Institut f. Analysis und Zahlentheorie

Zahlentheoretisches Kolloquium

Dienstag, 18. 6. 2019, 13:30 Uhr

Seminarraum Analysis-Zahlentheorie (NT02008), Kopernikusgasse 24/II

An overview on Arboreal Galois representations

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Abstract: Arboreal Galois representations are central objects in modern arithmetic dynamics. They are defined as continuous homomorphisms, associated to rational maps over algebraic varieties, from the absolute Galois group of a field to the automorphism group of a special graph, and they are considered to be the dynamical avatars of Galois representations attached to Tate modules of abelian varieties. Due to their nature, they combine in a beautiful way several combinatorial, arithmetic and group-theoretic information. In this talk I will introduce them, showing peculiar examples and the most important conjectures around the topic. Afterwards, I will explain the recent developments due to my research: our proof of Jones' conjecture (joint with G. Micheli) and our work around the inverse problem (joint with D. Casazza and C. Pagano).

R. Tichy