

Editorial for the Workshop on Biomedical Image Registration (WBIR) 2016

<http://wbir2016.doc.ic.ac.uk>

WBIR 2016 is the seventh international Workshop on Biomedical Image Registration. It aims to bring together leading researchers in the area of biomedical image registration to present and discuss recent developments in the field. Previous workshops in the series have been held in Bled, Slovenia (1999), at the University of Pennsylvania, USA (2003), at the University Medical Center Utrecht, The Netherlands (2006), in Luebeck, Germany (2010), at Vanderbilt University, Nashville, USA (2012), and at University College London, UK (2014).

In recent years, medical imaging researchers have established several unique approaches to deal with the often very complex, high dimensional and multi-modal nature of the image registration problem. In addition, they often draw inspirations from concepts originally introduced by the much larger computer vision and pattern recognition community, such as graphical models, machine learning, superpixels and many more. WBIR 2016 is therefore held for the very first time in conjunction with the Conference on Computer Vision and Pattern Recognition (CVPR) at Caesar's Palace in Las Vegas, Nevada, to emphasize the strong links between the two communities, and to foster fruitful scientific exchange and communication among researchers that share common interests.

Despite the saying that 'What happens in Vegas stays in Vegas', the WBIR 2016 proceedings are published together with the CVPR proceedings on IEEE Xplore, and contain the latest original research results selected through a rigorous peer-review process. Every full-length paper (7 to 9 pages double-column format) was reviewed in a double-blind process by three members of an international Scientific Committee, composed of 35 renowned scientists in the field of medical image registration. The result of this rigorous selection process is a set of 24 high-quality articles originating from 19 research groups located in 11 countries, spanning a large variety of registration research topics. From 31 original submissions, a total of 12 papers were selected for single-track oral presentation, which are loosely grouped into sessions on "Advances in Regularisation and Optimisation", "How to Deal with Missing Data", "Mosaicing with Temporal Stability" and "Registration for Advanced Magnetic Resonance Imaging". Further 12 accepted papers will be presented as posters during dedicated poster sessions. The workshop continues its tradition of fo-

cus on methodological advances and the presentation of exciting novel ideas.

The conference program is greatly enhanced by our two invited speakers. Professor Lourdes Agapito (University College London, UK) who is one of this year's CVPR Program Chairs will be presenting exciting work on structure-from-motion, the use of articulated models and much more within the theme: 'Non-rigid 2D and 3D registration'. Dr Andrew Fitzgibbon (Microsoft Research Cambridge, UK) explains how to find the right choice of optimisation methods for registration and vision problems in general in his talk, which is entitled: 'VarPro, ICP, lifting, and all that'.

We warmly thank the members of our Scientific Committee, who provided excellent feedback and all authors for contributing their latest research for presentation, as well as Dr Kanwal Bhatia and Dr Alberto Gomez (both King's College London) and Dr Bartlomiej Papiez (University of Oxford), for their scientific input and organisational help at the Program Selection meeting. We are certain that the workshop will be an exciting place to share the latest discoveries in this fascinating research area and live up to its excellent reputation.

Julia Schnabel, King's College London, UK

Kensaku Mori, Nagoya University, Japan

Ben Glocker, Imperial College London, UK

Mattias Heinrich, University of Luebeck, Germany

Scientific Committee: Paul Aljabar, (KCL); Tal Arbel, (McGill); Adrien Bartoli, (ISIT); Nathan Cahill, (RIT); Gary Christensen, (Iowa); Olivier Commowick, (INRIA); Adrian Dalca, (MIT); Benoit Dawant, (Vanderbilt); Stanley Durlleman, (INRIA); Polina Golland, (MIT); Stefan Klein, (Erasmus); Ender Konukoglu, (MGH Harvard); Christian Ledig, (Imperial); Marco Lorenzi, (UCL); Andreas Maier, (Erlangen); Marc Modat, (UCL); Jan Modersitzki, (Luebeck); Kerstin Miller, (Stanford); Wiro Niessen, (Erasmus); Aristeidis Sotiras, (UPenn); Bartlomiej Papiez, (Oxford); Nikos Paragios, (ECP); Xavier Pennec, (INRIA); Josien Pluim, (Eindhoven); Karl Rohr, (Heidelberg University); Daniel Rueckert, (Imperial); Dinggang Shen, (UNC); Marius Staring, (LUMC); Lisa Tang, (UBC); Matthew Toews, (Montreal); Jef Vandemeulebroucke, (VUB); Tom Vercauteren, (UCL); Cheng Zhang, (Iowa).