



The 4th International Symposium on Autonomous Systems

ISAS 2020

<https://www2.scut.edu.cn/isas2020cn/>
Dec 06-08, 2020, Guangzhou, PR China

Organizers

- South China University of Technology, China
- Chongqing University, China
- University of Texas at Arlington, USA
- Key Laboratory of Autonomous Systems and Networked Control, Ministry of Education of China

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- IEEE Computational Intelligence Society (CIS)
- Technical Committee on Reliable Control Systems, Chinese Association of Automation
- State Key Laboratory of Synthetical Automation for Process Industries, Northeastern University, China

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The 2020 International Symposium on Autonomous Systems, ISAS 2020, will be held virtually and physically from Dec.6th to Dec.8th, 2020, and the main venue will be hosted in Guangzhou, China. The conference is organized by South China University of Technology, Chongqing University, University of Texas at Arlington, USA, Key Laboratory of Autonomous Systems and Networked Control, Ministry of Education of China, and technically co-sponsored by IEEE Computational Intelligence Society, Technical Committee on Reliable Control Systems, Chinese Association of Automation, State Key Laboratory of Synthetical Automation for Process Industries, Northeastern University, China.

Conference papers written in English will be submitted for inclusion into IEEE Xplore as well as other Abstracting and Indexing (A&I) databases. The best paper award will be established to honor the author(s) of a paper of exceptional merit.

ISAS focuses on both theory and applications mainly covering the topics of artificial intelligence, control, automation, robotics and autonomous systems. In addition to the technical sessions, there will be invited sessions, panel sessions and keynote addresses.

The topics of interest include, but are not limited to:

- **Artificial intelligence (AI):** Artificial intelligence and philosophy, Automated reasoning and inference, Case-based reasoning, Cognitive aspects of AI, Commonsense reasoning, Constraint processing, Heuristic search, High-level computer vision, Intelligent interfaces, Intelligent robotics, Knowledge representation, Machine learning, Multi-agent systems, Natural language processing, Planning and theories of action, Reasoning under uncertainty or imprecision
- **Autonomous Systems:** Unmanned system command and control, Cooperative control of unmanned systems, Unmanned system modeling and simulation, Unmanned system dynamics, New concept unmanned systems, Robotic systems, Unmanned aerial vehicles
- **Networked Control Systems:** Coordinated control and estimation over networks, Control and computation over sensor networks, Control under communication constraints, Control and performance analysis issues, Synchronization of activities across a controlled network, Stability analysis of controlled networks, Analysis of networks as hybrid dynamical systems
- **Intelligent Control:** Adaptive control, Co-operative control, Intelligent systems, Discrete event systems, Multi-agent systems, Neural networks, Fuzzy systems, Control of biological systems
- **Automation:** Man-machine interactions, Process automation, Intelligent automation, Factory modeling and simulation, Home, laboratory and service automation, Network-based systems, Planning, scheduling and coordination, Nano-scale automation and assembly, Instrumentation systems, Biomedical instrumentation and applications, Building energy efficiency
- **Robotics:** Modeling and identification, Robot control, Mobile robotics, Mobile sensor networks, Perception systems, Micro robots and micro-manipulation, Visual servoing, Search, rescue and field robotics, Robot sensing and data fusion, Localization, navigation and mapping, Dexterous manipulation, Medical robots and bio-robotics, Human centered systems, Space and underwater robots, Tele-robotics, Mechanism design and applications.
- **Emerging Technologies:** Internet of things, Cyber-physical systems, Smart buildings, Smart grid, Energy management systems, Big data, Electric vehicles and intelligent transportation.

Keynote Speeches

- ✚ Professor Tianyou Chai, Northeastern University, China
- ✚ Professor Thomas Parisini, Imperial College of London, UK
- ✚ Professor Zhongping Jiang, New York University, USA
- ✚ Professor Jay Farrell, University of California, Riverside, USA

Important Dates

Deadline for Invited Session Proposals	January 15 March 15	2020
Deadline for Full Paper Submission	January 15 March 15	2020
Notification of Acceptance/Rejection	February 28 April 5	2020
Deadline for Camera Ready Manuscript Submission	April 15 Undetermined	2020
Deadline for Advance Registration	April 15 Undetermined	2020

