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Audrius Lopata · Daina Gudonienė ·  
Rita Butkienė (Eds.)

# Information and Software Technologies

27th International Conference, ICIST 2021  
Kaunas, Lithuania, October 14–16, 2021  
Proceedings

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# Preface

We are happy to present to you the proceedings of the 27th International Conference on Information and Software Technologies (ICIST 2021). This yearly conference was held during October 14–16, 2021, in Kaunas, Lithuania. The present volume includes three chapters, which correspond to the three major areas that were covered during the conference, namely, Business Intelligence for Information and Software Systems, Software Engineering, and Information Technology Applications. According to the four special sessions of the conference, the proceedings and the three areas are subdivided into the following sections:

- i. Intelligent Methods for Data Analysis and Computer Aided Software Engineering
- ii. Intelligent Systems and Software Engineering Advances
- iii. Smart e-Learning Technologies and Applications
- iv. Language Technologies

Conference participants not only had the opportunity to present their rigorous research in more specialized settings, but also had the possibility to attend high-quality plenary sessions. This year, we had the pleasure of hearing keynote presentations by Christian Grimme (University of Münster, Germany) on “Technical and Social Perspectives on Disinformation, Social Bots, and Social Media” and Martin Haagoort (Managing Director and Data Scientist at Intellerts, The Netherlands) on “Artificial Intelligence for Finance – A Hyped Trend? Overpromising and Underdelivering? How to get on track for This Journey?” We would like to express our deepest gratitude to the special session chairs Audrius Lopata (Kaunas University of Technology, Lithuania), Marcin Wozniak (Silesian University of Technology, Poland), Danguolė Rutkauskienė (Kaunas University of Technology, Lithuania), and Jurgita Kapočiūtė-Dzikienė (Vytautas Magnus University, Lithuania). We acknowledge and appreciate the immense contribution of the session chairs not only in attracting the highest quality papers but also in moderating the sessions and enriching discussions between the conference participants. The entire team working on organizing the conference is proud that despite the uncertainties of the COVID-19 pandemic period, the conference maintained and attracted the interest of numerous scholars across the globe. Every year ICIST attracts researchers from all over the world, and this year was not an exception – we received 79 submissions from authors in approximately 19 countries. This indicates that over the years the conference has truly gained international recognition as it brings together a large number of brilliant experts who showcase the state of the art of the aforementioned fields and come to discuss their newest projects as well as directions for future research. As we are determined not to stop improving the quality of the conference, only 30 scientific papers were accepted to be published in this volume (a 38% acceptance rate). Each submission was reviewed by at least three reviewers, while borderline papers had an additional evaluation. Reviewing and selection was performed by our highly esteemed Program Committee, who we thank for devoting their precious

time to produce thorough reviews and feedback to the authors. It should be noted that this year, the Program Committee consisted of 47 reviewers, representing 29 academic institutions and 16 countries. In addition to the session chairs and Program Committee members, we would also like to express our appreciation to the general chair, Audrius Lopata (Kaunas University of Technology, Lithuania), who has taken the responsibility of steering the wheel of ICIST since the 25th anniversary of the conference in 2019. Moreover, we would like to thank the Local Organizing Committee and the Faculty of Informatics at Kaunas University of Technology; the conference would not have been a great success without their tremendous support. The proceedings of ICIST 2021 are published as a volume in the Communications in Computer and Information Science series. This would not be possible without the kind assistance that was provided by Springer team, for which we are extremely grateful. We are very proud of this collaboration and believe that this fruitful partnership will continue for many more years to come.

August 2021

Audrius Lopata  
Daina Gudonienė  
Rita Butkienė

# Organization

The 27th International Conference on Information and Software Technologies (ICIST 2021) was organized by Kaunas University of Technology and was held in Kaunas, Lithuania (October 14–16, 2021).

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