

Foreword to the Special Section on XVII Brazilian Symposium on Computer Games and Digital Entertainment (SBGames 2018)

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SBGames conference is the largest and most important scientific event for games and digital entertainment in Latin America. It is attended by scientists, artists, designers, teachers and students from Colleges, Universities, research centers and the Game Industry, gathering around a thousand participants from different regions of Brazil and Countries, mainly from Peru, Argentina, Uruguay, United States, England, and Portugal. SBGames is the main conference of the Special Committee of Games and Digital entertainment of SBC (Brazilian Computer Society), which is also supported by ABRAGAMES (Brazilian Association of Digital Game Developers). SBGames is an In-Cooperation event of Eurographics and ACM SIGGRAPH.

In 2018, the XVII SBGames was held in the beautiful city of Foz do Iguaçu in a jointly conference with SIBGRAPI (Conference on Graphics, Patterns and Images) and SVR 2018 (Symposium on Virtual and Augmented Reality). We are really happy that Renato Degovani (TILT online) and Professor Norman Badler (University of Pennsylvania) each gave a keynote at SBGames 2018. In addition, the conference had technical sessions, round tables, and exhibits in 5 Conference Tracks: Computing, Arts & Design, Culture, Education, and Industry. Furthermore, there are several Activities, such as the Games Festival, Game Art Exhibition, SBGames Kids&Teens, and Diversity in Games.

This year we accepted papers previously submitted to the Special Track on SBGames for the Elsevier C&G journal. We received 12 high-standard papers and only the two best papers have made it to publication in this special issue. They were selected by a committee of well-renowned researchers in the field in three revision phases, where each paper has been reviewed by three reviewers at each phase. We thank all reviewers for their amazing and high quality work. The remaining papers have been encouraged to submission to the main track at SBGames conference.

The first paper of this special issue, A 3D modeling methodology based on a concavity-aware geometric test to create 3D textured coarse models from concept art and orthographic projections by Sergio N. Silva Junior, Felipe C. Chamone; Renato C. Ferreira, and Erickson R. Nascimento [1] tackles the problem of automatically modelling 3D structures from pieces of concept arts and provides high accuracy 3D reconstruction in both convex and concave regions. The second paper is Deep spherical harmonics light probe estimator for mixed reality games by Bruno Augusto Dorta Marques, Esteban W Clua and Cristina N Vasconcelos [2]. This paper describes a deep learning based method to estimate the lighting condition of a real scene in interactive time from a raw image. In addition, a public dataset for lighting estimations that output an spherical harmonic light probe is available.

We are very grateful to Prof. Joaquim Jorge and all of the C&G journal staff for facilitating the publication of this special section. We would like to thank the authors for their submissions, and the reviewers who helped us with the revision of the manuscripts. We would

also like to thank the SBGames organization. For further information about SBGames 2018, please visit the official website: www.sbgames.org/sbgames2018.

[1] Silva Sergio N Junior , Chamone Felipe C , Ferreira Renato C , Nascimento Erickson R. A 3D modeling methodology based on a concavity-aware geometric test to create 3D textured coarse models from concept art and orthographic projections. *Comput Graph* 2018;76:73–83.

[2] Marques Bruno Augusto Dorta , Clua Esteban Walter Gonzalez , Vasconcelos Cristina Nader . Deep spherical harmonics light probe estimator for mixed-reality games. *Comput Graph* 2018;76:96–106 .



Soraia Raupp Musse received the Ph.D. degree in computer science from the École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland, in 2000, under the supervision of Prof. D. Thalmann. She is currently an Associate Professor with the Department of Computer Science, Pontifical Catholic University of Rio Grande do Sul, Porto Alegre, Brazil, where she created (and still coordinates) the Virtual Human Laboratory, where projects supported by private companies and the Brazilian government are developed. Her current research interests include crowd simulation and analysis, facial animation and integration between computer graphics, pattern recognition, and computer vision.



Daniel Thalmann is a Swiss and Canadian Computer Scientist. He is currently Honorary Professor at EPFL, Switzerland, and Director of Research Development at MIRALab Sarl. Pioneer in research on Virtual Humans, his current research interests include social robots, crowd simulation and Virtual Reality. He has been the Founder of VRlab at EPFL. From 2009 to 2017, he was Visiting Professor at the Nanyang Technological University, Singapore. He is coeditor-in-chief of the *Journal of Computer Animation and Virtual Worlds*, and member of the editorial board of 12 other journals. Daniel Thalmann has published more than 600 papers in Graphics, Animation, and Virtual Reality. He received his PhD in

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Rafael Bidarra is associate professor Game Technology at the Faculty of Electrical Engineering, Mathematics and Computer Science of Delft University of Technology, The Netherlands. He graduated in electronics engineering at the University of Coimbra, Portugal, in 1987, and received his PhD in computer science from Delft University of Technology, in 1999. He leads the game technology research lab at the Computer Graphics and Visualization Group. His current research interests include: procedural and semantic modeling techniques for the specification and generation of both virtual worlds and gameplay; serious gaming; game adaptivity and interpretation mechanisms for in-game data. Rafael has numerous publications in international journals and conference proceedings, integrates the editorial board of several journals, and has served in many conference program committees.

Published in:

Computers & Graphics 76 (2018) A5–A6

<https://doi.org/10.1016/j.cag.2018.09.014>