

# PHYSICAL MATHEMATICS SEMINAR

## LIFE IN FLATLAND: EMERGENT ORIGINS OF BEHAVIOR IN NON-NEURONAL SYSTEMS

**MANU PRAKASH**  
Stanford University

### ABSTRACT:

Diverse multi-cellular animals encode a breathtaking diversity of natural behaviors. Non local interactions in traditional nervous systems make the study of underlying origins of behavior in animals difficult (and fascinating). It is a well-known fact that simple dynamical systems can also encode perplexing complexity with purely local update rules. In this talk, using a variety of toy models and systems, we will explore how complex behavior can arise in non-neuronal ensembles; or in short "how do animals with no brains (neurons), decide, compute or think?"

**TUESDAY, DECEMBER 1, 2020**  
**2:30 PM – 3:30 PM**

<http://math.mit.edu/seminars/pms/>

**<https://mit.zoom.us/j/97273690529>**  
**Meeting ID: 972 7369 0529**