Topology Seminar

Ryan Grady

of Boston University will be speaking on

Derived geometry as a tool for QFT, QFT as a tool in topology

on March 9 at 4:30 in
MIT Room 2-131

In this talk I will highlight how formal moduli problems and derived stacks have a role in constructing quantum field theories. I will then focus on a specific example which allows one to give a new proof of the algebraic index theorem of Nest-Tsygan and Fedosov. If time permits, I will also discuss observables in QFT and their structure as a factorization algebra; giving a further reinterpretation of the algebraic index theorem and some insight into higher analogues of index theory.