

1131-22-370

**Michael P Cohen\*** ([michael.cohen@ndsu.edu](mailto:michael.cohen@ndsu.edu)), 1600 Edmund Ave, St Paul, MN 55104. *On the large-scale geometry of diffeomorphism groups of 1-manifolds.*

I'll introduce a relatively new area of research advanced by Rosendal: the coarse geometry of topological groups, which unifies and generalizes the classical fields of geometric group theory of countable groups, and coarse geometry of Banach spaces. I'll define the notion of coarse boundedness, and characterize this property in the special context of the  $C^k$ -diffeomorphism groups of one-dimensional compact manifolds (the interval and the circle). For  $k = 1$ , our characterization implies that the diffeomorphism group is coarsely equivalent, via a natural mapping, to the classical space  $C[0, 1]$ . I'll pose some questions and open problems in this area. (Received July 18, 2017)