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Nirbhay Chaubey · Satyen Parikh ·
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Computing Science, Communication and Security

Second International Conference, COMS2 2021
Gujarat, India, February 6–7, 2021
Revised Selected Papers

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Preface

This volume contains the papers presented at the Second International Conference on Computing Science, Communication and Security (COMS2 2021), held at the beautiful campus of Ganpat University, India, during February 6–7, 2021. COMS2 2021 was held online, wherein the invited guests, keynote speakers, dignitaries, session chairs, paper presenters, and attendees joined a two-day international conference online from their homes through Zoom. The online conference forum brought together more than 155 delegates including leading academics, scientists, researchers, and research scholars from all over the world to exchange and share their experiences, ideas, and research results on aspects of Computing Science, Network Communication, and Security.

The conference was virtually inaugurated by the Indian National Anthem "Jana Gana Mana .." with the online presence of academic leaders and luminaries: Shri Ganpatbhai I. Patel (Padma Shri), President and Patron-in-Chief of Ganpat University, India; the Invited Guest of the program Professor (Dr.) Ian T. Foster, father of Grid Computing and Professor of Computer Science at the University of Chicago, USA; Professor (Dr.) Akshai Aggarwal, Professor Emeritus at the University of Windsor, Canada, and Former Vice Chancellor of Gujarat Technological University, India; Professor (Dr.) Rajkumar Buyya, Director of the Cloud Computing and Distributed Systems (CLOUDS) Lab at The University of Melbourne, Australia; Shri Rasesh Patel, Executive Vice President of AT&T, USA and BOG member of Ganpat University, India; Shri Arup R. Dasgupta, an Eminent Scientist and Former Deputy Director of the Space Application Centre at the Indian Space Research Organisation (ISRO), India; Dr. Mahendra Sharma, Pro-Chancellor and Director General of Ganpat University, India; and Dr. Amit Patel, Pro-Vice Chancellor and Executive Registrar of Ganpat University, India, which declared the conference open for further proceedings.

There were five plenary lectures covering the different areas of the conference: Dr. Ian T. Foster graced the conference with a talk giving insights on "Artificial Intelligence for Science", which discussed the opportunities for AI in science and also highlighted that progress requires much work in applications, learning systems, foundations, and hardware; Dr. Akashi Aggrawal delivered a talk on "Resetting the Universities after COVID-19"; Dr. Rajkumar Buyya addressed "Neoteric Frontiers in Cloud and Edge Computing"; Dr. K. K. Soundra Pandian from the Ministry of Electronics and Information Technology, India, delivered a talk on the "Impact of Emerging Technologies and Challenges in Cyber Physical Systems and Embedded IoT for Industrial Revolution"; and Prof. Arup R. Dasgupta gave a valedictory session talk on "Security and AI – Social Dimensions".

The conference accepted 19 papers as oral presentations (out of the 105 full papers received and critically peer reviewed using the Springer OCS System), which were presented online over the two days. The conference committee formed two session tracks: (i) Artificial Intelligence and Machine Learning and (ii) Networking and

Communication. Each track had five session chairs, all expert professors in their fields and from reputed universities in India and abroad. The first track was led by the following panel members and session chairs: Dr. Savita R. Gandhi, Gujarat University, India; Dr. Maulika Patel, CVM University, India; Dr. Snehal Joshi, Veer Narmad South Gujarat University, India; Dr. Nilesh Modi, Dr. Babasaheb Ambedkar Open University, India; and Dr. Priyanka Sharma, Raksha Shakti University, India. The panel members and session chairs leading the second track were as follows: Dr. Rakhee, University of West Indies, West Indies; Dr. Nikhil J. Kothari, Dharmsinh Desai University, India; Dr. Vishvjit Thakkar, Gujarat Technological University, India; Dr. J.M.Rathod, BVM Engineering College, India; and Dr. Vrushank Shah, Indus University, India.

The selected papers came from researchers based in various countries including Australia, Canada, Japan, Sri Lanka, Malaysia, Bangladesh, and India. All the accepted papers were peer reviewed by three qualified reviewers chosen from our conference Scientific Committee based on their qualifications and experience. The proceedings editors wish to thank the dedicated Scientific Committee members and all the other reviewers for their contributions. We also thank Springer for their trust and for publishing the proceedings of COMS2 2021.

The conference was organized by Ganpat University as a well reputed State Private University established through the Government of Gujarat State Legislative Act No.19/2005 on April 12, 2005, and recognized by the UGC under section 2(f) of the UGC Act, 1956, which has a campus spread over more than 300 acres of land with world-class infrastructure and more than 10,000 students on campus. In consideration of its contribution to education in a short period of time, the university has been given Permanent Membership of the Association of Indian Universities (AIU), India, besides having membership of the Association of Commonwealth Universities (ACU), UK, and the International Association of Universities (IAU), France. Ganpat University offers various unique, quality, industry-linked, and sector-focused Diploma, Undergraduate, Postgraduate, and Research level programs (professional and non-professional) in the field of Engineering, Computer Science, Management, Pharmacy, Sciences, Commerce and Social Science, Architecture, Design and Planning, Maritime Studies, Law, etc.

In a nutshell, the conference was full of fruitful discussions, igniting the spirit of research. It was indeed a remarkable, memorable, and knowledgeable virtual conference. The success of COMS2 2021 conference means that planning can now proceed with confidence for the Third International Conference on Computing Science, Communication and Security (COMS2 2022) scheduled for February 2022 at Ganpat University, India.

February 2021

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