Speaker: Paul Wedrich (U Hamburg)

Title: Perverse schobers of type A and categorified bialgebras

Abstract: This talk, based on joint work with Dyckerhoff, connects the concept of perverse schobers - a categorification of perverse sheaves envisioned by Kapranov and Schechtman - with structures in quantum topology and link homology theory. We propose a definition of perverse schobers on symmetric products of the complex line, with respect to the discriminant stratification, and construct a nontrivial example using complexes of singular Soergel bimodules of type A. Our approach centers on a stable categorification of Kapranov–Schechtman's classification data for perverse sheaves in terms of graded bialgebras. In particular, we show that singular Soergel bimodules give rise to a categorified graded bialgebra, which sheds new light on the geometric foundations of the Rouquier–Rickard braiding and the role of webs and foams in link homology theory.