



GALGOTIAS COLLEGE OF ENGINEERING AND TECHNOLOGY

01, Knowledge Park II, Greater Noida

Department of Electronics and Communication Engineering

(B. Tech ECE – NBA Accredited)

IOS
Press

**First International Conference
on
Recent Trends in Parallel and Distributed Processing Techniques (RTPDP-2021)
July 9 - 10, 2021**

The Department of Electronics and Communication Engineering (ECE) at Galgotias College of Engineering and Technology (GCET) always strives for education's betterment and evolution in different emerging fields. In line with the same, First International Conference on **Recent Trends in Parallel and Distributed Processing Techniques (RTPDP 2021)** is organized by the Department of Electronics and Communication Engineering on **9th and 10th July 2021** to let scholars, educators and researchers exchange their pieces of knowledge. The proceedings of RTPDP 2021 are published by IOS Press, Netherlands and it is indexed in Scopus. This conference provides fundamental theory, recent developments and research outcomes addressing the related theoretical and practical aspects in the usage of advanced tools and techniques for Parallel and Distributed Processing.

Parallel and distributed Processing is under development for many years, linking with different research and application trends such as cloud computing, data centre networks, green computing, etc. RTPDP-2021 is organized to exhibit current developments and address challenges in theory, technology, and applications evolving in this viable field. The primary goal of this conference is to provide a platform for researchers, scientists, industry experts, and scholars to share their novel ideas and research results on the application of human cognition models in various practical computing applications. The objective of this conference is to publish and outline recent trends in the interdisciplinary area of parallel and distributed computing, applications, and technologies.

We received 183 research papers on these areas and after review 88 papers are accepted. These papers are orally presented in different categories of 9 Tracks which are Parallel/Distributed Architectures and applications; Smart Antennas design and its applications; Artificial Intelligence and Machine Learning; Sensors and IOT; Wireless and

Mobile Computing; Image Processing and Its Applications; Real-Time and Embedded Systems; Automation and Control; Software Tools, Web-Based Simulation and Computing. There are 10 Keynote talks delivered by eminent speakers of academia and industry from India and abroad. Scientists, technologists, engineers, academicians and researchers from national laboratories, research centres, academic institutions, and industries from different parts of India are gathered on a common platform to interact with one another and shared their research activities in RTPDP-2021.

Day 1 of RTPDP 2021; July 9, 2021 (10.00 am- 5.30 pm)

The first day of the conference is started at 10:00 am with the Saraswati Vandana and is inaugurated by Honourable Chief Guest: Er. Wong Chang Jong, HUAWEI Technologies, Singapore. Also, Guests of Honour on this day are Dr. Sanjay Kumar, BIT Mesra, India, Dr. Neelakandan, IIT Goa India, Dr. Jude Hemanth, Karunya University, India and Mr. Himanshu Mahajan, HUAWEI Technologies, India. The dignitaries are welcomed and felicitated by Dr. Brijesh Singh, Conference General Chair and Dr. Lakshmanan M, Convener and Conference Organizing Chair.

The chief guest Er. Wong Chang Jong delivers the inaugural speech, emphasizing the importance and applications of Parallel and Distributed Processing Techniques in next-generation communication. Dr. Sanjay Kumar delivered an intensive talk on the use of various distributed processing Techniques in 5G and 6G communication. Dr. Neelakandan emphasizes the role of parallel and distributed processing techniques in the development of the latest communication devices. Dr. Jude Hemanth presents the application of AI and Machine learning in biomedical applications. Finally, Mr. Himanshu Mahajan brings the efforts taken by HUAWEI Technologies to the latest development in various fields of communication for Indian students and academic institutions. He also emphasizes improving the industry and academia collaborations for the betterment of both. A vote of thanks on the inaugural session of RTPDP 2021 is given by Dr. R.L. Yadava, Conference Chair.

Followed by the lunch break, we have the talks by our eminent keynote speakers of this session. To begin with

Keynote talk 1 is delivered by Dr. D. Vaithiyanathan, Department of ECE, NIT, Delhi on "*Research Challenges in Digital IC Design*"

Keynote talk 2 is delivered by Dr. Siti Nuurul Huda Mohammad Azimin, Universiti Malaysia Kelantan Jeli Campus, Malaysia on *Property model prediction of the boiling point for pure and mixture solvents applied in herbal extraction*"

Keynote Talk 3 is delivered by Dr. R. P. Sharma, Chhatrapati Shivaji Maharaj University, Navi Mumbai on "*Wavelet Transform for Speech Recognition*"

Keynote Talk 4 is delivered by Dr. Feras M. Awaysheh, University of Tartu, Estonia, Spain on "*The Next Big Thing in Big Data*"

Keynote Talk 5 is delivered by Prof. Agbotiname Imoize University of Lagos, Nigeria on "*Terahertz-Operated Measurements and Signal Processing in 6G Wireless Communications*"

The talks included interactive sessions on the emerging technologies in the field of Parallel and Processing Research, Artificial intelligence, Emerging development in 5G and 6G Networks, Physical design and its role in the semiconductor industry, Cloud Computing, Machine learning, Antenna and microwave, Embedded System and Terahertz-Operated Measurements and Signal Processing in 6G Wireless Communications.

After the five keynote talks are delivered, we have the oral presentation of registered papers in three different tracks (Track 1: Parallel/Distributed Architectures and applications; Track 2: Smart Antennas design and its applications; Track 3: Artificial Intelligence and Machine Learning) held in parallel sessions between 03.30 PM and 05.30 PM. Here, the session chairs select the best paper based on the research work presented by registered authors.

For track 1, the best research work award goes to "Trust model in Cloud Computing: A Review": Paper ID-30, presented by Shweta Kaushik.

For track 2, the best research work award goes to "UWB Compact Wearable Orthogonal MIMO Antenna with High Isolation": Paper id-165, presented by Vanshika Gupta.

For track 3, the best research work award goes to "Weapon Detection using transfer learning": PaperID-23, presented by Dr. Mridul Gupta.

Indeed, all these are summed up to a great day and is marked as the successful victory of the Day 1 Conference.

Day 2 of RTPDP 2021; July 10, 2021 (09.00 am- 6.00 pm)

Following Day 1, Day 2 of RTPDP 2021, witnesses the great knowledgeable sessions in the emerging fields. The first keynote speaker of the day, Er. Gaurav Pawar, Subject Matter Expertise in Optical Drive, presents a great knowledgeable session on "*Optical Network Technology & Scope of High-capacity Network Designing*".

After the keynote talk by Er. Gaurav Pawar, we have the oral presentation of registered papers in Track 4 and 5 (Track 4: Sensors and IOT; Track 5: Wireless and Mobile Computing) held in parallel sessions between 09.30 AM and 11.30 AM. Also, the session chairs select the best paper based on the research work presented by registered authors.

For track 4, the best research work award goes to "Contextual Knowledge representation for Interoperability in Internet of Things": Paper ID-76, presented by S. Prakash.

For track 5, the best research work award goes to "Performance Evaluation of Selection Combiner under different Fading conditions- A Review": Paper ID-163, presented by Abhishek Semwal.

Next Keynote speaker, Er. Samuel Jigme Harrison, Senior Digital IC Design Engineer, talks about "*Physical Design and its role in the Semiconductor Industry*". The session is completely surrounded by a great amount of information related to semiconductors and their related technologies.

After the keynote talk, we have the oral presentation of registered papers in Track 6 and 7 (Track 6: Image Processing and Its Applications; Track 7: Real-Time and Embedded Systems) held in parallel sessions between 12.00 PM and 02.00 PM. The session chairs select the best paper of these two tracks based on the research work presented by registered authors.

For track 6, the best research work award goes to "Normal and Abnormal Fetal Brain Image Classification using Convolution Neural Network": Paper ID-144, presented by P. Durgadevi.

For track 7, the best research work award goes to "Chatbot Implementation Using Natural Language Processing and Finite State Machine": Paper ID-161, presented by Priyanka Lalwani.

Followed by the lunch break, we have the talks by our eminent keynote speakers of this session. Dr. Sunday Ekpo, Senior Lecturer in Electrical and Electronic Engineering, delivers an informative session on the "*Auxiliary Distributed, Edge and Parallel Computing Technologies for 5G/5G+ Communication Use Cases*". Next is the keynote talk, "*Automation and Control, Software Tools, Web-Based Simulation and Computing*" presented by Dr. Sudhir Kumar Sharma, IOT and Optics, Jaipur National University, Rajasthan, India, and Dr. L J Muhammad, Federal University, Kashere. They share their valuable research and its findings related to the theme of the conference and enlighten the participants.

After the keynote talk, we have the oral presentation of registered papers in the last two Tracks (Track 8: Automation and Control; Track 9: Software Tools, Web-Based Simulation and Computing) held in parallel sessions between 03.30 PM and 05.30 PM. The session chairs select the best paper of these two tracks based on the research work presented by registered authors.

For track 8, the best research work award goes to "Twitter Sentiment Analysis": Paper ID-173, presented by Sonam Priya.

For track 9, the best research work award goes to "Automate Identification of semantics error for enabling errorless proofreading": Paper ID-55, presented by Nivedita Mandal.

Valedictory function and certificate distribution are held in the presence of Dr. Ramkumar Rajendran, IIT Bombay, Mumbai, Er. Raviprakash, National Core Service Delivery Manager and Network Security Head, Nokia Networks and Solutions Limited, India, Dr. Brijesh Singh, Conference General Chair and Dr. Lakshmanan M, Convener and Conference Organizing Chair, Prof. Amanpreet Singh Sani proposes a vote of thanks to the management, participants, speakers, and organizers who extend their support to make the conference a grand success.

On behalf of the organizing committee, we express our gratitude to all the researchers who take part in RTPDP 2021 and move a step forward towards development. Thus, the two consecutive auspicious days of conference witness great philosophical knowledge, inspirational sessions with the presence of eminent delegates and finally turned out to be a great success.