九大代数学セミナー

日時 2024 年 6 月 7 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 馬 昭平 氏 (東京工業大学)

題目 **Mixed Hodge structures of locally symmetric varieties**

概要 I will talk about the mixed Hodge structures on the cohomology of locally symmetric varieties. In the middle degree, I relate the weight filtration to the Siegel operators for certain modular forms. This has application to a classical problem on the Siegel operators. In the general degrees, I construct a spectral sequence which converges to the edge components in the Hodge triangle, and whose E^1 page is expressed by some simple geometric invariants associated to the cusps. This already degenerates at E^1 in a certain range. MHS approach also has application to the restriction map to the Borel-Serre boundary.

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