Sujoy Saha

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Experience	**Assistant Professor** *Department of Computer Science & Engineering* *National Institute of Technology Durgapur, India*	**2017-till now**
	Assistant Professor *Department of Computer Applications* *National Institute of Technology Durgapur, India*	**2010-2017**
	Lecturer *Department of Computer Science & Engineering* *Institute of Engineering Management, Saltlake, Kolkata, India*	**2007-2010.**
	Research Engineer *Center for Distributed Computing* *Department of Computer Science & Engineering* *Jadavpur University, Kolkata, India*	**2005-2007.**

Projects

Performance Evaluation of Open Source LID, Speaker Diarization and Speech Enhancement Algorithm
Description: The objective of this project is to carry out performance evaluation of the state of the art techniques in the context of the following tasks for which open source implementations are available. The scope is to identify parameters of evaluation that are important for practical deployments and carry out the evaluation on speech datasets matching the needs of the project. For instance, deep learning-based models generally trained on a single corpus fail to generalize to untrained corpora, especially in low signal-to-noise ratio (SNR) conditions. Developing a noise, speaker, and corpus independent speech enhancement algorithm is essential for real-world applications. The outcome of evaluation is to identify potential techniques/algorithms for each of the following tasks that may be considered for further exploration towards practical deployments (a) Speaker Diarization (b) Language Identification (LID) (c) Speech Enhancement.
Name of Funding Agency: *CARS, DRDO*
Amount (Rs.): *30L*
Date of Intimation and Duration: *2023-2024*
Role: *Co-PI*

Universal multi-modal interface for different disabilities
Description: This is not about mother tongues or regional languages. Instead, this

is about a universal Tech-Tongue based on assistive technology for the multimodally impaired persons, who are deprived of inheriting their mother tongues or hearing capability because of their physiological disabilities; and hence lag behind conventional way of human communication. The proposal of the project is focused to develop a universal assistive system for establishing an independent communication platform among the people having visual, hearing, speech and motor neuron impairment in any kind of interior environment. In spite of having their respective physical disabilities, those people will be able to communicate among themselves independently using the proposed assistive system without any intervention of disability less human beings. Along with the feature of inter-communication between the above mentioned modalities, the system will also assist those people to remotely operate their important home appliances. The feature further includes access to basic healthcare support through an IoT framework, which will effectively congregate a smart home system for them.

Name of Funding Agency: Tata Consultancy Services
Amount (Rs.): 29 L
Date of Intimation and Duration: 2021-2023
Role: Co-PI

AI, ML, Edge computing Optimized AudioAI for Android

Description: The aim of our Samsung project is to identify different kinds of sound events that take place in the house, for example, baby crying, glass break, cat meow, doorbell, doorknock, dog barking and The processing of the audio should take place in the mobile's processor and no internet should be used, as this could lead to privacy breach issues. We have used three different ML models and entire frameworks implemented in Android (automatic sound classification) and reported their accuracy. One was Google's Yamnet AI model, another was a model created with the help of self recorded data, on googel's teachable machine and integrated with Android, and another one, was a self created model. All had above 90 percent validation accuracy, but the least CPU was consumed by the teachable machine model, with fairly high accuracy. Now, we are planning to develop a distributed Machine Learning Strategy, by connecting all devices under the roof of a house, and carrying out distributed processing to lower CPU usage on each mobile and have a very optimised model, with less compromise on accuracy.

Name of Funding Agency: Samsung Prism Project, Samsung India.
Date of Intimation and Duration: 2021-2023
Role: Co-PI

IntAirSense: Intelligent Air Pollution Monitoring System for Smart Cities using Low-Cost Sensors

Description: The rise in environmental pollution and degradation of air quality around the world has dragged the attention of the researchers due to its direct societal impact. From studies, it has been observed that the indoor environment is even more polluted than that of outdoors. In this project, A Framework for indoor air quality monitoring has been developed. We have developed a portable and cost-effective air quality monitoring device. The device generates fine-grained data for a combination of different pollutants (CO_2, NO_2, CO), particles (PM1, PM2.5, PM10) and meteorological sensors (humidity, and temperature). In this work an energy aware Environment Monitoring Device(EMD) has been developed with adaptive sampling rate. Different aspects of the EMD have been presented with an analysis of their power consumption. A trade-off between the mobile phone and the developed EMD has been discussed with a proposed energy reduction technique. To ensure the relia-

bility of the sensed data, calibration of the sensor has been carried out. In order to calibrate the EMD, we have analyzed the correlation among the measurements even at different locations and a soft-calibration technique has been proposed to mitigate sensor errors.

Studies reveal that poor indoor air quality has resulted in a drop in academic performance and affected the comfort and concentration level of students consequently impacting their learning ability during the lecture. We have Deployed EMDs sparsely in a few selected classrooms of NIT Durgapur to minimize the overall deployment cost and estimated the concentration of pollutants of other classrooms using machine learning techniques.

Name of Funding Agency: *Department of Science and Technology and Biotechnology*

Amount (Rs.): *12 L*

Date of Intimation and Duration: *2019-2022*

Role: *PI*

Post-Disaster Situation Analysis and Resource Management Using Delay-Tolerant Peer-to-Peer Wireless Networks (DISARM)

Description: *Facebook's "Mark Yourself Safe" or Google Person Finder are quite popular nowadays. Such applications generate crisis maps based on crowdsourced information during or after disasters. Crisis maps are inevitably an extremely effective digital dashboard application for rescue and reliefs. But what if there is even a partial Internet blackout after the disaster strikes? This is indeed a common scenario, but today's crisis mapping solutions heavily depend on the Internet. In this project, we have developed an end-to-end solution for smartphone-based opportunistic crisis mapping in the fate of Internet blackouts. This framework uses intelligent and energy-efficient mechanisms for opportunistic ad-hoc information collection and filtering along with data summarization and dashboard application for crisis mapping over end-users' smartphones. The smartphone application intelligently incorporates and tunes the existing network systems and services at the backend to make the system work even when the conventional network infrastructure fails. We evaluate the performance of the framework from multiple field-trials for over five years, and the observed quantitative and qualitative performance is extremely promising for its mass-scale adoption at the disaster-prone areas.*

In this project, we present a novel end-to end application system, SURAKSHIT, which can run both as an Android App in users' smartphones as well as an application in custom portable units, referred as Information Storage Boxes (ISB) which are designed as networking building-blocks to combat network-outage after large-scale disasters. In the absence of Internet, it leverages (a) the presence of active smartphone users as crisis mappers, (b) inherent mobility of rescue vehicles as data mules, and (c) presence of few pre-deployed ISBs in a disaster-hit locality.

Name of Funding Agency: *ITRA, Media Lab Asia*

Amount (Rs.): *69.67 L*

Date of Intimation and Duration: *2013-2018*

Role: *Co-PI*

CityProbe: City Scale Pervasive Sensing System

Description: *To determine the health of a city, several parameters need to be considered. The proposed project aims to probe and understand two specific aspects of city health: road infrastructure and pollution-levels. We proposed a city-scale pervasive sensing framework, CityProbe, which seamlessly integrates customized sensing*

units and mobile phone sensors. The proposed solution scales by leveraging crowd-sensed reports from customized and mobile phone sensors, to monitor air and sound pollution levels and to detect poor road condions, in real-time. CityProbe is novel in incorporating both participatory and automated detection techniques; and in being a first-of-a-kind framework that explores causalities between road conditions and pollution levels. A dashboard depicting the derived insights from the crowd-sensed reports will be presented to city agencies for assistance in policy-making; and citizens will receive customized alerts and recommendations related to travel conditions. We will field deploy our solution in three cities: Mumbai, Durgapur and Chandigarh.
Name of Funding Agency: *IMPRINT*
Amount (Rs.): *60 L*
Date of Intimation and Duration: *2017-2020*
Role: *Co-PI*

Developing ICT-based kiosks for post disaster situational information management using opportunistic networking framework
Name of Funding Agency: *WestBengal DST*
Amount (Rs.): *14.96 L*
Date of Intimation and Duration: *2018-2021*
Role: *Co-PI*

Rural Development Project Maduli(Amulet), Bankura
Name of Funding Agency: *District Industries Center(DIC), Bankura, Govt of West BengalT*
Amount (Rs.): *10 L*
Date of Intimation and Duration: *2017-2017*
Role: *Co-PI*

Efficient Energy and pollution Management for Smart city: An Application of IoT
Name of Funding Agency: *Research Initiation Grant, NIT Durgapur*
Amount (Rs.): *10 L*
Date of Intimation and Duration: *2016-2019*
Role: *PI*

Patent	**AN END-TO-END SYSTEM FOR OFFLINE LOCALIZED CRISIS MAPPING AND METHOD OF OPERATION THEREOF** **Inventors:** Sujoy Saha, India, Subrata Nandi, India, Sujoy Saha, India, Partha Sarathi Paul, India, Kingshuk De, India, Prithviraj Pramanik, India , Bishakh Chandra Ghosh, India, Hriday Dutta, India, Indrajit Bhattacharya, India, Sandip Chakraborty, India **Patent App no:** 201931050685 Dated 09.12.2019
Research Areas	*Mobile Computing* *Intelligent Transport System* *Environment Monitoring* *Visible Light Communication System* *Internet of Things*

Education	**Ph.D**
	Department of Computer Science & Engineering
	National Institute of Technology, Durgapur India
	Thesis: Design of Energy Efficient Secure Delay Tolerant Networks under QoS Bound
	Supervisor: Prof. Subrata Nandi **2011-2015**
	Masters (MTech) in Computer Science & Engineering
	Department of Computer Science & Engineering
	Jadavpur University, India **2003-2005**
	Bachelors (BTech) in Computer Science & Engineering
	Department of Computer Science & Engineering
	National Institute of Technology, Calicut, India **1998-2003**

Awards/Travel Grants

- *Best Paper Award in International Conference on Frontiers in Computing and Systems (COMSYS 2020), January, 2020.*
- *ACM MobiCom Scholarship for Faculty Members from the South Asian Region, New Delhi, @018*
- *ACM Junior Faculty Travel Grant & NIT Durgapur for MobiSys 2016*
- *ITRA Media Lab Asia Travel Grant for Research Collaboration 2015*
- *IEEE student Travel grant for PerCom 2015 itemAppreciation Award from Institute of Engineering and Management, 2010.*

Chair

- *ICDCN Workshop Chair* **2023**
- *COMSYS Track Chair* **2023**

TPC Memebrs

- *COMSNETS* **2017-2022**
- *ICDCN Ph.D Forum* **2018-2020**
- *ANTS* **2017-2018**

Technology development/ translation/ initiation

- Developed "SURAKSHIT" System for Post Disaster Management with IIT Khragpur and KGEC Kalayani

- Developed UrbanEye with IIT Kharagpur – a smartphone application for prediction of public bus stops along with estimated time of arrival (ETA) considering the uncertainty during travel time.

- Developed e-ONE – an enhanced ONE simulator for simulating hybrid Delay Tolerant Networks. (Project DISARM deliverable)

- Developed Google-map– a network resource planning tool for developing hybrid adhoc network infrastructures in disaster hit areas.

- Developed Low Cost Environment Monitoring box:which collect data from the environment and periodically transfer to the cloud.
  (https://sites.google.com/site/environmentsensing/)

- Developed prototype model for post disaster management in Sundarban coastal area, West Bengal under project SDDMIN. The communication was setup among three islands near Gosaba using 802.11 enabled devices which was found to be able to cover near about 7 to 8 km range in line of sight.

Publications

Journals

1. Praveen Kumar Sharma, Bidyut Dalal, Ananya Mondal, Argha Sen, Amartya Banerjee, Sandip Mondal, Tanmay De, **Sujoy Saha**,Indoor Air Sensing: A Study in Cost, Energy, Reliability and Fidelity in Sensing, Journal of Sensing and Imaging (Springer), 2023.

2. Prithviraj Pramanik, Prasenjit Karmakar, Praveen Kumar Sharma, Soumyajit Chatterjee, Abhijit Roy, Santanu Mandal, Subrata Nandi, Sandip Chakraborty, Mousumi Saha, **Sujoy Saha**,AQuaMoHo: Localized Low-Cost Outdoor Air Quality Sensing over a Thermo-Hygrometer,ACM Transactions on Sensor Networks, 2023.

3. Ratna Mandal, Prasenjit Karmakar, Soumyajit Chatterjee, Debaleen Das Spandan, Shouvit Pradhan, **Sujoy Saha**, Sandip Chakraborty, Subrata Nandi, " Exploiting Multi-modal Contextual Sensing for City-bus's Stay Location Characterization: Towards Sub-60 Seconds Accurate Arrival Time Prediction" ACM Transactions on Internet of Things, 2023.

4. Prasenjit Karmakar, Vijay K. Shah, Satyaki Roy, Krishnandu Hazra, **Sujoy Saha** and Subrata Nandi, "Reliable Backhauling in Aerial Communication Networks against UAV Failures: A Deep Reinforcement Learning Approach", IEEE Transactions on Network and Service Management.,2022.

5. Krishnandu Hazra, Tanmoy Ghosh, Avirup Mukherjee, **Sujoy Saha**, Subrata Nandi, Saptarshi Ghosh, and Sandip Chakraborty,"Sustainable text summarization over mobile devices: An energy-aware approach", Sustainable Computing: Informatics and Systems (Elsevier, Volume (32), PP:100607, 2021.

6. Krishnandu Hazra, Vijay K Shah, Satyaki Roy, Swaraj Deep, **Sujoy Saha**, Subrata Nandi "Exploring Biological Robustness for Reliable Multi-UAV Networks", IEEE Transactions on Network and Service Management, 2021.

7. Ratna Mandal, Pallav Sonowal, Manish Kumar, **Sujoy Saha** and Subrata Nandi, "RoadSpeedSense: Context-Aware Speed Profiling from Smart-phone Sensors", EAI Endorsed Transactions on Energy Web, 2021.

8. Krishnandu Hazra, Vijay K Shah, Simone Silvestri, Vaneet Aggarwal, Sajal K Das, Subrata Nandi, **Sujoy Saha**,"Designing efficient communication infrastructure in post-disaster situations with limited availability of network resources", Elsevier Journal of Computer Communications, 2020.

9. Arindam Ghosh, Amartya Chakraborty, Joydeep Karmakar,Mousumi Saha, **Sujoy Saha**, "HumanSense:A Framework for Collective Human Activity Identification using Heterogeneous Sensor Grid in Multi-inhabitant Smart Environments" Personal and Ubiquitous Computing, 2020.

10. Munshi Yusuf Alam and Akash Nandi and Abhay Kumar and **Sujoy Saha** and Mousumi Saha and Subrata Nandi and Sandip Chakraborty, "Crowdsourcing from the True crowd: Device, vehicle, road-surface and driving independent road profiling from smartphone sensors", Elsevier Journal of Pervasive and Mobile Computing, 2020.

11. Kashi Nath Datta, Prithviraj Pramanik ,Satya Bagchi, Subrata Nandi, **Sujoy Saha**, " Binary Galois Field based Asynchronous Scheduling Protocol for Delay Tolerant Networks", Journal of Wireless Networks (Springer), 2020.

12. Rohit Verma, Aviral Shrivastava, Kingshuk De, Bivas Mitra, **Sujoy Saha**, Niloy Ganguly, Subrata Nandi, Sandip Chakroborty ,"A Smartphone-based Passenger Assistant for Public Bus Commute in Developing Countries," , IEEE Transactions on Computational Social Systems, 2020.

13. Partha Sarathi Paul, Bishakh C Ghosh, Hridoy S Datta, Kingshuk De, Arka P Basu, Prithviraj Pramanik, **Sujoy Saha**, Sandip Chakraborty, Niloy Ganguly, Subrata Nandi" CRIMP: Here Crisis Mapping Goes Offline ", Journal of Network and Computer Applications, 2019.

14. Arindam Ghosh, Amartya Chakraborty, Dhruv Chakraborty, Mousumi Saha, **Sujoy Saha**, "UltraSense: A non-intrusive approach for Human Activity Identification using Heterogeneous Ultrasonic Sensor Grid for Smart Home Environment", Journal of Ambient Intelligence & Humanized Computing (AIHC), 2019

15. Tamal Mondal, Indrajit Bhattacharya; **Sujoy Saha**; Prithviraj Pramanik; Naiwrita Boral; Jaydeep Roy; Subhanjan Saha, " A Multi-Criteria Evaluation Approach in Navigation Technique for Micro-jet for Efficient Damage Need Assessment of Shelter Points in Disaster Response Scenario", Knowledge-Based Systems (Elsevier), 2018.

16. **Sujoy Saha**, Subrata Nandi, P. S. Paul, vijay Shah, Akash Roy, Sajal .K Das, " Designing delay constrained hybrid ad hoc network infrastructure for post-disaster communication", Elsevier Journal of Ad Hoc Networks, Volume 25, Part B, 2015, pp. 406-427.

17. **Sujoy Saha**, Subrata Nandi, Rohit Verma, Satadal Sengupta, Kartikeya Singh, Vivek Sinha, Sajal K. Das, "Design of Efficient Lightweight Strategies to Combat DoS Attack in Delay Tolerant Network Routing", Journal of Wireless Networks (Springer), 2016, pp. 1-22.

Conferences

1. Praveen Kumar Sharma, Debjit Chatterjee, Debaleen Das, Sujoy Saha,"Can I take class in that classroom now? In the perspective of Air Quality", ICDCN 2023

2. Ratna Mandal, Nitin Agarwal, Saikat Kumar Dey, **Sujoy Saha**, Subrata Nandi, Sandip Chakraborty ,"GPS Crowdsensing for Public Stoppage Planning of City Buses: A Perspective of Developing Economies",COMSNETS 2022, Bangalore,2022.

3. Praveen Kumar Sharma, Prasenjit Karmakar, Soumyajit Chatterjee, Abhijit Roy, Santanu Mandal, Sandip Chakraborty, Subrata Nandi, **Sujoy Saha**, "Can I go for a roof walk today? know your housing's air quality from a thermo-hygrometer",ACM BUILDSYS 2021, Coimbra, Portugal.

4. Ratna Mandal, Prasenjit Karmakar, Soumyajit Chatterjee, Debaleen Das Spandan, Shouvit Pradhan, **Sujoy Saha**, Sandip Chakraborty, Subrata Nandi, "Exploiting Multi-modal Contextual Sensing for City-bus's Stay Location Characterization: Towards Sub-60 Seconds Accurate Arrival Time Prediction", ACM SIGSPATIAL 2021, Beijing, China.

5. Ratna Mandal, Prasenjit Karmakar, Abhijit Roy, Arpan Saha, Soumyajit Chatterjee, Sandip Chakraborty, **Sujoy Saha**, Subrata Nandi,"Ad-hocBusPoI: Context Analysis of Ad-hoc Stay-locations from Intra-city Bus Mobility and Smartphone Crowdsensing", Proceedings of the 28th International Conference on Advances in Geographic Information Systems, 2020.

6. Partha Sarathi Paul, Bishakh Chandra Ghosh, Ankan Ghosh, **Sujoy Saha**a, Subrata Nandi, Sandip Chakraborty,"Disaster Strikes! Internet Blackout! What's the Fate of Crisis Mapping?", 22nd International Conference on Human-Computer Interaction with Mobile Devices and Services, 2020.

7. Partha Sarathi Paul, Bishakh Chandra Ghosh, Ankan Ghosh, **Sujoy Saha**, Subrata Nandi, Sandip Chakraborty,"Aco-Wi: Acoustic Initiated Wi-Fi Peer-group Communication for Opportunistic Messaging", 22nd International Conference on Human-Computer Interaction with Mobile Devices and Services, 2020.

8. Munshi Yusuf Alam, Harshit Anurag, Md Shahrukh Imam, **Sujoy Saha**, Mousumi Saha, Subrata Nandi, Sandip Chakraborty,"Urban Safety as a Service During Bike Navigation: My Smartphone Can Monitor My Street-Lights", IEEE International Conference on Smart Computing (SMARTCOMP), 2020.

9. Krishnandu Hazra, Vijay K. Shah, Mohd Bilal, Simone Silvestri, Sajal K. Das, Subrata Nandi, and **Sujoy Saha**, "A Novel Network Architecture for Resource-constrained Post-disaster Environments." 11th International Conference on Communication Systems Networks (COMSNETS), pp. 328-335. IEEE, 2019.

10. Partha Sarathi Paul, Chandrika Mukherjee, Bishakh Chandra Ghosh, Sudipta Pandit, **Sujoy Saha**, and Subrata Nandi. 2019. On Designing Fast-Deployable 'Localized' GIS Platform for using 'Offline' during Post-Disaster Situation. In International Conference on Distributed Computing and Networking (ICDCN'19), January 4–7, 2019, Bangalore, India.

11. Partha Sarathi Paul, Naman Mehta, Aman Kumar Das, Sourav Agarwal, **Sujoy Saha**, and Subrata Nandi. 2019. SURAKSHIT : A smartphone-based application for 'Localized' GIS Data Aggregation in absence of Internet. In International Conference on Distributed Computing and Networking (ICDCN '19), January 4–7, 2019, Bangalore, India.

12. Kashi Nath Datta, Pradipta Das, Mousumi Saha, **Sujoy Saha**, Sandip Chakraborty, "Exploring Visible Light Communication System using RTS/CTS Mechanism for Mo-

bile Environment", MobiCom Poster 2018.

13. Arindam Ghosh, Dhruv Chakraborty, Deepak Prasad, Mousumi Saha, **Sujoy Saha**," Can we recognize multiple human group activities using ultrasonic sensors?",COMSNETS 2018.

14. Praveen Kumar Sharma, Tanmay De, **Sujoy Saha**,"IoT based indoor environment data modelling and prediction", COMSNETS Graduate Forum 2018.

15. Praveen Kumar Sharma, BibekPoddar, SoumyoDey, Subrata Nandi, Tanmay De, MousumiSaha, SandipMondal, **Sujoy Saha**" On Detecting Acceptable Air Contamination in Classrooms using Low Cost Sensors", IEEE COMSNETS WACI Workshop , 2017.

16. Arindam Ghosh, AnubrataSanyal, Amartya Chakraborty, Praveen Kumar Sharma, Subrata Nandi, Mousumi Saha, **Sujoy Saha**, "On Automatizing Recognition of Multiple Human Activities using Ultrasonic Sensor Grid", IEEE COMSNETS WACI Workshop, 2017.

17. Munshi Yusuf Alam, Sunny Saurav, Ratna Mandal, **Sujoy Saha**, Subrata Nandi, Sandip Chakraborty, "A Fair and Effective Driver Rating System for Developing Regions", IEEE COMSNETS ITS Workshop, 2016.

18. Arindam Ghosh, SandipMondal, **Sujoy Saha**, MousumiSaha, Subrata Nandi, "Air Quality Monitoring using Low-cost Sensing Devices", Mobisys, 2016.

19. Rohit Verma, Aviral Shrivastava, Bivas Mitra, **Sujoy Saha**, Niloy Ganguly, Subrata Nandi and Sandip Chakraborty, "UrbanEye: An Outdoor Localization System for Public Transport", INFOCOM, 2016.

20. Partha Sarathi Paul, Bishakh Chandra Ghosh, Kingshuk De, **Sujoy Saha**, Subrata Nandi, Subhanjan Saha, Indrajit Bhattacharya, Sandip Chakraborty, "On Design and Implementation of A Scalable And Reliable Sync System For Delay Tolerant Challenged Networks", COMSNETS, 2016.

21. Ratna Mandal, **Sujoy Saha**, Subrata Nandi, "Poster: Road Behavior and Stoppage Pattern Analysis from Public Bus Trajectories: A Perspective of Developing Region", Mobisys, 2016.

22. Partha Sarathi Paul, Hridoy Sankar Dutta, Bishakh Chandra Ghosh, Krishnandu Hazra, Sandip Chakraborty, **Sujoy Saha**, Subrata Nandi, "Offline crisis mapping by opportunistic dissemination of crisis data after large-scale disasters", EM-GIS, 2016.

23. Partha Sarathi Paul, Subrata Nandi, Saikat Kumar Dey, Kingshuk De, Prithviraj Pramanik and **Sujoy Saha**, "Challenges in Designing Testbed for Evaluating Delay-Tolerant Hybrid Networks", IEEE PerCom, 2015.

24. Ratna Mandal, Nitin Agarwal, Subrata Nandi, Projan Das, Aniket Anvit, Sunandini Sanyal and **Sujoy Saha**, "Temporal Analysis of Public Bus GPS Traces for Bus Stop Extraction in Developing Cities", IEEE PerCom, 2015.

25. Partha Sarathi Paul, Bishakh Chandra Ghosh, Kingshuk De, **Sujoy Saha**, Subrata Nandi, Sandip Chakraborty, "Demo: pSync: A Peer-to-peer Sync Tool for Challenged Networks", Mobicom CHANTS, 2015.

26. Ratna Mandal, Nitin Agarwal, Subrata Nandi, Projan Das, Shreyasi Pathak, Himansu Rathi and **Sujoy Saha**, "A System for Stoppage Pattern Extraction from Public Bus GPS Traces in Developing Regions", ACM SIGSPATIAL 2014 (MobiGIS 2014).

27. Ratna Mandal, Nitin Agarwal, Subrata Nandi, **Sujoy Saha**, "Personalised route-map generation using crowd sourced GPS traces", IEEE ICBIM, 2014.

28. **Sujoy Saha**, Nitin Agarwal,Priyam Dhanuka, Subrata Nandi, "Google Map Based User Interface for Network Resource Planning in Post Disaster Management", COMSNETS 2013 (ACM DEV 2013).

29. **Sujoy Saha**,Vijay Shah, Rohit Verma, Ratna Mandal and Subrata Nandi, "Is It Worth Taking A Planned Approach To Design Ad Hoc Infrastructure For Post Disaster Communication?", ACM MobiCom 2012 (ACM CHANTS 2012).

30. **Sujoy Saha**, Satadal Sengupta, Rohit Verma, Vineet Mishra and Subrata Nandi, "SRSnF: A Strategy for Secured Routing in Spray and Focus Routing Protocol for DTN", Springer CNSA-2012.

31. **Sujoy Saha**, Sushovan Patra, Anirudh Sheldekar, Rijo Joseph C, Amartya Mukherjee and Subrata Nandi, "Post Disaster Management using Delay Tolerant Network", Springer WIMO-2011.

PhD Scholars

1. *Name: Partha Sarathi Paul*
Topic: Challenges in Developing Networking Services forPost-Disaster Rescue-Relief Scenarios
Degree Awarded: 2021

2. *Name: Munshi Yusuf Alam*
Topic: Road Surface Profiling using Smart Phone Sensors
Degree Awarded: 2021

3. Name: Arindam Ghosh
Topic: Human Activity Identification through Noninvasive Sensors
Degree Awarded: 2021

4. Name: Tamal Mondal
Topic: Design of Effective Data Mining Techniques for Various Sources of Situational Data in Disaster Response Scenarios
Degree Awarded: 2020

5. Name: Krishnandu Hazra
Topic: Optimal Resource Planning for Extraction of Situational Information During Post-Disaster Scenarios.
Degree Awarded: 2022

6. Name: Praveen Sharma
Topic: IoT Based Indoor/Outdoor Environment Data Modelling Prediction
Degree Awarded: 2022

7. Name: Kashi Nath Datta
Topic: Energy Aware Delay Tolerant Network Framework Design for Visible Light Communication System
Ongoing

8. Name: Ruma Ghosh
Topic: Indoor Activities
Ongoing

9. Name: Kousik Konar
Topic: Rural HCI
Ongoing

Personal Details	**Date of Birth:** *28th November, 1979* **Nationality:** *Indian* **Gender:** *Male* **Marital Status:** *Married* **Parental Status:** *One child, born in 2014*
Languages	**English** *Full professional proficiency* **Bengaly** *Native proficiency* **Hindi** *Bilingual proficiency*