SCMS Seminar

THE P-ADIC GROSS-ZAGIER FORMULA OF ELLIPTIC MODULAR FORMS

Prof. Shinichi Kobayashi

Kyushu University

Time: 10:00-11:30, Fri, Mar 9, 2018
10:00-11:30, Tue, Mar 13, 2018
10:00-11:30, Thu, Mar 15, 2018
10:00-11:30, Tue, Mar 20, 2018
Venue: Room 2213, East Main Guanghua Tower, Handan Campus
Time: 15:00-16:30, Fri, Mar 23, 2018
10:00-11:30, Mon, Mar 26, 2018
Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Abstract: The p-adic Gross-Zagier formula describes the derivative of the p-adic L-function in terms of the p-adic height of Heegner cycle (Heegner point if the weight is two). Together with the classical Gross-Zagier formula, it has a striking application for the full Birch and Swinnerton-Dyer conjecture.

The formula was proved by B. Perrin-Riou (weight 2) and by J. Nekovar (higher weight) at good ordinary primes, and by the lecturer at non-ordinary primes. In this course, I explain the proof with a special emphasis on the non-ordinary case. (However, the proof also works (includes) the ordinary case.)

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