EDITORIAL

# Inaugural Editorial of Transactions on Intelligent Unmanned Systems

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Dear Readers,

Welcome to the inaugural issue of Transactions on Intelligent Unmanned Systems. This journal is dedicated to publishing high-quality, cutting-edge research in the rapidly evolving field of intelligent unmanned systems. Our mission is to provide a platform that brings together researchers, engineers, and practitioners from academia, industry, and government to share their innovative work and ideas. We are committed to fostering a collaborative and inclusive environment that drives advancements in unmanned technology and its applications across various domains.

Intelligent unmanned systems, including drones, ground vehicles, and underwater robots, are transforming industries by performing tasks autonomously [1]. These systems use advanced sensors and AI to analyze their environment, make decisions, and adapt to changes in real-time. They are widely used in agriculture for monitoring crops, in logistics for automating deliveries, and in defense for surveillance and reconnaissance [2].

AI and machine learning enhance these systems by allowing them to learn from experience, improving efficiency and safety [3]. Robust communication networks ensure seamless operation even in challenging environments, while human-computer interaction technologies make these systems easier to control and monitor [4].

The future of intelligent unmanned systems is bright, with ongoing research aiming to enhance their capabilities and expand their applications [5]. This journal aims to be at the forefront of these advancements, providing a platform for sharing innovative research and fostering collaboration across disciplines [6].

**Purpose of the Journal:** The primary aim of the Transactions on Intelligent Unmanned Systems is to provide a comprehensive platform for the dissemination of pioneering research and development in the field of intelligent unmanned systems. This journal focuses on the intersection of advanced robotics, artificial intelligence, and autonomous technologies, aiming to foster innovation and collaboration among researchers, practitioners, and policymakers.

**Content and Directions:** The journal encompasses a wide range of topics, including but not limited to:

1. **Robotics and Automation**: Advances in robotic systems, automation techniques, and control mechanisms for unmanned vehicles and drones.
2. **Artificial Intelligence and Machine Learning**: Application of AI and ML algorithms in enhancing the autonomy and intelligence of unmanned systems.
3. **Sensor Integration and Data Processing**:

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Innovations in sensor technologies, data fusion, and real-time processing for improved situational awareness and decision-making.

4. **Communication and Networking**: Development of robust communication protocols and networks to support the operation of unmanned systems in diverse environments.
5. **Navigation and Path Planning**: Techniques for autonomous navigation, path planning, and obstacle avoidance in dynamic and uncertain environments.
6. **Human-Computer Interaction**:Exploration of interfaces and interaction methods between humans and unmanned systems to ensure safe and efficient operation.
7. **Applications and Case Studies**:Practical implementations and case studies demonstrating the impact of intelligent unmanned systems in various sectors such as agriculture, defense, logistics, and environmental monitoring.

**Academic Standards:** Transactions on Intelligent Unmanned Systems adheres to the highest standards of academic excellence. All submissions undergo a rigorous peer-review process by experts in the field to ensure the publication of high-quality and impactful research. The journal encourages original contributions that advance theoretical understanding, propose innovative methodologies, and demonstrate practical applications.

The editorial board comprises distinguished researchers and professionals who are committed to maintaining the integrity and quality of the journal. We uphold strict ethical guidelines to ensure the authenticity and reliability of published content.

**Openness and Collaboration:** The journal promotes openness and collaboration within the scientific community. We encourage submissions from diverse geographical regions and institutions, fostering a global exchange of ideas and knowledge.

Transactions on Intelligent Unmanned Systems is committed to supporting open access initiatives, providing free and unrestricted access to published research. By doing so, we aim to maximize the dissemination and impact of scientific discoveries.

Additionally, we welcome interdisciplinary collaborations and partnerships with industry, academia, and governmental organizations. These collaborations are vital for addressing complex challenges and driving the advancement of intelligent unmanned systems.

**Future Prospects:** As the field of intelligent unmanned systems continues to evolve, Transactions on Intelligent Unmanned Systems is dedicated to staying at the forefront of innovation and research. Our future prospects include:

- **Expanding Scope**: Broadening the journal's scope to include emerging technologies and interdisciplinary research areas that contribute to the advancement of unmanned systems.
- **Special Issues**: Publishing special issues on cutting-edge topics and trends, curated by guest editors who are leaders in their respective fields.
- **Workshops and Conferences**: Organizing and supporting workshops, conferences, and symposia to facilitate direct interaction and knowledge sharing among researchers and practitioners.
- **Early Career Researchers**: Providing opportunities and support for early career researchers through mentorship programs, awards, and dedicated sections within the journal.

Transactions on Intelligent Unmanned Systems is poised to become a leading journal in the field, driving forward the development and application of intelligent technologies in unmanned systems. We invite researchers, practitioners, and stakeholders to contribute and collaborate in this exciting endeavor.

We are thrilled to embark on this journey with you, our readers, contributors, and collaborators. The Transactions on Intelligent Unmanned Systems aims to be more than just a journal; we envision it as a vibrant community where ideas flourish and innovations take shape. As we launch this inaugural issue, we look forward to your valuable contributions and feedback. Together, we can push the boundaries of what is possible with intelligent unmanned systems and make significant strides in this transformative field. Thank you for joining us, and we hope you find the content of this journal both inspiring and impactful.

Yours sincerely,

Jinchao Chen, Founding Editor-in-Chief

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