Topics in Geometric Analysis



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Mean curvature flows of higher codimension

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Many fascinating phenomena occur when a submanifold of higher codimension is evolved by its mean curvature vector. In this more general setting much of the structure of hypersurface flows is absent e.g. embeddedness and mean-convexity fail to be preserved. Consequently, even in the simplest settings (closed curves in 3-space, surfaces in 4-space) basic questions remain unanswered. I will describe some of these open questions, and recent developments concerning flows satisfying natural curvature pinching conditions (from joint works with Nguyen and Bourni, Langford).

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