Preface

Bioimage computing has known tremendous developments in recent years. State-of-the-art light microscopy (LM) can visualize living cells with unprecedented image quality and resolution in space and time. Novel LM modalities provide biologists with formidable means to explore cell mechanisms, embryogenesis, or neural development, to mention just a few biological applications. Electron microscopy (EM) supplies complementary information about the cell structure down to nanometer resolution. In view of the massive bioimage data sets produced in the field, amounting to multiple terabytes per volume or video, with exceedingly complex information content to be analyzed, state-of-the-art computational methods are very much needed.

With the aim to address at least part of this need, the second Workshop on Bioimage Computing (BIC) was held in conjunction with the 14th European Conference on Computer Vision (ECCV 2016), following the success of the first edition at the 28th IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2015). The workshop brought together a diverse crowd of researchers active in computer vision and bioimage analysis to discuss the latest challenges and promising solutions in image modeling, restoration, segmentation, registration, object detection, counting, clustering, tracking, and many other topics at the crossroads of computer vision and biology.

We are very grateful to the invited speakers, Charless Fowlkes, Pascal Fua, Jeroen van der Laak, Gonzalo de Polavieja, Jens Rittscher, Michael Unser, Thomas Walter, for sharing their expert vision at the workshop. In addition to invited talks, 10 contributed presentations (two talks and eight posters) were carefully selected from in total 14 submissions. We thank the authors for choosing to present their work at the workshop and for contributing to its success. Each submitted paper received at least three independent reviews. We gratefully acknowledge the effort of the 22 anonymous expert reviewers in assessing the technical and scientific quality of the papers. Special thanks to Florian Jug for maintaining the BIC website (bioimagecomputing.com).

The final accepted papers presented at the workshop are found in the following pages. We hope they are valuable to your research and we look forward to welcoming you at future editions of the workshop.

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