

Lecture Notes in Electrical Engineering 903

Sudhan Majhi

Rocío Pérez de Prado

Chandrappa Dasanapura Nanjundaiah *Editors*

# Distributed Computing and Optimization Techniques

Select Proceedings of ICDCOT 2021

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# Lecture Notes in Electrical Engineering

## Volume 903

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Editors

# Distributed Computing and Optimization Techniques

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# Preface

This volume of the conference proceedings encompasses top-notch papers presented at the International Conference on Distributed Computing and Optimization Techniques (ICDCOT–2021), which took place on the 25th and 26th of June 2021, at the SJB Institute of Technology, Bangalore, Karnataka, India.

## Mode of Conference

In view of the COVID-19 pandemic, a complete lockdown was imposed by the Indian Government. Public gatherings were strictly restricted and treated as a high offence by the task force not only within the country but world over. Travel restrictions were completely banned worldwide. Therefore, in order to abide by the government rules and to not risk the lives of the public, the conference was held online through “Microsoft Teams”. The platform conveniently provided the facilities of seamless and uninterrupted interactions amongst all the conference participants which involved researchers and speakers from different parts of the world coming together under one roof to conduct the event as per planned to avoid postponement. Conducting it offline was not a viable option as it would be possible only after the pandemic, causing a long delay, which can be easily prevented through a virtual meeting. We are delighted to announce that all the conference proceedings were successfully executed through the will and cooperation of all its organizers, hosts, participants and all other contributors.

International Conference on Distributed Computing and Optimization Techniques (ICDCOT–2021) is the premier conference, which aims to provide an opportunity to exchange valuable insight about the advanced trends in communications, signal processing, power engineering and VLSI designs. This peer-reviewed conference provides the forum for the participators, scholars and industry experts to discuss, debate and share their innovative ideas in advance trends in Electronics, Electrical and Communication Engineering. Field experts share their solutions for the complex

problems that occur in various fields/domains. This year ICDCOT–2021 Proceedings received an overwhelming global response from countries across the world. The presentations consisted of novel and original works undertaken in the areas of Electronics, Electrical and Communication Engineering as well as their applications by experts and budding researchers, across the world. This conference provided opportunities for researchers to exchange new ideas and application experiences to establish research relations and to find global partners for future collaboration. The presentations given at the proceedings encompassed a wide variety of research topics that majorly involved but were not limited to the following domains:

- 4G;5G, 802.16 & WiMAX
- Antenna design (lower band/higher band)
- Design of controllers using electrical circuits
- Image, signal and video processing
- Micro-electromechanical system (MEMS)
- Optical communication
- Renewable energy

The conference has received papers from countries such as Iraq, Egypt, Bangladesh, Belgium, as well as from various parts of India: Karnataka, Tamilnadu, Andhra Pradesh, Uttarakhand, Jalandhar, Rajasthan, Mathura and Maharashtra. We received a total of 332 papers for the conference. All the papers have been subjected to a thorough peer review by at least two referees, until each of the papers levelled the quality expected at the conference. A total of 73 papers had received the final acceptance for submission at the conference. Overall, the proceedings consisted of a total of eight sessions, spanned over two days. Each author was given a time of 15 minutes under which both paper presentation and the Q & A discussion had to be completed.

[Day 1]: 25/06/2021

[11:30 AM – 1:30 PM] = Speech given by our honourable speaker, Dr. Sudhan Majhi, followed by two sessions dedicated to paper presentations [Session 1 & 2], conducted parallelly.

[2:30 PM – 4:30 PM] = Speech given by our honourable speaker, Dr. Gabriella Casalino, followed by two sessions dedicated to paper presentations [Session 3 & 4], conducted parallelly.

[Day 2]: 26/06/2021

[10:15 AM – 1:00 PM] = Speech given by our honourable speaker, Dr. Mincong Tang, followed by a half an hour break, after which two sessions dedicated to paper presentations [Session 1 & 2], were conducted parallelly.

[2:15 PM – 4:30 PM] = Two sessions of the proceedings were conducted, parallelly. A total of 13 papers were presented over the span of two sessions, with nine papers presented in [Session 3] and ten papers presented in [Session 4]. This was followed by a speech given by our honourable speaker, Dr. Tu N. Nguyen.

Patna, India  
Jaén, Spain  
Bengaluru, India

Sudhan Majhi  
Rocío Pérez  
Chandrappa Dasanapura Nanjundaiah

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Some notable guests of ICDCOT–2021:

Speakers of the conference:

Dr. Sudhan Majhi, Professor, IIT-Patna, India

Dr. Gabriella Casalino, University of Bari, Bari, Italy

Dr. Mincong Tang, Beijing Jiaotong University, China

Dr. Tu N. Nguyen, Director of the Intelligent Systems Laboratory (ISL) in the Department of Computer Science at Kennesaw State University, Georgia, USA



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