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Heung-Il Suk · Mingxia Liu ·
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Preface

The 10th International Workshop on Machine Learning in Medical Imaging (MLMI 2019) was held in Shenzhen, China, on October 13, 2019, in conjunction with the 22nd International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI 2019).

In the face of artificial intelligence making significant changes in both academia and industry, machine learning has always played a crucial role in the medical imaging field, including but not limited to computer-aided detection and diagnosis, image segmentation, image registration, image fusion, image-guided intervention, image annotation, image retrieval, image reconstruction, etc. The main scope of this workshop was to help advance the scientific researches within the broad field of machine learning in medical imaging. This workshop focused on major trends and challenges in this area and presented original works aiming to identify new cutting-edge techniques and their uses in medical imaging. The workshop facilitated translating medical imaging research, boosted by machine learning, from bench to bedside. Topics of interests included deep learning, generative adversarial learning, ensemble learning, sparse learning, multi-task learning, multi-view learning, manifold learning, and reinforcement learning, with their applications to medical image analysis, computer-aided detection and diagnosis, multi-modality fusion, image reconstruction, image retrieval, cellular image analysis, molecular imaging, digital pathology, etc.

Along with the great advances in machine learning, MLMI 2019 received an unprecedentedly large number of papers (158 in total). All the submissions underwent a rigorous double-blinded peer-review process, with each paper being reviewed by at least two members of the Program Committee, composed of 81 experts in the fields. Based on the reviewing scores and critiques, the 78 best papers (49.3%) were accepted for presentation at the workshop and chosen to be included in this Springer LNCS volume. It was a tough decision and many high-quality papers had to be rejected due to the page limit of this volume.

We are grateful to all Program Committee members for reviewing the submissions and giving constructive comments. We also thank all the authors for making the workshop very fruitful and successful.

September 2019

Heung-Il Suk
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