ECS IITM Student Chapter Proudly Welcomes

Dr. Seeram Ramakrishna

For his Eminent Lecture on

Nature of Artificial Consciousness?

Feb 23, CB-310, 4:00 pm

About the Speaker

Seeram Ramakrishna is a Chair Professor and Xinghua Distinguished Chair Professor at Tsinghua University, where he directs the iWearables Center in the Department of Mechanical Engineering. He is also an adjunct professor at the National University of Singapore. A pioneer in nanofibers and nanotechnology, he is ranked 11th globally in Nanoscience and Nanotechnology (Elsevier–Stanford list) and recognized among the World's Most Influential Minds (Thomson Reuters). He has published over 500 Q1 journal papers, with an H-index of 222 and more than 230,000 citations, including publications in Nature and related journals. He is a Fellow or Academician of several prestigious academies, including the Chinese Academy of Engineering and the UK Royal Academy of Engineering (FREng). He earned his BEng from Andhra University, MTech from IIT Madras, PhD from the University of Cambridge, and TGMP from Harvard University, with advanced research experience at MIT, Johns Hopkins University, and KIT, Japan.

Department of Mechanical Engineering, Chair Professor and Xinghua Distinguished Chair Professor at Tsinghua University, Adjunct Professor at the National University of Singapore

Abstract

The nature of consciousness has been explored for millennia across scientific, philosophical, and spiritual traditions, leading to diverse interpretations. Spiritual perspectives view consciousness as an all-encompassing reality beyond the physical and mental self, whereas technical definitions describe it as awareness of internal states and external stimuli. A simple analogy—light enabling vision without being vision itself—suggests that consciousness may be an innate human capacity. Hence, it should be examined openly, without bias toward any single viewpoint.

This discussion extends to artificial consciousness, understood as synthetic self-awareness. Human experience arises from the integration of sensory inputs and complex brain functions. Advances in wearables, artificial intelligence, neuroscience, brain–machine interfaces, intelligent materials, and supercomputing are rapidly expanding the boundaries of machine capabilities. Future intelligent wearables may evolve into platforms contributing to artificial consciousness.

As this field progresses, research will likely focus on enhancing human cognition and metacognition. At the same time, artificial consciousness demands careful global dialogue on ethics, safety, regulation, and governance, while sustaining the curiosity and learning mindset that drive human advancement.

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