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De-Shuang Huang · Xiankun Zhang ·
Chuanlei Zhang
Editors

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Preface

The International Conference on Intelligent Computing (ICIC) was started to provide an annual forum dedicated to emerging and challenging topics in artificial intelligence, machine learning, pattern recognition, bioinformatics, and computational biology. It aims to bring together researchers and practitioners from both academia and industry to share ideas, problems, and solutions related to the multifaceted aspects of intelligent computing.

ICIC 2024, held in Tianjin, China, August 5–8, 2024, constituted the 20th International Conference on Intelligent Computing. It built upon the success of ICIC 2023 (Zhengzhou, China), ICIC 2022 (Xi'an, China), ICIC 2021 (Shenzhen, China), ICIC 2020 (Bari, Italy), ICIC 2019 (Nanchang, China), ICIC 2018 (Wuhan, China), ICIC 2017 (Liverpool, UK), ICIC 2016 (Lanzhou, China), ICIC 2015 (Fuzhou, China), ICIC 2014 (Taiyuan, China), ICIC 2013 (Nanning, China), ICIC 2012 (Huangshan, China), ICIC 2011 (Zhengzhou, China), ICIC 2010 (Changsha, China), ICIC 2009 (Ulsan, South Korea), ICIC 2008 (Shanghai, China), ICIC 2007 (Qingdao, China), ICIC 2006 (Kunming, China), and ICIC 2005 (Hefei, China).

This year, the conference concentrated mainly on the theories and methodologies as well as the emerging applications of intelligent computing. Its aim was to unify the picture of contemporary intelligent computing techniques as an integral concept that highlights the trends in advanced computational intelligence and bridges theoretical research with applications. Therefore, the theme for this conference was "Advanced Intelligent Computing Technology and Applications". Papers that focused on this theme were solicited, addressing theories, methodologies, and applications in science and technology.

ICIC 2024 received 2189 submissions from 15 countries and regions. All papers went through a rigorous single-blind peer-review procedure and each paper received at least three review reports. Based on the review reports, the Program Committee finally selected 863 high-quality papers for presentation at ICIC 2024, included in twenty-one volumes of proceedings published by Springer: thirteen volumes of Lecture Notes in Computer Science (LNCS), six volumes of Lecture Notes in Artificial Intelligence (LNAI), and two volumes of Lecture Notes in Bioinformatics (LNBI).

In addition, this year we selected 134 Poster papers from the remaining papers, which will be made accessible on the open access website http://poster-openaccess.com/.

This volume of LNAI_14879 includes 40 papers.

The organizers of ICIC 2024, including Eastern Institute of Technology, Ningbo, China; Tianjin University of Science and Technology, China; China University of Mining & Technology (Beijing), China; China University of Mining and Technology (Xuzhou), China; and North China University of Science and Technology, China, made an enormous effort to ensure the success of the conference. We hereby would like to thank the members of the Program Committee and the referees for their collective effort in reviewing and soliciting the papers. In particular, we would like to thank all the authors for contributing their papers. Without the high-quality submissions from the authors, the

success of the conference would not have been possible. Finally, we are especially grateful to the International Neural Network Society and the National Science Foundation of China for their sponsorship.

De-Shuang Huang
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