

Automorphisms of Heegaard splittings of 3-manifolds

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Abstract. This is joint work with Jesse Johnson (Yale). An automorphism of a Heegaard splitting (M, Σ) of a 3-manifold M is a homeomorphism $\phi : M \rightarrow M$ which maps the Heegaard surface Σ to itself. The restriction of ϕ to Σ can be periodic, reducible or pseudo Anosov. We give strong structural results on which 3-manifolds M admit periodic automorphisms and which types of Heegaard splittings Σ admit reducible automorphisms. The latter class is related to open book decompositions.