

Koch, Herbert; Lamm, Tobias

Geometric flows with rough initial data. (English) Zbl 1252.35159

Asian J. Math. 16, No. 2, 209-235 (2012).

The author proves the global existence and uniqueness of the analytic solution of the mean curvature flow, the surface diffusion flow and the Willmore flow of entire graphs for Lipschitz initial data with small Lipschitz norm. The author also prove the global existence and uniqueness of the analytic solution of the Ricci-DeTurck flow on Euclidean space with bounded initial metrics that is close to the Euclidean metrics in L^∞ norm and the harmonic map flow with initial maps whose image is contained in a small geodesic ball.

Reviewer: [Shu-Yu Hsu \(Min-hsiung\)](#)

MSC:

[35K59](#) Quasilinear parabolic equations

[35K45](#) Initial value problems for second-order parabolic systems

[53C44](#) Geometric evolution equations (mean curvature flow, Ricci flow, etc.)
(MSC2010)

Cited in **2** Reviews
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Keywords:

[global existence](#); [uniqueness](#); [analytic solution](#); [mean curvature flow](#); [surface diffusion flow](#); [Willmore flow](#); [Ricci-DeTurck flow](#)

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