

Ilka Brunner (LMU München)
Nils Carqueville (Universität Wien)
Hans Jockers (JGU Mainz)
Peter Mayr (LMU München)
Simone Noja (Universität Heidelberg)
Ivo Sachs (LMU München)
Johannes Walcher (Universität Heidelberg)

JOHANNES GUTENBERG
UNIVERSITÄT MAINZ



RIND seminar on Mathematical Physics and String Theory

July 3, 2023 at 4 p.m. c.t.
None

Joint seminar series on Mathematical Physics and String Theory

Tony Pantev
U. Penn

Topology of Wild Character Varieties

Wild character varieties parametrize monodromy representations of flat meromorphic connections on compact Riemann surfaces. They are classical objects with remarkable geometric and topological properties. In the past twenty years new insights from algebraic geometry lead to precise conjectures on the topological structure and complexity of character varieties. I will recall some of these conjectures and will sketch a strategy for approaching them. In particular I will describe recent joint works with Chuang, Diaconescu, Donagi, and Nawata in which we use dualities in geometry and physics to extract cohomological invariants of wild character varieties from enumerative Calabi-Yau geometry and refined Chern-Simons invariants of torus knots.

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