COLLOQUIUM

Jason Crann
Carleton University

Amenable dynamical systems through Herz–Schur multipliers

Mathematics and Statistics

Date: Friday January 29, 2021
Time: 3:30 - 4:30 PM
Zoom link:

https://uregina-ca.zoom.us/j/92508741353?pwd=UzFOMjVMelVkRWhqR215cjd6dTlCQT09

Abstract: The Herz–Schur multiplier manifestation of amenability provides a fundamental link between abstract harmonic analysis and operator algebras, allowing for a fruitful exchange of ideas and tools between the two areas. A generalized theory of Herz–Schur multipliers for dynamical systems has recently emerged through independent work of Bedos–Conti and McKee–Todorov–Turowska.

In this talk, we generalize the aforementioned link by establishing Herz–Schur multiplier characterizations of amenable W^*- and C^*-dynamical systems over arbitrary locally compact groups. As byproducts of our results, we (1) answer a question of Anantharaman-Delaroche and obtain a Reiter type characterization of amenable W^*-dynamical systems, and (2) show that a commutative C^*-dynamical system $(C_0(X), G, \alpha)$ is amenable if and only if the action of G on X is topologically amenable. Combined with recent work of Buss–Echterhoff–Willett, this latter result implies the equivalence between topological amenability and measurewise amenabilty for G-spaces X when both G and X are second countable. This is joint work with Alex Bearden.

University of Regina