**FDITOR-IN-CHIFF** Alan Jović (University of Zagreb, Croatia) **HONORARY** Vlado Glavinić (University of Zagreb, Croatia) **EDITOR-IN-CHIEF EDITORIAL BOARD** Goran Delač (University of Zagreb, Croatia) Domagoj Jakobović (University of Zagreb, Croatia) Andrea Kő (Crvinus University of Budapest, Hungary) Xiaohua Li (State University of New York at Binghamton, USA) Ivan Luković (University of Belgrade, Serbia) Zongmin Ma (Northeastern University, China) Robert Manger (University of Zagreb, Croatia) Kourosh Neshatian (University of Canterbury, New Zealand) Slobodan Ribarić (University of Zagreb, Croatia) Mincong Tang (Beijing Jiaotong University, China) Hong Zhao (Fairleigh Dickinson University, USA) Željko Žilić (McGill University, Canada) MANAGING EDITORS Goran Delač (University of Zagreb, Croatia) Marko Đurasević (University of Zagreb, Croatia) Nikolina Frid (University of Zagreb, Croatia) **EDITOR FOR** Kourosh Neshatian (University of Canterbury, New Zealand) SCIENTIFIC INTEGRITY **EDITOR FOR** Branka Marijanović (University of Zagreb, Croatia) **BIBLIOMETRICS ASSOCIATE EDITORS** Petra Bago (University of Zagreb, Croatia) Bruno Blašković (University of Zagreb, Croatia) Aswani Kumar Cherukuri (Vellore Institute of Technology - VIT, India) Marko Delimar (University of Zagreb, Croatia) Marko Đurasević (University of Zagreb, Croatia) Anna Formica (Institute for Systems Analysis and Computer Science - IASI-CNR, Italy) Nikolina Frid (University of Zagreb, Croatia) Marko Horvat (University of Zagreb, Croatia) Tomislav Hrkać (University of Zagreb, Croatia) Lei Huang (Beijing Jiaotong University, China) Zoran Kalafatić (University of Zagreb, Croatia) Sandi Ljubić (University of Rijeka, Croatia) Željka Mihajlović (University of Zagreb, Croatia) Jurij Mihelič (University of Ljubljana, Slovenia) Miljenko Mikuc (University of Zagreb, Croatia) Boris Milašinović (University of Zagreb, Croatia) Tomislav Petković Jr. (University of Zagreb, Croatia) Mirko Sužnjević (University of Zagreb, Croatia) Boris Vrdoljak (University of Zagreb, Croatia) **EDITORIAL OFFICE** University of Zagreb Faculty of Electrical Engineering and Computing (FER) Unska 3. HR-10000 Zagreb, Croatia phones: +385 1 612 9548, +385 1 612 9549, fax: +385 1 612 9653 e-mail: cit@fer.hr, Web: http://cit.fer.hr **PUBLISHED BY** University of Zagreb Faculty of Electrical Engineering and Computing (FER) Layout and printing by Element d.o.o., Menčetićeva 2, HR-10000 Zagreb, Croatia CIT. Journal of Computing and Information Technology is published quarterly.

This electronic version was published in March 2025. The printed issue was published in April 2025.

## **EDITORIAL POLICY**

CIT. Journal of Computing and Information Technology is an international peer-reviewed journal covering the area of computing and information technology, i.e. computer science, computer engineering, software engineering, information systems, and information technology. CIT endeavors to publish stimulating accounts of original scientific work, primarily including research papers on both theoretical and practical issues, as well as case studies describing the application and critical evaluation of theory. Surveys and state-of-the-art reports will also be considered, and proposals for such papers will be discussed within the Editorial Board.

Specific areas of interest comprise, but are not restricted to, the following topics: theory of computing, design and analysis of algorithms, numerical and symbolic computing, scientific computing, artificial intelligence, image processing, pattern recognition, computer vision, embedded and real-time systems, operating systems, computer networking, Web technologies, distributed systems, human-computer interaction, technology enhanced learning, multimedia, database systems, data mining, machine learning, knowledge engineering, soft computing systems, network security, computational statistics, computational linguistics, and natural language processing.

Special attention is paid to educational, social, legal and managerial aspects of computing and information technology. In this respect *CIT* fosters the exchange of ideas, experience and knowledge between regions with different technological and cultural background, and in particular developed and developing ones.