

九大代数学セミナー

日時 2026 年 1 月 23 日 (金) 16:00-17:00

場所 九州大学伊都キャンパス ウエスト 1 号館 5 階 C-513 中講義室,
および Zoom ミーティングによるオンライン開催

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講演者 Asif Zaman 氏 (University of Toronto)

題目 **The least prime with a given cycle type**

概要 Let K/k be a Galois extension of number fields with Galois group G . For a conjugacy class C of G , the least unramified prime with Frobenius element in C is known to be at most a fixed absolute power α of the discriminant of K due to the celebrated work of Lagarias, Montgomery, and Odlyzko (1979). This exponent α has been extensively studied with the primary method exploiting statistics of zeros of L-functions. We generalize an alternative method based on detecting sign changes. For $G = S_n$, our method improves this exponent α to decay exponentially with n as $n \rightarrow \infty$. The ideas also apply to general groups G and certain conjugacy invariant subsets C .

This talk is based on joint work with Peter J. Cho and Robert Lemke Oliver.

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世話人：小林 真一, 中村 健太郎, Ade Irma Suriajaya, 松坂 俊輝, 埴原 紀宏 (九大数理)