Course information form of MSC

Personal Information				
Name	Lin WENG 翁林	Institution	Kyushu University,Japan	Photo
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Awards and Honors				

Course Information	
Title	Zeta Functions and Their Zeros
Schedule	Part One Nov.12/14/19/21/26 Time:15:10-17:00 Part Two Dec. 09/11/16/18 Time: 10:10-12:00 Place: TBA
Description	Zeta functions, a central theme in mathematics, have been proved to be very mysterious. In this lecture series, we explain some genuine constructions of both abelian and non-abelian zetas for number fields and function fields over any base fields, using stability. We will expose some reasons via examples why they satisfy the Riemann Hypothesis. The topics covered range from motivic Euler products and motivic K group, Atiyah-Bott versus Harder-Narasimhan for various masses of moduli stacks, Arthur and Lafforgue truncations, Langlands-Siegel Eisenstein series, etc to the Riemann Hypothesis. Some exciting developments, jointly obtained with Zagier on zetas for elliptic curves will also be included. The lectures end with a conjectural structures on moduli stacks of principal bundles, exposing how non-abelian invariants can be obtained via abelian ones with the help of Lie structure guided by stability.
Prerequisite	Some understanding of languages of modern mathematics
References (Roughly)	1) Atiyah-Bott: Ying-Mills on Riemann surfaces, 2) Harder-Narasimhan: Cohomology of moduli spaces 3) Lafforgue: Ramanujan conjecture 4) Ki, Komori, Suzuki: Riemann Hypothesis for Weng zetas 5) Moglin-Waldspurger: Spectrum decomposition and Eisenstein series 6) Weng: Geometric Approach to L functions, 7) Weng & Zagier: Riemann Hypothesis for Higher Rank Zetas of Elliptic Curves

Any request for lecture room
Blackboard