

Approximation of Mean Curvature Flow with Generic Singularities by Smooth Flows with Surgery

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Abstract

We construct smooth flows with surgery that approximate weak mean curvature flows with only spherical and neck-pinch singularities. This is achieved by combining the recent work of Choi-Haslhofer-Hershkovits, and Choi-Haslhofer-Hershkovits-White, establishing canonical neighbourhoods of such singularities, with suitable barriers to flows with surgery. A limiting argument is then used to control these approximating flows. We demonstrate an application of this surgery flow by improving the entropy bound on the low-entropy Schoenflies conjecture.

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Location: B3.02

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