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Toward Digital Twins of Development and Disease

Monday, 2 March 2026 17:20 (45 minutes)

Computational simulations have long been used to study emergent phenomena in biology. Data-driven in silico models of tissue behavior in development and disease now enable the creation of Digital Twins—virtual counterparts with applications in bioengineering and precision medicine. In this talk, I will present our simulation frameworks for high-resolution tissue modeling and parameter inference from imaging and experimental data. Finally, I will discuss our progress in constructing Digital Twins for epithelial tissues, morphogenesis, and medical treatments.

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