

Standardizing Multicellular Simulation - Bridging Methods and Models

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Multicellular simulations have become indispensable in understanding complex biological phenomena, from tissue development to disease progression. But the diversity in simulation methods, from agent-based models, cellular Potts models, cellular automata, lattice-free models, stochastic particle simulations, etc, poses challenges in reproducibility, modularity, reusability, and integration within multi-scale simulation. This session aims to bridge these gaps by focusing on the development of standards and schemas, with special emphasis on multiscale, embedded, and coupled simulation methods. Through a combination of presentations, case studies, and discussions, attendees will gain an understanding of the multicellular simulation landscape, the need for standardization, and the importance of sharing and reusing models.