# Thurston mappings, Galois actions and algorithms

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The theory of Thurston mappings (post-critically finite branched covering maps of the 2-sphere) lies at the intersection of many domains: algebraic topology, holomorphic dynamics, Teichmüller theory. In this talk, we show how Galois theory for covering maps can be used towards a classification of such mappings, by providing some useful representations of fundamental groups into Galois groups. We also present recent results obtained with M. Braverman and M. Yampolsky about the algorithmic aspects of the theory.