



Edutainment '17 Programme

(26 ~ 27th June, 2017, Bournemouth, UK)

Brief Introduction of the Edutainment 2017.....	I
Committees	I
Schedule.....	1
Keynotes Speakers and Abstracts of Speeches.....	5

Brief Introduction to the Edutainment 2017

Edutainment 2017 is the 11th International Conference on E-Learning and Games, which provides an international forum for researchers and practitioners in various disciplines to share and exchange of experiences in the emerging research area combining Education and Entertainment. Edutainment 2017 becomes an international major conference, which facilitates the international exchange of the-state-of-the-art in academic research and practice. The conference covers all aspects of pedagogical principles, designs and technological issues for Education, Research and Entertainment.

Committees

Honorary Chairs

Jianjun Zhang	Bournemouth University, United Kingdom
Joaquim Jorge	Instituto Superior Tecnico, Lisboa, Portugal

Conference General Chairs

Feng Tian	Bournemouth University, United Kingdom
Christos Gatzidis	Bournemouth University, United Kingdom
Zhigeng Pan	Hangzhou Normal University, China

Programme Chairs

Wen Tang	Bournemouth University, United Kingdom
Abdenmour El Rhalibi	Liverpool John Moores Univeristy, United Kingdom
Yongzhao Zhan	Jiangsu University, China
Koji Koyamada	Kyoto University, Japan

Publication Chairs

Minghui Sun	Jilin University, China
Maiga Chang	Athabasca University, Canada
Hongchuan Yu	Bournemouth University, United Kingdom

Local Chairs

Fred Charles	Bournemouth University, United Kingdom
Charlie Hargood	Bournemouth University, United Kingdom
Karsten Pedersen	Bournemouth University, United Kingdom

Schedule

Day 1 – June 26th, 2017	
8:30 ~ 9:00 Registration Venue: EB 202/203, Executive Business Centre, Bournemouth University	
9:00 ~ 9:15 Opening Ceremony Venue: EB206, Executive Business Centre, Lansdowne, Bournemouth University Chair: <i>Dr. Feng Tian, Bournemouth University</i> Welcome message: by Professor Keith Phalp, Executive Dean, Faculty of Science & Technology, Bournemouth University, UK	
9:15 ~ 10:15 Keynote Speech Chair: <i>Dr. Christos Gatzidis, Bournemouth University</i> Talk: Learning to Predict 3D Volume or Depth from a Single View Dr. Gabriel Brostow, Reader in Computer Science, University College London, UK	
Tea Break 10:15 ~ 10:30	
Paper Session 1: 10:30 ~ 12:30 Venue: EB206, Executive Business Centre, Lansdowne, Bournemouth University Chair: <i>Professor Abdennour El Rhalibi</i>	
10:30 ~ 10:50	Snow White is Missing: An Interactive Locative Story For Dementia Patients Charlie Hargood, Ben Hicks, Fred Charles, Samuel Lynch and Wen Tang
10:50 ~ 11:10	Key Lightweight Technologies of Web3D for Virtual Training in Metro Station Fire Evacuation Fengting Yan, Jinyuan Jia and Kai Tang
11:10 ~ 11:30	Affective Classification of Gaming Activities Coming from RPG Gaming Sessions Fabrizio Balducci and Costantino Grana
11:30 ~ 11:50	How can 3D Game Engines create Photo-Realistic Interactive Architectural Visualizations? Joseph Ratcliffe and Alain Simons
11:50 ~ 12:10	Application of Virtual Simulation Technology in Maintenance Training Qiang Song, Jianda Zhang, Chunpeng Li and Zhaoqi Wang
12:10 ~ 12:30	Game-based Crisis Simulation and Generation Framework: Design and Implementation Structure Pisit Praiwattana and Abdennour El Rhalibi
Lunch 12:30 ~ 13:30 Venue: EB202/203, Executive Business Centre, Lansdowne, Bournemouth University	

13:30 ~ 14:30 Keynote Speech	
Chair: <i>Dr. Carlo Harvey, Bournemouth University</i>	
Venue: EB206, Executive Business Centre, Lansdowne, Bournemouth University	
Talk: Hybrid Learning Powered by Play	
Dr. Sylvester Arnab , Reader in Game Science, Disruptive Media Learning Lab (DMLL), Coventry University, UK	
Paper Session 2: 14:30 ~ 15:30	
Venue: EB206, Executive Business Centre, Lansdowne, Bournemouth University	
Chair: <i>Dr. Carlo Harvey, Bournemouth University</i>	
14:30 ~ 14:50	Exploring the shape of digital textbook for the classroom in the Mobile age Jeong Yong Ahn and Kyung-Soo Han
14:50 ~ 15:10	Mobility and Edutainment in ESL Learning via Podcasting Galina G. Artyushina, Olga A. Sheypak and Roman S. Golov
15:10 ~ 15:30	A Measure of Student Engagement for Serious Games and IoT John Henry, Stephen Tang, Martin Hanneghan, Chris Carter
Tea Break: 15:30 ~ 15:50	
Paper Session 3: 15:50 ~ 17:30	
Venue: EB206, Executive Business Centre, Lansdowne, Bournemouth University	
Chair: <i>Dr. Charlie Hargood</i>	
15:50 ~ 16:10	Tenochtitlan - An Interactive Virtual Reality Environment That Encourages Museum Exhibit Engagement Sebastian Garcia Cardona, Feng Tian and Simant Prakoonwit
16:10 ~ 16:30	A human body contour extraction method based on the elliptical model Li Wang, Wen Tang, Tao Wan, Yao Zhu and Tong Wu
16:30 ~ 16:50	Lightweight Web3D Visualization Framework using Dijkstra-Based Mesh Segmentation Wen Zhou and Jinyuan Jia
16:50 ~ 17:10	Game-enhanced and Process-based eLearning Framework Rawad Hammad
17:10 ~ 17:30	A Study into Autonomous Scanning for 3D Model Construction Darryl O'hare, William Hurst, David Tully and Abdennour El Rhalibi
19:00 Conference Dinner	
Venue: Carlton Hotel, Bournemouth (http://www.hallmarkhotels.co.uk/hotels/bournemouth/leisure)	

Day 2 – June 27th, 2017

Paper Session 1: 9:00 ~ 10:40

Venue: Executive Business Centre, Lansdowne, Bournemouth University

Chair: *Dr. Feng Tian, Bournemouth University*

09:00 ~ 09:20	What's wrong with the feedback? Alain Simons, Karsten Pedersen, Jose Fonseca and Simant Prakoonwit
09:20 ~ 09:40	Research on Multidisciplinary Integration in Game Art Higher Education Chenyang Cui
09:40 ~ 10:00	Representation of Intractable Objects and Action Sequences in VR Using Hand Gesture Recognition Denis Savosin, Simant Prankoonwit and Feng Tian
10:00 ~ 10:20	Dynamic gesture recognition based on edge feature enhancement using Sobel operator Mingmin Zhang, Bing Wang, Hui Zhang, Shengle Zhou, Rongfei Liu, Chongyang Deng, Zhigeng Pan and Hongwei Dong
10:20 ~ 10:40	A Collaborative Aesthetic-driven Virtual Fitness Game Lizhen Han, Mingmin Zhang, Feng Tian and Zhigeng Pan

Tea Break: 10:40 ~ 10:55

Paper Session 2: 10:55 ~ 12:35

Venue: EB206, Executive Business Centre, Lansdowne, Bournemouth University

Chair: *Dr Fred Charles*

10:55 ~ 11:15	An Improved Augmented Reality Registration Method Based on Visual SLAM Qing Gao, Tao Wan, Wen Tang, Long Chen and Kai Zhang
11:15 ~ 11:35	Web3d Learning Platform of Furniture Layout Based on Case-based Reasoning and Distance Field Peihua Song, Youyi Zheng and Jinyuan Jia
11:35 ~ 11:55	The Gamification of Cybersecurity Training Natalie Coull, Ian Ferguson and Iain Donald
11:55 ~ 12:15	Spherical Hybrid Curvature Images of 3D Shapes and Its Applications Yuankui Ma, Shusheng Zhang and Xiaoliang Bai
12:15 ~ 12:35	Evaluating the use of the Unity engine for developing 2D mobile games in consideration of start-up/student developers Jack Brett and Alain Simons

Lunch 12:35 ~ 13:30

Venue: EB202/203, Executive Business Centre, Lansdowne, Bournemouth University

13:30 ~ 14:30 Keynote Speech**Venue:** EB206, Executive Business Centre, Lansdowne, Bournemouth University**Chair:** *Professor Wen Tang***Talk:** Using Games to Explore Futures**Prof Paul Coulton**, Professor of Speculative and Game Design, Lancaster University, UK**Paper Session 3: 14:30-16:30****Venue:** Executive Business Centre, Lansdowne, Bournemouth University**Chair:** *Professor Wen Tang*

	14:30 ~ 14:50	Towards Using an Augmented Reality Mobile Assistant for Improving Driving Skills Gheorghe Daniel Voinea, Cristian Postelnicu and Mihai Duguleana
	14:50 ~ 15:10	3D Point Cloud Classification Based on Discrete Conditional Random Field Xinying Liu, Hongjun Li, Weiliang Meng, Shiming Xiang and Xiaopeng Zhang
	15:10 ~ 15:30	An Investigation into Usability and First Time User Experiences within a Mobile Gaming Context Lawrence Barnett, Christos Gatzidis and Carlo Harvey
	15:30 ~ 15:50	GPGPU-based Painterly Rendering for Mobile Environment Seulbeom Kim, Dongwann Kang and Kyunghyun Yoon
	15:50 ~ 16:10	'I've never really been interested in history but...': Young peoples' views of online historical archives Holly Crossen-White and Angela Turner-Wilson
	16:10 ~ 16:30	Generating Stained Glass Animation Dongwann Kang, Doan Quang Vu and Kyunghyun Yoon

Keynote Speakers and Abstracts of Speeches



Dr Gabriel Brostow

**Reader in Computer Science
University College London (UCL), UK**

Gabriel Brostow is an Associate Professor (Reader) at University College London. His group specializes in Human-in-the-Loop computer vision, where the applications span different areas of vision applied for scientific exploration, and vision applied for computer graphics. He received his PhD from Georgia Tech, and has worked at Cambridge University and ETH Zurich, before starting his group at UCL. He is an Associate Editor for IEEE PAMI, co-program chair for the British Machine Vision Conference 2017, and Area Chair for IEEE CVPR.16/.17 and ECCV 2016.

aLearning to Predict 3D Volume or Depth from a Single View

A single glimpse is hardly enough to triangulate the 3D shapes of a scene. However, training examples are readily available, so statistical models can be trained to map appearance to shape. The details matter, because 3D shapes have different representations and can have many degrees of freedom, and training data is rarely as clean as we'd wish.

I will present two separate learning based methods for shape reconstruction, developed by my team at UCL. In the first, we propose an algorithm that can complete the unobserved geometry of tabletop-sized objects from a single depth-image. This approach is based on a supervised model trained on already available volumetric elements. In the second, instead of a depth-image as input we have just an RGB image, from which we predict a depth image. This is a Convolutional Neural Network based method that exploits epipolar geometry constraints to learn depth-prediction from binocular pairs, to overcome the absence of good ground truth depth data. The two systems are not joined, because there is still more exciting work to be done!



Dr Sylvester Arnab

Reader in Game Science

Disruptive Media Learning Lab, Coventry University, UK

Dr. Sylvester Arnab is a Reader in Game Science at Coventry University, co-leading research at the Disruptive Media Learning Lab (DMLL). With more than 10 years research experience in simulation, serious games and gamification combined, his research interests include gameful, playful and persuasive designs that transform ordinary tasks into extraordinary experiences. Sylvester is currently coordinating projects funded by the EU Commission, HEFCE and NEWTON, such as the Horizon 2020 BEACONING project, HEFCE GameChangers and NEWTON CreativeCulture. He is also leading DMLL's contribution to the H2020 C4Rs project. He currently has over 80 publications and has a portfolio with a total value of in excess of £7 million research funding. He is consistently ranked in the top 10 of the Gamification Guru Power 100 (Rise.Global). He delivers regular keynotes at national and international events related to serious games, gamification and technology-enhanced learning.

<https://sylvesterarnab.wordpress.com/speaking/>

Hybrid learning powered by play

There is a need to harness the potential of a hybrid space in teaching and learning as digital and physical experiences are merging and it is essential that the experience empowers the minds and practices, bridges formal and informal contexts and deepens the learning process. This talk will touch on the potential of playful and gameful approaches for extending engagement to formal methods as an important means for promoting anytime anywhere and lifelong learning and, subsequently, for reshaping learning to better match the needs of the 21st century knowledge economies and open societies. To support this extension, it is important for educational institutions to evaluate and possibly re-design how formal spaces are being used in teaching and learning and how digital platforms can help facilitate delivery, application and assessment of learning in informal context. The talk will also describe existing initiatives, such as the GameChangers programme (<http://gamify.org.uk> and the EU funded Beaconing project (<http://beaconing.eu>).



Professor Paul Coulton

Professor of Speculative and Game Design, Lancaster University, UK

Paul Coulton a Chair of Speculative and Game Design within Lancaster University's open and exploratory, design-led research lab, Imagination Lancaster. His research largely falls into what is known as Game Studies, an area of research that deals with the critical study of digital and non-digital games. More specifically, it focuses on game design, players and their role in society and culture. This activity is embodied as 'research through design' and, in particular, to the speculative design of novel, hybrid, physical/digital interactive games, playful experiences, and artefacts. Some of this research is conducted using techniques he helped pioneer and relates to an, 'situated' evaluation methodology utilising 'app stores' and social networks as an experimental platforms. This element of his work has led to international recognition by industry as well as academia in that he was selected as one of 50 most talented mobile developers worldwide from a community of over 2 million to be a founding Nokia Champion and the first academic invited to speak at the mobile section of the Game Developers Conference. Increasingly, his work encompasses the consideration of interaction design as rhetoric across a range of application areas and increasingly the use of Design Fiction as a way of exploring technological futures for areas such as the Internet of Things.

Using Games to Explore Futures

As games are inherently about exploring alternative worlds in this talk I proposes the utilisation of games as a medium for speculative design through which players can explore scenarios that represent plausible alternative presents and speculative futures I will discuss this in relation to futures orientated design practices such as Design Fiction, Speculative Design, and Critical Design alongside complimentary research areas in games studies such as Critical Play, Persuasive Games, and Procedural Rhetoric to create a frame for using games as speculative design practice. The aim of this design frame is to create games that foster debate and facilitate productive future practice through which designers can develop games that encourage user reflection by enabling players to reflect upon the complex challenges the world now faces.