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Ancient solutions to geometric flows

Abstract. We discuss ancient solutions in different geometric flows. We focus on the classification of ancient solutions in the curve shortening flow and the Ricci flow on surfaces. We also construct a new ancient solution to the Yamabe flow on $\mathbb{R}^n$, which is equivalent to the fast diffusion equation on $\mathbb{R}^n$. The last is joint work with Daskalopoulos and del Pino.