

TOPOLOGY SEMINAR

Guest Speaker: Ningchuan Zhang

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Champaign**

Date: Tuesday, September 17, 2019

Time: 2:30 PM

Location: 258 Hurley Hall

Lecture Title:

Dirichlet character twisted Eisenstein series and J-spectra

Abstract

Bernoulli numbers show up in both the q -expansions of normalized Eisenstein series and the image of the J -homomorphism in the stable homotopy groups of spheres. Number theorists have defined generalized Bernoulli numbers and twisted Eisenstein series associated to Dirichlet characters. The goal of this talk is to construct a family of Dirichlet character twisted J -spectra and explain the relations between their homotopy groups and congruences of the twisted Eisenstein series. In the course of that, we will generalize Nicholas Katz's algebro-geometric explanation of congruences of the (untwisted) normalized Eisenstein series in his Antwerp notes.