Numerical solution of constrained mean curvature flow

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In the contribution we discuss the formulation and numerical solution of the planar mean curvature flow with the area or length constraint. The motion law is treated by means of the direct method [4] and by means of the phase-field method (see [3]) with non-local terms. This problem is originally mentioned in [1] and analyzed partially in [2]. We identify basic properties of this motion, generalize it by including anisotropy in relative geometry and discuss the quantitative numerical results, their mutual relation, and present qualitative behavior of the solution.

References

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