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Title: Exotic four-manifolds with cyclic fundamental group

Abstract: A basic question in four-dimensional topology: which topological four-manifolds admit smooth structures and if it does, how many non-diffeomorphic. In the most interesting cases (on the four-sphere, the complex projective plane, the four-torus) this latter question is wide open. We managed to find constructions for a wide class of manifolds having cyclic fundamental group of even order. In the lecture we will discuss (after putting the results in perspective) the topological constructions.