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Department of Biomathematics Seminar Series:
Frontiers in Systems and Integrative Biology

Computation of Transition States and its Applications in Biology

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ABSTRACT:

The dynamics of complex biological systems is often driven by multiscale, rare but important events. In this talk, I will first introduce the numerical methods for computing transition states, in particular, the Optimization-based Shrinking Dimer (OSD) method we recently proposed. Then I will give two applications of rare events and transition states in biology, including boundary sharpening in zebrafish hindbrain and neuroblast delamination in Drosophila. The joint work with Qiang Du (Columbia), Qing Nie (UC Irvine), Yan Yan (HKUST).

Host: Tom Chou, Ph.D.

To receive e-mail seminar notices, contact David Tomita (dtomita@biomath.ucla.edu)