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Intravascular Imaging and Computer Assisted Stenting *and* Large-Scale Annotation of Biomedical Data and Expert Label Synthesis

7th Joint International Workshop, CVII-STENT 2018
and Third International Workshop, LABELS 2018
Held in Conjunction with MICCAI 2018
Granada, Spain, September 16, 2018
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CVII-STENT 2018 Preface

MICCAI is again hosting the workshop on Computing Visualization for Intravascular Imaging and Computer Assisted Stenting (CVII-STENT), which focuses on the technological and scientific research connected with endovascular procedures. This series of workshops has become an important annual platform for the interchange of knowledge and ideas for medical experts and technological researchers in the field. Many of the authors have been involved with the workshop since its infancy and continue to be part of this research community. We look forward to this year's invited talks and presentations on the state of the art in imaging, treatment, and computer-assisted interventions in the field of endovascular interventions. We also extend our many thanks to the reviewers, who have helped ensure the high quality of the papers presented at CVII-STENT.

September 2018

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LABELS 2018 Preface

The third international workshop on Large-scale Annotation of Biomedical data and Expert Label Synthesis (LABELS) was held in Granada, Spain, on September 16, 2018, in conjunction with the 21st International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI). With the widespread use of data-intensive supervised machine learning methods in medical image computing, a growing pressure has mounted to generate vast quantities of quality annotations. Unsurprisingly, in response to the need for very large volumes of training data for deep learning systems, the demand for new methods of gathering vast amounts of annotations in efficient, coherent, and safe ways has only grown. To address these issues, LABELS gathers contributions and approaches focused on either adapting supervised learning methods to learn from external types of labels (e.g., multiple instance learning, transfer learning) and/or acquiring more, or more informative, annotations, and thus reducing annotation costs (e.g., active learning, crowdsourcing). Following the success of the previous two LABELS workshops, and given the ever growing need for such methods, the third workshop was planned for 2018. The workshop included invited talks by Tal Arbel (McGill University, Canada) and Leo Joskowicz (The Hebrew University of Jerusalem, Israel), as well as several papers and abstracts. After peer review, a total of 12 papers and 7 abstracts were selected. The papers appear in this volume, and the abstracts are available on the workshop website, http://miccailabels.org. The variety of approaches for dealing with a limited number of labels, from semi-supervised learning to crowdsourcing, are well-represented within the workshop. Unlike many workshops, the contributions also feature "insightfully unsuccessful" results, which illustrate the difficulty of collecting annotations in the real world. We would like to thank all the speakers and authors for joining our workshop, the Program Committee for their excellent work with the peer reviews, our sponsor – RetinAi Medical – for their support, and the workshop chairs for their help with the organization of the third LABELS workshop.

September 2018

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