



## Program Schedule

# ICDCN 2019

**20<sup>th</sup> International Conference on Distributed  
Computing and Networking**

**January 04-07, 2019  
Indian Institute of Science, Bangalore**

**Honeywell**

THE POWER OF **CONNECTED**



## Program Schedule

### January 04

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08:00 am - 09:00 am

Registration (CSA)

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09:00 am - 09:10 am

Common Welcome by Workshop Chairs (CSA 254)

09:10 am – 10:00 am

Common Workshop Keynote-1 by David Kravitz (CSA 254)

- **Title:** User Mobility and Device Portability without Sacrificing Security and Privacy

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10:00 am - 10:30 am

Tea/Coffee Break (CSA Lawn)

10:30 am - 12:30 pm

**02 Parallel Sessions**

Track-1: ComNet-IoT Workshop (CSA 254)

- Welcome
- 4 papers
  - Load Balanced Transaction Scheduling in On-demand Computing using Cuckoo Search-Ant Colony Optimization by Dharmendra Prasad Mahato
  - CSLim: Automated Extraction of IoT Functionalities from Legacy C Codebases by Hyogi Sim, Arnab K. Paul, Eli Tilevich, Ali R. Butt and Muhammad Shahzad
  - STSDB: Spatio-Temporal Sensor DB for Smart City Query Processing by Utsav Vyas, Parth Panchal, Mayank Patel and Minal Bhise
  - Optimized CL-PKE with Lightweight Encryption for Resource Constrained Devices by Mayank K Aditia,

Fahiem Altaf, Moirangthem R Singh, Manohar S Burra,  
Chanchal Maurya, Sujit S Sahoo, Soumyadev Maity

## Track-2: CHIN Workshop (EE MMCR)

- 10:30 am - 11:00 am
  - Welcome
  - Invited Talk by Dr. Dilip Krishnaswamy
    - Title: The Convergence of AI, IoT, and Blockchain with applications to Healthcare
  - 3 papers
    - Evaluating the Quality of Word Representation Models for Unstructured Clinical Text based ICU Mortality Prediction by Kamath S
    - Proactive Diabetes Management: Research Directions by Merlin George, Dr. Anu Mary Chacko and Dr. Sudeep Koshy Kurien
    - AyurTourism:A Web Based Recommendation System for Medical Tourism by Dileep Manali Ramakrishnan, Jithin J and Prathyash V

12:30 pm - 01:30 pm

Lunch Break (CSA Lawn)

01:30 pm – 02:30 pm

Common Workshop Keynote-2 by Paolo Bellavista (CSA 254)

Title: Edge/Fog Computing for the Industrial Internet of Things

02:30 pm – 04:00 pm

02 Parallel Sessions

Track-1: ASCPS & SPloE Workshops (CSA 254)

- 02:30 pm – 03:00 pm
  - Invited Talk by Dr. Akshay Uttama Nambi
    - Title: Fault detection and isolation in IoT Systems
  - 02 papers
    - Effect of Sign-bit-Flipping Trojan on Turbo Coded Communication Systems by Karthi Balasubramanian, Salija P, Karthikeyan Lingasubramanian, Deepak Mishra, B. Yamuna

- 02:30 pm – 03:00 pm

- Do we have the time for IRM for IoT? by R. Shah, S. Nagaraja

## Track-2: ConSH Workshop (EE MMCR)

- Welcome
- Invited Talk by Dr. Nirmalya Roy
- 03 papers
  - A Novel Compression Based Neuronal Architecture for Memory Encoding by A. Kathpalia, N. Nagaraj
  - An Accurate Missing Data Prediction Method using LSTM based Deep Learning for Health care by H. Verma, S. Kumar
  - Community Cloud Architecture to Improve Use Accessibility with Security Compliance in Health Big Data Applications by S. Valluripally, M. Raju, P. Calyam, M. Chisholm, S. Sivarathri, A. Mosa, T. Joshi

04:00 pm – 04:30 pm

Tea/Coffee Break (CSA Lawn)

04:30 pm – 06:00 pm

Common Workshop Panel Discussion (CSA 254)

07:30 pm – 08:30 pm

Dinner (CSA Lawn)

**January 05****08:00 am - 09:00 am****Registration (CSA)****09:00 am - 09:30 am****Opening Remarks by OC Chairs (MRC Auditorium)****09:30 am - 10:30 am****Keynote 1 (MRC Auditorium)****Session Chair: S.K. Das (Missouri Univ. Science and Technology, USA)****Speaker: H. Vincent Poor (Princeton University, USA)****Title: Fundamentals for IoT Networks: Secure and Low-Latency Communications****10:30 am – 11:00 am****Tea/Coffee Break (CSA Lawn)****11:00 am – 01:00 pm****Plenary Session 1 (MRC Auditorium)****Session Chair: Rupak Biswas (NASA Ames Research Center, USA)****Highlighted Papers (4 full papers, 2 from DC track and 2 from Networking track)**

- **Scheduling Virtual WiFi Interfaces for High Bandwidth Live Video Upstreaming Using Multipath TCP by (S. Maheshwari (University of Utah), P. Lurdrighan (University of Utah), S. Kasera (University of Utah) )**
- **The Weakest Failure Detector to Solve the Mutual Exclusion Problem in an Unknown Dynamic Environment by (E. Mauffret (LISTIC/Université Savoie Mont Blanc), D. Jeanneau (Sorbonne Universités, UPMC Univ Paris 06, CNRS, INRIA, LIP6), L. Arantes (Sorbonne Universités, UPMC Univ Paris 06, CNRS, INRIA, LIP6), P. Sens (Sorbonne Universités, UPMC Univ Paris 06, CNRS, INRIA, LIP6) )**
- **Multi-Tenant Mobile Offloading Systems for Real-Time Computer Vision Applications by ( Z. Fang (University of California San Diego), J. Lin (University of California San Diego), M. Srivastava (University of California Los Angeles), R. Gupta (University of California San Diego) )**

- Distributed Symmetry-Breaking with Improved Vertex-Averaged Complexity by (L. Barenboim (Open University of Israel), Y. Tzur (Open University of Israel) )

01:00 pm – 02:00 pm

Lunch Break (CSA Lawn)

02:00 pm – 03:00 pm

Keynote 2 (MRC Auditorium)

Session Chair: S. Ghosh (Univ. Iowa, USA)

Speaker: Rupak Biswas (NASA Ames Research Center, USA)

Title: From Supercomputing to Quantum Computing: NASA's Needs for Science and Engineering

03:00 pm – 04:15 pm

03 Parallel Sessions

Paper Session 2: (DC track, 3 full papers) (CSA 254)

Distributed Computing Track: Distributed Algorithms

Session Chair: S.V. Pemmaraju (Univ. Iowa, USA)

- A simple  $2(1-1/e)$  factor distributed approximation algorithm for Steiner tree in the CONGEST model by P. Saikia (IIT Guwahati), S. Karmakar (IIT Guwahati)
- Parallel Algorithms for Predicate Detection by V. Garg (University of Texas at Austin), R. Garg (University of Texas at Austin)
- Improving Efficacy of Concurrent Internal Binary Search Trees using Local Recovery by A. Ramachandran (The University of Texas at Dallas), N. Mittal (The University of Texas at Dallas)

Tutorial on Blockchain – David Kravitz (Crypto Systems Research, DarkMatter) (MRC Auditorium)

Industry Track (CSA 117)

- Satya Lokam - Microsoft Research - Zero Knowledge Proofs in Blockchain Systems
- Prof. R ChandraMouli - Spectronn CEO / Stevens Institute of Technology - Cognitive Mobile Edge Computing

**04:15 pm – 04:45 pm****Tea/Coffee Break (MRC Auditorium & CSA Lawn)****04:45 pm – 06:00 pm****02 Parallel Sessions****Paper Session 3 (Networking track, 3 full papers) (CSA 254)****Networking Track: Emerging Network Architectures****Session Chair: P. Bellavista (Univ. Bologna, Italy)**

- **pDCell: an End-to-End Transport Protocol for Mobile Edge Computing Architectures** by C. Fiandrino (IMDEA Networks Institute), A. de la Oliva (Universidad Carlos III de Madrid), Joerg Widmer (IMDEA Networks Institute), Kirill Kogan (IMDEA Networks Institute)
- **Scalable, High-speed On-chip based NDN Name Forwarding using FPGA** by D. Saxena (The Hong Kong Polytechnic University, Hong Kong) S. Mahar (IIT Roorkee), V. Raychoudhury (Miami University, Ohio, Oxford), J. Cao (The Hong Kong Polytechnic University, Hong Kong)
- **NOVN: Named-Object Based Virtual Network Architecture** by F. Bronzino (Inria, Paris), S. Maheshwari (WINLAB, Rutgers University), I. Seskar (WINLAB, Rutgers University), D. Raychaudhuri (WINLAB, Rutgers University)

**Tutorial on Blockchain – David Kravitz (Crypto Systems Research, DarkMatter) (MRC Auditorium)****06:00 pm – 07:00 pm****Town Hall Meeting (CSA 117)****07:00 pm – 08:00 pm****Steering Committee Meeting (CSA 101)****07:00 pm – 09:00 pm****Welcome Dinner (CSA Lawn)**

**January 06****08:00 am - 09:00 am****Registration (CSA)****09:00 am - 10:00 am****Keynote 3 (MRC Auditorium)****Session Chair:** D. Krishnaswamy (Reliance Jio Infocomm, India)**Speaker:** David Peleg (The Weizmann Institute, Israel)**Title:** Glass Ceiling and Power Inequality in Social Networks**10:00 am – 11:05 am****04 Parallel Sessions****Paper Session 4A (DC track, 2 full, 1 short paper) (CSA 254)****Distributed Computing Track: Theoretical Aspects of Distributed Computing****Session Chair:** D. Peleg (Weizmann Inst., Israel)

- **Session Guarantees with Raft and Hybrid Logical Clocks** by M. Roohitavaf (Michigan State University), J. Ahn (eBay Inc.), W. Kang (eBay Inc.), K. Ren (eBay Inc.), G. Zhang (eBay Inc.), S. Ben-Romdhane (eBay Inc.), S. Kulkarni (Michigan State University)
- **Reconfigurable Dataflow Graphs for Processing-In-Memory** by C. Shelor (University of North Texas), K. Kavi (University of North Texas)
- **On the Hardness of the Strongly Dependent Decision Problem (Short Paper)** by M. Biely (EPFL), P. Robinson (McMaster University)

**Paper Session 4B (Networking track, 2 full, 1 short paper) (CSA 117)****Networking Track: Blockchain and Security****Session Chair:** D. Raychaudhuri (Rutgers Univ., USA)

- **Exploration and Impact of Blockchain-enabled Adaptive Non-binary Trust Models** by D. Kravitz (Crypto Systems Research, DarkMatter)



- Cache Attacks on Blockchain Based Information Centric Networks: An Experimental Evaluation by S. Roy, F. Morais, M. Salimitari, M. Chatterjee, S. Roy (University of North Florida), F. Morais (University of North Florida), M. Salimitari (University of Central Florida), M. Chatterjee (University of Central Florida)
- Defense Strategies and Expected Capacity of High Performance Computing Infrastructures (Short Paper) by N. Rao (Oak Ridge National Laboratory), N. Imam (Oak Ridge National Laboratory), C. Ma (Hang Seng Management College), F. He (Texas A&M University)

Tutorial on Security in SDN/NFV and 5G Networks - Opportunities and Challenges – Ashutosh Dutta (Johns Hopkins Univ., USA) (MRC Auditorium)

#### Industry Track (CSA 101)

- Subhas Mondal - Wipro - Real-time Network Analytics at the 5G Edge

11:05 am – 11:30 am

Tea/Coffee Break (MRC Auditorium & CSA Lawn)

11:30 am – 01:00 pm

#### 03 Parallel Sessions

#### Paper Session 5A (DC track, 3 full, 1 short papers) (CSA 254)

Distributed Computing Track: Theoretical Aspects of Distributed Computing

Session Chair: N. Rao (Oak Ridge National Lab., USA)

- Benefit of Self-Stabilizing Protocols in Eventually Consistent Key-Value Stores: A Case Study by D. Nguyen (Michigan State University), S. Kulkarni (Michigan State University), A. Datta (University of Nevada, Las Vegas)
- Silent Self-Stabilizing Scheme for Spanning-Tree-like Construction by S. Devismes (UGA/VERIMAG), D. Ilcinkas (CNRS/LaBRI), C. Johnen (Université de Bordeaux/LaBRI)

- **A Simple and Practical Concurrent Non-blocking Unbounded Graph with Reachability Queries** by B. Chatterjee (IBM, India Research Lab, New Delhi), S. Peri (IIT Hyderabad), M. Sa (IIT Hyderabad), Nandini Singhal (IIT Hyderabad)
- **QoS and Performance Metrics for Container-based Virtualization in Cloud Environments (Short Paper)** by I. Jawarneh (University of Bologna), P. Bellavista (University of Bologna), F. Bosi (Imola Informatica), L. Foschini (University of Bologna), G. Martuscelli (University of Bologna), R. Montanari (University of Bologna), A. Palopoli (University of Bologna)

**Paper Session 5B (Networking track, 3 full, 1 short paper)  
(CSA 117)**

**Networking Track: Distributed Protocols and Collaboration**

**Session Chair: Vipin Chaudhary (National Science Foundation, USA)**

- **Measurements and Analytics of Wide-Area File Transfers over Dedicated Connections** by N. Rao (Oak Ridge National Laboratory), Q. Liu (Oak Ridge National Laboratory), S. Sen (Oak Ridge National Laboratory), Z. Liu (Argonne National Laboratory), R. Kettimuthu (Argonne National Laboratory), I. Foster (Argonne National Laboratory)
- **pTASC - Trustable Autonomous Secure Communications** by P. Sousa (DCC-FCUP/CRACS-INESCTEC), A. Cirne (DCC-FCUP/CRACS-INESCTEC), J. Resende (DCC-FCUP/CRACS-INESCTEC), R. Martins (DCC-FCUP/CRACS-INESCTEC), L. Antunes (DCC-FCUP/CRACS-INESCTEC)
- **Building an Emulation Environment for Cyber Security Analyses of Complex Networked Systems** by F. Tanasache (Sapienza University of Rome), M. Sorella (Sapienza University of Rome), S. Bonomi (Sapienza University of Rome), R. Rapone (unaffiliated), Davide Meacci (Sapienza University of Rome)
- **HydraDoctor: Real-time Liquids Intake Monitoring by Collaborative Sensing (Short Paper)** by B. Du (University of Warwick), C. Lu (University of Oxford), X. Kan (Tongji University), K. Wu (Tongji University), M. Luo (University of Warwick), J. Hou (Tongji University), K. Li (CISTER Research Unit), S. Kanhere (University of New South Wales), Y. Shen (Data61, CSIRO), H. Wen (University of Warwick)

**Tutorial on Security in SDN/NFV and 5G Networks (continued) – Ashutosh Dutta (Johns Hopkins Univ., USA) (MRC Auditorium)**

**Steering Committee Meeting – starting at noon (CSA 101)**

**01:00 pm – 02:00 pm**

**Lunch Break and Steering Committee Meeting (CSA Lawn)**

**02:00 pm – 03:00 pm**

**Keynote 4 (MRC Auditorium)**

**Session Chair: Paolo Bellavista (Univ. Bologna, Italy)**

**Speaker: Vipin Chaudhary (National Science Foundation, USA)**

**Title: Changing Landscape of Advanced Cyberinfrastructure in Science and Engineering**

**03:00 pm – 04:00 pm**

**02 Parallel Sessions**

**PhD Forum (Lightning talk + Poster presentation) (CSA 112)**

- **An Efficient User Privacy Preserving Multi-server Private Information Retrieval by Radhakrishna Bhat, N R Sunitha**
- **Flexible Cryptographic Access Control through Proxy Re-encryption between Groups by Gaurav Pareek, Purushothama B R**
- **Channel Selection in Dynamic Networks of Unknown Size by Rohit kumar, Sumit J. Darak**
- **Entitling Concurrency to Smart Contracts Using Optimistic Transactional Memory by Parwat Singh Anjana, Sweta Kumari, Sathya Peri, Sachin Rathor, and Archit Somani**

- **CAN-Based Networked Path-Tracking Control of a 4WS4WD Electric Vehicle: Selection of Sampling Period and Hardware-in-the-Loop Simulation** by Arun Kant Singh, Ramprasad Potluri
- **A Scalable and Composable Analytics Platform for Distributed Wide-Area Tracking** by Aakash Khochare, Yogesh Simmhan
- **A Cost-aware Algorithm for Placement of Enterprise Applications in Federated Cloud Data Center** by Moustafa Najm, Venkatesh Tamarapalli

#### Industry Track (CSA 117)

- **Lenin Naragani - Honeywell - Supply Chain Management with 5G Technology**
- **Krishna Paul - Intel - Autonomous / ADAS automotive systems design**

#### Tea/Coffee Break (in parallel) (CSA Lawn)

04:00 pm – 05:30 pm

#### 02 Parallel Sessions

#### Panel: Opportunities and Challenges in Applying IoT to Sustain Critical Urban Resources (CSA 254)

##### Moderators:

- **Mohan Kumar (Rochester Inst. of Tech)**
- **Archan Mishra (Singapore Management University)**

##### Panelists:

- **Shivkumar Kalaynaraman (GE Power, India)**
- **P. R. Kumar (Texas A&M University)**
- **Pradeep Majumdar (Indian Institute of Science, Bangalore)**
- **Vincent Poor (Princeton University)**
- **Paolo Bellavista (Univ. Bologna, Italy)**

## Industry Track (CSA 117)

- Satish Jamadagni - Reliance Jio - Deployment considerations for 5G
- Deepak Hoshing - ex-Infosys / Finnacle - Common Characteristics of Blockchain Applications
- Parth Thakkar - IBM Research - Optimizing the performance of the Hyperledger Fabric Blockchain Platform
- Gourango Biswas - Honeywell - Sensing as a service Blockchain-based Micropayment

06:00 pm – 07:30 pm

Cultural Program (MRC Auditorium)

08:00 pm – 10:30 pm

Banquet Dinner in Le Méridien Bangalore

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**January 07****08:00 am - 09:00 am****Registration (CSA)****09:00 am - 10:00 am****Keynote 5 (MRC Auditorium)****Session Chair:** A. Misra (Singapore Management Univ.)**Speaker:** K. Mani Chandy (California Institute of Technology, USA)**Title:** Big Data Applications as Commodities**10:00 am - 11:30 am****05 Parallel Sessions****Paper Session 6A (DC track, 3 full, 1 short paper) (CSA 254)****Distributed Computing Track: Mobile Robots****Session Chair:** S. Kanhere (U. New South Wales, Australia)

- **Efficient Dispersion of Mobile Robots on Graphs** by A. Kshemkalyani (University of Illinois at Chicago), F. Ali (University of Illinois at Chicago)
- **Time-Optimal Uniform Scattering in a Grid** by P. Poudel (Kent State University), G. Sharma (Kent State University)
- **Sublinear-Time Mutual Visibility for Fat Oblivious Robots** by P. Poudel (Kent State University), G. Sharma (Kent State University), A. Aljohani (Royal Commission Yanbu Colleges and Institutes)
- **Odd-Even Based Adaptive Two-way Routing in Mesh NoCs for Hotspot Mitigation (Short Paper)** by R. S. Reshma Raj (National Institute of Technology Calicut), C. Gayathri (Government Engineering College Thrissur), S. Kalady (National Institute of Technology Calicut), P. B. Jayaraj (National Institute of Technology Calicut)

**Paper Session 6B (Networking track, 3 full, 1 short paper) (EE MMCR)****Networking Track: Wireless Networking****Session Chair: K. Mani Chandy (California Inst. Technology, USA)**

- **Distributed Alpha-Fair Transmit Power Adaptation Based Congestion Control in VANET by C. Navdeti (Indian Institute of Engineering Science and Technology, Shibpur) , C. Giri (Indian Institute of Engineering Science and Technology, Shibpur), I. Banerjee (Indian Institute of Engineering Science and Technology, Shibpur)**
- **Low Complexity Landmark-Node Tracing in WSNs using Multi-Agent Random Walks by S. Redhu (IIT Kanpur), R. Hegde (IIT Kanpur)**
- **Improving Performance of TCP for Wireless Network using SDN by K. Singh (Sikkim Manipal University), S. Gupta (Motilal Nehru National Institute of Technology), S. Verma (Motilal Nehru National Institute of Technology), M. Pandey (Motilal Nehru National Institute of Technology)**
- **Dynamic Sensor Selection for Path Coverage (Short Paper) by S. Shamoun (City University of New York), T. Abdelzaher (University of Illinois Urbana-Champaign), A. Bar-Noy (City University of New York)**

**Industry Track (MRC Auditorium)**

- **Arpan Pal - TCS Research - Digital Transformation of Manufacturing - Industry 4.0 using IoT, Robotics, and AI**
- **Subodh Gajare - Cisco - Distributed IoT s/w architecture in Mfg/Industrial Automation**
- **Divya Sheel - ABB - Networked Querying for Industrial IoT**
- **Ram Krishnan - VMWare - Open Source Landscape and Opportunities in Distributed Edge Clouds**

- Narayan Ranganathan - Intel - Upcoming Data Center Technologies and Rack Scale Architecture

## Workshop: EmeRTeS (Technical Session I) (CSA 112)

- Welcome
- 04 Papers
  - A Study on Rumor Propagation Trends and Features in a Post Disaster Situation by Tamal Mondal, Tunir Roy, Indrajit Bhattacharya, Sourav Bhattacharya, Indranil Das
  - Identifying Fact-Checkable Tweets during Disaster: A Classification Approach by Divyank Barnwal, Siddharth Ghelani, Rohit Krishna, Moumita Basu, Saptarshi Ghosh
  - Building Resilient Community using Social Technologies: A Precursory Measure for Effective Disaster Management by Sneha Bhattacharyya, Priyadarshini Dey, Jayanta Basak, Siuli Roy, Somprakash Bandyopadhyay
  - SURAKSHIT: A smartphone-based application for 'Localized' GIS Data Aggregation in absence of Internet by Partha Sarathi Paul, Naman Mehta, Aman Kumar Das, Sourav Agarwal, Sujoy Saha, Subrata Nandi

## Workshop: NWCDN (CSA 101)

- Welcome: 10:00 am - 10:05 am
- 07 Papers
  - End to End Secure Anonymous Communication for Secure Directed Diffusion in IoT by J. Sengupta, S. Ruj, S. Das Bit: 10:05 am – 10:25 am
  - COR-HR: An Efficient Hybrid Routing approach using Coefficient of restitution in MANET by S. Sinha, S. Saha, S. Mishra: 10:25 am – 10:45 am



- **Flocking along line by Autonomous Oblivious Mobile Robots by S. Chaudhuri: 10:45 am – 11:05 am**
- **An Efficient Heuristic to Minimize Number of Regenerations in Translucent Optical Network under Dynamic Scenario by I. Nath, U. Bhattacharya, M. Chatterjee: 11:05 am – 11:15 am**
- **iSecure: Imperceptible and Secure Peer-to-peer Communication of Post-disaster Situational Data over Opportunistic DTN by C. Chakrabarti, S. Roy: 11:15 am – 11:25 am**  
**Note: Session will continue during Tea/Coffee Break**
- **To protect ecological system from electromagnetic radiation of Mobile communication by A. Das, S. Kundu: 11:25 am – 11:45 am**
- **A Percolation-based Recovery Mechanism for Bot Infected P2P Cloud by S. De, M. Barik, I. Banerjee: 11:45 am – 12:05 pm**

**11:30 am – 11:50 am****Tea/Coffee Break (MRC Auditorium & CSA Lawn)****11:50 am – 01:30 pm****03 Parallel Sessions****Paper Session 7A (DC track, 3 full) (CSA 254)****Distributed Computing Track: Security in Distributed Systems****Session Chair: S.V. Pemmaraju (Univ. Iowa, USA)**

- **Consistify: Preserving Correctness and SLA Under Weak Consistency by S. Sidhanta (IIT Jodhpur), W. Golab (University of Waterloo), S. Mukhopadhyay (Louisiana State University)**

- **Round Efficient Computationally Secure Multi-Party Computation Revisited** by L. Bangalore (University of Rochester), A. Choudhury (IIIT Bangalore), G. Garimella (Oregon State University)
- **Perfectly Secure Message Transmission over Partially Synchronous Networks** by R. Kishore (Mahindra Ecole Centrale, Hyderabad, India), A. Inumella (International Institute of Information Technology, Hyderabad), K. Srinathan (International Institute of Information Technology, Hyderabad)

**Paper Session 7B (Networking track, 3 full, 1 short paper)  
(MRC Auditorium)**

**Networking Track: Distributed Applications**

**Session Chair: S. Roy (Univ. South Florida, USA)**

- **On Upper and Lower Bounds of Identifying Code Set for Soccer Ball Graph with Application to Satellite Deployment** by A. Sen (Arizona State University), V. Goliber (Arizona State University), K. Basu (Arizona State University), C. Zhou (Arizona State University), S. Ghosh (Arizona State University)
- **Detection of Beacon Transmission Denial Attack in ITS Using Temporal Auto-correlation and Random Inspections** by S. Sultana (Samsung R&D, SRI-Delhi), F. Altaf (IIIT Allahabad), M. Aditia (IIIT Allahabad), M. Burra (IIIT Allahabad), Chanchal Maurya (IIIT Allahabad), Soumyadev Maity (IIIT Allahabad)
- **Advanced Urban Public Transportation System for Indian Scenarios** by P. Rajput (Pandit Deendayal Petroleum University, Gandhinagar), M. Chaturvedi (Pandit Deendayal Petroleum University, Gandhinagar), P. Patel (Fraunhofer USA - Center for Experimental Software Engineering)
- **A Hybrid Classifier Approach to Multivariate Sensor Data for Climate Smart Agriculture Cyber-Physical Systems (Short Paper)** by A. Pandey (IIT Patna), P. Tiwary (IIT Patna), S. Kumar (IIT Patna), S. K. Das (Missouri University of Science and Technology Rolla)

• 11:50 am – 12:30 pm

## Workshop: EmeRTeS (Technical Session II) (EE MMCR)

- 02 Papers

- Sensor Node Assisted DTN for a Post-Disaster Scenario by Amit Kumar Gupta, Jyotsna Kumar Mandal, Indrajit Bhattacharya
- A Blockchain Based Incentive Scheme for Post Disaster Opportunistic Communication over DTN by Chandrima Chakrabarti, Souvik Basu

• 12:30 pm – 01:30 pm

## Common Workshop Keynote-3 by Sriram Pemmaraju (EE MMCR)

**Title:** Distributed and Parallel Algorithms in All-to-All Communication Models

01:30 pm – 02:30 pm

## Lunch Break (CSA Lawn)

02:30 pm – 03:30 pm

## Invited Talk (MRC Auditorium)

**Speaker:** Dr. Saptarshi Ghosh, Indian Institute of Technology, Kharagpur

**Title:** Leveraging Online Social Media for Post-Emergency Relief Operations

03:30 pm – 04:10 pm

## Workshop: EmeRTeS (Technical Session III) (EE MMCR)

- 02 Paper

- Towards Energy-efficient and Robust Disaster Response Networks by Vijay K. Shah, Satyaki Roy, Simone Silvestri, Sajal K. Das
- ENTER: An Encounter based Throwbox Deployment Strategy for Enhancing Network Reliability in Post Disaster

**Scenarios over DTN by Suman Bhattacharjee, Sipra Das  
Bit**

**04:10 pm – 04:30 pm**

**Tea/Coffee Break (CSA Lawn)**

**04:30 pm – 05:10 pm**

**Workshop: EmERTeS (Technical Session IV) (EE MMCR)**

- **02 Papers**

- **On Designing a Fast-Deployable 'Localized' GIS Platform for using 'Offline' during Post-Disaster Situation by Partha Sarathi Paul, Chandrika Mukherjee, Bishakh Chandra Ghosh, Sudipta Pandit, Sujoy Saha, Subrata Nandi**
- **Designing Infrastructure-less Disaster Networks by Leveraging the AllJoyn Framework by Srikant Manas Kala, Vanlin Sathya, Suhel Sajjan Magdum, Tulja Vamshi Kiran Buyakar, Hatim Lokhandwala, Bheemarjuna Reddy Tamma**