THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

M. E. Taylor Analysis and PDE Seminar

Wednesday, April 17th
3:30 - 4:30 p.m.
Phillips Hall 385

Interior Hessian Estimates for Singularities of the Lagrangian Mean Curvature Flow

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Abstract. In this talk, we discuss the history of the Lagrangian Mean Curvature equation beginning with the special Lagrangian equation of Harvey and Lawson. We consider the hypercritical case which results in a convex potential function for our Lagrangian submanifold. From there, we will talk about the Lagrangian Mean Curvature flow and some of its singularities, namely, shrinker, expander, translator, and rotator solutions. We then extend our results to a broader class of Lagrangian Mean Curvature equations. We will highlight some of the key ideas in proving our Hessian estimates and end the talk with applications of these a priori estimates to the regularity of solutions. This talk is based on joint work with Arunima Bhattacharya.