



## Colloquium

# Disjointness in Ergodic and Number Theory

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ETH Zürich

Host: Vadim Kaloshin

Furstenberg introduced in 1967 joinings and disjointness as fundamental tools for studying structural properties of measure preserving systems. We will review some old and some new results in this direction that classify joinings or even establish disjointness. In particular we will discuss how these can be used for number theoretical 'joint equidistribution' problems. For instance disjointness results can be used to describe the joint equidistribution of low lying rational points on closed horocycles related by different powers, the joint equidistribution of rational points on spheres and the shape of the lattice in the orthogonal complement, or other refinements of Duke's theorem concerning the equidistribution of CM-points on the modular surface. The talk will be based on various joint works with M. Akka, E. Lindenstrauss, M. Luethi, Ph. Michel, U. Shapira, A. Wieser

**Wednesday, October 4, 2023 03:30pm - 04:30pm**

Raiffeisen Lecture Hall



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.