ENGINEERING SCIENCES & APPLIED MATH--FEATURED SPEAKER



From Molecules to Development: Understanding How Biological Oscillators Function and Coordinate

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November 26, 2018 • 4 pm – 5pm

M416 (ESAM Conference Room), Tech

An overview of our research interest: The Yang Lab studies biological oscillations and self-organization phenomena (e.g. mitotic cycles, periodic somite formation, etc.) in both artificially constructed mitotic cells and live zebrafish embryos. We focus on understanding how the network structures of biological clocks are linked to their functions, such as tunability and robustness, and how individuals coordinate through biochemical and mechanical signals to generate collective spatiotemporal patterns. To pin down the physical mechanisms that give rise to these complex phenomena, we integrate modeling, time-lapse fluorescence microscopy, microfluidics, and systems and synthetic biology approaches.

This event is co-sponsored by the NSF-Simons Center for Quantitative Biology Scholars and Fellows. Supported by a grant from the Simons Foundation/SFARI and the National Science Foundation *This is a required activity

