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Lagrangian mean curvature flow of entire Lipschitz graphs

We consider an equivalent Lagrangian mean curvature flow for entire graphs with Lipschitz initial data. Under a certain bound on the Lipschitz norm of the initial surface (which is equivalent to the requirement that the potential of the Lagrangian graph is uniformly convex), we prove the longtime existence and curvature decay for the equivalent Lagrangian mean curvature flow. We also apply our result to translating soliton and self-similar solutions in this case, and get a complete description of these special solutions. Note that the Lipschitz condition is not assumed be small in our case. The previous results are mainly concerned with the case with smallness Lipschitz condition.

This is joint work with Albert Chau and Jingyi Chen. The papers relevant to this talk can be found on arxiv.org.

- Title: Entire self-similar solutions to Lagrangian Mean curvature flow, arXiv:0905.3869.
- Title: Lagrangian Mean Curvature flow for entire Lipschitz graphs, arXiv:0902.3300.