Preface

WI-IAT 2023

The 2023 IEEE/WIC International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'23) serves as a premier international forum that brings together researchers and practitioners from diverse fields to present original research and to exchange innovative and practical experiences on web intelligence and intelligent agent technology.

WI-IAT'23 is a hybrid conference and will be held in Venice, Italy. It follows a long and successful series beginning in 2001. The conference debuted that year in Maebashi, Japan and has since taken place around the globe: Halifax, Canada (2003); Beijing, China (2004); Compiegne, France (2005); Hong Kong (2006); Silicon Valley, USA (2007); Sydney, Australia (2008); Milano, Italy (2009); Toronto, Canada (2010); Lyon, France (2011); Macau, China (2012); Atlanta, USA (2013); Warsaw, Poland (2014); and Singapore (2015). From 2016 to 2019, the conference was held under a different brand with a focus on Web Intelligence (WI'16 in Omaha, USA; WI'17 in Leipzig, Germany; WI'18 in Santiago de Chile; and, WI'19 in Thessaloniki, Greece). But 2020 saw a return to the original, much broader scope of the conference in order to renew its focus on the strong connection between Web Intelligence and Intelligent Agent Technology. WI-IAT'20 (online), WI-IAT'21 (hybrid), and WI-IAT'22 (hybrid - Niagara Falls, Canada) bear that classic brand.

The aim of the WI-IAT conference series is to achieve a multi-disciplinary balance between advances in theoretical research and methods typically associated with collective intelligence, data science, human-centric computing, knowledge management, network science, autonomous agents and multi-agent systems. The conference is committed to addressing research that both deepens the understanding of computational, logical, cognitive, physical, and social foundations of the future Web, and enables the development and application of intelligent technologies.

To that end, WI-IAT'23 features high-quality, original research papers and real-world applications in all the theoretical and applied areas that make up the field of Web Intelligence and Intelligent Agent Technology. The conference hosted five topical tracks on how intelligent technologies are impacting the Web of People, the Web of Data, the Web of Things, the Web of Trust, and the Web of Agents. Furthermore, this year's edition of WI-IAT proposes a special track on Fairness, Accountability, Transparency and Generative Content in AI.

Overall, WI-IAT'23 received 169 submissions, including 111 regular papers and 58 workshop papers, with over 400 authors from more than 40 countries across the world. After a rigorous peer review process undertaken by the Program Committee members and additional reviewers, 30 high quality papers have been accepted for publication in the proceedings as regular papers, marking an acceptance rate of 27%. Also included in the proceedings are 29 short papers. Alongside the main conference, there are jointly nine workshops, which include 41 pioneering and exploratory

works. We congratulate the authors of these papers and sincerely thank the reviewers who provided invaluable feedback.

In addition to the main conference papers, we are thrilled to have four keynote speakers at the conference:

- "Wearable Data for Health: Are we there yet?" by Prof. Cecilia Mascolo, *University of Cambridge, United Kingdom*
- "What is the Meaning of Superhuman Performance in Natural Language Processing?" by Prof. Roberto Navigli, *Sapienza University of Rome, Italy*
- "Autonomous Development at the Individual and Collective Level" by Prof. Franco Zambonelli, *University of Modena and Reggio Emilia, Italy*
- "Representation and Quantification of Uncertainty in Machine Learning" by Prof. Eyke Hüllermeier, *Ludwig-Maximilians-Universität München, Germany*

The nine workshops included in the Technical Program, along with the organizing co-chairs, are the following:

- The 12th International Workshop on Intelligent Data Processing (IDP)
  Organizers:
    - Paolo Mengoni, *Hong Kong Baptist University, Hong Kong, China*
    - Kristen (Yuanxi) Li, *Hong Kong Baptist University, Hong Kong, China*
- The 8th International Workshop on Application of Big Data for Computational Social Science (ABCSS2023)
  Organizers:
    - Fujio Toriumi, *The University of Tokyo, Japan*
    - Isamu Okada, *Soka University, Japan*
    - Hiroki Takikawa, *The University of Tokyo, Japan*
    - Mitsuo Yoshida, *University of Tsukuba, Japan*
- The 8th International Workshop on Integrated Social CRM (iCRM 2023)
  Organizers:
    - Rainer Alt, *Leipzig University, Germany*
    - Olaf Reinhold, *University of Cooperative Education Saxony, Germany*
    - Fabio Lobato, *Federal University of Western Para, Brazil*
- The International Workshop on Personalized QA and its Applications (PQAIA)
  Organizers:
    - Yuanzhuo Wang, *Chinese Academy of Sciences, China*
    - Jingyuan Li, *Beijing Technology and Business University, China*

- The 4th International Workshop on AI for Social Good in the Connected World (AI4SG)
  Organizers:

- ○ Jiming Liu, *Hong Kong Baptist University, Hong Kong, China*
  - ○ Yang Liu, *Hong Kong Baptist University, Hong Kong, China*
  - ○ Maria Fasli, *University of Essex, United Kingdom*
- The 1st International Workshop on Artificial Intelligence of Things for Healthcare
  Organizers:
  - ○ Guohun (Tony) Zhu, *University of Queensland, Australia*
  - ○ Fei Yan, *Tsinghua University, China*
- GENUINE (modelinG, lEarning, and miniNg to coUnter INformation disordEr)
  Organizers:
  - ○ Gianni Costa, *The National Research Council of Italy (CNR), Italy*
  - ○ Riccardo Ortale, *The National Research Council of Italy (CNR), Italy*
- International Workshop on ChatGPT for Business Applications
  Organizers:
  - ○ Raj Gururajan, *University of Southern Queensland, Australia*
  - ○ Revathi Venkataraman, *SRM Institute of Science and Technology, India*
  - ○ Catherine Prentice, *University of Southern Queensland, Australia*
  - ○ Vaishnavi Moorthy, *SRM Institute of Science and Technology, India*
- The International Workshop on Web Intelligence meets Brain Informatics (WImBI'23)
  Organizers:
  - ○ Jianzuo Yan, *Beijing University of Technology, China*
  - ○ Jiajin Huang, *Beijing University of Technology, China*
  - ○ Jianhui Chen, *Beijing University of Technology, China*

It is impossible to organize a first-class conference without the support and expertise of many outstanding researchers, leaders, volunteers, and sponsors. We acknowledge the time and effort dedicated by the members of the WI-IAT'23 Program Committee. They assured the success and academic integrity of the conference. We would like to thank the keynote speakers, invited speakers, and workshop organizers, who selflessly dedicated their time, knowledge, and expertise to WI-IAT'23 and helped prepare an excellent Technical Program. We also thank the sponsors of WI-IAT'23: the Institute of Electrical and Electronics Engineers (IEEE), the IEEE Computer Society, the Web Intelligence Consortium (WIC), the Ca' Foscari University of Venice, and IOS Press.

Finally, we extend our gratitude to the members of the Organizing Committee:

- Local Organizing Chair: Cristiana Fiandra (*The Office, Italy*)
- Workshop and Special Session Chairs: Marco Viviani (*University of Milano Bicocca, Italy*) and Xujuan Zhou (*University of Southern Queensland, Australia*)
- Publicity Chairs: Hongzhi Kuai (*Maebashi Institute of Technology, Japan*) and Thanveer Shaik (*University of Southern Queensland, Australia*)
- Web & CyberChair Master: Hongzhi Kuai (*Maebashi Institute of Technology, Japan*)

Yours sincerely,

General Co-chair, Salvatore Orlando, *Ca' Foscari University of Venice, Italy*
General Co-chair, Gabriella Pasi, *University of Milano-Bicocca, Italy*
Program Committee Co-chair, *Sebastian Bruch, Pinecone, United States*
Program Committee Co-chair, Claudio Lucchese, *Ca' Foscari University of Venice, Italy*
Program Committee Co-chair, Xiaohui Tao, *University of Southern Queensland, Australia*