

Call for Papers

The Fourth Edition of Focused Section on TMECH/AIM Emerging Topics

Submissions are called for the Fourth Edition of Focused Section (FS) on TMECH/AIM Emerging Topics. This Focused Section is intended to expedite publication of novel and significant research results, technology and/or conceptual breakthroughs of emerging topics within the scopes of TMECH (www.ieee-asme-mechatronics.org), providing rapid access to the state-of-the-art of TMECH publications to the mechatronics community.

The submitted paper must not exceed 8 TMECH published manuscript pages, excluding photos and bios of authors, and will be subject to the peer review process by TMECH standard. All final accepted papers will be published in August Issue of TMECH in 2023, and will be presented in the 2023 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM 2023, <http://www.aim2023.org/>). The rejected papers from the submissions will be transferred to the Program Committee of AIM 2023 for further review and consideration as conference contributed papers.

The review process for submissions to this Focused Section will be conducted in up to two rounds with one Major/Minor Revision allowed, and the final decision falls into one of the following two categories:

1. Accept for publication in Focused Section. In this case, the paper will be accepted by AIM 2023 concurrently for presentation only, with full information of the paper included in the preprinted proceeding of AIM 2023. The final publication in TMECH, however, will be subject to the completion of presentation in AIM 2023 with full registration fee paid.
2. Reject for publication in Focused Section (after the first or second round). In this case, the paper, as well as all the review comments, will be forwarded to the Program Committee of AIM 2023 for further consideration. A final Accept/Reject decision will then be made by the Committee as a conference contributed paper for AIM 2023.

Manuscript preparation

Papers must contain original contributions and be prepared in accordance with the journal standards. Instructions for authors are available online on the TMECH website.

Manuscript submission

Manuscripts should be submitted to TMECH online at: mc.manuscriptcentral.com/tmech-ieee, selecting the track 'TMECH/AIM Emerging Topics'. The cover letter should include the following statement: This paper is submitted to the Fourth Edition of Focused Section on TMECH/AIM Emerging Topics. The full information of the paper should be uploaded concurrently to AIM 2023 online at: ras.papercept.net/conferences/scripts/start.pl, noted with the given TMECH manuscript number in the designated area.

Submission/Review/Decision Timeline:

Opening Date of TMECH/AIM FS Submission Site (first submission):	November 1, 2022
Closing Date of TMECH/AIM FS Submission Site (first submission):	January 6, 2023
Full Information of TMECH/AIM FS Paper Submitted to AIM Site:	January 6, 2023
First Decision for TMECH/AIM FS Submission:	March 1, 2023
Revised TMECH/AIM FS Submission Due by:	March 25, 2023
Final Decision for TMECH/AIM FS Submission:	April 25, 2023
Final Version of TMECH/AIM FS Submission Due by:	May 10, 2023
Publication of Focused Section in TMECH:	August 2023

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Areas: Design Methods for Industrial Engineering

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Areas: grasping and manipulation, precision engineering and control, micro/nano technology, field robotics

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Areas: AI and machine learning, Estimation and adaptive control, Linear & nonlinear control, Precision machine control System identification, Medical and rehabilitation robotics, Distributed & cloud robotics, Renewable energy and energy storage systems Applications (robotics)

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Areas: autonomous systems, perception and planning, localization, control, machine learning.

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Areas: Optimal control, energy harvesting, vibration control, vehicle control, robotics.

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Areas: grasping and manipulation mechanisms, design, modeling & control applications (robotics), biomimetic & bio-inspired robotics, biomimetic actuators and sensors, mobility & locomotion, aerospace systems and applications, rapid prototyping, design methodology for mechatronics.

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Areas: precision machine control, mechanisms, design, modeling & control, system identification, precision engineering and control, vibration isolation and control, estimation and adaptive control, factory automation, industry applications.

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Areas: motion control, estimation, stochastic systems, robotic manipulation, power assistive devices, sensors and sensing systems.

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Areas: robotics, vibration control, actuators and sensors, modeling and design.

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Areas: robotics, precision control, smart material device design and control.

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Areas: Sensors and actuators, smart materials and structures, intelligent mechatronics, semi-active control, dampers and isolators.

Yaoyu Li, University of Texas at Dallas, USA, yaoyu.li@utdallas.edu

Areas: energy efficiency, renewable energy, wind energy, thermal system controls and modeling, model-free control

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Areas: automotive control systems, mechatronics, autonomous systems, energy systems.

David Naso, Politecnico di Bari, Italy, David.naso@poliba.it

Areas: Motion control, neural networks and artificial intelligence in control systems, smart materials, unmanned aerial vehicles, autonomous vehicles, intelligent industrial automation, fault detection and recovery

Jinghua She, Tokyo University of Technology, Japan, jinhua_she@yahoo.co.jp

Areas: Active disturbance rejection, Assistive robotics, Mechatronics, Repetitive control, Robust control.

Barys Shyrokau, Delft University of Technology, The Netherlands, b.shyrokau@tudelft.nl

Areas: automotive control systems, driver assistance systems, path planning & control, driving simulators

Tomoyuki Shimono, Yokohama National University, Japan, shimono-tomoyuki-hc@ynu.ac.jp

Areas: actuators and sensors, motion control, robotics

TARUNRAJ SINGH, University at Buffalo, USA, tsingh@buffalo.edu

Areas: Target tracking; human-vehicle control; optimal control; nonlinear control; dynamics & control of flexible structures

Mahdi Tavakoli, University of Alberta, Canada, mahdi.tavakoli@ualberta.ca

Areas: robotics, modeling and design, actuator and sensor, rehabilitation robotics and human-robot interaction.

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Areas: Guidance, Navigation, and Control of Aerospace Vehicles, Estimation and Filtering, Optimal Control, Network Control.

Jianyong Yao, Nanjing University of Science and Technology, China, yaojianyong@njust.edu.cn

Areas: motion control, hydraulics systems, motor control, fault tolerant control for dynamic systems

Jingang Yi, Rutgers the State University of New Jersey, USA, jgyi@soe.rutgers.edu

Areas: autonomous robotic systems, mechatronics, dynamic systems and controls, automation science and engineering, with applications to biomedical, transportation, and civil infrastructure systems

Li Zhang, City University of Hongkong, Hong Kong, China, lizhang.cuhk@gmail.com

Areas: Biomimetic actuators and sensors, Soft actuators & sensors, Bio-micro-nano devices, Micro-electro-mechanical systems, Micro/nano technology, Biomimetic & bio-inspired robotics, Soft robotics systems, Medical and rehabilitation robotics

Lei Zuo, Virginia Polytechnic University, USA, leizuo@vt.edu

Areas: Marine and hydrokinetic (MHK) energy, Energy harvesting, Vibration and control, Self-powered sensors, mechatronics design, Vehicle dynamics, Smart materials and structures, Advanced manufacturing