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*Locally constrained mean curvature type flows*

The talk concerns a class of mean curvature type flows with constraints. The first of such flow involving mean curvature was considered in a previous joint work with Junfang Li to provide a flow approach to the classical isoperimetric inequality. Later, general fully nonlinear constrained flows were introduced for optimal geometric inequalities involving quermassintegrals. These flows are associated with variational properties of corresponding geometric quantities. We will discuss some recent results and open regularity problems.