

SOME GROMOLL FILTRATION GROUPS AND HOMOTOPY

GROUPS OF DIFFEOMORPHISM GROUPS

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Time: Fri, April 11th, 16:30 - 17:30

Venue: Room 102, SCMS

Abstract:

In 1964, Gromoll gave a filtration of the group of homotopy $n+1$ -spheres for $n > 5$ and connected this filtration to the pinching of homotopy spheres. On the other hand, this filtration is closely related to homotopy groups of diffeomorphism groups of smooth manifolds.

In this talk, we will first give some background on Gromoll filtration groups and diffeomorphism groups from a topological point of view. Then we will introduce some methods of calculation and give our recent results. We will also discuss some further applications to certain smooth fibre bundles.