Math + Science Innovation

SGU Special Lectures

スーパーグローバルコース数学特別講演会

国立台湾大学の Ming-Lun, Hsieh 先生の講演が下記の日程で行われます。

日時：2026 年 3 月 12 日（木）14：00～15：30

場所：理学研究科 3 号館 127 室

Title：「Modular forms and Selmer groups」

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Abstract：
The classical class number formula for imaginary quadratic fields reveals a mysterious and profound connection between the special values of L-functions and the size of ideal class groups.
In 1990, Spencer Bloch and Kazuya Katoformulated the so-called Bloch–Kato conjecture, a far-reaching generalization of the class number formula.
This conjecture predicts a deep relationship between the special values of motivic L-functions at integers and the sizes of Selmer groups, which are defined in terms of certain Galois cohomology groups.
Currently, there are two major approaches to studying this conjecture. One is the theory of Euler systems, which is used to bound the size of Selmer groups in terms of special values of L-functions.
The other approach uses congruences between modular forms to construct nontrivial elements in Selmer groups arising from special L-values.
The purpose of this lecture is to survey important examples studied via the method of modular form congruences and to report on some recent progress in this direction.

・本学の学生は申込不要です。
・本講演は京都大学のスーパーグローバル教育プログラム、スーパーグローバルコース（数学分野）の企画講演です。
当コースについての詳細は https://www.math.kyoto-u.ac.jp/ja/ktgu/ktgu をご覧ください。