

Special Issue

Dynamical Systems and Operator Theory

Message from the Guest Editors

This Special Issue will collect high-quality research or review papers on recent developments of operator-theoretic methods in the broad context of dynamical systems theory. The main focus is on, but not limited to, the framework of the dual Koopman (or composition) operator and Perron–Frobenius (or transfer) operator. We await theoretical contributions highlighting connections between the operator-theoretic description of dynamical systems (e.g., spectral properties) and their geometric properties in the state space (e.g., attractors, coherent structures). Contributions proposing novel (possibly data-driven) numerical methods to compute finite-dimensional approximations of the operators, with possible connections to or use of dynamic mode decomposition, finite element/volume methods, or machine learning will also be appreciated. Finally, we anticipate cutting-edge applications of operator-theoretic methods to specific domains, such as control theory, engineering, fluid dynamics, computational biology, and network science, to list a few.

Guest Editors

Prof. Dr. ALEXANDRE MAUROY

Namur Center for Complex Systems, Department of Mathematics,
University of Namur, 5000 Namur, Belgium

Prof. Dr. Yoshihiko SUSUKI

Osaka Prefecture University, Kyoto 606-8501, Japan

Prof. Dr. Igor Mezic

Mechanical Engineering, University of California, Santa Barbara 93106-5070, CA, USA

Deadline for manuscript submissions

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
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About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

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