Adam Mickiewicz University
Faculty of Mathematics and Computer Science

Geometry and Topology Seminar

1:45 pm, Wednesday, December 05, 2018
B2-38, Collegium Mathematicum

Speaker: Arturo Espinosa Baro (Adam Mickiewicz University)

Title: On the sectional category of subgroup inclusions and relative cohomologies

Abstract:

Let H and G be subgroups, with i a subgroup inclusion of H into G. The sectional category of i, $\mathrm{secat}(i)$, is the one associated to the fibration induced by i between the classifying spaces. We will extend a characterization of topological complexity due to Farber, Grant, Lupton and Oprea to the context of sectional category of subgroup inclusions. Also, we will employ a relative cohomology theory, the Adamson cohomology of G with respect to H, to study $\mathrm{secat}(i)$, describing a notion of canonical class analogous to the one developed by Bernstein, and generalizing a result of Costa and Farber to this sectional category. Finally, we will discuss some interesting conjectures related to the characterization of $\mathrm{secat}(i)$ and topological complexity of aspherical spaces.