

Workshop on Geometric Evolution Equations  
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## Mean curvature flow and isoperimetric inequalities

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### **Abstract**

The evolution of hypersurfaces in direction of their unit normal with speed given by their mean curvature is a quasilinear parabolic system that decreases area while smoothing the evolving hypersurfaces in a natural way. The lecture explains how weak solutions of mean curvature flow and mean curvature flow with surgeries can be used to prove isoperimetric inequalities.