

VARIATIONAL/HEMIVARIATIONAL INEQUALITIES AND THEIR APPLICATIONS

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DESCRIPTION

In many complicated physical processes and engineering applications, mathematical models of problems are formulated as inequalities instead of more commonly seen equations. Moreover, inequality problems have undergone, within a very short time, a remarkable development in both pure and applied mathematics as well as in mechanics and engineering sciences, largely because of new and efficient mathematical approaches in this fields or, more generally, in convex analysis and nonsmooth analysis. Generally speaking, inequality problems can be divided into two main classes: that of variational inequalities, which, with a research "life" of some sixty years now, is mainly concerned with convex energy functions, and that of hemivariational inequalities, which was first introduced and studied by P.D. Panagiotopoulos, since the early 1980s, to handle a variety of engineering problems involving nonmonotone and possibly multivalued constitutive and interface laws for deformable bodies.

This Special Issue is devoted to new advances and research results on variational/hemivariational inequalities and their applications. It seeks to develop new mathematical tools and methods for the theoretical study of problems for various variational/hemivariational inequalities and apply those theoretical results to solve open problems from our real life, such as, problems in solid mechanics, mechanical impact problems, economical dynamics, dynamic traffic networks, problems in fluid mechanics, and so on.

SCOPE

Potential topics include but are not limited to the following:

- ▶ Nonlinear partial differential equations
- ▶ Variational inequalities
- ▶ Hemivariational inequalities
- ▶ Solid mechanics
- ▶ Control theory
- ▶ Inverse problems
- ▶ Equilibrium problems
- ▶ Fluid mechanics
- ▶ Mathematical programming

- ▶ Fractional differential equations
- ▶ Mathematical modelling
- ▶ Nonlinear phenomena
- ▶ Numerical analysis

HOW TO SUBMIT

All submissions to the Special Issue must be made electronically at <https://www.editorialmanager.com/openmath/>

Before submission, please carefully read the [Instructions for Authors](#). All manuscripts will undergo the standard peer review process (at least two Referees, single-blind).

When entering your submission (via online submission system), please choose the option “**Special Issue on Variational/Hemivariational Inequalities**”.

Submissions for the special issue will be handled starting on **May 1, 2019**, while the strict deadline for submission is **December 31, 2019**.

We are looking forward to your submission!

If you have any question, please contact Dr. Justyna Żuk, Managing Editor, Justyna.Zuk@degruyter.com.