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Serious Games

Third Joint International Conference, JCSG 2017 Valencia, Spain, November 23–24, 2017 Proceedings



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Preface

The Third International Joint Conference on Serious Games (JCSG 2017) was held in Valencia, Spain, and hosted by Universidad Politécnica de Valencia. JCSG 2017 brought together the 8th Serious Games Development and Applications (SGDA 2017) and 7th Serious Games (GameDays 2017) conferences, previously held in the UK, Norway, Germany, Portugal, and Australia.

JCSG 2017 joined experts from over 12 countries presenting and discussing recent developments to further improve the application of serious games in multiple fields like education and learning, simulation, training, health and well-being, management, and cultural heritage among others. The topics covered by the conference offered participants a valuable platform to discuss and learn about the latest developments, technologies, and possibilities in the development and use of serious games with a special focus on how different fields can be combined to achieve the best possible results.

We received 44 submissions from which 23 were selected as full papers, two as short papers, and four as posters. All the manuscripts submitted to the JCSG2017 were peer-reviewed by at least three independent reviewers, who were provided with a detailed review proforma. The comments from the reviewers were communicated to the authors, who incorporated the suggestions in their revised manuscripts. The recommendations from three reviewers were taken into consideration while selecting a manuscript for inclusion in the proceedings. The exhaustiveness of the review process is evident, given the large number of articles addressing a wide range of research areas. The stringent review process ensured that each published manuscript met rigorous academic and scientific standards.

Keynote presentations were given by: Val Shute, Mack and Effie Campbell Tyner endowed professor of education at Florida State University; Baltasar Fernández-Manjón, Full Professor in the Department of Software Engineering and Artificial Intelligence (DISIA) at the Complutense University of Madrid (UCM); and digital media entrepreneur and researcher Kam Star.

The conference and the publication of the JCSG 2017 proceedings by Springer were the remarkable outcome of the untiring efforts of the entire organizing team. The success of an event undoubtedly involves the painstaking efforts of several contributors at different stages, dictated by their devotion and sincerity. Fortunately, since the beginning of its journey, JCSG 2017 has received support and contributions from every corner. I thank all who have wished the best for JCSG 2017 and contributed by any means toward its success. The edited proceedings volumes published by Springer would not have been possible without the perseverance of all the committee members. I especially thank the Organizing Committee members, Stefan Göbel, Minhua Ma, Tim Marsh, Manuel Fradinho Oliveira, and Jannicke Baalsrud Hauge, for helping me shape JCSG 2017. The organizers of JCSG 2017 owe thanks to all the contributing authors for their interest and exceptional articles. I also thank the authors of the papers for adhering to the time schedule and for incorporating the review comments in the

VI Preface

final version of their work. I wish to extend my heartfelt gratitude to the authors, reviewers, committee members, and production staff whose diligent work put shape to the JCSG 2017 proceedings. I especially thank our dedicated team of reviewers who volunteered for the arduous and tedious task of quality checking and critique of the submitted manuscripts. I also wish to thank my research colleagues at the Immersive Neurotechnologies Laboratory (LENI), and my PhD research scholars for extending their enormous assistance during the reviewing and editing process of the conference proceedings, with a special thanks to Alejandra Del Valle and Irene Alice Chicchi . The time spent by all of them and the midnight oil burnt is greatly appreciated, for which I will ever remain indebted. I also thanks the Polytechnic City of Innovation of my university for hosting the conference. Lastly, I would like to thank Springer for accepting our proposal to publish the JCSG 2017 conference proceedings.

September 2017

Tim Marsh Minhua Ma Manuel Fradinho Oliveira Jannicke Baalsrud Hauge Stefan Göbel Mariano Alcañiz

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JCSG 2017 was organized by the Institute of Research and Innovation in Bioenginnerring (I3B) in cooperation with the Polytechnic City of Innovation (CPI) of the Universidad Politécnica de Valencia (UPV).

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Contents

Virtual Stealth Assessment: A New Methodological Approach for Assessing Psychological Needs	1
Irene Alice Chicchi Giglioli, Elena Parra, Georgina Cardenas-Lopez, Giuseppe Riva, and Mariano Alcañiz Raya	
VR Serious Game Design Based on Embodied Cognition Theory Jose L. Soler, Manuel Contero, and Mariano Alcañiz	12
VROARRR, Audio Based VR Weapon Design	22
Go with the Dual Flow: Evaluating the Psychophysiological Adaptive Fitness Game Environment "Plunder Planet"	32
Smart Mobility, the Role of Mobile Games	44
An Extensible System and Its Design Constraints for Location-Based Serious Games with Augmented Reality	60
Full Lifecycle Architecture for Serious Games: Integrating Game Learning Analytics and a Game Authoring Tool	73
InterPlayces: Results of an Intergenerational Games Study	85
PathoGenius: A Serious Game for Medical Courses	98
Galaxy Shop: Projection-Based Numeracy Game for Teenagers with Down Syndrome	109

A Novel Serious Game for Trust-Related Data Collection in Supply Chains	121
Generating Consensus: A Framework for Fictional Inquiry in Participatory City Gaming	126
A Platformer Serious Game with Dynamic Learning Contents	138
I-Interact: A Virtual Reality Serious Game for Eye Contact Improvement for Children with Social Impairment	146
A Case Study into the Use of Virtual Reality and Gamification in Ophthalmology Training	158
Players' Performance in Cross Generational Game Playing	170
The Med Life - A Medical MMORPG	183
Recommendations to Leverage Game-Based Learning to Attract Young Talent to Manufacturing Education	187
An Evaluation of Extrapolation and Filtering Techniques in Head Tracking for Virtual Environments to Reduce Cybersickness	203
Geodata Classification for Automatic Content Creation in Location-Based Games	212
Reflection Continuum Model for Supporting Reflection and Game-Based Learning at the Workplace	224

Conte	ents	XI
Experimental Serious Games: Short Form Narrative in Augmented Reality Dioramas		235
Games for Mental and Moral Development of Youth: A Review of Empirical Studies		245
None in Three: The Design and Development of a Low-Cost Violence Prevention Game for the Caribbean Region		259
Sliced Serious Games: Conceptual Approach Towards Environment-Friendly Mobility Behavior		271
Conceptual Approach Towards Recursive Hardware Abstraction Layers. Robert Konrad, Polona Caserman, Stefan Göbel, and Ralf Steinmetz		284
Bridging Educational and Working Environments Through Pervasive Approaches		296
Putting Serious Games in Context: The Energy Efficiency of Buildings Case		308
Creating Location-Based Augmented-Reality Games for Cultural Heritag Mads Haahr	;e	313
"Skipping the Baby Steps": The Importance of Teaching Practical Programming Before Programming Theory		319
Author Index		331