

1011-58-24

Dave Auckly* (dav@math.ksu.edu), Mathematics Department, Kansas state University, Manhattan, KS 66506, and **Lev Kapitanski**. *The structure of spaces of maps into homogeneous spaces.*

Motivated by a generalization of the Faddeev model, we give a novel representation of S^2 -valued maps based on flat connections. We discuss the generalization of this representation for general homogeneous space valued maps and give applications to variational problems with topological constraints. (Received July 05, 2005)