



# ME Seminar



## Adaptability from patterns

**Dr. Ganga Prasath, Post-doctoral researcher, School of Engineering and Applied Sciences, Harvard University, Cambridge USA**

### ABSTRACT

The soft matter view to understand collective behavior in natural systems has led to a surge in models to study pattern formation. The functional aspect of these patterns is often understudied and falls under the realm of evolution. In the first part of the talk, we will discuss ways by which natural systems can inspire artificial systems for a particular function. We will also look at a possible generalized approach to design robots with robust properties that might be feasible with an integrated view of multiple fields. In the second part of the talk we will discuss approaches for designing geometric materials that can help us make better robots by leveraging the novel properties.

### ABOUT THE SPEAKER

Dr. Ganga Prasath is currently a post-doc at Harvard University's School of Engineering and Applied Sciences. He is interested in developing adaptable systems inspired by the natural world. His recent work takes a soft-matter view of robotics and animal behaviour, expanding the pattern formation paradigm with function. He received his PhD from the Tata Institute of Fundamental Research for his work on elasticity and hydrodynamics and has a Masters degree from Ecole Polytechnique. With his background in engineering, physics and applied mathematics, he wants to approach difficult real world questions with an integrated view of these fields.



**September 24<sup>th</sup>, 2021, 4:00 pm, Microsoft Teams**