

## **Brief Update and Call for Special Issues in the IEEE Transactions of Systems, Man, and Cybernetics - Systems**

*- from the desk of Robert Kozma, Editor-In-Chief, IEEE TSMC-Systems*

During the past 10 years, since the formation of the present version of the Transactions of Systems, Man, and Cybernetics - Systems, this journal has developed significantly, considering its size, quality, and coverage of the field of cybernetics, systems science and engineering with a broad range of applications. TSMC-Systems started in 2013 with 6 issues and about 150 papers, which grew to 24 issues and well over 600 papers in 2023. In 2013, it had a more limited impact factor around 2, which grew approaching and exceeding 10 in recent years. Considering research focus, neural networks and nonlinear systems with applications remain a dominant area through the years; together with optimization, fuzzy and evolutionary tools for classification and pattern recognition, including vision; intelligent control, tracking-, fault-tolerant-, distributed-, multi-agent systems, and many others, with key applications in autonomous robotics and process control; manufacturing, transport, energy, and other industrial systems; decision making; biomedical applications, and additional key areas.

We cover many emerging hot topics, and it is impossible to mention them all here. Such as networks science and complex systems; internet of things, cyber-physical and social systems, internet of mind and brain-computer interaction, and sustainable artificial intelligence. For a comprehensive overview of TSMC-Systems present status and future perspectives I refer the readers to the Special Issue in January 2021, commemorating the 50th Anniversary of our predecessor journal IEEE Transactions on Systems, Man, and Cybernetics; see the introductory paper in the Anniversary Issue (Tunstel et al., Systems science and engineering research in the context of systems, man, and cybernetics: Recollection, trends, and future directions. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 51(1), 5-21, 2021).

This leads us to restarting Special Issues (SIs). In the past 3 years, we did not consider Special Issues in TSMC-Systems (with the exception of the 50th Anniversary Issue), due to the huge backlog of accepted papers waiting for publications in IEEE Early Access. Accepted papers had to wait sometimes more than 2 years to get published on the pages of the journal. The good news is that with the consistent hard work of our Associate Editors and our reviewers, and with the support of SMC Society Board of Governors, we drastically reduced the wait list, and papers are now published on the pages of TSMC-Systems within a couple of months following their acceptance. This is a great news for all, including our authors, and we hope it will attract further top-quality papers to our journal.

As a first step in restarting SIs, we had a special initiative to support the publication of the extra pages of a Special Section at the end of 2022. Considering the significant impacts and widespread discussions of the metaverse in both academia and industry, I supported metaverse as the first topic after restarting the SIs, and invited Prof. Fei-Yue Wang from The State Key Laboratory for Management and Control of Complex Systems, Chinese Academy of Sciences, Prof. Ying Tang from Rowan University, and Paul J. Werbos from Missouri University of Science and Technology, to serve as the Guest Editors, due to their important contributions and academic influences in the fields of parallel intelligence and metaverse. Thanks to their great efforts, an Invited special section

on “Cyber-Physical-Social Intelligence for Metaverse in CPSS” has been organized and completed, and will be published in April, 2023. This special section aims to inspire more investigations and explorations on research and applications of metaverses in various fields, to realize cyber-physical-social intelligence and parallel intelligence in Cyber-Physical-Social Systems, and strengthen the smart societies with “6I” (i.e., cognitive intelligence, parallel intelligence, encrypted intelligence, federated intelligence, social intelligence, and ecological intelligence) and “6S” (i.e., safety, security, sustainability, sensitivity, services, and smartness).

There is an upcoming Special Issue, the announcement of which is being finalized now on “AI-powered planning and control of autonomous marine vehicles,” spearheaded by Prof. Jun Wang, Chair Professor of Computational Intelligence, City University of Hong Kong, and Prof. Qing-Long Han, Pro Vice-Chancellor, Swinburne University, Australia. Details will be available soon.

For IEEE TSMC-S, this is the new start. We expect that our Special Issues on cutting-edge areas of cybernetics and systems science and engineering will be highly popular among our authors and readers, and will lead to future breakthroughs reported on the pages of our journal. Interested researchers in relevant fields are welcome to contact the EIC at: [trans.smcsystems.eic@gmail.com](mailto:trans.smcsystems.eic@gmail.com) to propose special issues in TSMC-S.