

Lepage forms in the calculus of variations

Olga Krupková
Palacký University

Lepage forms represent a fundamental concept in the global calculus variations. Inspired by the work of Lepage, they were introduced by Demeter Krupka in 1973 in his seminal paper *Some Geometric Aspects of Variational Problems in Fibered Manifolds*, published in the journal of Brno University "Folia Fac. Sci. Nat. Univ. Purk. Brunensis" (see also [ArXiv:math-ph/0110005](https://arxiv.org/abs/math-ph/0110005) for the electronic transcription). The talk is devoted to Lepage forms, their recent generalisations, the role they play in the current global variational analysis, and their applications in the geometric theory of differential equations, the theory of variational sequences and bicomplexes, and higher-order mechanics and field theory.