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Jet multi-time KCC-invariants for some remarkable PDE systems. (English) Zbl 1328.58003

Summary: In this paper, we compute the multi-time Kosambi-Cartan-Chern (KCC) invariants associated with some remarkable PDE systems produced, for example, by sine-Gordon, Tzitzeica or Monge-Ampère equations. These multi-time KCC-invariants naturally characterize the given PDE systems from geometrical point of view.

MSC:
58A20 Jets in global analysis
58B20 Riemannian, Finsler and other geometric structures on infinite-dimensional manifolds
35M99 Partial differential equations of mixed type and mixed-type systems of partial differential equations

Keywords:
1-jet spaces; multi-time KCC-invariants; sine-Gordon equation; Tzitzeica equation; Monge-Ampère equation

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