

# Focused Section on Mechatronics in Unmanned Systems

A Focused Section of the IEEE/ASME Transactions on Mechatronics

## Call for Papers

### Introduction

Unmanned systems have been widely applied in the fields of aerospace, ground, surface, and underwater in the past few decades. It is expected that unmanned systems have a more pervasive applications in industry, military, agriculture, logistics, etc., when the most advanced mechatronic technologies are combined with the complex systems engineering. Mechatronic design offers feasible solutions for unmanned systems to operate robustly and efficiently under diverse and difficult environmental conditions, but brings challenges for design, sensing and control. Facing with the growing application demands, this subject has drawn increasing attention in recent years. For this reason, the design, implementation, modeling, control, and optimization of unmanned systems have become urgent issues.

The IEEE/ASME TMECH invites manuscripts for a focused section on “Mechatronics in Unmanned Systems” to report the latest research results, both theoretical and application oriented. The focused section will emphasize mechatronics in unmanned systems, including mechanism design and optimization of unmanned systems, modeling and control of unmanned systems, bioinspired mechatronics in unmanned systems, applications of mechatronic for unmanned systems, etc. It will provide an opportunity for engineers and scientists to exchange their most recent accomplishments in this area. It is expected to consolidate high impact contributions from researchers and developers in the area and thus offer readers a comprehensive view, not only on the present-day issues but also the future horizons. We encourage submissions of both theoretical and experimental works, which would promote further research activities in the area.

Topics explored in this focused section will include, but be not limited to:

- ❖ Theoretical foundations for mechatronics in unmanned systems
- ❖ Mechatronics design of the unmanned systems
- ❖ Mechanism design, fabrication and optimization of unmanned systems
- ❖ Modeling, identification, sensing and control of unmanned systems
- ❖ Mechatronics in unmanned space/aerial/ground/surface/underwater vehicles
- ❖ Bioinspired mechatronics in unmanned systems
- ❖ Applications of mechatronics for unmanned systems in industry/military/agriculture/logistics

### Important Dates

July 1, 2020	Paper submission deadline
October 1, 2020	Completion of the first-round review
November 15, 2020	Submission of revised paper
January 15, 2021	Final decisions
February 28, 2021	Submission of final manuscript
April, 2021	Publication

### Manuscripts Submission

All manuscripts are to be submitted through the Manuscript Central for IEEE/ASME TMECH at <https://mc.manuscriptcentral.com/tmech-ieee>. All manuscripts must be prepared according to the IEEE/ASME TMECH publication guidelines and will be reviewed following the standard IEEE/ASME TMECH review process.

### Guest Editors

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