

Proceedings of the 13th International Conference on Identification, Information and Knowledge in the Internet of Things

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IIKI 2025

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Preface

We are delighted to introduce the proceedings of the 13th International Conference on Identification, Information and Knowledge in the Internet of Things (IIKI 2025), held in Chengdu, China, from December 18 to 21, 2025. Since its inception, IIKI has served as an international forum for researchers, practitioners, and industry experts to exchange ideas and present advances in the fields of the Internet of Things (IoT), information systems, knowledge engineering, artificial intelligence, digital economy, and FinTech. IIKI 2025 continued this tradition by bringing together participants from academia, industry, and government to discuss emerging trends, challenges, and innovative solutions for the next generation of intelligent interconnected systems.

The technical program of IIKI 2025 featured a diverse collection of high-quality research contributions covering a broad spectrum of topics, including computer vision, object detection, multimodal learning, federated learning, wireless communication networks, intelligent manufacturing, trustworthy IoT systems, robotic control, distributed intelligence, healthcare applications, digital economy, and digital finance. The conference program was organized into multiple thematic sessions, providing opportunities for in-depth discussions and interdisciplinary exchanges among researchers from different domains.

In addition to the technical paper presentations, IIKI 2025 was honored to host an outstanding lineup of keynote speakers from leading universities and research institutions worldwide. The keynote program addressed a wide range of frontier topics, including cybersecurity programming languages, cryptography and artificial intelligence, underwater acoustic sensor networks, privacy protection for cloud-based media data, diffusion-driven learning, edge intelligence, federated learning, industrial Internet control, NextG vehicular communications, data lifecycle management, embodied intelligence systems, Agentic AI, financial mathematics, and quantitative risk analysis. These keynote speeches provided valuable insights into current research developments and future directions in both academia and industry.

The success of IIKI 2025 would not have been possible without the dedication and support of many individuals. We would like to express our sincere gratitude to the Steering Committee members for their guidance and support throughout the organization of the conference. We are especially grateful to the General Chairs, Program Chairs, Program Co-Chairs, Workshop Chairs, Publication Chairs, Local Chairs, Section Chairs, Technical Program Committee members, and reviewers for their significant efforts in maintaining the high quality of the conference program through a rigorous peer-review process. We also thank all authors, presenters, participants, and sponsors for their valuable contributions and active participation.

We believe that IIKI 2025 has provided an excellent platform for sharing innovative ideas, fostering international collaboration, and promoting the advancement of research in IoT, artificial intelligence, information systems, and digital technologies. We hope that the contributions collected in these proceedings will inspire future research and encourage further developments in these rapidly evolving fields.

Prof. Jiguo Yu, Prof. Lin Meng, Prof. Yunchuan Sun

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