

# SALZBURG MATHEMATICS COLLOQUIUM

Summer 2017

Vitaly Bergelson (Ohio)

## „Ergodic Ramsey theory: a meeting point of dynamics, combinatorics, and number theory“

March 16, 2017

### Abstract:

The talk will focus on the multifaceted and mutually perpetuating connections between dynamical systems, combinatorics and number theory. In particular, we will discuss Furstenberg's ergodic approach to Szemerédi's theorem on arithmetic progressions and its far reaching recent ramifications (including polynomial extensions of Szemerédi's theorem and the Green-Tao theorem on arithmetic progressions within the primes), some modern generalizations of the classical results of Weyl in the theory of uniform distribution, and new promising connections between ergodic aspects of Ramsey theory and multiplicative number theory.

Thursday, **15:00-15:45**  
Hörsaal 414, 1. Stock