THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE
Algebraic Geometry and Representation Theory Seminar

on Wednesday, Nov 24, 2021at 13:00

** Note the unusual time ** Link: https://weizmann.zoom.us/j/98304397425

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Exceptional zeros of twisted triple product p-adic L-functions

Abstract:

p-adic L-functions involve modified p-factors which measure the discrepancy between the p-adic and complex L-values in the interpolation formula. It is a puzzling fact that this factor can vanish at the central point. Then the p-adic L-function trivially vanish at the point, and such a zero is called an exceptional zero. The p-adic L-function of an elliptic curve has an exceptional zero if and only if it has split multiplicative reduction at p, and the precise relation between derivative of the p-adic L-function and the algebraic part of the complex L-value was conjectured by Mazur-Tate-Teitelbaum and proved by Greenberg-Stevens. ã€€ There have been many attempts to extend this result of Greenberg-Stevens to more general automorphic forms. In this talk I will consider the exceptional zeros of the cyclotomic twisted triple product p-adic L-function associated to elliptic curves over rationals and a real quadratic field, and prove an identity between derivatives of the p-adic L-function and complex L-values. I will also consider exceptional zeros of a certain p-adic L-function of degree 6 associated with two rational elliptic curves. This is a joint work with Ming-Lun Hsieh.

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