Lott, John: Long-time behavior in geometric flows

A geometric flow is a way of evolving a geometry on a manifold. The hope is that as time goes on, the geometry converges to something recognizable. I will talk about what's known, and what's not known, for two geometric flows in three dimensions. The first flow is the Ricci flow, used by Perelman to prove Thurston's geometrization conjecture. The second flow is the Einstein flow, which generates solutions of the vacuum Einstein equations on a four dimensional spacetime.