

Topology and Field Theory Seminar



Speaker: Takuo Matsuoka
Northwestern University

Tuesday, April 29, 2014
12:00 pm
Room: 258 Hurley Hall

Title: On the Koszul duality for E_n -algebras and factorization algebras

Abstract:

Generalizing Jacob Lurie's idea on the relation between the Verdier duality and the iterated loop space theory, we consider the Koszul duality for locally constant factorization algebras. We formulate an analogue of Lurie's "nonabelian Poincare duality" theorem (which is closely related to earlier results of Graeme Segal, of Dusa McDuff, and of Paolo Salvatore) in a symmetric monoidal stable infinity category carefully, using John Francis' notion of excision. Its proof is done by first studying the Koszul duality for E_n -algebras in detail. As a consequence, we obtain a Verdier type equivalence for factorization algebras. We further examine another consequence, on a topological field theory.