Local rigidity of group action by isometries on compact Riemannian manifolds

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Abstract: For a group action by smooth isometries of a compact smooth Riemannian manifold, we establish a Kolmogorov-Arnold-Moser scheme to show its local rigidity. More precisely, under certain conditions, any group action by diffeomorphisms which are smoothly close to these isometries can be smoothly conjugated to this group action by isometries. Based on a joint work with L. Stolovitch (University Côte d'Azur)