PROFINITE RIGIDITY AND LOW DIMENSIONAL ORBIFOLDS

Martin Bridson

To what extent is a residually-finite group determined by its set of finite quotients? Ideas developed in connection with non-positive curvature have led to significant progress on this question in recent years.

Fundamental groups of orbifolds of dimension at most 3 enjoy a greater degree of profinite rigidity than arbitrary groups. I shall present positive and negative results in this context, and outline how Reid, Wilton and I proved that the fundamental groups of punctured torus bundles can be distinguished from each other and from other 3-manifold groups by means of their profinite completions.