भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Applied Physics & Machine Learning Seminar Series, IIT Hyderabad

Online webinar on **Sept 8, 2020 at 5 :00 PM**

Date : 08-09-2020
Time : 05:00 PM (IST)
Topic : Talk at IITH
Speaker : **Dr. Fabio Giardina**
Affiliation : Harvard University
Title : **Studying the dynamics of locomotion with biomimetic robots**
Link : https://meet.google.com/pvv-ocne-xiv

Abstract

The behavior of an agent (an animal, robot, etc.) is largely governed by the environment it lives in and its associated physical interactions. Animals living in complex environments exploit these interactions rather gracefully, but it is often hard to dissect the required components (control, morphology, environment) that give rise to a particular behavior. Using biomimetic robots, we can emulate biological dynamics and probe the minimal defining properties of a system that give rise to complex behavior. In this vein, I will talk about three projects that explore the dynamics and limits of locomotion using mathematical modeling and biomimetic robots, and I will touch upon the questions of the origins of legged locomotion, why mammals haven't invented the wheel (or have they?), and how robots can exploit external fields for unprecedented climbing performance.

Short Bio:

Fabio Giardina is a Postdoctoral Fellow at Harvard University. His current area of research is in locomotion of robots inspired by nature. He did his PhD from University of Cambridge and his undergraduate studies from ETH, Zurich.