

A gradient flow for open elastic curves with fixed length and clamped ends

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Abstract. We consider regular open curves in \mathbb{R}^n with clamped ends subject to a fixed length constraint and moving according to the L^2 -gradient flow of the elastic energy. For this flow we prove a long time existence result and subconvergence to critical points. In particular our result provides an alternative approach for finding equilibrium configurations of bending energy.

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