

Special Issue on  
**Variational and Nonvariational Methods for PDEs with  
Variable Exponents**

# CALL FOR PAPERS

Nonlinear partial differential equations (PDEs) involving variable exponent growth conditions are extremely attractive because they can be used to model dynamical phenomena which arise from the study of electrorheological fluids or elastic mechanics. Problems with variable exponent growth conditions also appear in the modeling of stationary thermorheological viscous flows of non-Newtonian fluids and in the mathematical description of the filtration of an ideal barotropic gas through a porous medium, in magnetostatics and in image restoration.

Lack of general existence theorems for establishing solutions for nonlinear PDEs forces scientists to seek alternative pathways. In this regard, variational and non-variational methods are quite valuable tools in the analysis of nonlinear problems. These methods can be applied to many nonlinear problems in a variety of physical and engineering contexts. Therefore, in the past two decades, a growing interest in the application of these two types of methods has been observed.

The aim of this special issue is to provide a platform where contemporary developments in the area of variational and nonvariational methods for solving PDEs with variable exponent can be shared. Original research articles and review articles on the topic are also welcome.

Potential topics include but are not limited to the following:

- ▶ PDEs in non-Newtonian fluids
- ▶ PDEs in variable exponent Musielak-Orlicz-Sobolev spaces
- ▶ Fractional PDEs with variable exponents
- ▶ Fourth-order PDEs with variable exponents
- ▶ Anisotropic variable exponent PDEs: continuous and discrete case
- ▶ Applications of fixed point, topological and monotonicity techniques in solving variable exponent PDEs

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijde/vnm/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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