Mathematics, Statistics, and Computer Science **@ UIC**

Geometry, Topology and Dynamics Seminar

Galois groups and Cantor actions

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Abstract: In this paper, we study the actions of profinite groups on Cantor sets which arise from representations of Galois groups of certain fields of rational functions. Such representations are associated to polynomials, and they are called profinite iterated monodromy groups. We are interested in a topological invariant of such actions called the asymptotic discriminant. In particular, we give a complete classification by whether the asymptotic discriminant is stable or wild in the case when the polynomial generating the representation is quadratic. We also study different ways in which a wild asymptotic discriminant can arise.

Monday, October 15 at 3:00 PM in 636 SEO