

ICDCN 2010

11th International Conference on Distributed Computing & Networking

January 3-6, 2010
Kolkata, India

Technical Program

January 3

9:00	9:30	Tutorial Inauguration
9:30	12:45	Tutorial 1: “Vehicular Communications: Standards, Protocols, Applications and Technical Challenges” Rajeev Shorey, NIIT Univ, India
9:30	12:45	Tutorial 2: “Informative Labeling Schemes” Amos Korman, CNRS Paris, France
9:30	12:45	Tutorial 3: “Middleware for Pervasive Computing” Jiannong Cao, Hong Kong Polytechnic Univ.
12-45	13-45	Lunch
13:45	17:00	Tutorial 4: “Secure Distributed Computing” C. Pandurangan, IIT Madras, India
13:45	17:00	Tutorial 5: “Next Generation of Transportation Systems, Distributed Computing, and Data Mining” Hillool Kargupta, UMBC, USA
13:45	17:00	Tutorial 6: “Peer-to-Peer Storage Systems: Crowdsourcing the Storage Cloud” Anwitaman Datta, NTU, Singapore

January 4

9:00	9:30	Inauguration
9:30	10:30	Keynote – “An Intelligent IT Infrastructure for the Future” Prith Banerjee (Senior VP of Hewlett-Packard) <i>Chair: Sajal K. Das, Univ. of Texas at Arlington and NSF, USA</i>
10:30	11:00	Tea/coffee
11:00	12:30	Session 1A: Fault Tolerance and Security <i>Chair: Prasad Jayanti, Dartmouth College, USA</i> Session 1B: Network Protocols and Applications <i>Chair: Jiannong Cao, Hong Kong Polytechnic Univ.</i>
12:30	13:00	A word from sponsors
13:00	14:00	Lunch
14:00	15:30	Session 2A: Distributed Algorithms and Optimization <i>Chair: Stefan Schmid, T-Labs/TU Berlin, Germany</i> Session 2B: Sensor Networks <i>Chair: Jorge A. Cobb, Univ. of Texas at Dallas, USA</i>
15:30	16:00	Tea/coffee
16:00	17:30	Session 3A: Parallel and Distributed Systems <i>Chair: Krishna M. Sivalingam, IIT Madras, India</i>

Session 3B: P2P Networks and Network Tracing
Chair: Anwitaman Datta, NTU, Singapore

18:00 20:00 Dinner w/ word from sponsors and
Keynote – “India’s Mobile Revolution and the Unfinished Tasks”
Ashok Jhunjhunwala (IIT Madras, India)
Chair: Krishna Kant, Intel and NSF, USA

January 5

9:00 10:00 **Keynote – “Heavy Tails and Models for the Web and Social Networks”**
Prabhakar Raghavan (Head, Yahoo Labs)
Chair: Sriram V. Pemmaraju, Univ. of Iowa, USA

10:00 10:30 Tea/coffee

10:30 12:00 **Session 4A:** Applications of Distributed Systems
Chair: Nabendu Chaki, Univ. of Calcutta, India

Session 4B: Wireless Networks
Chair: Subir Bandyopadhyay, Univ. of Windsor, Canada

12:00 13:00 **AK Choudhury Memorial Lecture:**
“Data Structures and Algorithms for Packet Forwarding and Classification”
Sartaj Sahni (Univ of Florida, USA)
Chair: Bhabani P. Sinha, Indian Statistical Institute, Kolkata, India

13:00 14:00 Lunch

14:00 15:30 **Session 5A:** Theory of Distributed Systems
Chair: Arobinda Gupta, IIT Kharagpur, India

Session 5B: Optical, Cellular and Mobile Ad-hoc Networks
Chair: Anurag Kumar, IISc, Bangalore, India

15:30 16:00 Tea/coffee

16:00 17:30 **Session 6:** Network Protocols
Chair: Habib M. Ammari, Hofstra Univ., USA

17:30 18:30 Followup of PEERS workshop

18:30 20:30 Banquet w/ future ICDCN planning

January 6

9:00 9:45 **Keynote – “Spoken Web: A Parallel Web for the Masses”**
Manish Gupta (IBM Research, India)
Chair: Sukumar Ghosh, Univ. of Iowa, USA

9:45 11:15 **Panel: “Role of Digital Convergence in Reaching Out to a Billion People”**
Panelists: Shivkumar Kalyanraman (IBM Research, India)
Sharad Jaiswal (Alcatel-Lucent Bell Labs, India)
Giridhar Mandhyam (Qualcomm, India)
Mukesh Shah (Varaha Systems, India)
Moderator: Sanjoy Paul (AVP and General Manager-Research, Infosys Technologies Limited, India)

11:15 11:30 Tea/coffee

11:30 13:00 **Industry Research Talks:**
Vishy Poosala (Alcatel-Lucent Bell Labs, India)
Amitabha Das (Infosys Technologies Limited, India)
Shrikant Naidu (Motorola India Research Labs, India)

13:00 14:00 Lunch

14:00 16:00 PhD Forum Presentations
Organizers: Indranil Sengupta, IIT Kharagpur, India
Mainak Chatterjee, University of Central Florida, USA

16:00 16:45 PhD Student Forum: Poster Session with Coffee/Tea

SESSION DETAILS

There will be two parallel sessions, one for Distributed Computing Track and one for Networking Track

Distributed Computing Track

SESSION 1A: Fault Tolerance and Security Chair: Prasad Jayanti, Dartmouth College, USA

1.1	On The Communication Complexity of Perfectly Secure Message Transmission in Directed Networks	Arpita Patra	IIT Madras
		Ashish Choudhary Chandrasekaran Pandurangan	
1.2	On Composability of Reliable Unicast Broadcast	Anuj Gupta	IIIT Hyderabad
		C. Pandu Rangan	
		Kannan Srinathan Sandeep Hans	
1.3	A Leader-free Byzantine Consensus Algorithm	Andre Schiper	EPFL
		Fatemeh Borran	
1.4	Authenticated Byzantine Generals in Dual Failure Model	Anuj Gupta	IIIT Hyderabad
		Kannan Srinathan	
		Piyush Bansal	
		Prasant Gopal	

SESSION 2A: Distributed Algorithms and Optimization Chair: Stefan Schmid, Technical University, Munich, Germany

2.1	Optimizing Distributed Computing Workflows in Heterogeneous Network Environments	Qishi Wu	Univ. of Memphis, TN
		Yi Gu	
2.2	Radio Network Distributed Algorithms in the Unknown Neighborhood Model	Bilel Derbel	Univ. of Sc & Tech at Lille
		El-Ghazali Talbi	
2.3	Probabilistic Self-stabilizing Vertex Coloring in Unidirectional Anonymous Networks	Samuel Bernard	Université Pierre et Marie Curie, Paris
		Stéphane Devismes	Universite Grenoble
		Katy Paroux	INRIA Bretagne Atlantique
		Maria Gradinariu Potop-Butucaru	Université Pierre et Marie Curie, Paris
		Sebastien Tixeuil	
2.4	A Token-Based Solution to the Group Mutual I-Exclusion Problem in Message Passing Distributed Systems	Abhishek Swaroop	GPM College of Engg., Delhi
		Awadhesh Kumar Singh	National Inst. of Technology, Kurukshetra

SESSION 3A: Parallel and Distributed Systems
Chair: Krishna M. Sivalingam, IIT Madras, India

3.1	Parallelization of the Lanczos Algorithm on Multi-Core Platforms	Abhijit Das	IIT Kharagpur
		Souvik Bhattecherjee	
3.2	Supporting Malleability in Parallel Architectures with Dynamic CPUSET Mapping and Dynamic MPI	Márcia Cera	Univ. Federal do Rio Grande do Sul
		Yiannis Georgiou	LIG Laboratory Grenoble
		Olivier Richard	
		Nicolas Maillard	Univ. Federal do Rio Grande do Sul
		Philippe Navaux	
3.3	Impact Of Object Operations And Relationships On Concurrency Control In Distributed Object Oriented System	V. Geetha	Pondicherry Engg. College
3.4	Causal cycle based Communication Pattern Matching	Himadri Sekhar Paul	Interra Systems, India

SESSION 4A: Applications of Distributed Systems
Chair: Nabendu Chaki, University of Calcutta, India

4.1	VirtualConnection: Opportunistic networking for Web on Demand	Lateef Yusuf	Georgia Tech, Atlanta
		Umakishore Ramachandran	
4.2	Video surveillance with PTZ cameras: The problem of maximizing effective monitoring time	Satyajit Banerjee	Honeywell Technology Solutions, Bangalore
		Atish Datta Chowdhury	
		Subhas Ghosh	
4.3	DisClus: A Distributed Clustering Technique over High Resolution Satellite Data	Dhruba Bhattacharyya	Tezpur University
		Sauravjyoti Sarmah	
4.4	Performance Evaluation of a Wormhole-Routed Algorithm for Irregular Mesh NoC Interconnect	Arshin Rezazadeh	Iran Univ. of Science & Technology
		Mahmood Fathy	

SESSION 5A: Theory of Distributed Systems
Chair: Arobinda Gupta, IIT Kharagpur, India

5.1	An Online Derivative-Free Optimization Approach to Autotuning of Computing Systems	Sudheer Poojary	IIT Bombay
		Ramya Raghavendra	
		D Manjunath	
5.2	Consistency-Driven Probabilistic Quorum System Construction for Improving Operation Availability	Kinga Kiss Iakab	Carl von Ossietzky Univ. of Oldenburg
		Christian Storm	
		Oliver Theel	
5.3	Hamiltonicity of a General OTIS Network	Nagendra Kumar	Indian School of Mines, Dhanbad
		Rajeev Kumar	

5.4	Specifying Fault-Tolerance using Split Precondition Logic	Dheeresh Mallick	BIT, Ranchi
		Prasanta Jana	Indian School of Mines, Dhanbad
		Anup Kumar Bandyopadhyay	Jadavpur University, Calcutta
		Awadhesh Kumar Singh	National Inst. of Technology, Kurukshetra

Networking Track

SESSION 1B: Network Protocols and Applications Chair: Jiannong Cao, Hong Kong Polytechnic University

1.1	Scheduling in Multi-Channel Wireless Networks	Vartika Bhandari	University of Illinois at Urbana-Champaign
		Nitin Vaidya	
1.2	Email Shape Analysis	Paul Sroufe	University of North Texas
		Santi Phithakkitnukoon	
		Ram Dantu	
		Joao Cangussu	University of Texas at Dallas
1.3	Maintaining Safety in Interdomain Routing with Hierarchical Path-Categories	Jorge Cobb	University of Texas at Dallas

SESSION 2B: Sensor Networks Chair: Jorge A. Cobb, University of Texas at Dallas, USA

2.1	Mission-Oriented k-Coverage in Mobile Wireless Sensor Networks	Habib M. Ammari	Hofstra University
		Sajal Das	University of Texas at Arlington
2.2	Lessons From The Sparse Sensor Network Deployment in Rural India	Prabhakar T V	Indian Institute of Science, Bangalore
		H S Jamadagni	
		Amar Sahu	TU Delft
2.3	A New Architecture for Hierarchical Sensor Networks with Mobile Data Collectors	R Venkatesha Prasad	
		Ataul Bari	
		Ying Chen	University of Windsor
		Arunita Jaekel	Michigan State University
2.4	Stability Analysis of Multi-hop Routing in Sensor Networks with Mobile Sinks	Subir Bandyopadhyay	
		Jayanthi Rao	
		Subir Biswas	

SESSION 3B: P2P Networks and Network Tracing
Chair: Anwitaman Datta, NTU, Singapore

3.1	The Weak Network Tracing Problem	H B Acharya Mohamed Gouda	University of Texas at Austin
3.2	Poisoning the Kad Network	Thomas Locher	
		David Mysicka Roger Wattenhofer	ETH Zurich
		Stefan Schmid	T-Labs/TU Berlin
3.3	Credit Reputation Propagation: A Strategy to Curb Free-Riding in a Large BitTorrent Swarm	Suman Paul Subrata Nandi	Indian Institute of Technology Kharagpur
		Ajit Pal	
3.4	Formal understanding of the emergence of superpeer networks : A complex network approach	Bivas Mitra Abhishek Kumar Dubey Sujoy Ghose Niloy Ganguly	Indian Institute of Technology Kharagpur

SESSION 4B: Wireless Networks
Chair: Subir Bandyopadhyay, University of Windsor, Canada

4.1	Channel Assignment in Virtual Cut-Through Switching based Wireless Mesh Networks	Dola Saha	
		Aveek Dutta Dirk Grunwald	University of Colorado Boulder
		Douglas Sicker	
4.2	Efficient Multi-hop Broadcasting in Wireless Networks using k-Shortest Path Pruning	Subhankar Dhar Michael Rieck	San Jose State University Drake University
4.3	Bandwidth Provisioning in Infrastructure-based Wireless Networks Employing Directional Antennas	Shiva Kasiviswanathan Bo Zhao	Los Alamos National Laboratory
		Sudarshan Vasudevan	University of Massachusetts Amherst
		Bhuvan Uргаonkar	Los Alamos National Laboratory
4.4	ROTIO+: A Modified ROTIO for Nested Network Mobility	Ansuman Sircar Bhaskar Sardar	Jadavpur University
		Debashis Saha	Indian Institute of Management, Calcutta

SESSION 5B: Optical, Cellular and Mobile Ad-hoc Networks
Chair: Anurag Kumar, IISc, Bangalore, India

5.1	Dynamic Multipath Bandwidth Provisioning with Jitter, Throughput, SLA Constraints in MPLS over WDM Network	Palash Dey	Jadavpur University	
		Arkadeep Kundu		
		Mrinal K. Naskar		
5.2	Path protection in Translucent WDM Optical Networks	Amitava Mukherjee	IBM India Pvt. Ltd	
		Mita Nasipuri	Jadavpur University	
		Q. Rahman	University of Windsor	
		Subir Bandyopadhyay		
A. Bari				
5.3	Post Deployment Planning of 3G Cellular Networks through Dual Homing of Nodes	A. Jaekel	Indian Institute of Management, Calcutta	
		Y. P. Aneja		
		Samir K. Sadhukhan		
		Swarup Mandal		Wipro Technologies, Kolkata
		Partha Bhaumik		Jadavpur University
5.4	K-Directory Community: Reliable Service Discovery in MANET	Debashis Saha	Indian Institute of Management, Calcutta	
		Vaskar Raychoudhury	The Hong Kong Polytechnic University	
		Jiannong Cao	Sun Yat-sen University	
		Weigang Wu		
		Yi Lai	The Hong Kong Polytechnic University	
		Canfeng Chen	Nokia Research Center, Beijing	
Jian Ma				

SESSION 6: Network Protocols
Chair: Habib M. Ammari, Hofstra University, USA

6.1	Fast BGP Convergence Following Link/Router Failure	Swapan Kumar Ray	Jadavpur University
		Susmit Shannigrahi	
6.2	On Using Network Tomography for Overlay Availability	Umesh Bellur	Indian Institute of Technology Bombay
		Mahak Patidar	
6.3	QoSBR: A Quality Based Routing Protocol for Wireless Mesh Networks	Amitangshu Pal	University of North Carolina at Charlotte
		Sandeep Adimadhyam	
		Asis Nasipuri	

6.4	An ACO based Approach for Detection of an Optimal Attack Path in a Dynamic Environment	Nirnay Ghosh Saurav Nanda S K Ghosh	Indian Institute of Technology Kharagpur
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