



Seminario Rubio de Francia

Conferencia

por

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Título:

Large deviations for lacunary sums

Abstract: The study of lacunary series is a classical and still flourishing topic in harmonic analysis that has attracted considerable attention. In 1939, Kac proved a central limit theorem for lacunary trigonometric sums defined by integer sequences with very large gaps. A few years later, Salem and Zygmund established a central limit theorem for lacunary trigonometric sums in the general setting. Those results show that these sums behave in many ways like sums of independent random variables. This idea was taken further in different directions by Salem and Zygmund and Erdős and Gál by proving a law of the iterated logarithm and by Kac by pushing results beyond the lacunary framework. Recently, together with Christoph Aistleitner, Nina Gantert, Zakhar Kabluchko, and Kavita Ramanan, we initiated the study of large deviation principles (LDPs) for lacunary trigonometric sums, discovering an intimate relation between the rate function and the arithmetic structure of the gap sequence. While (due to time constraints) most of our results will be out of reach in this talk, we shall give a general overview and discuss the special case of lacunary trigonometric sums defined by integer sequences with large gaps.

Fecha: Jueves, 26 de Noviembre de 2020.

Hora: 12:00 horas.

Webinar: <https://us02web.zoom.us/j/84776727315?pwd=V1JyaWI1Q2s2R3FWcDZ3OFJTNGJ0Zz09>

Web: <http://anamat.unizar.es/seminario.html>