



2nd International Conference on Intelligent Autonomous Systems (ICoIAS' 2019)

<http://www.icias.org>

Dear Scholars and Researchers,

The 2nd International Conference on Intelligent Autonomous Systems (ICoIAS'2019) will be held from Feb. 28-Mar. 2, 2019 in Singapore. The Conference is technically sponsored by IEEE System, Man and Cybernetics (SMC) Singapore Chapter and the Institution of Engineers, Singapore (IES) Electrical and Electronic Engineering Technical Committee. The proceedings of ICoIAS will be included in the IEEE Xplore database and indexed by EI Compendex and Scopus. The theme of ICoIAS'2019 is "Advancing the Frontier of Intelligent Autonomous Systems". The ICoIAS'2019 will provide a premier interdisciplinary platform for scientists, researchers, industry leaders, engineers and educators throughout the world to present and discuss the most recent innovations, trends, concerns, as well as practical challenges encountered, and streamline solutions in the fields of Intelligent Autonomous System (IAS). The meeting will provide an opportunity to highlight recent developments and to identify emerging and future areas of growth in IAS.

Nowadays, autonomous systems play an increasingly important role in both control and engineering applications. For example, millions of autonomous robots are impacting our daily life by working on assembly lines, construction sites, and even at home. More interestingly, the unmanned aerial and ground, surface and/or underwater systems have provided more efficient ways to execute various challenging tasks in difficult terrains. However, the autonomous systems are usually featured with dynamics coupling, actuator saturation, under-actuated structure, time-varying disturbance, etc., and thereby presenting great challenges and difficulties in system analysis and controller design. Recently, by employing intelligent approaches, advanced control methodologies for autonomous systems have been proposed and rapidly developed.

In the real world, the environment is complex and dynamics. As such, the autonomous systems should learn and adapt accordingly. In this context, more efforts should be focused on the methodology of the learning system on one hand. For example, fast adaptation and self-organizing capability are highly desired and research activities on this type of development should be expedited. On the other hand, one should leverage on artificial intelligence and machine learning to enhance their performance. Towards this end, deep intelligence should be integrated tightly with nonlinear design for complex control tasks of autonomous systems.

The main goal of ICoIAS'2019 is to address latest original results in advanced intelligent control of autonomous systems, including both theoretical advances and practical implementations, which are becoming more and more popular in industry and in our daily lives. Invited sessions focusing on Autonomous Systems including, but are not limited to Artificial Intelligence, Machine Learning, Intelligent Robotics, Cognitive Computing, Smart Manufacturing, Advanced Signal Processing and Communications, Bio-signal Processing and Control, etc. are welcome.

Keynote Speakers

Prof. Ljiljana Trajkovic

Simon Fraser University, Canada

Prof. Meng Joo Er

Nanyang Technological University, Singapore

Prof. Chiang-Ju Chien

Huafan University, Taiwan

Invited Speakers

Prof. Shiqian Wu

Wuhan University of Science and Technology, China

Prof. Ning Wang

Dalian Maritime University, China

Prof. Yi Zhou

Singapore Institute of Technology, Singapore

Prof Haizhou Li

National University of Singapore, Singapore

ICoIAS' 2019 Conference Committees

General Chair:

Meng Joo Er, School of Electrical and Electronic Engineering,

Nanyang Technological University

General Co-Chair:

Xinxiang Pan, Vice President, Dalian Maritime University,
China

General Co-Chair:

Huasong Min, Director, Institute of Robotics and Intelligent
Systems (IRIS), Wuhan University of Science and Technology,
China.

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Submission

Authors are invited to submit papers through the [Electronic Submission System](#) before November 30, 2018. For any inquiry about the conference, please feel free to contact us at: icias@zhconf.ac.cn.

Proceedings

Papers will be published in the ICoIAS'2019 Conference Proceedings. The proceedings of ICoIAS will be included in the IEEE Xplore database and indexed by **Ei Compendex** and **Scopus**.

Topics of interest for submission include, but are not limited to:

- A. Advanced Intelligent Control Applications
- Autonomous Learning System Modelling and Parameter Estimation
- Composite Learning Machine Learning
- Disturbance Observer
- Self-organizing Algorithm
- Reinforcement Learning
- Adaptive Dynamic Programming
- B. System Modeling and Optimization
- Intelligent Optimization and Applications
- C. Vision and Navigation
- Sensors and architectures
- Image processing
- Pattern recognition
- SLAM technologies
- D. Applications to Autonomous Systems
- Unmanned Underwater Vehicles
- Unmanned Surface Vehicles
- Robotics Systems
- Flexible Manipulators
- Unmanned Aerial Vehicles
- Spacecrafts
- Missiles

History

ICoIAS'2018 was successfully held in Nanyang Technological University, Singapore during March 1-3, 2018

ICoIAS'2018 conference proceeding has already been published online and included in IEEE Xplore

Important Dates

Submission Deadline	Nov. 30th, 2018
Acceptance Notification	Dec. 20th, 2018
Registration Deadline	Jan. 10th, 2019
Conference Date	Feb.28-Mar.2, 2019

Contact us

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