

Editorial

Editorial for the First Issue of Control and Robotics Express Communications

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It is with great pleasure that I prepare this Editorial for the inaugural issue of *Control and Robotics Express Communications*. This journal represents, in my view, a remarkable and timely initiative by the publishing company Scilight, to whom I extend my sincere gratitude for embracing and supporting the vision of this new venture. Their commitment has made it possible to create a forum dedicated to the rapid dissemination of pioneering ideas in Automatic Control and Robotics.

1. Vision and Purpose

Control and Robotics Express Communications is a gold open-access, peer-reviewed journal devoted to publishing high-quality, timely research contributions in the fields of Automatic Control and Robotics. Our principal aim is to stimulate researchers and scientists to share their most significant results as soon as they emerge, ensuring that important ideas reach the scientific community without unnecessary delay.

While there are numerous established journals in these domains, we identified a clear gap: the absence of an immediate, high-impact forum where innovative ideas can be presented and debated promptly. Bridging this gap is the core mission of this journal. We aspire to be the place where groundbreaking concepts—whether theoretical frameworks, technological breakthroughs, or novel applications—can be shared at the speed of scientific discovery.

Although express communications will be a central focus, *Control and Robotics Express Communications* will also welcome comprehensive review articles and traditional full-length research papers. In this way, the journal will balance cutting-edge, rapidly emerging contributions with in-depth studies that provide lasting value to the field.

2. Scope and Areas of Interest

The scope of the journal is broad, encompassing both theoretical foundations and applied innovations, as well as interdisciplinary and visionary topics. We invite contributions in—but not limited to—the following areas:

2.1. Theoretical Foundations & Methodologies

- Classical and modern control: stability, robustness, optimality, adaptation, nonlinear methods.
- Networked, distributed, hybrid, and time-delay systems.
- Intelligent and learning-based control: neural networks, fuzzy logic, evolutionary algorithms, machine learning.
- Stochastic control, control under uncertainty, and soft computing strategies (modeling with AI-inspired methods).
- Fractional-order systems and non-integer calculus in control theory.



2.2. Robotics, Autonomous System Technology

- Bio-inspired, plant-inspired, and soft robotics; compliant and continuum systems.
- Multi-agent systems, swarm intelligence, and cooperative control.
- Autonomous vehicles including UAVs, UUVs, rovers, and humanoids.
- Micro- and nano-robotic systems; PLIF micro-robots; applications in biomedicine and manufacturing.
- Teleoperation, human–robot interfaces, haptic feedback, and immersive control.

2.3. Sensing, Perception, and Intelligence

- Advanced sensor integration, sensor fusion, SLAM, and dynamic environment mapping.
- Visual servoing, tactile sensing, and force-awareness in robotic systems.
- Cognitive architectures, decision-making frameworks, and semantic knowledge representation for autonomy, hidden technology conceived as all the systems with integrated A.I systems.

2.4. Application Domains

- Smart manufacturing, Industry 4.0, automation, and intelligent control systems.
- Assistive and rehabilitation robotics (e.g., exoskeletons).
- Agricultural automation, disaster-response systems, environmental and marine robotics.
- Energy and transportation systems: smart grids, autonomous traffic, and sustainable infrastructures.

2.5. Emerging & Cross-Disciplinary Areas

- Quantum control and quantum-inspired robotic systems.
- Morphogenetic and self-assembling systems.
- Biohybrid systems, brain–machine interfaces, synthetic biology applications.
- Complex systems, emergent behavior, and chaos control.
- Sustainability, ethics, human-robot coexistence, and regulation.

2.6. Visionary Technologies and Radical Concepts

- Planetary habitats, deep-sea exploration systems, extreme-scale robotic architectures.
- Fusion of control, materials science, AI, and environmental engineering.
- Soft sensors, adaptive control in uncertain real-world environments.

3. Beyond the Conventional Boundaries

The journal's multidisciplinary outlook encourages research that bridges Automatic Control and Robotics with physics (including quantum mechanics), biological sciences, neuroscience, materials, and environmental engineering. We particularly welcome conceptual and prototype work that challenges traditional frameworks and proposes bold, new models of control, autonomy, and intelligence.

4. The Role of Classical Engineering in a Changing World

In an era dominated by Artificial Intelligence and Machine Learning, the enduring value of classical engineering principles and scientific rigor is unmistakable. These foundational methodologies, combined with humanistic perspectives from the arts and social sciences, remain essential for ensuring that technologies are sustainable, ethical, and socially beneficial. Our journal will provide space for discourse connecting technological progression with social responsibility, environmental stewardship, and cross-cultural collaboration.

We wish to promote also in the journal—ranging from robust and nonlinear control to emergent dynamics, bio-inspired systems, networked control architectures, and hands-on implementations with MATLAB and hardware with strong Educational Scopes.

5. Gratitude and Outlook

I am deeply grateful to all those who will contribute to the success of *Control and Robotics Express Communications*: the authors whose pioneering research forms the lifeblood of the journal; the Associate Editors who uphold our scientific rigor; and the dedicated Editorial Staff who enabled this launch.

It is my hope that, in the near future, this journal will become a trusted home for high-impact, visionary research—a catalyst for innovation and a community grounded in both excellence and collegiality. Together, we

will build a platform that not only disseminates knowledge swiftly but also cultivates the collaborative spirit that propels science and society forward.

Conflicts of Interest

The authors declare no conflict of interest.