

# Harmonic maps and the stabilization of Heegaard splittings

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**Abstract:** A geometric view of the collection of Heegaard splittings of a hyperbolic manifold has been emerging recently. We combine this with a method of controlling surfaces via a deformation to harmonic maps. As an application, we give examples for each genus greater than one of a 3-manifold with a pair of genus  $g$  Heegaard splittings whose smallest common stabilization has genus  $2g$ . All previously known examples had a common stabilization of genus  $g + 1$ . This is joint work with Abigail Thompson and Bill Thurston.