Topological fixed point theory for homogeneous spaces — a brief survey

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102 Bradley Hall, 4:00 pm
(Tea 3:30 pm Math Lounge)

Abstract

The celebrated Lefschetz-Hopf fixed point theorem asserts that if a selfmap on a finite polyhedron has nonzero Lefschetz trace then every map homotopic to the given map must have a fixed point. While the converse does not hold in general, the vanishing of a more subtle invariant, namely, the Nielsen number, is often sufficient to guarantee that the given map is deformable to be fixed point free. In this talk, I will survey the computation of the Nielsen number of selfmaps on coset spaces of Lie groups.

This talk should be accessible to general faculty.

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