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Editorial

Topological Methods in Analysis

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Topological methods have played a seminal role in functional analysis since its birth in the early twentieth century. The Baire category theorem, for example, is the bedrock on which rest such basic principles of functional analysis as the open mapping theorem and the principle of uniform boundedness. Initial (weak) topologies, compactness, and the Tikhonov theorem drive such classical results of duality theory as the Banach-Alaoglu and Krein-Milman theorems. Topological methods also play a crucial role in Banach algebra theory (Gelfand topology), harmonic analysis (locally compact groups and function spaces), differential equations (fixed point theorems and Ascoli-Arzela theorem), and nonlinear analysis (fixed point existence theorems and topological degree theory) to mention just a few.

The lofty goal of this special issue is to present some new outstanding contributions in this research area. They include results on fixed point theorems, metric spaces, C^*-algebras, modular spaces, algebraic hypersurfaces, and topological groups. Our hope is that this wide spectrum of topics will be of interest to many researchers in the area.

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