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AROB-ISBC-SWARM 2023

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ORGANIZED BY

International Society of Artificial Life and Robotics (ISAROB)

CO-OPERATED BY

The Society of Instrument and Control Engineers (SICE, Japan)
The Robotics Society of Japan (RSJ, Japan)
The Institute of Electrical Engineers of Japan (IEEJ, Japan)
The Institute of Electronics, Information and Communication Engineers (IEICE, Japan)
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HISTORY

The AROB symposium was founded in 1996 under the support of Science and International Affairs Bureau, Ministry of Education, Culture, Sports, Science and Technology, Japanese Government. Since then, the symposium organized by the AROB has been held every year at B-Con Plaza, Beppu, Japan except AROB 5th '00 (Oita), AROB 6th '01 (Tokyo) and AROB 18th '13 (Daejeon, Korea). The twenty-eighth symposium will be held on January 25-27, 2023, at B-Con PLAZA, Beppu, JAPAN and ONLINE.

OBJECTIVE

This symposium will bring together researchers to discuss development of new technologies concerning *artificial life and robotics* based on computer simulations and hardware designs of state-of-the-art technologies, and to share findings on how advancements in artificial life and robotics technologies that relate to artificial intelligence, virtual reality, and computer science are creating the basis for exciting new research and applications in various fields.

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Accepted papers will be published in the proceeding of AROB-ISBC-SWARM2023 and some of high quality papers in the proceeding will be requested to re-submit their papers for the consideration of publication in an international journal ARTIFICIAL LIFE AND ROBOTICS. All correspondence related to the symposium should be addressed to AROB Secretariat.

AROB Secretariat

International Society of Artificial Life and Robotics
1-9-4-101 Hatakenaka, Oita, 870-0856, Japan

Tel: +81-97-594-0181
Fax: +81-97-547-9242
Email: arobsecr@isarob.org
URL：https://isarob.org/symposium/

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GENERAL SESSION TOPICS

Agent-based modeling	Artificial intelligence
Artificial life	Bioinformatics
Bio-inspired robotics	Biomedical imaging & Medical informatics
Bio-mimetics & Brain science	Cognitive science
Control techniques	Data mining
Evolution of cooperation	Evolutionary computations (Genetic algorithm)
Human-machine interaction and collaboration	Identification and Estimation
Intelligent control	Machine learning
Manipulator	Mobile robots
Model estimation	Motion planning and navigation
Multi-agent systems	Neural networks
Neurocomputing technologies and its application for hardware	
Robot vision and image processing	Robotic Mechanism
Security	Sensor and multi-sensor data fusion
Swarm robot	Swarm robotics
Tele-operation	

ORGANIZED SESSION TOPICS

AROB: Bio-inspired Theory and Applications
AROB: Biomimetic Machines and Robots
AROB: Computational intelligence and cognitive science for human biosignals and human well-being
AROB: Human-Centered Robotics
AROB: Intuitive Human-System Interaction
AROB: Measurement and control of mobile vehicle
AROB: Recent Natural Language Processing Models and Applications
AROB: Robot control and HCI
AROB: Robotics with Intelligence and/or Informatics
AROB: Robotics, Bioinspiration, and Intelligence
AROB: System Sensing and Its Applications
ISBC: Complex biomolecules and hazards
ISBC: Complex information
ISBC: Complex processes
ISBC: Quantum leaps after IIAS Complexity workshop
SWARM: Behavioral measurement and modeling technology to consider
                individual cognitive functions of organisms
SWARM: Fusion of biological and engineering approaches for swarm design
SWARM: Individuals and collectives in (artificial) living systems
SWARM: Motion Analysis and Control of Advanced Robotic Systems
SWARM: Swarm and Bio-inspired Systems
SWARM: Snake Robot