

The 14th International Symposium

# Computer Methods in Biomechanics and Biomedical Engineering

20 – 22 September 2016, Tel Aviv, Israel



## Session Track: “**COMPUTATIONAL BIO- IMAGING AND VISUALIZATION**”

João Manuel R. S. Tavares

Instituto de Ciência e Inovação em Engenharia Mecânica e Engenharia Industrial, Faculdade de Engenharia, Universidade do Porto, Portugal

[tavares@fe.up.pt](mailto:tavares@fe.up.pt), [www.fe.up.pt/~tavares](http://www.fe.up.pt/~tavares)

### **Description:**

In recent years extensive research has been performed in numerical modelling and visualization of structures for several distinct areas of science, namely, computer sciences, engineering, mathematics, medicine and physics. A major application of numerical modelling and visualization of structures can be found in medicine. For instance, it is possible to use computational methods on medical imaging data to build numerical models and visualize bio-structures. These methods can have different goals, such as shape reconstruction, segmentation, motion and deformation analyses, registration, simulation, visual assessment, etc.

The main goal of the proposed Session Track is to bring together researchers involved in the related fields (Image Acquisition, Image Analysis, Image Segmentation, Objects Tracking, Objects Matching, Shape Reconstruction, Motion and Deformation Analysis, Medical Imaging, Scientific Visualization, Software Development, Grid Computing, etc.), in order to set the major lines of development for the near future.

The proposed Session Track will consist of researchers representing various fields related to Biomechanics, Biomedical Engineering, Computational Vision, Computer Graphics, Computational Mechanics, Mathematics, Medical Imaging, Scientific Visualization, Statistics, etc., in order to contribute to the achieving of better solutions for more realistic computational “living” models, and attempts to establish a bridge between clinicians and researchers from these diverse fields.

The best works presented in the proposed Session Track will be invited to submit an extended version to the journal “Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization”, which is published by Taylor & Francis and has the organizer as Editor-in-Chief.

**Keywords:** Medical Imaging, Scientific Visualization, Computational Methods.