



भारतीय अंतरिक्ष विज्ञान एवं प्रौद्योगिकी संस्थान
INDIAN INSTITUTE OF SPACE SCIENCE AND TECHNOLOGY
तिरुवनंतपुरम / Thiruvananthapuram - 695 547

विज्ञान में महिलाओं और लड़कियों का अंतर्राष्ट्रीय दिवस
के अवसर पर वीशेष विद्वत गोष्ठी
**Special Colloquium on the occasion of
International Day of Women and Girls in Science - 2026**



03:00 PM



11

FEBRUARY

**WEDNESDAY
2026**



Council Hall
Admn. Building

Title of the Talk: Harnessing Chaos



वक्ता / Speaker

डॉ. सुदेशना सिन्हा / Dr. Sudeshna Sinha

प्रोफेसर, भौतिक विज्ञान विभाग / Professor

Department of Physical Sciences, IISER, Mohali, India

Abstract: We discuss how understanding the nature of chaotic dynamics allow us to control and manipulate these complex systems. A controlled chaotic system can then serve as a versatile pattern generator that can be used for a range of applications. Specifically we will discuss the application of controlled chaos to the design of novel computational paradigms. Further we indicate how one can exploit the interplay of nonlinearity and noise to obtain more consistent and robust logic operations. We also suggest how these concepts may be applied to systems ranging from electronic circuits to nanomechanical oscillators.

About the Speaker : Dr. Sudeshna Sinha is a Professor at IISER Mohali, where she has also served as Dean of Faculty Affairs and Deputy Director. Her research spans over a hundred papers and several patents, with features in Nature News & Views, Scientific American, The Economist, and MIT Technology Review. She is a recipient of the Birla Award for Physics, the J.C. Bose National Fellowship (2015—2025), and is a Fellow of IAS, INSA, and TWAS. She also serves on editorial boards of leading journals including Chaos (AIP), Communications in Nonlinear Science and Numerical Simulation (Elsevier), and Proceedings of the Royal Society A (UK).