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Information and Communication Technology for Sustainable Development

Proceedings of ICT4SD 2018

Springer

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Preface

Third International Conference on ICT for Sustainable Development (ICT4SD 2018) targeted theory, development, applications, experiences, and evaluation of interaction sciences with fellow students, researchers, and practitioners.

Conference may concern any topic within the conference scope. Workshops may be related to any topics within the conference scope. The conference is devoted to increase the understanding role of technology issues, how engineering has day by day evolved to prepare human friendly technology. The conference provided a platform for bringing forth significant research and literature across the field of ICT for sustainable development and an overview of the technologies awaiting unveiling. This interaction was the focal point for leading experts to share their insights, provide guidance, and address participant's questions and concerns.

The conference was held during August 30–31, 2018, at Hotel Vivanta by Taj, Panaji, Goa, India, organized by Global Knowledge Research Foundation, state chamber partner—Goa Chamber of Commerce & Industry, and incubation partner —Centre for Incubation and Business Acceleration, and supported by The Institution of Engineers (India)—CEDB, IE(I); Department of Electronics and IT, Ministry of Communications & Information Technology—Government of India; Asian-African Chamber of Commerce & Industry; Unified Brainz; and World Peace & Diplomacy.

Research submissions in various advanced technology areas were received, and after a rigorous peer review process with the help of program committee members and 56 external reviewers for 400 papers from 8 different countries including Algeria, USA, United Arab Emirates, Serbia, Qatar, Mauritius, Egypt, Saudi Arabia, Ethiopia, and Oman, 82 were accepted with an acceptance ratio of 0.13.

Technology is the driving force of progress in this era of globalization. Information and communication technology (ICT) has become a functional requirement for the socioeconomic growth and sustainable development of any country. The influence of information and communication technology (ICT) in shaping the process of globalization, particularly in productivity, commercial, and financial spheres, is widely recognized. The ICT sector is undergoing a revolution that has momentous implications for the current and future social and economic

situation of all the countries in the world. ICT plays a pivotal role in empowering people for self-efficacy and in understanding how it can facilitate this mission to reach out to the grassroots level. Finally, it is concluded that ICT is a significant contributor to the success of the ongoing initiative of Startup India.

In order to recognize and reward the extraordinary performance and achievements by ICT and allied sectors and promote universities, researchers, and students through their research work adapting new scientific technologies and innovations, the two-day conference had presentations from the researchers, scientists, academia, and students on the research work carried out by them in different sectors.

ICT4SD & Start up Summit was a flagship event of G R Foundation. This was the third edition. The earlier two series were a grand success with participation from various universities, academia, scientists, scholars, researchers, students, industries, stakeholders, and R&D institutions from within and outside the country. The researchers presented their research papers through presentations at the conference. All the earlier conferences witnessed the presence of more than 250 delegates and eye-catching presence from government institutions and ministries. The third edition of ICT4SD & Start up Summit along with Startup & ICT Awards focused on the new innovations using scientific technologies in the ICT sector. The conference-cum-awards marked the presence of national and international stakeholders, universities, R&D institutions, academics, students from Goa University, and BITS Pilani, Goa Chapter, representatives from union and state governments, investors, policymakers, industry leaders, trade bodies and scientific consultants, and ICT experts to share their knowledge in this area.

Belgrade, Serbia — Milan Tuba
Gwalior, India — Shyam Akashe
Ahmedabad, India — Amit Joshi

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About the Editors

Milan Tuba received his B.S. and M.S. in Mathematics, and M.S., M.Ph. and Ph.D. in Computer Science from the University of Belgrade and New York University. He was an Assistant Professor of Electrical Engineering at Cooper Union Graduate School of Engineering, New York. During that time, he was the founder and director of Microprocessor Lab and VLSI Lab, and led scientific projects. Since 1994, he has participated in the scientific projects for the Republic of Serbia's Ministry of Science. Currently he is the Vice Rector of Singidunum University, Serbia. His research interests include mathematical, queuing theory and heuristic optimizations applied to computer networks, image processing and combinatorial problems. He is the author of more than 150 scientific papers and a monograph. He has held ten plenary lectures at conferences at Harvard, Cambridge, Moscow, Paris and Istanbul. He is also a co-editor, member of the editorial board, scientific committee member and a reviewer for several international journals and conferences. He is a member of various international and scientific organizations: ACM, IEEE, AMS, SIAM and FNA.

Shyam Akashe is a Professor at ITM University, Gwalior, Madhya Pradesh, India. He completed his Ph.D. at Thapar University, Punjab and his M.Tech. in Electronics and Communication Engineering at the Institute of Technology & Management, Gwalior. He has authored 190 publications, including more than 50 papers in SCI indexed journals. His main research focus is low power system on chip (SoC) applications in which static random access memories (SRAMs) are omnipresent. He has authored two books entitled *Moore's Law Alive: Gate-All-Around (GAA) Next Generation Transistor* published by LAMBERT Academic Publishing, Germany and *Low Power High Speed CMOS Multiplaxer Design* published by Nova Science Publishers, Inc., New York, USA. He has also published over 120 papers in leading national and international refereed journals of repute. Dr. Akashe has participated in numerous national and international conferences and presented over 100 papers.

Amit Joshi is a young entrepreneur and researcher who holds a B.Tech. in Information Technology and M.Tech. in Computer Science and Engineering. He pursued research in the areas of cloud computing and cryptography and has 6 years' academic and industrial experience in prestigious organizations in Udaipur and Ahmedabad. Currently, he is working as an Assistant Professor at the Department of Information Technology at Sabar Institute in Gujarat. He is an active member of ACM, CSI, AMIE, IACSIT-Singapore, IDES, ACEEE, NPA and many other professional societies. He is also Honorary Secretary of CSI Udaipur Chapter and Secretary of the ACM Udaipur Chapter. He has presented and published more than 30 papers in national and international journals as well as IEEE and ACM conferences. He has edited three books on diverse subjects including advances in open source mobile technologies, ICT for integrated rural development and ICT for competitive strategies. He has also organized more than 15 national and international conference and workshops including ICTCS 2014 in Udaipur and ACM–ICPS. He has received appreciation awards from The Institution of Engineers (India), ULC and from the SIG-WNs Computer Society of India for his contributions to society.