

**Lisa Fauci**  
**Tulane University**

**Title:**

A Tale of Waving Tails: Calcium-Driven Dynamics of Undulatory Swimmers

**Abstract:**

Locomotion due to body undulations is observed across the entire spectrum of swimming organisms, from microorganisms to fish. The internal force generating mechanisms range from the action of dynein molecular motors within a mammalian sperm to muscle activation in lamprey. We will present recent progress in building multiscale computational models that couple biochemistry, passive elastic properties and active force generation with a surrounding fluid for these two swimmers.