

Special Issue

New Developments in Calculus of Variations

Message from the Guest Editors

The purpose of this Special Issue is to gather a collection of articles reflecting the latest developments in the following areas: the calculus of variations and its inverse problems; Helmholtz conditions and their generalization; variational methods in differential equations; variational methods in optimization; Lagrangian formalism with its standard and non-standard Lagrangians, null Lagrangians, and gauge functions; invariance in Lagrangians; gauge and Lie groups; gauge theories and variational principles; variational symmetries; gauge systems with Grassmann variables; Lagrangian interactions; classical and quantum dynamical systems; applications in mathematical physics; and others.

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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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