

Séminaire de théorie des nombres

Le 20 octobre 2025 à 14h (PRG)

Rigid cocycles for $\mathrm{SL}(n)$ and their values at special points

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Résumé : The theory of complex multiplication implies that the values of modular functions at CM points belong to abelian extensions of imaginary quadratic fields. In this talk, we propose a conjectural extension of this phenomenon to the setting of totally real fields. Generalizing the work of Darmon, Pozzi, and Vonk, we construct rigid cocycles for $\mathrm{SL}(n)$, which play the role of modular functions, and define their values at points associated with totally real fields. The construction of these cocycles originates from a topological source : the Eisenstein class of a torus bundle. This is ongoing joint work with Peter Xu.