

ADVANCES IN MODELING AND SIMULATION OF BIOLOGICAL SYSTEMS

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ABSTRACT

This invited session will survey both achievements and open problems in computational modeling and simulation of biological systems for medical applications. It will serve as a forum for exchanging new ideas across emerging fields such as data-driven modeling, reduced order methods, and biomedical engineering. This session will contribute to tearing down existing silos that lead to fragmented and uncoordinated data, hampering the effective translation of computational findings into clinical practice. It will bring together experts in experimental, computational, and theoretical research in biological systems to create novel solutions to current medical challenges. This session represents a stepping-stone for future synergistic research efforts that lead discovery, advance knowledge, and guide the development of new preventative, diagnostic, and treatment methods in healthcare.