

Bevilacqua - Variational analysis of inextensible elastic curves

Saturday, 26 November 2022 11:45 (45 minutes)

Abstract. In this talk we propose a variational analysis of inextensible elastic curves.

First, we introduce a more general frame called relatively parallel adapted frame (RPAF) to take into account not so regular curves, like r in $W^{2,p}([0; L]; \mathbb{R}^3)$. Second, we minimize elastic energies defined on the introduced framed curves penalizing both curvature and torsion and finally, we discuss critical points deriving the first-order necessary conditions

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