

**EDITORIAL**  
**A SPECIAL ISSUE ON VARIATIONAL AND HEMIVARIATIONAL INEQUALITIES  
WITH APPLICATIONS**

The mathematical research on variational inequalities has its origins in the early 1960s in seminal contributions of A. Signorini, G. Fichera, J.-L. Lions, G. Stampacchia, and others. The theory stems from the models in mechanics described by partial differential equations. Mutual relations among variational inequalities, convex analysis, maximal monotone operators, and subdifferentials were established by J.J. Moreau, F.E. Browder, and H. Brézis.

The pioneering works on hemivariational inequalities at the beginning of 1980s are due to P.D. Panagiotopoulos. Hemivariational inequalities are variational descriptions of physical processes that include nonconvex, nondifferentiable, and locally Lipschitz functions. On one hand, such inequalities have a precise physical meaning expressing principle of virtual work or power introduced by Fourier, and on the other hand they are the generalizations of variational inequalities exploiting the notion of generalized gradient of Clarke-Rockafellar.

During the last four decades, several research directions appear in the mathematical theory of variational-hemivariational inequalities. They have shown to be very useful across a wide variety of applications, ranging from nonconvex analysis to nonsmooth mechanics, physics, and engineering sciences, and new fields of applicability have emerged covering problems in optimization, control, fixed point, economics, game theory and so on.

This special issue is comprised of nine contributed papers consisting of most recent and new results in variational and hemivariational inequalities. We believe that publication of this special issue will be useful and helpful for researchers working in these topics. Finally, we warmly thank all the authors for their contributions and the reviewers for their efforts and valuable reports.

Stanislaw Migórski  
Jagiellonian University, Krakow, Poland  
E-mail address: [stanislaw.migorski@uj.edu.pl](mailto:stanislaw.migorski@uj.edu.pl)

Jen-Chih Yao  
China Medical University Hospital, China Medical University, Taichung, Taiwan  
E-mail address: [yaojc@mail.cmu.edu.tw](mailto:yaojc@mail.cmu.edu.tw)