Computers & Graphics 69 (2017) A3–A4

Contents lists available at ScienceDirect

Computers & Graphics

journal homepage: www.elsevier.com/locate/cag

Editorial

Foreword to the Special Section on Motion in Games 2016

Games have become a very important medium for both education and entertainment. Motion plays a critical role in computer games. Characters move, objects are manipulated or move due to physical constraints, entities are animated, and a camera moves through the scene. Even the full-body motion of the player is now used as input to games. Motion is currently studied in many different areas of research, including graphics and animation, game technology, robotics, simulation and computer vision, as well as physics, psychology, and urban studies. Cross-fertilization between these communities can considerably advance the state of the art. The Motion in Games conference brings together researchers from these various fields to present the most recent results and to initiate collaboration.

This special section of Computers & Graphics is dedicated to the best papers from the Ninth International Conference on Motion in Games (MIG), which was held in San Francisco, California, on 10–12 October 2016. MIG 2016 was sponsored by ACM SIGGRAPH and in cooperation with Eurographics. The 47 submissions have been evaluated in a double-blind process by at least three reviewers from the international program committee. The three best papers were selected for this special issue from the 25 accepted papers. They were significantly revised and extended, and went through a second review cycle, before they could be accepted for publication in the Journal. These papers cover three important areas in motion-related research. Alexanderson et al. explore how motion data is gathered - an important problem in animation. They utilise prior knowledge to reconstruct hand gesture data and achieve high-quality tracking in the presence of heavy occlusions [1]. Neog et al. generate real-time interactive graphics using human motion as an input. They present a system for synthesising 3D anatomical models using images obtained from a depth camera [2]. Shen et al. focus on motion analysis and visualisation. The proposed system enables the high-level analysis of motion quality based on the connectivity and variety of motion in a database, supporting applications in sports training and rehabilitation [3].

References

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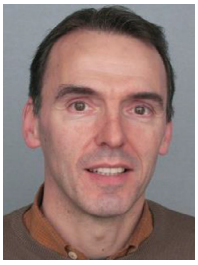
https://doi.org/10.1016/j.cag.2017.11.002

Hubert P. H. Shum received the M.Sc. and B.Eng. degrees from the City University of Hong Kong and the Ph.D. degree from the School of Informatics, The University of Edinburgh. He was a Lecturer with the University of Worcester, a Post-Doctoral Researcher with RIKEN Japan, and a Research Assistant with the City University of Hong Kong. He is currently an Associate Professor (Reader) and the Director of Research and Innovation with Northumbria University. His research interests include character animation, machine learning, human motion analysis, and computer vision.

Michael Neff is a professor in Computer Science and Cinema & Digital Media at the University of California, Davis where he leads the Motion Lab, an interdisciplinary research effort in character animation and embodied interaction. He holds a Ph.D. from the University of Toronto and is also a Certified Laban Movement Analyst. His interests include character animation, especially modeling expressive movement, nonverbal communication, gesture and applying performing arts knowledge to animation. Select distinctions include an NSF CAREER Award and the Alain Fournier Award. He currently serves as Chair for the Department of Cinema and Digital Media at UC Davis.



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