

Department of Mathematics, BGU

BGU Probability and Ergodic Theory
(PET) seminar

On Thursday, November ,17 2022

At 11:10 – 12:00

In 101-

Michel Abramoff (Ben-Gurion University)

will talk about

Generalizations of Furstenberg's 2×3 Theorem

Abstract:

Title: Generalizations of Furstenberg's $\times 2 \times 3$ Theorem.

Abstract: Furstenberg's $\times 2 \times 3$ theorem asserts that certain special 2-parameter sequences of real numbers are dense modulo 1. I present a survey of some other results regarding the density modulo 1 of some multi-parameter sequences, and also provide the following new results (joint work with D. Berend): Given a pair of multiplicatively independent integers a, b , an irrational α , a positive integer d and a polynomial p with at least one irrational coefficient apart from the free term, the sets $\{\binom{m+n}{d} a^m b^n \alpha \mid m, n \in \mathbb{N}\}$ and $\{p(m) a^m b^n : m, n \in \mathbb{N}\}$ are dense modulo 1.