

Special Issue

Algorithms for Biological Network Modelling

Message from the Guest Editor

This Special Issue will bring together cutting-edge methods from diverse computational disciplines that are currently being employed to address this important problem. Of particular interest are (i) methods from evolutionary computing to efficiently explore and characterize the design space (e.g., evolutionary algorithms, multi-objective optimisation, surrogate-assisted optimisation, landscape-aware heuristic search) and (ii) methods from applied mathematics to construct model formulations that reduce complexity whilst preserving predictive capacity (e.g., logic-based models). We encourage submissions across a broad range of application domains, including—but not restricted to—gene regulatory network modelling, metabolic modelling, synthetic biology and computational neuroscience.

- computational biology
- evolutionary algorithms
- surrogate models
- multi-objective optimization
- landscape analysis
- local optima networks

Guest Editor

Dr. Ozgur Akman

Department of Mathematics, University of Exeter, Exeter EX4 4QE, UK

Deadline for manuscript submissions

closed (1 April 2023)



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Algorithms
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
algorithms@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Algorithms are the very core of Computer Science. The whole area has been considered from quite different perspectives, having led to the development of many sub-communities: Complexity theory (limitations), approximation or parameterized algorithms (types of problems), geometric algorithms (subject area), metaheuristics, algorithm engineering, medical imaging (applications), indicates the range of perspectives. Our journal welcomes submissions written from any of these perspectives, so that it may become a forum for exchange of ideas between the corresponding scientific subcommunities.

Editor-in-Chief

Prof. Dr. Frank Werner

Faculty of Mathematics, Otto-von-Guericke-University, P.O. Box 4120,
D-39016 Magdeburg, Germany

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