Advisory Council Honorary Chairs:

T. J. Tarn, Washington University, USA Toshio Fukuda, Beijing Institute of Technology **Advisory Council Chairs:**

Huadong Yu, CUST, China Tianyou Chai, Northeastern University, China Hegao Cai, Harbin Institute of Technology, China Liding Wang, Dalian University of Tech., China A.A. Goldenberg, University of Toronto, Canada Kazuhiro Kosuge, Tohoku University, Japan Paolo Dario, Scuola Superiore Sant'Anna, Italy Masayoshi Tomizuka, UC Berkeley, USA Mario A. Rotea, University of Massachusetts, USA Ju-Jang Lee, KAIST, Korea

Ren C. Luo, National Taiwan University, China Yu Yao, Harbin Engineering University, China Yanrong Li, UESTC, China Zhongmin Su, CUST, China

Qingxin Yang, Tianjin University of Tech., China **General Chairs:**

Hideyuki Sawada, Waseda University, Japan Qin Li, Beijing Institute of Technology, China **General Co-Chairs:**

Shigeki Sugano, Waseda University, Japan William R. Hamel, University of Tennessee, USA Qiang Huang, Beijing Institute of Technology, China Sergej Fatikow, University of Oldenburg, Germany Darwin G. Caldwell, Italian Institute of Tech., Italy Yuxin Zhao, Harbin Engineering University, China Lixin Dong, City University of Hong Kong, China Zhan Yang, Suzhou University, China Simin Li, Guangxi Univ. of Science and Tech., China Baofeng Zhang, Tianjin University of Tech., China

Yuanqing Xia, Beijing Institute of Technology, China **Program Chair:**

- Liwei Shi, Beijing Institute of Technology, China **Program Co-Chairs:**
- Kohei Nakajima, The University of Tokyo, Japan Ryuma Niiyama, The University of Tokyo, Japan Tatsuo Arai, Beijing Institute of Tech, China Kevin Lynch, Northwestern University, USA Cecilia Laschi, Scuola Superiore Sant'Anna, Italy Stefan Byttner, Halmstad University, Sweden Wan Kyun Chung, POSTECH, Korea Yili Fu, Harbin Institute of Technology, China Jian Li, Guangxi Univ. of Science and Tech., China

Anqi Qiu, National Univer. of Singapore, Singapore Yajing Shen, City University of Hong Kong, China Zhangguo Yu, Beijing Institute of Technology, China **Organizing Committee Chairs:**

Shuxiang Guo, Kagawa University, Japan Jian Sun, Beijing Institute of Technology, China Xueshan Gao, Beijing Institute of Technology, China

Organizing Committee Co-chairs Aiguo Ming, U. of Electro-Communications, Japan Qinxue Pan, Beijing Institute of Tech., China Hideyuki Hirata, Kagawa University, Japan

Tutorials/Workshop Chairs: Guangjun Liu, Ryerson University, Canada

Huosheng Hu, University of Essex, U.K Invited/Organized Session Chairs:

Shingo Maeda, Shibaura Institute of Tech., Japan Meisuke Morishima, Osaka University, Japan Chaoyang Shi, Tianjin University, China Yongfu Li, City University of Hong Kong, China Yasuhisa Hirata, Tohoku University, Japan

Awards Committee Co-chairs James K. Mills, Univ. of Toronto, Canada Qiang Fu, Tianjin University of Technology, China

Publications Chair:

Jin Guo, Beijing Institute of Technology, China **Publicity Chairs:**

Jinjun Shan, York University, Canada

Xiufen Ye, Harbin Engineering University, China **Finance Chairs:**

Jian Guo, Tianjin University of Technology, China Hidenori Ishihara, Kagawa University, Japan **Local Arrangement Chairs:**

Yi Xin, Beijing Institute of Technology, China Xiao Zhang, Beijing Institute of Technology, China Yan Zhao, Hebei University of Technology, China Secretariats:

Y. Liu, Z. Wang, R. An, X. Jin, P. Shi, Z. Yang,

L. Zheng, Kagawa University, Japan

C. Yang, W, Zhou, D. Bu, Beijing Institute of Tech.

IEEE IEEE ICMA 2020

2020 IEEE International Conference on Mechatronics and Automation October 13-16, 2020, Beijing, China



Co-sponsors: IEEE Robotics and Automation Society, Beijing Institute of Technology, Kagawa University

Technical Co-sponsors: CAA, RSJ, JSME, SICE, JSPE, TJUT, HIT, HEU, UEC, UESTC, CUST, GUST

Call for Papers Index

The 2020 IEEE International Conference on Mechatronics and Automation (IEEE ICMA 2020) will take place in Beijing. China from October 13 to October 16. 2020. Beijing is both a tribute to China's proud history and a gateway to China's future. The capital city during the Liao, Yuan, Ming and Qing Dynasties, Beijing has long been the political, cultural, and diplomatic center of China. It is now an international metropolis, home to 11 million people from all walks of life.

As the host city of IEEE ICMA 2020, Beijing not only provides the attendees with a great venue for this event, but also an unparalleled experience in Chinese history and culture. You are cordially invited to join us at IEEE ICMA 2020 in Beijing. The objective of ICMA 2020 is to provide a forum for researchers, educators, engineers, and government officials involved in the general areas of mechatronics, robotics, automation and sensors to disseminate their latest research results and exchange views on the future research directions of these fields.

The topics of interest include, but not limited to the following:

- Intelligent mechatronics, robotics, biomimetics, automation, control systems,
- Opto-electronic elements and Materials, laser technology and laser processing
- Elements, structures, mechanisms, and applications of micro and nano systems
- Teleoperation, telerobotics, haptics, and teleoperated semi-autonomous systems
- -Sensor design, multi-sensor data fusion algorithms and wireless sensor networks
- Biomedical and rehabilitation engineering, prosthetics and artificial organs
- Control system modeling and simulation techniques and methodologies
- AI, intelligent control, neuro-control, fuzzy control and their applications
- Industrial automation, process control, manufacturing process and automation

Contributed Papers: All papers must be submitted in PDF format prepared strictly following the IEEE PDF Requirements for Creating PDF Documents for Hiroyuki Nabae, Tokyo Institute of Technology, Japan IEEE Xplore. The standard number of pages is 6 and the maximum page limit is 8 pages with extra payment for the two extra pages. See detailed instructions in the conference web site. Accepted papers will be published in the Proceedings of the 2020 IEEE International Conference on Mechatronics and Automation. The conference proceedings will be submitted to the IEEE Xplore® digital library **Organized Sessions:** Proposals with the title, the organizers, and a brief statement

of purpose of the session must be submitted to an OS Chair by May 20, 2020. Tutorials & Workshops: Proposals for tutorials and workshops that address related topics must be submitted to one of the Tutorial/Workshop Chairs by July 1, 2020.

Important Dates:

June 10, 2020 Full papers and organized session proposals July 1, 2020 **Proposals for tutorials and workshops** July 15, 2020 Notification of paper and session acceptance August 1, 2020 Submission of final papers in IEEE PDF format

For detailed up-to-date information, please visit the IEEE ICMA conference website at:

http://2020.ieee-icma.org