



International Seminar Series on Harmonic Analysis & Applications

Title: Point configurations, operator bounds, and complexity

Speaker: Alex Iosevich (University of Rochester, USA)

Time: 2021.08.22 20:30-21:30 Beijing / 12:30-13:30 GMT

Zoom ID & Link: 960 2623 0806 /

<https://zoom.com.cn/j/96026230806>

Abstract:

The question we ask is, does a compact subset of \mathbb{R}^d of sufficiently large Hausdorff dimension contain vertices of a given geometric configuration, and how is the complexity of this configuration related to the dimensional threshold. The study of this problem has its roots in the celebrated Falconer distance conjecture, the Erdős distance conjecture, and the study of point configurations in sets of positive upper Lebesgue density by Bourgain, Furstenberg, Lyall, Katznelson, Magyar, Weiss, and others. We shall discuss some connections between these concepts and the Vapnik-Chervonenkis dimension in learning theory.

Organizers:

Yujia Zhai (翟羽佳), University of Nantes, France

Xudong Lai (赖旭东), IASM, Harbin Institute of Technology, China

Wenjuan Li (李文娟), Northwestern Polytechnical University, China

Huiju Wang (王会菊), University of Chinese Academy of Sciences, China

Upcoming Seminar

Speaker: Frédéric Bernicot (University of Nantes, France)

Time: 2021.08.29 16:00-17:00 Beijing / 8:00-9:00 GMT