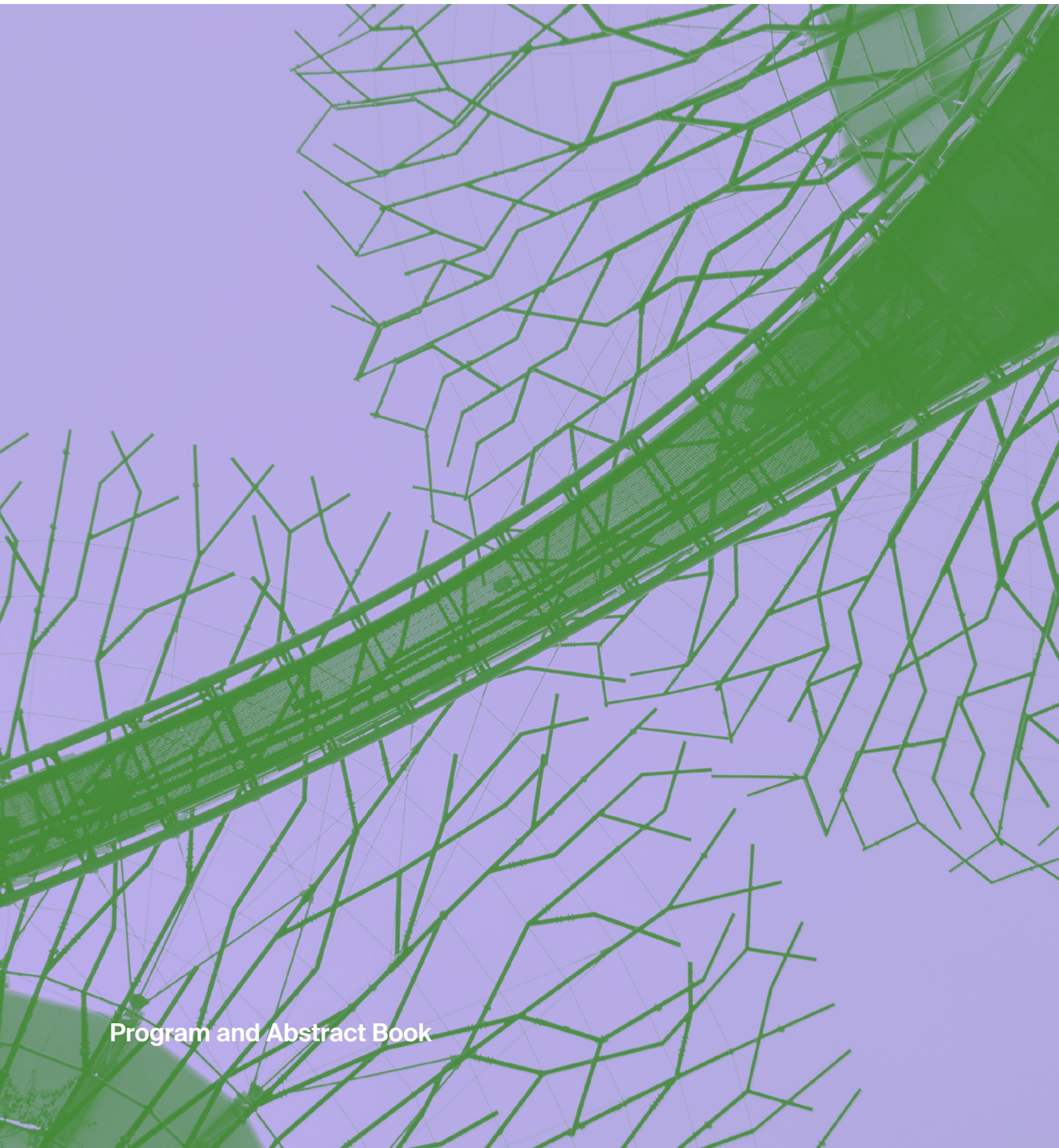
IOCB 2024 Conference

The 1st International Online Conference on Biomimetics

15–17 May 2024 | Online



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Welcome from the Chair

Dear Colleagues,

The 1st International Online Conference on Biomimetics, with a focus on "Advances in bioinspired materials, biomimetic design and device, bioinspired surfaces and interfaces, bioinspired robotics and bioinspired sensors", will be held from **15–17 May 2024**. The main purpose of the conference is to promote biomimicry and bionics, and it is dedicated to research that relates to the most basic aspects of living organisms and the transfer of their properties to human applications and man-made devices.

This conference is an excellent opportunity for researchers and scientists in the field of biomimetics and bionics to interact with each other, communicate with colleagues, learn from each other, share ideas and experiences, jointly solve problems, and suggest alternative solutions for a better future in the bionics. A distinct advantage of this virtual international conference is that the participants are not required to travel and can simply attend the conference regardless of their location. Participants do not need to seek financial support for travel, nor do they need to leave the comfort of their home, office, and/or family to book a trip and, consequently, adjust to the corresponding time zone.

In the virtual conference setting, while the presenters can deliver live presentations simultaneously, the participants can contribute to the discussion and provide feedback orally and/or using the "Chat" and "Reaction" functions.

The main topics of this conference include:
Biomimetics of Materials and Structures
Biomimetic Design, Constructions, and Devices
Biomimetic Surfaces and Interfaces
Design and Control of Bioinspired Robotics
Biomimetic Application of Insect Functional Morphology

All accepted abstracts will be published on the conference's website. Participants are expected to submit an abstract of 200 to 300 words and should refer to the abstract preparation guidelines at "Instructions for Authors".

After the conference, the participants may submit a full paper to MDPI's *Biomimetics* journal. After the review process, the authors of the accepted papers will receive a **20% discount** on the APC before the paper is published in *Biomimetics*.

On behalf of the Organizing Committee, I welcome your attendance to the **1st International Online Conference** on Biomimetics on, "Advances in bioinspired materials, biomimetic design and device, bioinspired surfaces and interfaces, bioinspired robotics and bioinspired sensors".

Prof. Dr. Giuseppe Carbone
Conference Chair
Department of Mechanics,
Mathematics and Management,
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sciforum-086556: Future Advancements and Potential Applications of Biomimetic Sensors in Agriculture

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Global population growth, environmental degradation, climate change, and geopolitical issues are putting pressure on sectors like agriculture, forestry, water management, environmental protection, and biodiversity preservation, making the sustainable use of the environment a growing challenge. The potential uses of biomimetic sensors in agriculture and other sectors have drawn a lot of interest in recent years. Despite extensive research on biomimetic sensors in general, a comprehensive analysis of their unique applications and developments in agriculture is still lacking. Hence, this paper aims to provide a comprehensive understanding of the future advancement and application of biomimetic sensors' potential in various sectors, highlighting their potential in agriculture. Through synthesizing the available literature from the last 10 years, this paper delves into the integration of biomimetic sensors in agricultural practices, highlighting potential benefits and identifying current limitations, challenges, and construction. It will encourage researchers, experts, and industry professionals to explore new ways to enhance biomimetic sensor capabilities in the agricultural sector. This review suggests that biomimetic sensors in agriculture require further studies to develop advanced technologies, optimize design, enhance capabilities, and functionality, and integrate fields like biology, materials science, and engineering. Integrating data analytics and machine learning could lead to precision agriculture and real-time crop health monitoring.