

SEMINARIO

SISTEMAS DINAMICOS

Expositor

Andreas Koutsogiannis
The Ohio State University

Título

Norm and pointwise averages of multiple ergodic averages and applications

ABSTRACT:

Via the study of multiple ergodic averages for a single transformation, Furstenberg, in 1977, was able to provide an ergodic theoretical proof of Szemerédi's theorem, i.e., every subset of natural numbers of positive upper density contains arbitrarily long arithmetic progressions. We will present some recent developments in the area for more general averages, e.g., for multiple commuting transformations with iterates along specific classes of integer valued sequences. We will also get numerous applications of the aforementioned study to number theory, as we will present the corresponding results along prime (and shifted prime) numbers, topological dynamics and combinatorics. Finally, we will present a result to the most general, and far more difficult case of pointwise convergence along special sublinear functions. This is part of independent, as well as joint work with D. Karageorgos (norm case); and S. Donoso and W. Sun (pointwise case).

Día: jueves 05 de julio del 2018

Hora: 16:30hrs

Lugar: Beauchef 851, Torre Norte, 7mo piso, Sala de Seminarios John Von Neumann.