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Casey Lynn Kelleher* (clkelleh@uci.edu), **Jess Boling** and **Jeffrey D Streets**. *Entropy, stability, and harmonic map heat flow*.

Inspired by work of Colding-Minicozzi on mean curvature flow, Zhang introduced a notion of entropy stability for harmonic map flow. We build further upon this work in several directions. First we prove the equivalence of entropy stability with a more computationally tractable F-stability. Then, focusing on the case of spherical targets, we prove a general instability result for high-entropy solitons. Finally, we exploit results of Lin-Wang to observe long time existence and convergence results for maps into certain convex domains and how they relate to generic singularities of harmonic map flow. This is joint work with Jess Boling and Jeffrey Streets. (Received August 15, 2015)