

Adam Mickiewicz University
Faculty of Mathematics and Computer Science

GEOMETRY AND TOPOLOGY SEMINAR

1:45 PM, Wednesday, November 14, 2018
B2-38, Collegium Mathematicum

Speaker: Zbigniew Błaszczyk (Adam Mickiewicz University)

Title: **Topological complexity and efficiency of motion planning algorithms**

Abstract:

I will discuss a variant of Farber's topological complexity, defined for smooth compact Riemannian manifolds, which takes into account only motion planners with the lowest possible "average length" of the output paths. In particular, I will prove that it never differs from topological complexity by more than 1, thus showing that the latter invariant addresses the problem of the existence of motion planners which are "efficient".

The talk is based on joint work with J. G. Carrasquel Vera.