



**INDIAN STATISTICAL INSTITUTE**  
Theoretical Statistics and Mathematics Unit, Kolkata

**SEMINAR**

Date: December 06, 2022, Tuesday  
Time: 05:00 PM

**VENUE:**

**L- 2**

(4<sup>th</sup> Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

**TITLE:**

**Understanding linear groups via geometric structures, II**

**SPEAKER:**

**Mitul Islam**

University of Heidelberg

**ABSTRACT:**

*In recent years, convex projective geometric structures (which are a generalization of hyperbolic structures) have played an important role in understanding discrete subgroups of projective general linear groups. This has connections with several active areas of research like (higher) Teichmüller theory and Anosov representations.*

*In the first talk, I will give an introduction to geometric structures with an emphasis on hyperbolic and convex projective structures and explain some of the classical and motivating results in the area. In the second talk, I hope to discuss some recent results in convex projective geometry, aimed toward a better understanding of non-Gromov hyperbolic discrete linear groups. Some of the results that I will discuss are joint work with A. Zimmer. I will try to explain enough background so that the talks are accessible to students at the graduate level.*

**ALL ARE CORDIALLY INVITED**