Special Issue on
Recent Contributions to Fixed Point Applications in Fractional Calculus

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CALL FOR PAPERS

Fixed point theory is an essential tool in several theoretical and applied areas in nonlinear phenomena. Fixed point theorems and techniques have been applied in a range of fields, such as nonlinear analysis, integral and differential equations and inclusions, dynamic systems, mathematics of fractals, fractional calculus, mathematical economics (game theory, equilibrium problems, and optimization problems), biology, chemistry, engineering, and physics.

The significance of the fractional calculus has been demonstrated to be very effective in various fields, for example, in elasticity, continuum mechanics, quantum mechanics, signal analysis, and other areas of pure and applied mathematics, like nonlinear analysis and nonlinear dynamics. The study of fractional calculus develops out of traditional concepts of the calculus derivative and integral operators. Many papers introduced several different forms of noninteger differential operators and discussed various results on existence, uniqueness, and qualitative and quantitative properties of solutions for fractional differential equations.

This special issue aims to present recent contributions and new trends related to the fixed point theory and its various applications to the theory of fractional calculus.

We invite researchers to contribute original research papers as well as review articles to this special issue giving new insights into recent achievements.

Potential topics include but are not limited to the following:

▸ Fixed point structures and applications

▸ Generalized distances

▸ Fixed points of G-type contractions on graphs

▸ Fixed point theorems for generalized multivalued mappings

▸ Ulam-Hyers stability and well-posedness of fixed point problems

▸ Iterative methods and algorithms

▸ Degree and fixed point index for mappings

▸ Approximate solutions of fixed point problems

▸ Best proximity points and extensions of fixed point theorems

▸ Recent development in fixed point theory, optimization, and their applications

▸ Set-valued equilibrium problems with applications to Browder variational inclusions and to fixed point theory;

▸ Nonlinear Analysis

▸ Advances on multivalued operators and related fixed point problems

▸ Ekeland variational principle with applications to fixed point theory

▸ Fixed point results and their applications in right multivariate fractional calculus

▸ Fixed points of multivalued monotone operators and the solvability of a fractional integral inclusion

▸ Fractional differential equations and related topics

▸ Special Functions and integral transforms related to fractional calculus

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