Topology Seminar

UNIVERSITY OF NOTRE DAME
Department of Mathematics

Speaker: David Gepner
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Wednesday, September 30, 2015
10:00 AM
258 Hurley Hall

Title: Cohomology theories associated to infinity-topoi, globally equivariant spectra, and elliptic cohomology

Abstract:

In this talk I will explain how an infinity-topos equipped with a suitable ring or module object gives rise to a (co)homology theory, locally defined on the infinity-topos, and how this specializes to various versions of (co)homology, such as sheaf cohomology, motivic cohomology, etc. in algebraic geometry, twisted cohomology, equivariant cohomology, etc. in algebraic topology, as well as similar sorts of things in other contexts. As an application, we will recover Schwede's global spectra as well as Lurie's equivariant elliptic cohomology. Finally, in the presence of a ring structure, we will see how to find invertible and dualizable objects and therefore maps which admit Thom isomorphisms or transfers with respect to these theories. This is joint work in progress with Thomas Nikolaus.