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Distributed Computing and Networking

11th International Conference, ICDCN 2010
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Proceedings

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Message from the General Chairs

As General Chairs it is our pleasure to welcome you to the proceedings of ICDCN 2010, the 11th International Conference on Distributed Computing and Networking. This series of events started as the International Workshop on Distributed Computing (IWDC) in the year 2000. In view of the growing number of papers both in distributed computing and networking, and the natural synergy between the two areas, in 2006 the workshop series assumed its current name. Since then the conference has grown steadily in its reach and stature. The conference has attracted quality submissions and top speakers annually in the areas of distributed computing and networking from all over the world, thereby strengthening the connection between research in India, which has been on the rise, and the rest of the world. After a foray into Central India in the year 2009, this year the conference returned to the city of Kolkata.

ICDCN continues to be a top-class conference due to the dedicated and tireless work put in by the volunteers who organize it each year. This year again, the General Chairs were honored to work with a truly superb team who basically left us with very little to do!

A good conference is known by its technical program, and this year's program was in the able hands of a Program Committee chaired by Krishna Sivalingam and Jie Wu (Networking Track), and Krishna Kant and Sriram Pemmaraju (Distributed Computing track). There were 169 submissions, 96 to the networking track and 73 to the distributed computing track. After a rigorous review process, the committee selected 23 papers for the networking track, and 21 for the distributed computing track (16 regular, 5 short).

We would like to thank the Keynote Chair, Sajal Das, for organizing an excellent invited program. This year's keynote speakers are Prith Banerjee, Senior VP of Research, and Director HP Labs, Prabhakar Raghavan, Head of Yahoo! Labs, and Manish Gupta, Associate Director, IBM India Research Labs. The Prof. A.K. Choudhury Memorial Lecture was delivered by Sartaj Sahni, Distinguished Professor and Chair of Computer Science, University of Florida and Ashok Jhunjhunwala, the head of the Telecommunications and Computer Networks group at IIT Madras gave an invited lecture.

This year's tutorial topics included: Vehicular Communications: Standards, Protocols, Applications and Technical Challenges, by Rajeev Shorey; Informative Labeling Schemes, by Amos Korman; Middleware for Pervasive Computing, by Jiannong Cao; Secure Distributed Computing, by C. Pandurangan; Next Generation of Transportation Systems, Distributed Computing, and Data Mining, by Hillol Kargupta; Peer-to-Peer Storage Systems: Crowdsourcing the Storage Cloud, by Anwitaman Datta. We thank the Tutorial Co-chairs, Gopal Pandurangan, Violet R. Syrotiuk, and Samiran Chattopadhyaya, for their efforts in putting together this excellent tutorial program.

We would like to thank Sriram Pemmaraju who, as Publication Chair, dealt with the many details of putting the proceedings together, and the Publicity Chair, Arobinda Gupta, for doing a good job of getting the word out about the event this year. Our Industry Chairs, Sanjoy Paul and Rajeev Shorey, helped keep everyone's feet on the ground! Our congratulations to them for organizing a "cutting-edge" industry session with a set of esteemed panelists and speakers from the booming IT sector in India. This year, ICDCN also hosted a PhD Forum to encourage PhD students in India and abroad to present and discuss their research with peers in their fields. Thanks to Indranil Sengupta and Mainak Chatterjee for making this happen. Special thanks go out to the Organizing Co-chairs Devadatta Sinha, University of Calcutta, Nabendu Chaki, University of Calcutta, and Chandan Bhattacharyya, Techno India, Salt Lake, and to the Finance Chair, Sanjit Setua, University of Calcutta, for having done a marvelous job of taking care of all the nitty-gritty details of the conference organization.

The vision of the founders of this conference series, Sajal Das and Sukumar Ghosh, continues to play a key role in the Steering Committee, and we hope that under their leadership the conference will continue to grow and become one of the major international research forums in distributed computing and networking.

We thank all the authors and delegates for their participation. The success of any conference is measured by the quality of the technical presentations, the discussions that ensue, and the human networking that takes place. We expect that, given the dedication and hard work of all the organizers, the conference did not fall short on any of these measures.

January 2010

Anurag Kumar
Michel Raynal

Message from the Technical Program Chairs

Welcome to the proceedings of the 11th International Conference on Distributed Computing and Networking (ICDCN 2010). ICDCN enters its second decade as an important forum for disseminating the latest research results in distributed computing and networking.

We received 169 submissions from all over the world, including Brazil, Canada, China, France, Germany, Hong Kong, Iran, The Netherlands, Switzerland, and the USA, besides India, the host country. The submissions were carefully read and evaluated by the Program Committee, which consisted of 43 members for the Networking Track and 34 members for the Distributed Computing Track, with the additional help of external reviewers. The Program Committee selected 39 regular papers and 5 short papers for inclusion in the proceedings and presentation at the conference. The resulting technical program covers a broad swath of both distributed computing and networking. The networking track contains papers on wireless, sensor, mobile, and ad-hoc networks and on network protocols for scheduling, coverage, routing, etc., whereas the distributed computing track contains papers on fault-tolerance, security, distributed algorithms, and the theory of distributed systems.

While the technical program forms the core of the conference, this year's ICDCN was rich with many other exciting events. We were fortunate to have several distinguished scientists as keynote speakers and we had a strong tutorial program preceding the official start of the conference. In addition, we had a fabulous industry session that has the potential of strengthening research ties between academics and the industry. Finally, this year ICDCN hosted a PhD forum whose aim was to connect student researchers with peers as well as experienced researchers.

We thank all those who submitted a paper to ICDCN 2010 for their interest. We thank the Program Committee members and external reviewers for their careful reviews despite a tight schedule.

January 2010

Krishna Kant
Sriram V. Pemmaraju
Krishna M. Sivalingam
Jie Wu

Organization

ICDCN 2010 was organized by the University of Calcutta, Department of Computer Science and Engineering in collaboration with the Techno India Group, Salt Lake.

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