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A finitely presented group of piecewise projective homeomorphisms

In this talk I will present an example of a finitely presented subgroup of the homeomorphism group of the unit interval which consists of piecewise projective homeomorphisms. This group is nonamenable and, by work of N. Monod, does not contain a nonabelian free subgroup. Its presentation contains three generators and nine relations. While Ol'shanskii and Sapir have previously constructed an example of a finitely presented counterexample to the von Neumann-Day problem, ours is the example with a small, explicit presentation. This is joint work with Yash Lodha.