

Topology Seminar

Dan Berwick-Evans

of University of Illinois Urbana-Champaign will be speaking on

Field theories and elliptic cohomology from the vantage of characters

on April 21 at 3:00 in
MIT Room 2-131

A basic way to probe a cohomology theory is through its complexification and the resulting Chern character map. Features of the cohomology theory can then be transferred to this complexification, e.g., pushforwards determine Riemann-Roch factors. Field theories also have a good notion of character theory via their partition functions, which are functions on certain moduli spaces. Constructions in field theories similarly endow partition functions with additional structure. I'll apply these ideas to elliptic cohomology and 2-dimensional supersymmetric field theories, showing how the character theories of these objects line up with one another. Refining this comparison points toward a connection between field theories and topological modular forms.

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