The IMAG Multiscale Modeling Consortium held its 13th meeting on March 17, 2020, guided by the theme, “Amplifying Impact by Nurturing Diversity.” The meeting showcased the future of multiscale modeling by spotlighting the innovation, diversity, and impact of research being conducted by trainees in the multiscale modeling community. Since it coincided with the national concern surrounding the global COVID-19 pandemic, convening at one location was not possible, therefore the organizers conducted the event online.

Trainee Podium and Poster Competition Winners

A key feature of the meeting was a Trainee Oral Presentation and a Trainee Poster Competition, judged by members of the meeting Program Committee. The first-place winners and honorable mentions were selected from nearly 40 submitted abstracts, and these trainees received cash prizes generously provided by the Paul G. Allen Frontiers Group.

All of the submitted abstracts and posters, as well as the oral presentations, can be viewed on the IMAG Wiki.

Trainee Oral Presentation Competition Results

First Place

Kyoko Yoshida, Ph.D., University of Virginia
Multiscale model of pregnancy-induced heart growth: Integrating hormonal signaling and mechanics

Honorable Mention

Christian Guerrero-Juarez, Ph.D., University of California, Irvine
Towards a multiscale synthesis of skin regeneration: Single cell transcriptomics and modeling reveal functional fibroblast heterogeneity in skin wounds

Honorable Mention

Angela Jarrett, Ph.D., University of Texas at Austin
Integrating multiple scales and imaging modalities to predict tumor response for individual patients and generate personalized therapy regimens
Honorable Mention

Peng Zhang, Ph.D., University of Michigan
Integrating machine learning in multiscale modeling for blood flow and platelet-mediated thrombosis initiation

Trainee Poster Competition Results

First Place

Ariel Nikas, Ph.D., Emory University
Investigating waning of influenza vaccine induced immunity with a multi-scale modeling approach

Honorable Mention

Jacob Herrmann, Ph.D., University of Vermont
Self-organizing of honeycombing in an agent-based model of lung fibrosis

Honorable Mention

Erin Louwagie, Columbia University
Biomechanics of cervical funneling in high-risk pregnancies