WESTFÄLISCHE
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Kolloquium des Mathematischen Instituts

Finite loop spaces

Professor Jesper Grodal (Universität Kopenhagen)
07.04.2011, 16:30 Uhr, Hörsaal M 5

Abstract: Hilbert's 5th problem, in its most basic form, asks if every compact topological group, which admits the structure of a smooth manifold, is a Lie group. In this form, it was answered affirmatively by von Neumann in 1929. If one takes a homotopical interpretation of the word "admits", the question is more subtle, and one is led to the notion of a finite loop space. These turn out not quite to be Lie groups, but nevertheless posses a rich enough structure to admit a classification. My talk will outline this story, which starts with a 1941 paper of Hopf:" Über die Topologie der Gruppen-Mannigfaltigkeiten und ihre Verallgemeinerungen" and ends close to the present.

Tee wird ab 16:00 Uhr im Sitzungszimmer SR 0 des Mathematischen Instituts serviert.

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