

# Cohomological rigidity for Bott manifolds

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We show that two Bott manifolds are diffeomorphic if their cohomology rings are isomorphic as graded rings.

The main idea of the proof is that, if there is a cohomology ring isomorphism between two Bott manifold  $X$  and  $Y$ , then we can change the tower structures of  $X$  and  $Y$  through diffeomorphism such that the composition map satisfies the condition of Ishida's construction of a diffeomorphism.

This talk is based on recent work with Taekgyu Hwang and Hyeontae Jang.