

Non-topological boundary conditions of perturbative Chern-Simons and AKSZ models

Wednesday 11 September 2024 10:00 (1 hour)

In Witten's CS/WZW correspondence the chiral WZW model appears from the chiral boundary condition imposed on the CS theory.

I will describe how similar boundary conditions (mixed chiral-antichiral) of the CS theory and of its AKSZ analogs produce many other interesting examples and how they explain, in particular, Poisson-Lie T-duality. Unlike the CS/WZW correspondence, this generalization is at the moment only perturbative; on the other hand, the perturbative renormalization leads quickly to the (generalized) Ricci tensor and hopefully still hides many interesting things. The calculation is done using the Batalin-Vilkovisky method and the main tool is a CS propagator compatible with the chiral boundary conditions. Based on joint works with J. Pulmann, F. Valach, and D. Youmans.

Presenter: SEVERA, Pavol (University of Geneva, Switzerland)