On the reconstruction problem for some nontransitive homeomorphism groups

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Let $G(M_i)$ be a group of homeomorphisms of a manifold M_i, $i = 1, 2$. Usually we will assume that M_i is smooth and $G(M_i)$ is the automorphism group of a geometric structure. Given a group isomorphism φ between $G(M_1)$ and $G(M_2)$, the reconstruction problem consists in the question whether there exists a homeomorphism τ of M_1 onto M_2 such that φ is induced by τ. In this talk we will consider this problem in case of some nontransitive geometric structures.

Our study has been inspired by recent papers of Matatyahu Rubin and his collaborators.

Bibliography

[1] M. Rubin, Y. Yomdin: *Reconstruction of manifolds and subsets of normed spaces from subgroups of their homeomorphism groups.* Warsaw, IM PAN, 2005.
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