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# Distributed Computing and Internet Technology

First International Conference, ICDCIT 2004  
Bhubaneswar, India, December 22-24, 2004  
Proceedings



Springer

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## Program Chairs' Message

This volume contains the papers presented at the 1st International Conference on Distributed Computing and Internet Technology (ICDCIT 2004), December 22–24, 2004. The Conference was held in Bhubaneswar, the capital city of Orissa and the city of a thousand temples. It was hosted by the Kalinga Institute of Industrial Technology (KIIT).

We received 211 contributed papers from researchers in 15 countries across the world. With the help of a strong international program committee that comprised 48 members and four track chairs, Vijay Kumar (Distributed Computing), Sanjay Madria (Internet Technology), Indrakshi Ray (System Security) and Abhik Roychoudhury (Software Engineering), we offered an excellent technical program. Each of the submitted papers was reviewed by two reviewers and by at least one program committee member. Every effort was made to include the papers of the highest quality in the technical programme. Less than 23% of the contributed papers were selected for presentation after the review process. As the conference is a focused one, we had to be selective and had to return even some good papers. We are confident that this volume will attest to the technical quality of the conference.

The presentations were grouped under four tracks, namely Distributed Computing, Internet Technology, Software Engineering, and System Security. Distributed Computing track presentations were organized into three different sessions with first and second sessions each having two parallel sittings. The papers in the Distributed track report results on several important problems like leader election, modeling, protocols and performance, distributed transaction processing, and information dissemination. The Internet Technology track was comprised of three sessions with the second session having two parallel sittings. The track included papers about some recent problems on application development using Internet technologies, related protocols, information retrieval, and service delivery in the Internet environment. The Software Engineering track consisted of two sessions with the second session having two parallel sittings. This track contained some interesting papers on formal modeling, generating systems from specifications, requirements engineering, distributed program analysis and program reusability. The System Security track had three sessions; the second and third sessions had two parallel sittings each. The track contained papers on interesting issues in systems security. Several hot topics like intrusion detection and access control were in the second session. Some security issues pertaining to conventional and ad hoc computer networks were also presented in this session. The third session addressed the issues in the design of secured systems. The papers discussed anonymity in mobile commerce, and techniques of steganography and cryptography for achieving secured services. The preconference activities included tutorials and a workshop. The workshop on Data Mining, Security and Other Applications was organized by Prem Uppuluri (University of Missouri-

Kansas City) and Ashok Srivastava (NASA Ames Research Center, USA). The tutorials were on security issues in distributed systems and enterprise resource planning.

We take this opportunity to thank various people and organizations who contributed to make this conference a grand success. Our heartfelt thanks to the track chairs whose full cooperation and technical assessments were crucial to achieve this high level of quality even in the first edition of the conference. The full participation of the program committee members and the reviewers made it possible to complete the peer-review process in time. We are extremely thankful to them. We would like to thank our advisors and general chair for having confidence in us. Our special thanks go to A. Samanta and P.K. Mishra of KIIT for their support and encouragement in organizing this conference. We gratefully acknowledge the financial and logistic support extended by KIIT in hosting this conference. The All India Council of Technical Education (AICTE), Government of India, New Delhi provided a generous grant-in-aid for organizing ICDCIT. We thankfully acknowledge AICTE's support. We are thankful to Springer for its cooperation in publishing the proceedings in such a short time. We are also thankful to our parent departments, Department of Computer Science and Engineering, IIT Kanpur and Department of Computer and Information Sciences, University of Hyderabad, for providing infrastructural support to carry out the editorial work. We thank Krithi Ramamritham and Pradeep Khosla for agreeing to deliver the lectures in the plenary sessions. We also extend our thanks to Susil Jajodia, Bharat Bhargava and Vijay Kumar for agreeing to deliver the track keynote addresses and Satish Chandra and Sharma Chakravarthy for agreeing to deliver the invited talks. All the talks focused on the themes of the conference and were well appreciated and thought provoking.

We would like to thank all the authors and attendees for making this conference a grand success. We sincerely hope that the three-day program of ICDCIT 2004 provided a platform to researchers for further academic interactions and collaborations. We plan to make the ICDCIT conference an annual event with the support of KIIT and the cooperation of Springer. We hope the ICDCIT proceedings in the coming years will report exciting research results in hot topics in computer science and engineering.

December 2004

R.K. Ghosh  
Hrushikesh Mohanty

# General Chair's Message

The convergence of computing, communication and control is setting the research agenda for the coming years. Distributed computing and Internet technology are two important in this issues. The series of international conferences on Distributed Computing and Internet Technology (ICDCIT 2004) was initiated to provide a forum for researchers around the world. It was indeed a great honor and privilege for me to welcome all the participants to ICDCIT 2004, held in the historical cultural city of Bhubaneswar.

A true measure for a conference is the material being presented and also the participation. I was extremely delighted to see a wealth of material represented here that can be broadly categorized into the following tracks: (i) Distributed Computing, (ii) Internet Technology, (iii) Software Engineering, (iv) System Security. In addition to these tracks, various tutorials were dedicated to Web mining, intrusion detection, enterprise resource planning and distributed secured systems. Gauging the impact of the convergence of computing, communications and control on science and on society is very difficult. This conference is a forum that shall attempt not only to comprehend the impact but also reshape it. It was a delight to see the enthusiastic participation of researchers from a large number of countries. The most interesting feature was that the conference was held in a purely academic environment of a typical college in India that naturally attracted a large number of students from Orissa and other parts of India.

I would like to thank the plenary speakers Krithi Ramamritham, IIT, Bombay and Pradeep Khosla, CMU. In addition, I thank all the keynote speakers of various tracks for joining us in making the conference a success.

I would like to thank R.K. Ghosh and H. Mohanty for compiling such an excellent program. I would like to thank all the PC members, especially the track chairs who did excellent work.

It is a pleasure to thank the Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar who took the brunt of the organization of ICDCIT 2004. My special thanks go to A. Samanta, Chancellor, and P.K. Mishra, Pro-chancellor, KIIT (Deemed University) for all the organizational efforts, and also to the innumerable dedicated volunteers who were responsible for the organization of the conference. Finally, I thank Springer for having accepted to bring out the proceedings in their LNCS series.

December 2004

R.K. Shyamasundar

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