# Seminarium geometrów

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## Polar Actions and Building-like Geometries

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Abstract: An isometric action of a compact Lie group on a Riemannian manifold is called polar if there exists an immersed submanifold which meets every group orbit orthogonally. Polar actions on spheres correspond to isotropy representations of symmetric spaces, and these in turn correspond to compact Tits buildings. General polar actions look at least infinitesimally like Tits buildings. A possible approach to their classification is thus a classification of geometries which look locally building like. In my lecture I will explain these geometries and some classification results. This is joint work with Alexander Lytchak.