Special Issue

Bionic Unmanned Aircraft Systems

Message from the Guest Editors

Bionic Unmanned Aerial Systems (BUASs) have the potential to develop into useful tools to assist humans accomplish various aims, such as monitoring, surveillance, search, rescue, and, especially, covert reconnaissance via bionic appearance. In recent years, the improvement of Computational Fluid Dynamics (CFD) technology, micro-electromechanical technology, SoC (System-on-a-Chip) technology and batteries have greatly promoted the development of bionic aircrafts, making the applicational capability of bionic aircrafts more and more practical. Nevertheless, some challenges and open issues remain to ensure the full operational use of BUASs. This Special Issue aims to present recent advances in technologies and algorithms to improve the levels of efficiency, autonomy, reliability, and safety of BUASs. Topics of interest include but are not limited to: aerodynamic computation and analysis of BUASs; design of biomimetic mechanism and actuators; advanced guidance, navigation, and control algorithms; networked swarms; new vehicle concepts and designs; new applications and field experiments.

Guest Editors

Prof. Dr. Bifeng Song

Dr. Dong Xue

Dr. Xiaojun Yang

Deadline for manuscript submissions

closed (20 June 2023)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/95730

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

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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