

# INAUGURAL LECTURE

**26.03.2024 | 17:30**

**Belval Campus**

**Maison du Savoir - Room 3.350**



## Prof. Anupam Sengupta

Prof. Dr. Anupam Sengupta is an FNR-ATTRACT Fellow and Head of the Physics of Living Matter Group at the Department of Physics and Materials Science since 2018. Before joining UL, Prof. Sengupta was a Human Frontier Cross-Disciplinary Fellow, first at the MIT (Cambridge, USA) and then at the ETH Zurich (Switzerland); and held a Marie-Curie Doctoral Fellowship during his PhD studies at the Max Planck Institute for Dynamics and Self-Organization, Göttingen, Germany. His multi-disciplinary team combines material physics, microbiology, mathematical modelling and machine learning to understand how living systems respond and adapt to dynamic environmental conditions. Currently, Prof. Sengupta is a member of the Institute for Advanced Studies at the University of Luxembourg, and among other roles, serves as the Director of the Undergraduate Physics Studies of the University of Luxembourg.

## LIFE: A paradox of order amidst disorder

**LIFE** - as we see it in the Sengupta Lab - **Living In Fluctuating Environments**, is a paradoxical quest for claiming order where there might exist none. Over the last years cross-disciplinary approaches developed by us and elsewhere have allowed us to not only detect order-and thereby engineer biological processes and systems-but also predict future scenarios with reliable degree of accuracy. After a short introduction to the tools and techniques we develop, I will present some of our key discoveries spanning life-giving aquatic algae and pathogenic biofilms to tumors and cancer tissues. In closing, I will touch upon future challenges and how understanding LIFE could help ideate sustainable bio-based solutions in anticipation of a resource-limited society of the future.

## Programme

17:30 Introduction

17:35 Lecture

18:15 Questions & Answers

18:30 Cocktail