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Curvature measures, isoperimetric inequalities and fully nonlinear PDE

We discuss the connections of elliptic and parabolic fully nonlinear partial differential equations with curvature measures and isoperimetric inequalities for the quermassintegrals. We settle the prescirbing curvature measure problem by solving a corresponding elliptic equation, with a new key estimate. We also propose some parabolic curvature flows to prove the isoperimetric type inequalities.