

**Special Session on
Recent Advances on Bioinspired Computation
at
International Conference on Innovations in Bio-Inspired Computing and
Applications
(IBICA 2021)
on
World Wide Web
December 16-18, 2021**

<http://www.mirlabs.net/ibica21/>

Objectives and Scope

The main goal of this conference is to present new techniques, methods and experimental results from the bio-inspired interdisciplinary research work linking biological data with information processing, algorithms, and statistics. Aim is to bring together research papers from Bioinspired computation and its sub-fields. Applications of Bioinspired computation to various domains.

- Application of Bio-inspired computation through the use of computers to model nature.
- To solve biological features and concepts related to the field of biology, computer science and mathematics using machine learning, artificial intelligence techniques, Swarm intelligence, Ant colony optimization, Neural networks, etc.
- Evaluate the accuracy and efficiency of bio-inspired optimization approaches.
- Bio-inspired applications to diverse fields such as robotics, nano devices, computer aided architecture, software engineering, autonomic computing, computational neuroscience, bioinformatics, natural language processing, genetic engineering, modeling and simulation of complex networks, etc.

Subtopics

The topics include, but are not limited to:

- Bio-Inspired Robotics (Cognitive robotics and computation, Computational modelling of biological systems, Soft robotics and sensing, Human-robot interaction, Bio-inspired approaches for robot design)
- Bio-inspired computing techniques for Data-intensive applications (evolutionary algorithms, cellular automata, DNA computation, amorphous computing, etc.)
- Bio-inspired techniques for modeling and simulation of complex networks (computer networks, electricity grids, energy networks, biological systems, etc.)

- Bio-inspired algorithms for Biological applications (Bioinformatics and Genetic engineering).
- Bio-inspired optimization algorithms (graph algorithms, combinatorial scientific computing, Monte-Carlo simulations, linear, nonlinear and discrete optimization, and others).
- Machine learning and multi-agent systems in the development of autonomic computing.
- Swarm intelligence, Ant colony optimization, Neural networks.
- Natural language processing.
- Fuzzy systems, rough sets, molecular computing.
- Software Engineering.

Paper Publications

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (Indexed in SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago)
<https://www.springer.com/series/15179>
- Papers maximum length is 10 pages
- Papers must be formatted according to Springer format (Latex/word) available at: <https://www.springer.com/de/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324>

Important Dates

Paper submission due: September 30, 2021

Notification of paper acceptance: October 31, 2021

Registration and Final manuscript due: November 15, 2021

Conference: December 13-15, 2021

Special Session Chairs

- Dr. Rajashree Shettar, Department of Computer Science and Engineering, RV College of Engineering, Mysuru Road, Bengaluru-560059, Karnataka, INDIA
- Dr. Poonam Ghuli, Department of Computer Science and Engineering, RV College of Engineering, Mysuru Road, Bengaluru-560059, Karnataka, INDIA
- Dr. Shankru Guggari, Member, Machine Intelligence Research Labs, USA

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