### **Preface**

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This volume includes workshop papers presented at the 30th ACM International Conference on Information and Knowledge Management (CIKM 2021), held during November 1-5, 2021, in Gold Coast, Queensland, Australia.

Nine workshops were accepted to this edition:

- CDCEO'21: 1st Workshop on Complex Data Challenges in Earth Observation
- IWILDS'21: 2nd Workshop on Investigating Learning During Web Search
- KDAH-CIKM-2021: 4th Workshop on Knowledge-driven Analytics and Systems Impacting Human Quality of Life
- KINN'21: 1st Workshop on Knowledge Injection in Neural Networks
- LQ 2021: Learning to Quantify: Methods and Applications
- MODIMO: Workshop on Multi-Omics Data Integration for Modelling Biological Systems
- MUFin21: International Workshop on Modelling Uncertainty in the Financial World
- PSTCI2021: International Workshop on Privacy, Security and Trust in Computational Intelligence
- THECOG: Transforms in beHavioral and affective COmputinG

All workshops provide interdisciplinary forums for academics and industry experts from different background areas such as computer science, machine learning, information science, psychology, finance, biology, data mining, to exchange latest research ideas, discuss on open challenges and facilitate cross-disciplinary collaborations.

We would like to thank all authors, participants and workshop organisers for their contributions and supports to this edition. We sincerely hope that the papers of the CIKM 2021 workshops will benefit researchers for future development.

CIKM 2021 Workshop chairs

Gao Cong, Nanyang Technological University

Maya Ramanath, IIT Delhi

## CIKM'2021 Workshops included in this proceedings

We list the CIKM'2021 workshops (with their organisers) which the papers accepted for presentation and publications are included in this proceedings as following.

#### (CDCEO'21) 1st Workshop on Complex Data Challenges in Earth Observation

- Aleksandra Gruca, Silesian University of Technology, Poland
- Pedro Herruzo, Institute of Advanced Research in Artificial Intelligence, Austria
- Pilar Rípodas, Spanish Meteorological Agency, Spain
- Pedram Ghamisi, Institute of Advanced Research in Artificial Intelligence, Austria;
  Helmholtz-Zentrum Dresden-Rossendorf, Germany
- Christian Briese, Earth Observation Data Centre for Water Resources Monitoring, Austria
- Andrzej Kucik, Φ-lab, European Space Agency, Italy
- Michael Kopp, Institute of Advanced Research in Artificial Intelligence, Austria; Here Technologies, Switzerland
- David Kreil, Institute of Advanced Research in Artificial Intelligence, Austria
- Sepp Hochreiter, Institute of Advanced Research in Artificial Intelligence, Austria

#### (IWILDS'21) 2nd Workshop on Investigating Learning During Web Search

- Irina Brich, IWM Leibniz-Institut für Wissensmedien, Germany
- Anett Hoppe, TIB Leibniz Information Centre for Science & Technology, Germany
- Jigun Liu, University of Oklahoma, USA
- Ran Yu, GESIS Leibniz Institute for the Social Sciences, Germany

### (KDAH-CIKM-2021) 4th Workshop on Knowledge-driven Analytics and Systems Impacting Human Quality of Life

- Leandro Marin, University of Murcia, Spain
- John Farserotu, Centre Suisse d'Electronique et de Microtechnique (CSEM),
  Switzerland
- Antonio Jara, University of Applied Sciences Western Switzerland (HES-SO), Switzerland
- Arijit Ukil, TCS Research, Tata Consultancy Services, India

#### KINN'21: 1st Workshop on Knowledge Injection in Neural Networks

- Vasudev Lal, Intel Labs, USA
- Somak Aditya, Microsoft Research, India
- Yezhou Yang, ASU, USA
- Pasquale Minervini, UCL, UK
- Sandya Mannarswamy, Intel, India

# MODIMO: Workshop on Multi-Omics Data Integration for Modelling Biological Systems

- Marco Beccuti, University of Turin, Italy
- Vincenzo Bonnici, University of Verona, Italy
- Rosalba Giugno, University of Verona, Italy

# MUFin21: International Workshop on Modelling Uncertainty in the Financial World

- Srikanta Bedathur, IIT-Delhi, India
- Tanmoy Bhowmik, Mastercard, India
- Nitendra Rajput, Mastercard, India
- Karamjit Singh, Mastercard, India
- Maneet Singh, Mastercard, India

# PSTCI2021: International Workshop on Privacy, Security and Trust in Computational Intelligence

- Guanfeng Liu, Macquarie University, Australia
- Kim-Kwang Raymond Choo, The University of Texas at San Antonio, USA
- Hongzhi Yin, The University of Queensland, Australia
- Deepak Puthal, Newcastle University, UK
- Chi Yang, Huazhong University of Science and Technology, China
- Xuyun Zhang, Macquarie University, Australia

#### **Learning to Quantify: Methods and Applications (LQ 2021)**

- Juan José del Coz, Artificial Intelligence Center University of Oviedo, Spain
- Pablo González, Artificial Intelligence Center University of Oviedo, Spain
- Alejandro Moreo, Istituto di Scienza e Tecnologie dell'Informazione Consiglio Nazionale delle Ricerche Pisa, Italy
- Fabrizio Sebastiani, Istituto di Scienza e Tecnologie dell'Informazione Consiglio Nazionale delle Ricerche Pisa, Italy

#### THECOG - Transforms in beHavioral and affectivE COmputinG

- Eleanna Kafeza, Zayed University, UAE
- Georgios Drakopoulos, Ionian University, Greece