MESSAGES

Keigo Watanabe

General Chair

Specially Appointed Professor,
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It is my great pleasure to welcome you to AROB-ISBC2026, the joint symposium of the 31st International Symposium on Artificial Life and Robotics (AROB2026) and the 11th International Symposium on Bio-Complexity (ISBC2026).

This symposium brings together diverse perspectives to explore the cutting-edge advancements in artificial life, robotics, and bio-complexity. In recent years, the field has expanded beyond traditional bioinspired robotics to encompass transformative technologies such as AI-powered robots utilizing deep learning for perception, autonomous vehicles reshaping transportation, and innovations in human augmentation enhancing human capabilities through robotics and AI integration. These developments represent a new paradigm, blending biology, robotics, and artificial intelligence to address some of humanity's greatest challenges.

For example, autonomous driving technologies and advanced robotics are becoming essential components in smart cities and mobility solutions, while human augmentation technologies are unlocking new possibilities in healthcare, accessibility, and productivity. Additionally, the integration of AI with robotics is enabling systems capable of adaptive decision-making, environmental interaction, and even ethical reasoning—paving the way for broader societal applications.

In the context of artificial life, emerging trends such as the creation of synthetic organisms, self-organizing systems, and life-like simulations are offering profound insights into the nature of life and its engineering. Furthermore, advances in biologically inspired systems, from molecular robots to large-scale biohybrid systems, are contributing to breakthroughs in medicine, sustainability, and beyond.

This year's symposium reflects these exciting trends and serves as a forum for exchanging ideas across disciplines. I extend my deepest gratitude to the supporting organizations, including SICE, RSJ, IEEJ, ISCIE, JSST, and the IEEE Robotics and Automation Society Japan Chapter, for their generous contributions.

We hope this symposium fosters vibrant discussions, new collaborations, and innovative insights as we collectively shape the future of artificial life, robotics, and bio-complexity. I look forward to engaging with all of you and exploring the exciting possibilities ahead.

Welcome Message

Welcome to AROB/ISBC2026, the joint symposium of the 31st International Symposium on Artificial Life and Robotics (AROB 2026) and the 11th International Symposium on Bio-Complexity (ISBC 2026).

Due to the COVID-19 pandemic in Japan, the symposium was held online from 2020 to 2022 to ensure the safety of all participants. In 2023 and 2024, the symposium adopted a hybrid format and was held in Beppu, Japan, accommodating both in-person and remote attendees. Recognizing the value of face-to-face discussions, we are delighted to host the symposium entirely in person from 2025 onward.

At AROB/ISBC2026, we have 324 general presentations across 35 general sessions and 26 organized sessions, with contributions from 11 countries. We are honored to feature three plenary talks by Prof. Dong-Soo Kwon (Founder & CEO, ROEN Surgical Inc. / Emeritus Professor, Korea Advanced Institute of Science and Technology, Korea), Dr. Olaf Witkowski (Founding Director, Cross Labs, Japan), and Prof. Kei Tokita (Nagoya University, Japan), as well as three invited talks by Prof. Takashi Ikegami (The University of Tokyo, Japan), Prof. Tom Froese (Okinawa Institute of Science and Technology, Japan), and Dr. Milan Rybar (Okinawa Institute of Science and Technology, Japan).

This symposium provides an excellent opportunity for participants to exchange research ideas and information related to artificial life, robotics, control, AI, bio-complexity, and related fields.

We extend our heartfelt gratitude to our plenary and invited speakers, session organizers, and all participants for their valuable contributions. Special thanks go to the advisory, organizing, executive, and program committee members, the AROB office, and everyone who dedicated their time and effort to making this symposium a success.

We sincerely hope that you find AROB/ISBC2026 to be an enriching and rewarding experience.

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