## CONTENTS

### INVITED SPEAKERS

**Keynote Speakers**

- Advances and Challenges in Dynamic Bioimage Analysis  
  *Erik Meijering*  
  (IS-5)

- How to Cross the Border from R to D? - The Example of Conception of New Medical Devices  
  *Lionel Pazart*  
  (IS-7)

- The Bidirectional Route of Research and Innovation - Insights from the Stressed Brain  
  *Nuno Sousa*  
  (IS-9)

- Enchanted Objects - Design, Human Desire and the Internet of Things  
  *David Rose*  
  (IS-11)

### PAPERS

#### Full Papers

- Crutchfield Information Metric for Quantifying the Inter-sequence Relationship of Multiparametric MRI Data  
  *Jens Kleesiek, Armin Biller and Kai Ueltzhöffer*  
  (5)

- Content Based Retrieval of MRI Based on Brain Structure Changes in Alzheimer's Disease  
  *Katarina Trojacanec, Ivan Kitanovski, Ivica Dimitrovski and Suzana Loshkovska*  
  (13)

- Meshing Meristems - An Iterative Mesh Optimization Method for Modeling Plant Tissue at Cell Resolution  
  *Guillaume Cerutti and Christophe Godin*  
  (23)

- Optical Imaging for Diagnosis of Rheumatoid Arthritis - Automatic Versus Human Evaluation  
  *Pouyan Mohajerani, Reinhard Meier, Ernst Rummery and Vasilis Ntziachristos*  
  (36)

#### Short Papers

- Segmentation of LG Enhanced Cardiac MRI  
  *Kjersti Engan, Valery Naranjo, Trygve Efsethol, Stein Ørn and Leik Woie*  
  (47)

- A Block-based Approach for Malignancy Detection within the Prostate Peripheral Zone in T2-weighted MRI  
  *Andrik Rampun, Paul Malcolm and Reyer Zwiggelaar*  
  (56)

- Influence of Muscle Cross-sectional Area in Skin Temperature  
  *Eduardo Borba Neves, Fabio Bandeira, Leandra Ulbricht, José Vilaça-Alves and Victor Machado Reis*  
  (64)

- A Fully Automatic Tool for Counting Virchow-Robin Spaces in Magnetic Resonance Imaging for Lacunar Stroke Study  
  *Sérgio Pereira, José Mariz, Nuno Sousa, J. H. Correia and Carlos Silva*  
  (69)

- Detection of Root Knot Nematodes in Microscopy Images  
  *Faroq AL-Tam, António dos Anjos, Stephane Bellafiore and Hamid Reza Shahbaktia*  
  (76)
Low-rank and Sparse Matrix Decomposition with a-priori Knowledge for Dynamic 3D MRI Reconstruction
Dornoosh Zonoobi, Shahrooz Faghigh roohi and Ashraf. A. Kassim

Robust Image Analysis of BeadChip Microarrays
Jan Kalina and Anna Schlenker

Encoded Total Focusing Method for Improving Data Acquisition Rate
César Gutiérrez Fernández, Ana Jiménez and Carlos Julián Martín-Arguedas

Quantitative Scoring of Muscle Involvement in MRI of Neuromuscular Diseases
Maria Evelina Fantacci, Guja Astrea, Roberta Battini, Alessandra Retico, Chiara Sottocornola and Michela Tosetti

AUTHOR INDEX