

On the n -sphere S^n

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July 29, 2019

Abstract

A manifold is the most important research object in geometry and topology. Although people consider the n -sphere S^n as one of the simplest well-known simply connected closed smooth n -manifolds, it is still far from reach to understand it completely.

In this talk, first I'd like to survey a history of research on S^n , which includes a Poincaré conjecture in dimension 3 and 4. And then, if a time allows, I'll present how to construct a family of homology 4-spheres.