IEEE/ASME TRANSACTIONS ON MECHATRONICS

Call for Papers
Focused Section on
Flexible and Intelligent Control in Mechatronic Systems

With the booming development of mechatronics systems and artificial intelligence, flexible and intelligent control have attracted increasing attention in modern society due to their promising prospects. The flexibility of mechatronic systems allows them to perform precise tasks in complex environments, improving production efficiency and human quality of life, whether in the manufacturing industry, medical field, or daily life. Intelligent control technology endows mechatronic systems with autonomous decision-making ability, enabling them to adapt to changing work environments and requirements through accurate perception of the surrounding complex environment. However, flexible and intelligent control technology also faces increasing challenges. Flexible mechatronic systems need to have higher robustness and applicability to cope with complex and changing work environments and requirements. Also, intelligent control requires the continuous improvement of algorithms and sensor technologies to enhance the mechatronic system's response speed and accuracy, as well as its interaction capabilities with humans or heterogeneous structure design to complete a variety of complex tasks.

The IEEE/ASME TMECH invites manuscripts for a focused section on "flexible and intelligent control in mechatronics systems" to report the latest research results, both theoretical and application oriented. The focused section will emphasize flexible and intelligent control in mechatronics systems, including mechanism design and optimization of intelligent robotic systems, modelling and control of flexible mechatronics system, applications of mechatronic for flexible and intelligent system, 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.

Manuscripts will be subject to the normal TMECH review procedures. The topics of interest within the scope of this Special Section include, but not limited to, the following:

- Theoretical foundations for mechatronics in flexible control systems
- Modelling and identification in flexible and intelligent mechatronics system
- Sensing and environmental perception for flexible and intelligent mechatronics system
- Complex task dynamic planning for flexible and intelligent mechatronics system
- Analysis methods enhanced by artificial intelligence for flexible control systems
- Flexible and intelligent control methods in space/aerial/ground/surface/underwater vehicles
- Manufacturing methods for flexible and intelligent mechatronics system;
- Applications of flexible and intelligent control in industry/military/agriculture/logistics

Manuscript Preparation:

Papers must contain original contributions and be prepared in accordance with TMECH standards. Instructions for authors are available online at: http://www.ieee-asme-mechatronics.org

Manuscript Submission:

Manuscripts should be submitted through the online submission service available at: http://mc.manuscriptcentral.com/tmech-ieee. The cover letter should report the following statement: "*This paper is submitted for possible publication in the Focused Section on Flexible and Intelligent Control in Mechatronic Systems"*. All manuscripts will be subjected to a peer review process.

Important Dates:

Paper Submission	October 1, 2024
Completion of First Review	December 1, 2024
Submission of Revised Papers	January 15, 2025
Completion of Final Review	March 1, 2025
Submission of Final Manuscripts and Copyright Forms	April 1, 2025
Publication	June, 2025

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