Preface

This volume contains the papers that were accepted for presentation at the 11th International Symposium on Integrated Uncertainty in Knowledge Modelling and Decision Making (IUKM 2025) held in Ho Chi Minh City, Vietnam, March 17–19, 2025.

The IUKM conference aim to provide a forum for exchanges of research results and ideas, and experiences of application among researchers and practitioners involved with all aspects of uncertainty modelling and management. Previous editions of the conference were held in Ishikawa, Japan (2010), Hangzhou, China (2011), Beijing, China (2013), Nha Trang, Vietnam (2015), Da Nang, Vietnam (2016), Ha Noi, Vietnam (2018), Nara, Japan (2019), Phuket, Thailand (2020), Ishikawa (online), Japan (2022) and their proceedings were published by Springer in AISC 68, LNAI 7027, LNAI 8032, LNAI 9376, LNAI 9978, LNAI 10758, LNAI 11471, LNAI 12482, LNAI 13199, LNAI 14375 and LNAI 14376.

The IUKM 2025 was jointly organized by Industrial University of Ho Chi Minh City (IUH), University of Science – Vietnam National University Ho Chi Minh City, Vietnam, and Japan Advanced Institute of Science and Technology (JAIST), Japan.

This year, the conference received 116 submissions from which the Program Committee selected 55 papers for presentation and inclusion in the LNAI proceedings. In addition to the accepted papers, the conference program also featured the following keynote talks:

- Professor Hung T. Nguyen (New Mexico State University, USA; Chiang Mai University, Thailand), On Conditional Event Algebra for Probability Reasoning in System Design
- Professor Sebastien Destercke (Universite de Technologie de Compiegne, France), Information Fusion as a Tool to Estimate Parameters from Imprecise Data
- Professor Katsushige Fujimoto (Fukushima University, Japan), Interaction Indices as a Tool to Explaining Machine Learning Models
- Professor Yuchi Kanzawa (Shibaura Institute of Technology, Japan), Fuzzy Clustering: Unifying Algorithms through Theory, Parameterization, and Implementation
- Professor Hiroshi Mamitsuka (Kyoto University, Japan), Deep Tensor Learning: Application to Predicting Adverse Drug Effects

The conference proceedings are split into two volumes (LNAI 15585 and LNAI 15586). This volume contains three abstracts and two papers from invited talks, and 27 papers related to Machine Learning, Pattern Recognition and Data Analysis, and Applications.

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We would like to express our appreciation to the members of the Program Committee for their support and cooperation in this publication. We are also thankful to Celine Lanlan Chang, Anna Kramer, and their colleagues at Springer for providing a meticulous service for the timely production of this volume. Last, but certainly not the least, our special thanks go to all the authors who submitted papers and all the attendees for their contributions and fruitful discussions that made this conference a great success.

March 2025

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Katsuhiro Honda
Bac Le
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