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Hector Florez · Sanjay Misra (Eds.)

Applied Informatics

Third International Conference, ICAI 2020
Ota, Nigeria, October 29–31, 2020
Proceedings

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Preface

The Third International Conference on Applied Informatics (ICAI 2020) aimed to bring together researchers and practitioners working in different domains in the field of informatics in order to exchange their expertise and to discuss the perspectives of development and collaboration.

ICAI 2020 was held virtually at the Covenant University in Ota, Nigeria, during October 29–31, 2020. It was organized by the Information Technologies Innovation (ITI) research group that belongs to the Universidad Distrital Francisco José de Caldas, Colombia, the Covenant University, Nigeria, and the Federal University of Technology, Minna, Nigeria. In addition, ICAI 2020 was proudly sponsored by Springer and Strategic Business Platforms.

ICAI 2020 received 101 submissions on informatics topics such as artificial intelligence, business process management, cloud computing, data analysis, decision systems, health care information systems, human-computer interaction, learning management systems, simulation and emulation, and software design engineering. Authors of the 101 submissions came from the following countries: Argentina, Brazil, Cameroon, Chile, China, Colombia, Ecuador, France, India, Lithuania, Mexico, Nigeria, Poland, Portugal, South Africa, Spain, and the USA.

All submissions were reviewed through a double-blind peer-review process. Each paper was reviewed by at least three experts. To achieve this, ICAI 2020 was supported by 80 Program Committee (PC) members, who hold PhD degrees. PC members come from the following countries: Argentina, Austria, Brazil, Chile, China, Colombia, Cyprus, Czech Republic, Ecuador, France, Germany, Greece, India, Latvia, Lithuania, Luxembourg, Mexico, The Netherlands, Nigeria, Portugal, Spain, Switzerland, Ukraine, the UAE, the UK, and the USA. Based on the double-blind review process, 35 full papers were accepted to be included in this volume of *Communications in Computer and Information Sciences* (CCIS) proceedings published by Springer. Moreover, seven of the accepted papers are international collaborations.

Finally, we would like to thank Jorge Nakahara, Alfred Hofmann, Leonie Kunz, Ramvijay Subramani, and Alla Serikova from Springer for their helpful advice, guidance, and support in publishing the proceedings.

We trust that the ICAI 2020 conference and proceedings open you to new vistas of discovery and knowledge.

October 2020

Hector Florez
Sanjay Misra

Welcome Message

On behalf of the Local Organizing Committee of ICAI 2020, it was a pleasure to welcome you to the Third International Conference on Applied Informatics (ICAI 2020), held during October 29–31, 2020. We are very proud and grateful to the ICAI Steering Committee for giving us the opportunity to host this year's conference.

ICAI 2020 was planned to take place at the Covenant University, Ota, Nigeria, which is located in close vicinity to the metropolitan city of Lagos, Nigeria. Ota is an industrial town surrounded by many large-scale industries. Covenant University, which happened to be the venue of the conference, is a gentle departure from the hustle and bustle of the busy metropolitan life in the city of Lagos. It is a serene campus with landscaped surroundings. However, due to the COVID-19 pandemic and considering the safety, security, and health of all the authors and ICAI community, we decided to organize this conference in virtual mode at the Covenant University.

Covenant University is currently among the most prestigious institutions of higher education in Nigeria and offers an excellent setting for the conference. In 2019, Times Higher Education (THE) ranked Covenant University under 400–500 best in Nigeria and West Africa, and 5th on the whole African continent. Founded in 2002, Covenant University is rated the best performing university by the National Universities Commission, Nigeria.

Plenary lectures by leading scientists and several paper sessions provided a real opportunity to discuss new issues and find advanced solutions able to shape recent trends in informatics.

The conference could not have happened without the dedicated work of many volunteers. We want to thank all members of ICAI Organizing Committee for collaborating with us in hosting a successful ICAI 2020 as well as our fellow members of the local organization.

On behalf of the Local Organizing Committee of ICAI 2020, it was our honor to cordially welcome your virtual presence to the Covenant University for this unique event. Your participation and contribution to this conference made it much more productive and successful.

October 2020

Sanjay Misra

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