

Small deformations, variations and energies of curves

Marija Najdanović
University of Priština in Kosovska Mitrovica
Faculty of Sciences and Mathematics
38220 Kosovska Mitrovica, Serbia
E-mail: marija.najdanovic@pr.ac.rs

Contrary to isometries as transformations that preserve distances, infinitesimal bending is a type of small deformation in which the arc length is invariant with appropriate precision. The influence that given deformations have on geometric quantities is measured by variations. In this talk we discuss the infinitesimal bending of curves and variations of their energies. In particular, we consider spherical curves and an infinitesimal bending field that leaves a given curve on a sphere with a predetermined deviation.

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