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Title: Besse manifolds, systolic inequalities and some orbifold topology

abstract: A contact manifold is called Besse if all its Reeb orbits are closed. In this case the Reeb flow is actually periodic and induces a Seifert fibration. Examples of Besse manifolds for instance arise from special Riemannian and symplectic orbifolds. In the talk I will first discuss the relation between these objects. This involves a topological condition for an orbifold to be a manifold that is also relevant in other contexts, and a description of Seifert fibrations that are induced by contact forms. Then I will explain a result obtained in collaboration with Alberto Abbondandolo and Marco Mazzucchelli which characterizes the inducing contact forms in the 3-dimensional case as local maximizers of some suitable systolic ratio, as well as related systolic inequalities for Riemannian orbifolds obtained together with Tobias Soethe.