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Simplifying Medical Ultrasound

Second International Workshop, ASMUS 2021
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Preface

In this exciting era for medical ultrasound, recent developments in deep learning (artificial intelligence) and medical robotics have started to show clinically measurable improvement in assisting ultrasound examinations, ultrasound-guided interventions, and surgery. ASMUS 2021: the 2nd International Workshop of Advances in Simplifying Medical UltraSound provided a forum for research topics around ultrasound image computing and computer-assisted interventions and robotic systems that utilize ultrasound imaging. ASMUS is the official workshop of the MICCAI Special Interest Group on Medical Ultrasound.

We were pleased to see the high quality of the submissions, evidenced by reviewer feedback and the fact that we had to reject a number of papers with merit due to the competitive nature of this workshop. The 22 accepted papers were selected based on their scientific contribution, via a double-blind process involving written reviews from at least two external reviewers in addition to a member of the Program Committee. Partly due to the focused interest and expertise, we received a set of exceptionally high-quality reviews and consistent recommendations.

The published work includes reports across a wide range of methodology, research, and clinical applications. The research topics cover advanced deep learning approaches for anatomy segmentation, lesion detection, ultrasound registration, ultrasound probe localization, robot-guided ultrasound, classification, image synthesis, quality assessment, and uncertainty estimation, with applications to point-of-care ultrasound systems and scenarios as well as computer-assisted interventions.

We would like to thank all reviewers, organizers, authors, and our keynote speakers, Muyinatu A. Lediju Bell, Ali Kamen, and Prerna Dogra, for sharing their research and expertise with our community, and we look forward to this workshop inspiring many exciting developments in the future in this important area.

September 2021

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