Heat flow on Alexandrov spaces

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I will prove that on a compact, finite dimensional Alexandrov space with curvature bounded below, the gradient flow of the Dirichlet energy with respect to L^2 coincides with the gradient flow of the relative entropy with respect to W_2. The proof does not use PDE techniques but relies only on metric arguments. I will also show how from this identification it easily follows that the heat kernel is Lipschitz.

This is joint work with Kazumasa Kuwada and Shin-ichi Ohta.