Date: November 10

Speaker: Aristotelis Panagiotopoulos

Title. Dynamical obstructions to classification by (co)homology and other TSI-group invariants.

Abstract. One of the leading questions in many mathematical research programs is whether a certain classification problem admits a "satisfactory" solution. Hjorth's theory of turbulence provides conditions under which such a classification problem cannot be solved using only isomorphism types of countable structures as invariants. In the same spirit, I will introduce "unbalancedness": a new dynamical obstruction to classification by orbits of a Polish group which admits a two-side invariant metric (TSI). I will then illustrate how "unbalancedness" can be used for showing that a classification problem cannot be solved by classical homology and cohomology invariants, and I will apply these ideas to attain anti-classification results for the isomorphism problem of Hermitian line bundles.

This is joint work with Shaun Allison.