



ICTS Seminar

Title : Topology of Random Čech Complexes in Thermodynamic Regime

Speaker : Akshay Goel (Kyushu University, Japan)

Date : Thursday, August 26, 2021

Time : 3:00 pm (IST)

Abstract : Random topology is an emerging research area which comprises theoretical results that characterize the asymptotic behavior of topological properties of random objects. One aspect of this area is the study of random geometric complexes and their topological properties such as Betti numbers. In this talk, I will talk about the strong law of large numbers for Betti numbers of random Čech complexes (a typical example of random geometric complexes) built on \mathbb{R}^d -valued Poisson point processes in the thermodynamic regime. Here, we will consider both the case where the underlying distribution of the point processes is absolutely continuous with respect to the Lebesgue measure on \mathbb{R}^d (Euclidean setting) and the case where it is supported on a C^1 compact manifold of dimension strictly less than d (manifold setting).

This is a joint work with Dr. Trinh Khanh Duy (Associate Professor, Waseda University, Japan) and Dr. Kenkichi Tsunoda (Assistant Professor, Osaka University, Japan).

Venue : Please click on the below link to join the meeting

<https://us06web.zoom.us/j/81472055634?pwd=dGhmeFhNZU9JMldNenVLV0dlL2hTZz09>

Meeting ID: 814 7205 5634

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