

TOPOLOGY SEMINAR

Guest Speaker: Raphael Zentner
University of Regensburg

Date: Tuesday, December 7, 2021

Time: 2:30 PM

Location: Zoom

Zoom Link: <https://notredame.zoom.us/j/97262637721>



Lecture Title:

SL(2,C)-character varieties of knots and maps of degree 1

Abstract

We ask to what extent the $SL(2, \mathbb{C})$ -character variety of the fundamental group of the complement of a knot in S^3 determines the knot. Our methods use results from group theory, classical 3-manifold topology, but also geometric input in two ways: The geometrization theorem for 3-manifolds, and instanton gauge theory. In particular this is connected to $SU(2)$ -character varieties of two-component links, a topic where much less is known than in the case of knots. This is joint work with Michel Boileau, Teruaki Kitano and Steven Sivek.