Institute of Analysis and Number Theory

Zahlentheoretisches Kolloquium

Friday, 19.7.2019, 13:30

Seminarraum Analysis-Zahlentheorie, Kopernikusgasse 24, 2.OG

Higher-rank Bohr sets and multiplicative Diophantine approximation

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Gallagher's theorem is a sharpening and extension of the Littlewood conjecture that holds for almost all tuples of real numbers. This talk is about joint work with Sam Chow where we provide a fibre refinement, solving a problem posed by Beresnevich, Haynes and Velani in 2015. Hitherto, this was only known on the plane, as previous approaches relied heavily on the theory of continued fractions. Using reduced successive minima in lieu of continued fractions, we develop the structural theory of Bohr sets of arbitrary rank, in the context of Diophantine approximation.

Ch. Aistleitner