

Geodesic convexity in Markov chains and Fokker–Planck equations

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We consider finite-dimensional, time-continuous Markov chains satisfying the detailed balance condition as gradient systems with the relative entropy E as driving functional. The Riemannian metric is defined via its inverse matrix called the Onsager matrix K . We provide methods for establishing geodesic λ -convexity of the entropy and treat several examples including some more general nonlinear reaction systems.