

# Seminarium geometrów

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## Hyperbolic groups and their applications

Abstract: The notion of hyperbolic groups stems from Gromov's study of fundamental groups of negatively curved manifolds. Negative curvature can be generalized to finitely generated groups by requiring that geodesic triangles in the Cayley graph are uniformly slim. I will define this slim-triangle condition and survey key properties and applications of hyperbolic groups.

As a detailed case study, I will explain how Olshanskii solved the Burnside Problem and how Fournier-Facio and I answered an open question of Talelli, both using inductive quotients of hyperbolic groups.