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Functional Imaging and Modeling of the Heart

11th International Conference, FIMH 2021 Stanford, CA, USA, June 21–25, 2021 Proceedings

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Preface

FIMH 2021 was the 11th International Conference on Functional Imaging and Modeling of the Heart. FIMH 2021 was hosted by Stanford University, but conducted entirely online due to the COVID-19 pandemic. The conference took place from June 21 to June 25, 2021, and included both pre-conference and post-conference workshops. This year's publication of the FIMH proceedings followed the success of the past ten conferences held in Helsinki (2001), Lyon (2003), Barcelona (2005), Salt Lake City (2007), Nice (2009), New York (2011), London (2013), Maastricht (2015), Toronto (2017), and Bordeaux (2019).

FIMH 2021 celebrated 20 years of bringing together friends, colleagues, and collaborators to share and discuss the latest advances in cardiac and cardiovascular imaging, electrophysiology, computational modeling, and translational applications. An important goal of this meeting was to openly discuss new ideas, build new collaborations, and foster an inclusive community to promote and discuss the latest developments in the areas of functional cardiac imaging as well as computational modeling of the heart. The topics of the FIMH 2021 conference included: 1) Advanced Cardiac and Cardiovascular Image Processing; 2) Cardiac Microstructure – Measures and Models; 3) Novel Approaches to Measuring Heart Deformation; 4) Cardiac Mechanics – Measures and Models; 5) Translational Cardiac Mechanics; 6) Modeling Electrophysiology, ECG, and Arrhythmia; 7) Cardiovascular Flow – Measures and Models; and 8) Atrial Microstructure, Modeling, and Thrombosis Prediction.

FIMH 2021 attracted submissions from authors in more than ten countries. From the original submissions, and after single-blind review by international experts, 65 papers were accepted for presentation at the meeting and publication in this Lecture Notes in Computer Science Proceedings volume. Before submitting the final version of their manuscripts, authors addressed specific concerns and issues raised by the reviewers and improved the scientific content and the overall quality of the manuscripts.

Three world experts in fields related to cardiac computational modeling, advanced imaging, and translational applications, representing the three major pillars of the FIMH society, were invited to give keynote presentations at the conference. We are very grateful to Dr. Blanca Rodriguez (University of Oxford, UK), Dr. Steffen Petersen (Queen Mary University of London, UK), and Dr. Joseph Woo (Stanford University, USA) for their exceptional keynote presentations.

The FIMH 2021 organizing committee was also committed to promoting the careers of trainees and young scientists and established a trainee committee consisting of enthusiastic post-doctoral researchers that helped coordinating special trainee sessions to foster professional success.

We expect that the FIMH 2021 papers, the keynote speakers' contributions, and the engaging discussion during the conference helped to accelerate progress in several important areas of functional imaging and modeling of the heart.

June 2021

Daniel B. Ennis
Luigi E. Perotti
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Organization

We would like to thank all organizers, additional reviewers, contributing authors, and sponsor for their time, effort, and financial support in making FIMH 2021 a successful virtual event.

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