PREFACE
SPECIAL ISSUE ON
"VARIATIONAL, TOPOLOGICAL AND SET-VALUED METHODS FOR NONLINEAR DIFFERENTIAL PROBLEMS"

GIUSEPPINA D'AGUÌ, ANGELA SCIAMMETTA, AND PATRICK WINKERT

This special issue follows the associated Special Session SS34 with the same name from The 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications in Wilmington, USA (May 31 - June 4, 2023). The focus of this session was the qualitative analysis of nonlinear differential problems. In particular, the main purpose was to give an update on recent developments concerning ordinary and partial differential equations, variational-hemivariational inequalities, difference and algebraic systems obtained by exploiting different methods of the nonlinear analysis such as critical point theory, fixed point theorems, topological degree, Morse theory, set-valued analysis, and so on.

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In addition, we would like to thank Professor Xiaoying Han and Professor Alain Miranville, Editors-in-Chief of DCDS-S, for their support in carrying out the special issue.

Overall, 16 research papers on recent trends on the qualitative analysis of nonlinear differential problems are included in this special issue:

[10] S. Gnanasekaran, A. Columbu, R. Díaz Fuentes, N. Nithyadevi, *Global existence and lower bounds in a class of tumor-immune cell interactions chemotaxis systems.*
[11] A. Harrabi, M.K. Hamdani, A. Fiscella, *Multiplicity of solutions for a higher m-polyharmonic Kirchhoff type equation on unbounded domains.*
[12] E. Ipocoana, V. Taddei, *On multiplicative time-dependent perturbations of semigroups and cosine families generators.*
[13] Y.-H. Kim, C.Y. Park, S. Zeng, *Infinitely many small energy solutions to the p-Laplacian problems of Kirchhoff type with Hardy potential.*
[14] R. Livrea, B. Vassallo, *Three weak solutions to a periodic boundary Sturm-Liouville problem with discontinuous reaction.*
[15] F. Mennuni, A. Salvatore, *Multiple solutions for quasilinear elliptic problems with concave and convex nonlinearities.*
[16] N.S. Papageorgiou, J. Zhang, W. Zhang, *Global existence and multiplicity of solutions for nonlinear singular eigenvalue problems..*

(G. D'Aguì) Department of Engineering, University of Messina, 98166 Messina, Italy
Email address: dagui@unime.it

(A. Sciammetta) Department of Mathematics and Computer Science, University of Palermo, 90123 Palermo, Italy
Email address: angela.sciammetta@unipa.it

(P. Winkert) Technische Universität Berlin, Institut für Mathematik, Strasse des 17. Juni 136, 10623 Berlin, Germany
Email address: winkert@math.tu-berlin.de