

**Special Session on  
“Nature-inspired computing Applications: Multidisciplinary Approaches”  
at  
13th World Congress on Nature and Biologically Inspired Computing  
(NaBIC 2021)  
on  
World Wide Web  
December 13-15, 2021**

<http://www.mirlabs.org/nabic21>

### **Aims & Scope**

Nature and Biologically Inspired Computing (NaBIC) is a powerful interdisciplinary field where computational methods to solve complex problems are inspired by principles encountered in Nature. The research interest for Nature and Bio-inspired computing has considerably grown: swarm intelligence, multi-agents systems, evolutionary algorithms, natural computing are just a few examples. These strategies are of crucial importance to the future of computational intelligence and poses difficult and fascinating problems that need to be addressed across multidisciplinary approaches. Recently, the field of application has expanded rapidly and nowadays even includes hybrid solutions that build capacity to mix somewhat extremely distant areas including computing with words, cognitive modeling, robotics, machine learning, decision-making, game theory. This Special Session aims to bring together researchers from these different fields to discuss both the current state of the art neither the future vision for biologically-inspired solution techniques.

Contributions to this special session are welcome to present novel methods and applications of Nature and Bio-inspired principles for multidisciplinary approaches.

### **Subtopics**

The topics include, but are not limited to:

- Swarm Intelligence
- Swarm robotics
- Multi-agents Systems
- Artificial Neural Networks
- Evolutionary Algorithms
- Emergent Systems
- Artificial Life
- Computing with Words
- Cognitive Modeling and Architecture
- Hybrid natural artificial societies
- Decision Making

### **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>

All submitted papers will be reviewed by experts in the field based on the criteria of originality, significance, quality and clarity.

### **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

### **Session Chairs**

- Dr. Alessandra Vitanza,  
Department of Computer Science, University of Bari "Aldo Moro",  
Institute of Cognitive Sciences and Technologies (ISTC- CNR)
- Dr. Eliseo Ferrante,  
Department of Computer Science - Vrije Universiteit Amsterdam (NL),  
Autonomous Robotics Research Centre - Technology Innovation Institute Abu Dhabi  
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