

Department of Mathematics, BGU

BGU Probability and Ergodic Theory (PET) seminar

On Thursday, December 9 2021

At 11:10 – 12:00

In 101-

Valérie Berthé (Université de Paris)

will talk about

Symbolic discrepancy and Pisot dynamics

Abstract: Discrepancy is a measure of equidistribution for sequences of points. A bounded remainder set is a set with bounded discrepancy, that is, the number of times it is visited differs by the expected time only by a constant. We discuss dynamical, symbolic, and spectral approaches to the study of bounded remainder sets for Kronecker sequences. We consider in particular discrepancy in the setting of symbolic dynamics and we discuss the existence of bounded remainder sets for some families of zero entropy subshifts. Note that bounded discrepancy has also to do with the notion of bounded displacement to a lattice in the context of Delone sets. We focus on the case of Pisot parameters for toral translations and then show how to construct symbolic codings in terms of multidimensional continued fraction algorithms.

This is joint work with W. Steiner and J. Thuswaldner.