

Lecture Notes in Networks and Systems 1078

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# Unmanned Systems and Intelligent Control

Proceedings of USIC 2025

 Springer

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Azhar Mohd Ibrahim · Wenfeng Hu · Rui Gao  
Editors

# Unmanned Systems and Intelligent Control

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ISSN 2367-3370

ISSN 2367-3389 (electronic)

Lecture Notes in Networks and Systems

ISBN 978-3-032-16547-3

ISBN 978-3-032-16548-0 (eBook)

<https://doi.org/10.1007/978-3-032-16548-0>

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# Preface

It is our great pleasure to present the proceedings of the inaugural Asia Conference on Unmanned Systems and Intelligent Control (USIC 2025), held in the vibrant innovation hub of Hong Kong, China, from 7 November to 9 November 2025. As the first edition of this conference series, USIC marks an important milestone in bringing together global researchers, engineers, and practitioners committed to advancing the next generation of autonomous and intelligent technologies.

The conference is dedicated to exploring and pushing the frontiers of autonomy, intelligence, and engineering in unmanned systems. With the rapid evolution of artificial intelligence, robotics, intelligent control, and autonomous platforms, unmanned systems are reshaping industries ranging from transportation and logistics to environmental monitoring, smart cities, and precision inspection. Against this dynamic backdrop, USIC 2025 provides a new international platform for pioneering research dissemination, cross-disciplinary collaboration, and in-depth discussion of the technical challenges that will define tomorrow's autonomous ecosystems.

The papers reflect the broad scope and depth of current innovation in the field. Topics include intelligent control methodologies, autonomous navigation and perception, machine learning-based decision systems, cooperative unmanned platforms, optimization techniques, and emerging applications across diverse domains. Together, these contributions showcase the creativity, rigor, and forward-looking spirit that characterize the global unmanned systems community.

As the inaugural conference, USIC 2025 would not have been possible without the dedicated efforts of our authors, reviewers, organizing committee members, and participants. We express our sincere appreciation for their commitment, which has laid a strong foundation for the growth and continued success of future editions.

We hope that the insights and innovations presented in the proceedings will inspire continued research, foster new collaborations, and contribute meaningfully to the advancement of autonomous and intelligent systems worldwide.

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