Special Session on

Bio-Inspired Computing in Healthcare and Medicine

in conjunction with

14th International Conference on Innovations in Bio-Inspired Computing and Applications (IBICA 2023)

December 14-15, 2023

Website: http://www.mirlabs.org/ibica23

Hybrid Mode – Online & Offline

Onsite Venues: http://mirlabs.org/ibica23/venue2.php

Objectives and Scope

The objective of the session on "Bio-Inspired Computing in Healthcare and Medicine" is to explore and showcase the transformative potential of bio-inspired computing techniques in advancing healthcare and medical research. This session aims to bring together researchers, practitioners, and experts from both the computational and medical fields to discuss, share insights, and present cutting-edge developments at the intersection of bio-inspired computing and healthcare. By fostering collaboration and knowledge exchange, the session seeks to contribute to the enhancement of medical diagnosis, treatment, and overall healthcare practices through the innovative application of bio-inspired computational approaches.

The scope of the session on "Bio-Inspired Computing in Healthcare and Medicine" encompasses a wide range of topics that demonstrate the utilization of bio-inspired computing techniques in addressing challenges and opportunities within the healthcare and medical domains.

Subtopics

The topics include, but are not limited to:

- Bio-Inspired Drug Discovery Algorithms
- Biologically Motivated Image Segmentation
- Genetic Algorithms for Biomarker Identification
- Neural Network-based Disease Classification
- Swarm Intelligence for Medical Robotics
- Immunocomputing for Anomaly Detection
- Evolutionary Optimization of Treatment Plans
- Bio-Inspired Neural Interfaces
- Biomechanics Simulation in Virtual Patients
- Ant Colony Optimization in Medical Scheduling
- Biomimetic Soft Robotics for Surgery
- Neuromorphic Hardware for Medical Diagnostics

- Evolutionary Genomics and Functional Annotation
- Bio-Inspired Deep Learning Architectures
- Immune System Modeling for Disease Understanding
- Biologically Inspired Electrocardiogram Analysis
- Cognitive Computing in Medical Decision Support
- Bioinformatics for Personalized Nutrition
- Neural Network-based Predictive Pharmacokinetics
- Bio-Inspired Data Privacy and Security

Paper publications

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (https://www.springer.com/series/15179)
- Indexed by SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago
- 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
- Submission Link: https://cmt3.research.microsoft.com/IBICA2023

Important Dates

Paper submission due: **September 30, 2023**
Notification of paper acceptance: **October 31, 2023**
Registration and Final manuscript due: **November 10, 2023**
Conferences: **December 11-15, 2023**

Special Session Chairs

- **Dr. Santosh Kumar Srivastava**, Galgotias University, Greater Noida, India
- **Dr. Dhirendra Kumar Shukla**, Galgotias University, Greater Noida, India
- **Vijayant Pawar**, Galgotias University, Greater Noida, India

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