Preface of the "3rd Symposium on Modelling and Simulation in Computer Sciences and Engineering"

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Preface of the "3rd Symposium on Modelling and Simulation in Computer Sciences and Engineering"

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The 3rdSymposium on Modelling and Simulation in Computer Sciences and Engineering was held in the14th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2016), Rhodes, Greece, 19-25 September 2016.

Modelling and simulation, applied to computer science and engineering is anexciting research area that uses the computational power of modern information processing systems to improve our understanding about the real world.Computer simulations and graphical visualizationsplay a fundamental role developing mathematical models to examine problems that would be too expensive, too much dangerous, or even impossible to study by direct experimentation.Moreover, virtual prototyping, using modelling and simulating software, is a keystone process to bring down the overall cost of designing and developing novel products. Indeed, the rising number of organisations using these technologies has led to a dramatic increase in demand for better research and skilled professionalsin this research area.

As in the first and second symposiums, that were great successes in ICNAAM 2014 and ICNAAM 2015, the aim of this 3rdsymposium was to provide researchregarding modelling and simulation techniques applied tothephysical sciencesand engineering, wherethe purpose of the section activities was to discusstheoretical studies and experimental results with interest inseveral topics like modelling in engineering sciences and technology, dynamical systems models and methods, computational methods in engineering, computer science modelling and simulation, computer networks modelling, optimization, simulation and control theory, stochastic optimization, numerical methods and simulation, systems modelling, computational mathematics, analysis of mathematical models, algorithms and data structures, software design, control and systems engineering.

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TechnicalCommittee: António Pinto, Bibudhendu Pati, Carla Barbosa, Chhabi Rani Panigrahi, Daniel Filipe Albuquerque, DucTruongPham, Giovanni Pau, Helena Sofia Rodrigues, Hugo Rodrigues, Humberto Varum, Isabel Gonçalves, James M. Raude, JianyeHao, João F. Nunes, João Manuel R. S. Tavares, Luca Cassano, Manuel Rui Alves, MarioCollotta, MeeraViswavandya, Paula Alexandra Rego, Paulo Caldas, Pedro Dinho da Silva, Pedro Dinis Gaspar, Pedro Pinto, Reza GharoieAhangar, RoohollahKalatehjari, Rui Carneiro, SaadAljebori, Sónia Dias, TawandaMushiri, Tiago Pedrosa, Vai KuongSin, YildirimDalkiliç.

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Francisco Miranda

Francisco Miranda was born on April 1, 1975 in Viana do Castelo, Portugal. He graduated in Mathematics from University of Coimbra in 1999. Having done research on Control Theory he earned his MSc and PhD degrees in Applied Mathematics from University of Porto in 2003 and 2008, respectively. His research interests focus on stabilization and observability of control systems, optimal control, guidance control, numerical methods of stabilizer construction, time scales. Currently, he is Professor and Head of Mathematics Department at the Polytechnic Institute of Viana do Castelo, Portugal. He is also a researcher at Center for Research and Development in Mathematics and Applications, University of Aveiro, Portugal, and research collaborator at Centro de Estatística e Modelação of Polytechnic Institute of Viana do Castelo, Portugal.

Carlos Abreu

Carlos Abreu was born on September 8, 1976 in Esposende, Braga, Portugal. He graduated in Electronics and Telecommunications from University of Aveiro in 2005. Having done research on Instrumentation, Signal and Medical Image he earned his MSc degree in Biomedical Engineering in 2008. In 2014 he received his PhD in Biomedical Engineering from the University of Minho, Portugal. His research interests focus on: Wireless Sensors Networks for Medical Applications, Biomedical Instrumentation and Human Machine Interfaces for Disabled or Elderly People. Currently, he is working as Assistant Professor at the Polytechnic Institute of Viana do Castelo (IPVC).

Daniel Miranda

Daniel Miranda was born on May 18, 1981 in Viana do Castelo, Portugal. He graduated in Physics and Chemistry from University of Minho in 2005.Having done research on Materials, Nanoscience, Nanotechnology, Processing and characterization on poly (vinylidene fluoride) doped with nano-silver particles he earned his MSc degree in Physics in 2008. From 2005 to 2015 he worked as a teacher in Secondary Schools and last two years in Polytechnic Institute of Viana do Castelo - School of Technology and Management (IPVC). His research interests focus on: Energy, Energy Systems, Storage energy applications, and Development of theoretical and simulation models for rechargeable lithium, magnesium and sodium-ion batteries (Computational simulation and modeling).
Currently, he is PhD Student in Physics of third year of a PhD program in University of Minho, Portugal. He is also a researcher in Group on Electroactive Smart Materials and Center of Physics of University of Minho, Portugal. The main research is the theoretical study of the processes occurring in the operation of lithium-ion batteries and the development of theoretical models simulation/prediction of the parameters of the battery performance and test experimentally.