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# Simplifying Medical Ultrasound

Third International Workshop, ASMUS 2022  
Held in Conjunction with MICCAI 2022  
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Proceedings

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# Preface

This is an exciting era for medical ultrasound! Recent developments in deep learning (artificial intelligence) and medical robotics are producing clinically measurable improvements in the speed, accuracy, and reproducibility of numerous ultrasound examinations and interventions. Additionally, these developments are expanding ultrasound's role into nearly every aspect of patient care.

ASMUS 2022, the Third International Workshop of Advances in Simplifying Medical Ultrasound, provided a forum for ultrasound researchers, application developers, and medical professions to give presentations and live demonstrations that spanned ongoing work, recent accomplishments, open-source code, and shared data. ASMUS inspires new collaborations and aids in the identification new challenges in ultrasound computing, computer-assisted interventions, robotics, and clinical applications. ASMUS is the official workshop of the MICCAI Special Interest Group on Medical Ultrasound.

This year, we received a total of 23 high-quality submissions. Each submission was reviewed using a double-blind process, with at least two outside reviewers and one organizing committee member providing written reviews. These reviews were used by the area chairs to make recommendations to the Program Committee, who then made the final decisions. The quality of the reviews was evident in the consistency of the reviewers' recommendations. Ultimately, 18 papers were accepted based on their scientific contribution, innovation, rigor, and clinical impact.

The accepted papers are a tour de force for medical ultrasound. Clinical applications featured in the papers span the fields of obstetrics, cardiology, interventional radiology, and organ transplant surgery. AI and traditional image analysis methods for ultrasound image reconstruction, localization, segmentation, and registration are presented. The challenges and opportunities associated with robotics, AI training using synthetic data, and overcoming noise are also addressed. New investigators and seasoned ultrasound professionals were well represented at ASMUS 2022, both as authors and attendees.

We are very grateful to the many reviewers, committee members, authors, and attendees who shared their time, research, and expertise to make this workshop so successful. We look forward to this workshop inspiring many new collaborations and exciting developments for the next several years in this exciting era for medical ultrasound.

September 2022

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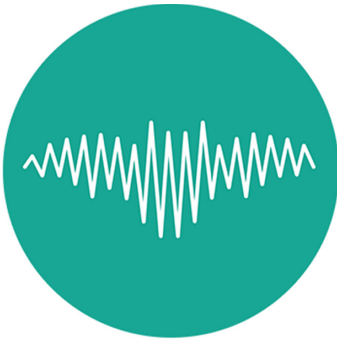
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