



3rd Special Session: Modeling



Serge van Sint Jan – co-chairman

Associate Professor at the Department of Anatomy of the Université Libre de Bruxelles since 1990. His Research interests mainly include all aspects around anatomically correct modeling of the musculo-skeletal system and the related clinical aspects. He is now deeply involved in the co-organization of a coordination action whose aim is to promote Physiome-like actions in Europe.



Philippe Pudlo – co-chairman

Philippe Pudlo has been an assistant professor in biomechanics team since 1999. He has a PhD in automatic control. His subject doctorate was the analysis and the optimization of rowing movements. Since five years, his research has targeted the modelisation and the simulation of human movements (e.g. the car ingress/egress movements, the rowing gesture). At the present time, he's coordinating the Handiman national project. The aim of this project is to simulate the car ingress/egress movement for elderly and pathological population.



Franck Barbier – co-chairman

Assistant Professor at the UVHC. He defended his PhD in 1994 and his HDR in 2005. He is actually searcher in the LAMIH-UMR CNRS 8530 and Assistant Head of the Faculty of Sport Sciences. His research is focused on decision making and their applications are the human gait and load carrying with backpack. He manages industrial contracts since 1995 and has a patent.



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A motion tracking method for the modeling and simulation of human movement in 3D

Ajay Seth - invited speaker



He obtained his BSc (1997) and MSc (2000) in Systems Design Engineering. After his numerous industrial experiences (Canadian Space Agency, CEA Electronics Inc., VGI), he returned to academia to pursue his PhD under the guidance of Marcus G Pandy, University of Texas, Austin (USA). He was awarded a ISB Dissertation Grant (2004), a University of Texas Continuing Fellow (2004-05) and was granted the Komor New Investigator Award by the ISB Technical Group on Computer Simulation (2005). His research interests are the generation of patient specific models from imaging and clinical protocols and the integration of these models and simulations into the clinical regimen to analyze and treat musculoskeletal disorders.





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- Thomas Robert, Laurence Chèze, Raphael Dumas & Jean-Pierre Verriest,
Joint forces and moments calculation for a 3D whole body model during complex movement : Application to the balance recovery movement following a support surface translation
- Ilya Phenichniy, Andrey Morozov & Victor Sholukha,
Real time modeling of human body dynamics
- M. Desmarais, R. Aissaoui & A. Barré,
Knee Joint Energy Dissipation: A New Conceptual Approach To Inverse Dynamic Analysis
- Vicon Peak,
Sponsor presentation
- Discussion

