Technology, Taiwan |
|----------|--------------------------------------------------------------------------------------------------|
| 2F 203   | W The Attributes and Importance of Online Game with Language Learning for College English-Majored Students  
Ru-Chu Shih, Charles Puga, Tien-Hsien Hsiao and Shi-Jer Loa |
|          | W The Influence of the Presentations of Game-Based Learning Teaching Materials on Chinese L2 Learning  
Shi-Jer Loa, Yu-Yen Wang, Hsiu-Yi Tien and Ru-Chu Shih |
|          | W Study on Influence of Adventure Game on English reading Confidence, Motive and Self-efficacy  
Hsiu-Mei Lin, Shi-Jer Loa, Charles Puga and Chin-Chao Chang |
|          | W The Application of Digital Game-Based Learning to Idioms Education Acceptance  
Sheng-Huang Kuo, Shi-Jer Loa, Tien-Hsien Hsiao and Wei Yuan Diao |
|          | W Using Web 2.0 Social Networking to Enhance Collaborative Learning in Preparing Graduation Events  
I-Tian Chang, Eric Zhu-Feng Liu, Shing-Ti Chen and Ru-Chu Shih |

| Paper ID | Workshop on the Game-based Testing and Assessment  
Chair: Shian-Myong Tseng, Asia University, Taiwan |
|----------|--------------------------------------------------------------------------------------------------|
| 1F 103   | 90F Perceived Fit and Satisfaction on Online Learning Performances: An Empirical Study  
Wen-Shan Lin |
|          | 90F The Relationship of Motives and Achievements in Teacher's Online Training Course  
Wen-Chun Lee, Yuan-Chen Liu, Te-Hsin Fang and Wei-Chun Hsu |
|          | W Deployment of Interactive Games in Learning Management Systems on Cloud Environments for Diagnostic Assessments  
Wen-Chung Shih, Shian-Myong Tseng and Chao-Fang Yang |
|          | W A Pilot Study of Interactive Storytelling for Bullying Prevention Education  
Min-Kai Tai, Shian-Myong Tseng and Jie-Feng Zheng |
|          | W Assessment for Online Small Group Discussion Based on Concept Map Scoring  
Zhe-Hao Ju, Shieh-Yang Cheng, Kuo-Chen Li and Jia-Sheng Heh |

Closing Ceremony (1F-103)