

Anandarup Mukherjee

RESEARCH ASSOCIATE (UNIVERSITY OF CAMBRIDGE, U.K.) · PH.D.(IIT KHARAGPUR, INDIA)

Distributed Information and Automation Lab. (DIAL), Institute for Manufacturing (IfM), Department of Engineering, University of Cambridge, 17 Charles Babbage Road, Cambridge, UK, CB3 0FS

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Personal Data

Nationality Indian

Date of Birth 18 September 1987

Languages English, Hindi, Bengali

Academic Profiles Google Scholar, Publons, ORCID, dblp

Education

Indian Institute of Technology Kharagpur (IIT-KGP)

West Bengal, India

PH.D. IN COMPUTER SCIENCE AND ENGINEERING (THESIS SUBMITTED)

Jan. 2015 - Apr. 2020

- Research domain: Internet of Things for Constrained Networks
- Thesis: "Offloading in UAV Networks"
- Supervisors: Prof. Sudip MISRA, Prof. Narendra Singh RAGHUWANSHI
- Obtained 92% marks in coursework and 81% in Ph.D. comprehensive exam (top 5% in the CSE department)

West Bengal University of Technology (UTech)

West Bengal, India

M.TECH. IN ELECTRONICS AND COMMUNICATIONS ENGINEERING

July. 2010 - May 2012

- Specialization on Microelectronics and VLSI Design
- Thesis: "Detection of Arrhythmia using Wavelet Transforms, PCA and Neural Networks"
- Supervisor: Prof. Kamal Kanti GHOSH
- Obtained a GPA of 9.38/10 (top 2 in the ECE department)

West Bengal University of Technology (UTech)

West Bengal, India

B.TECH. IN ELECTRONICS AND COMMUNICATIONS ENGINEERING

July. 2006 - May 2010

- Final year project on "PC controlled Robotic Arm with Authentication Control"
- Advisor: Mr. Avishankar Roy
- Obtained a GPA of 8.2/10 (top 10% in the ECE department)

Research Interests

Internet of Things Offloading, Low-power sensing, Acoustic sensing, Collaboration, Scheduling, Network optimization

Industrial IoT OSA-CBM, Condition-based Monitoring, Condition-based Maintenance, Predictive monitoring and maintenance

UAV Networks Communications, Controls, Swarms, Data Offload, Processing offload, Imaging, Machine learning

Underwater Networks Modem development, PHY and MAC layer protocols, Signalling

Deep Learning LSTM, CNN, GAN, MLP

Networked Robots Agricultural robots, UAV swarms, UAV-UGV collaboration

Skills

Programming Python, Matlab, C, Embedded C, Arduino, LaTeX, YAML

Web HTML, PERL, PHP, Javascript, REST

Development Environments Docker, Docker Compose, VirtualBox

Databases InfluxDB, MySQL, MongoDB

IoT Protocols WebSockets, MQTT, ZeroMQ, XMPP, WiFi, Zigbee, Bluetooth, TCP/UDP

Dashboards/Visualization Grafana, Matplotlib

Python Libraries Numpy, Scipy, Pandas, Keras, OpenCV, Matplotlib

Environments Linux, Windows, OSX

Languages English, Hindi, Bengali

Research Experience

IoT-based Devices for Non-critical Support in Hospitals

University of Cambridge, U.K.

SECONDARY ACADEMIC SUPERVISOR

Sept. 2020 - Present

- Explore and identify the potential solution benefits to the healthcare staff
- Specify the requirements and technical barriers to implementing the solutions in a hospital environment
- Present the data management and integration requirements if this is to be introduced into a hospital environment
- Deliver a hardware and software demonstration if access to the labs remain feasible. Otherwise, deliver a software demonstration

Engineering R & D at IFM Engage

University of Cambridge, U.K.

CONTRACTOR

July. 2020 - Present

- Develop and support technical solutions for industries and SMEs
- Specify the requirements and technical barriers to implementing the solutions in various environment
- Provide technical support services

Distributed Information & Automation Lab. (DIAL)

University of Cambridge, U.K.

RESEARCH ASSISTANT

July. 2020 - Present

- Low-cost condition monitoring of industrial processes and machineries.
- Research and develop methodologies for sensing, processing, and enabling communication for enabling low-cost condition monitoring.

Sensordrops Networks Pvt. Ltd.

IIT Kharagpur, India

Co-FOUNDER & DIRECTOR

Aug. 2018 - Present

- Responsible for the design and development of patentable technological ideas in the domains of networking and communication for Nokia's "Invent with Nokia" initiative, with which Sensordrops Networks Pvt. Ltd. has signed a contract.
- Responsible for the design and development of mesh-based IoT remote temperature monitoring network. Led a 4-person team from Sensordrops Networks for the development and manufacture of this product and its visualization app. for TCS INNOVATION LAB, KOLKATA, INDIA.
- Responsible for all technical and commercial aspects of the development of partial discharge sensing solutions for monitoring of electrical sub-stations and installations of CESC, KOLKATA.
- Responsible for all technical and commercial aspects of the development of Epione: IoT-based Ubiquitous Healthcare monitoring kit, and machine health monitoring in manufacturing industries.

Ministry of Electronics and Information Technology, Govt. of India

IIT Kharagpur, India

SENIOR RESEARCH FELLOW

Sep 2018 - Jul. 2020

- Project: Development of Digital Mine Using IoT
- Responsible for conceptualizing and implementing algorithms, methods and hardware for underground coal mine safety and worker safety.

UGC-UKIERI

IIT Kharagpur, India

SENIOR RESEARCH STAFF

Aug 2017 - June 2020

- Project: Joint Indo-UK Project on Safe and Usable IoT Ecosystem
- Responsible for conceptualizing and implementing algorithms, methods and hardware for acquisition and encryption of healthcare data, and finally releasing it on an IoT Blockchain.

Indian Council for Agricultural Research, Govt. of India

IIT Kharagpur, India

SENIOR RESEARCH FELLOW

Oct 2017 - Jan 2018

- Project: Development of Precision Robotic Planter
- Responsible for conceptualizing and implementing algorithms, methods and hardware for agricultural robotic planter. The planter has to autonomously navigate a given plot of land and plant seedlings at pre-defined intervals.

ITRA, Department of Electronics and Information Technology

IIT Kharagpur, India

SENIOR RESEARCH FELLOW

Oct 2014 - Jul 2017

- Project: Increasing water use efficiency through experimental sensor networks
- Provided technical know-how, implementation and support for deployment and analysis of data gathered from wireless sensor networks, deployed for in-field monitoring of agricultural data. Developed and implemented an IoT- Cloud based infrastructure for integrating and automated analysis of the incoming field data. Designed various smartphone apps and sensor nodes for low-cost field parameter monitoring.

Defence Scientific Information & Documentation Center

DRDO, India

SUMMER RESEARCH INTERN

May 2009- July 2009

- Applied various data-mining and visualization techniques for analyzing interdependence between various users and their field of research. The data analyzed was acquired from the DRDO central library, which had information about various scientists and their book issue records. This work culminated in the publication of a magazine article and a research paper.

Department of Computer Science & Engineering

IIT Kharagpur, India

RESEARCH INTERN

Jan 2009- Feb 2009

- Interned under Prof. Pabitra Mitra (CSE).
- Implemented various image processing technologies to perform segmentation and thresholding of satellite images, for detection of aircraft in the satellite images.

Eastern Regional Testing Labs. (ERTL)- EAST, Govt. of India

Kolkata, India

INTERN

Dec. 2008

- Interned at Center for Electronics Test Engineering (CETE) , Kolkata
- Learned about various Intel based micro-controllers and micro-processors. Implemented the technologies learned to design an automated traffic light controller using Atmel 89c51 based micro-processor.

Teaching Experience

National Programme on Technology Enhanced Learning (NPTEL)

IIT Kharagpur, India

GRADUATE TEACHING ASSISTANT

Jul 2017- Aug 2020

- Course: Introduction to Internet of Things
- Responsible for assisting in the development of course material, evaluation questions, and regularly addressing students' technical queries on the online forum.

National Programme on Technology Enhanced Learning (NPTEL)

IIT Kharagpur, India

COURSE TRAINER

Mar. 2017

- Course: Introduction to Internet of Things
- Responsible for demonstrating various hardware and software-based IoT projects for course video lectures of weeks 5, 6, and 7.

Dept. of Computer Science & Engineering

IIT Kharagpur, India

GRADUATE TEACHING ASSISTANT

Aug 2016- Apr. 2020

- Responsible for assisting in taking theory, as well as laboratory sessions along with evaluations for courses ranging from "Programming and Datastructures" to "Architecting solutions for the Internet of Things".

University of Engineering & Management

Jaipur, India

HEAD OF DEPARTMENT (ACTING)

Jan 2013- Oct 2014

- Dept. of Electronics & Communication Engineering
- Responsible for liaising between the department and various levels of university management. Organized multiple workshops, outreach programmes, and technical exhibitions. Responsible for management of department's workings.

University of Engineering & Management

Jaipur, India

ASSISTANT PROFESSOR

Jun 2012- Oct 2014

- Dept. of Electronics & Communication Engineering
- Responsible for teaching as well as administrative assignments. The teaching assignments spanned over theory as well as practical classes. Administrative tasks involved the assignment of acting Head of Department for a period of 2 years from 2013-2015. Over-saw and implemented the setting up and planning of over 7 laboratories, as well as student welfare activities such as workshops, internships and industrial visits.

Institute of Engineering & Management

Kolkata, India

LECTURER

Aug 2011- May 2012

- Dept. of Information Technology
- Responsible for theory as well as practical assignments. Additional responsibilities included mentoring students and organizing an international conference at the institute, as the *Assistant Organizing Secretary*, in Jan 2012.

Honors & Awards

INTERNATIONAL

- | | | |
|------|---|------------|
| 2020 | IEEE INFOCOM 2020 , Selected for IEEE INFOCOM 2020 Student Travel Grants | IEEE |
| 2020 | ACM-India/IARCS Travel Grants , Selected for ACM-India/IARCS Travel Grants for IEEE INFOCOM | ACM |
| 2019 | Top Downloaded Article 2017-2018 , Interdisciplinary Reviews - Data Mining and Knowledge Discovery | Wiley |
| 2015 | Special Mention , IEEE PULSE | EMBS PULSE |

DOMESTIC

2019	Young Achiever Award , Institute of Scholars (InSc)	<i>Bangalore, India</i>
2018	Dr. Amulya K. N. Reddy Award , Hari-om Ashram Prerit Society	<i>New Delhi, India</i>
2018	Gold Medallist , The Internet of Things Quiz Contest, Dept. of IT & Electronics, Govt. of West Bengal	<i>Kolkata, India</i>
2018	Socially Relevant Innovation , Gandhian Young Technology Innovation Award by the PRESIDENT OF INDIA	<i>New Delhi, India</i>
2016	Finalist , 2 nd Runner up, Inovation Challenge, Johnson Controls	<i>IIT Kharagpur, India</i>
2016	Finalist , 1 st Runner up, Prototype Demo., IBM	<i>IIT Kharagpur, India</i>
2015	Head (Membership Development) , IEEE Student Branch	<i>IIT Kharagpur, India</i>

Media Mentions

2018	Gandhian Young Technology Innovation Award ,	The Telegraph,	SRISTI	<i>Print Media</i>
2017	AmbuSens - Ambulatory Monitoring System ,	Economic Times, Hindustan Times, Indian Express, Times of India, Firstpost		<i>Print Media</i>
2017	BHIM - Autonomous Drone ,	The Hindu, LinkedIn, Times of India, India Today		<i>Print Media</i>

Talks

KEYNOTE TALK

- 2020 **Phantom Networks: An Intangible Communication Paradigm**, Indo-UK (UGC-UKIERI) Workshop on IoT and Security, Feb. 2020 *Loughborough University, U.K.*

INVITED TALKS

- 2020 **Phantom Networks: targeting Future Communications Beyond 5G and 6G**, Invited Talk (September 2020), Department of Information Technology *Institute of Engineering and Management, Kolkata*
- 2020 **Intelligent Networked UAVs**, Invited Talk (September 2020), Department of Information Technology *Institute of Engineering and Management, Kolkata*
- 2020 **Intelligent Data Handling in Aerial IoT Networks**, Invited Talk (August 2020), Department of Computer Applications *Regent Education and Research Foundation, Kolkata*
- 2020 **Phantom Networks: Next-Generation Communication using Intangible Infrastructures**, 5th International Conference on Advanced Computing and Intelligent Engineering (June 2020) *Université des Mascareignes (UdM), Mauritius*
- 2019 **Covert Networked Surveillance Systems and Soldier-as-a-System**, SRIC-NSCS Workshop on Future Research Collaborations on Defence Security Applications *IIT Kharagpur*
- 2019 **Development of an End-to-End IoT-based Architecture for real deployments**, SGRIP-sponsored Short Term Course on Selected Topics in Modern Wireless Networks and IoT *IIT Kharagpur*
- 2018 **Evolution and Need for IoT: Microcontrollers to Complex System of Systems**, TEQIP III-sponsored Short Term Course on Internet of Things: Theory and Applications *IIT Kharagpur*
- 2018 **Safety and Privacy in IoT Healthcare**, Indo-UK (UGC-UKIERI) Workshop on IoT Security *City, University of London, U.K.*
- 2017 **Architecting IoT-enabled UAV Networks and Networked UAV Swarms**, Indo-UK (UGC-UKIERI) Workshop on IoT Security *Loughborough University, U.K.*
- 2017 **Designing Autonomous UAVs**, DelTy-Media Lab. Asia - ITRA Water Evaluation Workshop *IIT Kharagpur, India*

Travel Grants

INTERNATIONAL

- 2020 **IEEE INFOCOM 2020**, Agency: IEEE INFOCOM *Toronto, Canada*
- 2020 **IEEE INFOCOM 2020**, Agency: ACM India *Toronto, Canada*
- 2020 **Loughborough University**, Agency: UGC-UKIERI *London, U.K.*
- 2018 **IEEE WCNC 2018**, Agency: IIT Kharagpur *Barcelona, Spain*
- 2018 **City, University of London**, Agency: UGC-UKIERI *London, U.K.*
- 2017 **Loughborough University**, Agency: UGC-UKIERI *London, U.K.*

DOMESTIC

- 2019 **Central Institute of Mining and Forestry Research (CIMFR)**, Agency: MeitY *Dhanbad, India.*
- 2017 **Indo-UK joint project workshop on Internet of Things**, Agency: UGC-UKIERI *Bhubaneshwar, India*
- 2016 **ITRA-Water Evaluation Workshop, KIIT University**, Agency: DelTy, Media lab Asia *Bhubaneshwar, India*
- 2015 **Microsoft-ACM Academic Research Summit**, Agency: ACM *Pune, India*
- 2016 **ITRA-Water Feedback Workshop, IIT Bombay**, Agency: DelTy, Media lab Asia *Mumbai, India*
- 2015 **ITRA-Water Evaluation Workshop, University of Hyderabad**, Agency: DelTy, Media lab Asia *Hyderabad, India*
- 2015 **ITRA-Water Feedback Workshop, IISc. Bangalore**, Agency: DelTy, Media lab Asia *Bangalore, India*

Professional Affiliations

IEEE

GRADUATE STUDENT MEMBER

- IEEE Communications Society (ComSoc)
- IEEE Computer Society
- IEEE Young Professionals Society

IIT Kharagpur, India

2015 - PRESENT

ACM

GRADUATE STUDENT MEMBER

IIT Kharagpur, India

2015 - PRESENT

International Recognitions

- **Area Expert** (IoT Communications and Interoperability), *IEEE Communications Society* Special Interest Group (SIG) on, **IoT for e-Health**, (under E-health Technical Committee), *since June 2021*. [Link](#)

Conference Leadership Roles

- **Co-Chair**, *Workshop on “COVI-COM: Communication, IoT, and AI technologies to counter COVID-19”*, IEEE International Conference on Communication (IEEE ICC) 2021, June 14-18, 2021, Montreal, Canada

Technical Program Committee

- SIGNIS: Softwarized Next Generation Networks for IoT Services (IEEE Globecom 2021 Workshop), Dec. 2021, Spain
- VNI: Virtualization for Enabling Next-Generation IoT Networks (IEEE HPSR 2021 Workshop), June 2021, Paris, France
- International Conference on Data Science and Edge Computing (ICDSEC 2021), March 2021, Ningbo, China
- International IoT, Electronics and Mechatronics Conference (IEMTRONICS) 2020, Sept. 9-12, 2020, Vancouver, Canada

Academic Referee Service

- IEEE ACCESS
- IEEE Networks
- IEEE Wireless Communication Letters
- IEEE Systems Journal
- IEEE Transactions on Aerospace and Electronic Systems
- IEEE Transactions on Sustainable Computing
- IEEE Journal on Selected Areas in Communication
- IEEE Transactions on Vehicular Technology
- IEEE Transactions on Mobile Computing
- IEEE Transactions on Signal Processing
- Telecommunication Systems, Springer
- Photonic Network Communications, Springer
- Computer Networks, Elsevier
- Fractals, Elsevier
- Pervasive and Mobile Computing, Elsevier
- Computers and Electronics in Agriculture, Elsevier
- Security and Communication Networks, Wiley
- International Journal of Communication Systems, Wiley
- International Journal of Communication Networks and Distributed Systems, Inderscience
- Journal of Visualized Experiments, JoVE

Books

- B2. S. Misra, C. Roy, **A. Mukherjee**, "Introduction to Industrial Internet of Things and Industry 4.0", CRC Press, USA [Link](#)
- B1. S. Misra, **A. Mukherjee**, A. Roy, "Introduction to IoT", Cambridge University Press, UK [Link](#)

Book Chapters

- BCH1. P. K. Deb, S. Misra, **A. Mukherjee**, A. Bandhopadhyay, "Containing the Spread of COVID-19 with IoT: A Visual Tracing Approach", in *Computational Modelling and Data Analysis in COVID-19 Research*, CRC Press, USA (Accepted).

Articles

- A4. **A. Mukherjee**, S. Goswami, "Visualizing Graphs using PAJEK", PC Quest, Enterprise Solutions, Nov. 2010.
- A3. **A. Mukherjee**, "Creating VB Macros in MS Word", PC Quest, Developer, Dec. 2010.
- A2. **A. Mukherjee**, "Folder Manipulator in VB 6.0", Electronics for You, ISSN No. : 0013- 516x, Sep. 2011.
- A1. N. Pathak, **A. Mukherjee**, "NANOENGINEER- A Virtual Nanotechnology Lab", PC Quest, Hands On, Apr. 2013

Journals

- J30. P. Deb, **A. Mukherjee**, S. Misra, "XiA: Send-it-Anyway Q-Routing for 6G-Enabled UAV-LEO Communications", IEEE Transactions on Network Science and Engineering (selected for publication), May. 2021., (IF=5.213) [Link-TBA](#)
- J29. N. Pathak, P. Deb, **A. Mukherjee**, S. Misra, "IoT-to-the-Rescue: A Survey of IoT Solutions for COVID-19-like Pandemics", IEEE Internet of Things Journal (selected for publication), May. 2021., (IF=11.75) [Link-TBA](#)
- J28. S. Misra, P. Deb, **A. Mukherjee**, "Latency-Aware Horizontal Computation Offloading for Parallel Processing in Fog-Enabled IoT", IEEE Systems Journal (selected for publication), May. 2021., (IF=4.463) [Link-TBA](#)
- J27. P. Deb, **A. Mukherjee**, S. Misra, "CovChain: Blockchain-Enabled Identity Preservation and Anti-Infodemics for COVID-19", IEEE Network Magazine (selected for publication), May. 2021., (IF=8.808) [Link-TBA](#)
- J26. G. Hawkrige, **A. Mukherjee**, D. McFarlane, Y. Tlegenov, A. K. Parlikad, N. J. Reyner, A. Thorne, "Monitoring on a Shoestring: Low Cost Solutions for Digital Manufacturing", IFAC Annual Reviews in Control, Elsevier, (selected for publication), Mar. 2021., (IF=4.987) [Link-TBA](#)
- J25. S. Misra, P. Deb, **A. Mukherjee**, "Channel Modeling of IoT Phantom Networks: Communications in the THz Band", Transactions of the Indian National Academy of Engineering, Springer Nature, [accepted-Jan. 2021.](#) [Link-TBA](#)
- J24. N. Pathak, S. Misra, **A. Mukherjee**, N. Kumar, "HeDI: Healthcare Device Interoperability for IoT-Based e-Health Platforms", IEEE Internet of Things Journal. [accepted- Jan. 2021.](#) (IF=11.75) [Link-TBA](#)
- J23. P. Deb, S. Misra, T. Sarkar, **A. Mukherjee**, "Magnum: A Distributed Framework for Enabling Transfer Learning in 5G-Enabled Industrial-IoT", IEEE Transactions on Industrial Informatics, [accepted- Dec. 2020.](#) (IF=8.48) [Link-TBA](#)
- J22. S. Misra, S. Rachuri, P. Deb, **A. Mukherjee**, "Multi-Armed Bandit-based Decentralized Computation Offloading in Fog-Enabled IoT", IEEE Internet of Things Journal, [accepted- Dec. 2020.](#) (IF=11.75) [Link-TBA](#)

- J21. S. Misra, P. Deb, N. Koppala, **A. Mukherjee**, S. Mao, "S-Nav: Safety-Aware IoT Navigation Tool for Avoiding COVID-19 Hotspots", *IEEE Internet of Things Journal*, **accepted- Nov. 2020**. (IF=11.75) [Link](#)
- J20. S. Misra, **A. Mukherjee**, A. Roy, N. Saurabh, Y. Rahulamathavan, M. Rajarajan, "Blockchain at the Edge: Performance of Resource-Constrained IoT Networks", *IEEE Transactions on Parallel and Distributed Systems*, July 2020. (IF=4.64) [Link](#)
- J19. S. Misra, A. Roy, C. Roy, **A. Mukherjee**, "DROPS: Dynamic Radio Protocol Selection for Energy-Constrained Wearable IoT Healthcare", *IEEE Journal of Selected Areas in Communications (JSAC), Special issue on Internet of Things for in-home health monitoring*, Apr. 2020. (IF=7.172) [Link](#)
- J18. N. Pathak, **A. Mukherjee**, S. Misra, "AerialBlocks: Blockchain-Enabled UAV Virtualization for Industrial IoT", *IEEE Internet of Things Magazine, Special Issue on Blockchain-Enabled IIoT*, Mar. 2020. [Link-TBA](#)
- J17. N. Pathak, S. Misra, **A. Mukherjee**, A. Roy, A. Zomaya "UAV Virtualization for Enabling Heterogeneous and Persistent UAV-as-a-Service", *Transactions on Vehicular Technology, IEEE*, Apr. 2020. (IF=5.339) [Link](#)
- J16. **A. Mukherjee**, S. Misra, V.S.P.Chandra, N. S. Raghuwanshi, "ECoR: Energy-Aware Collaborative Routing for Task Offload in Sustainable UAV Swarms", *Transactions on Sustainable Computing, IEEE*, Feb. 2020. (IF=2.456) [Link](#)
- J15. D. Bhattacharya, S. Misra, N. Pathak, **A. Mukherjee**, "IDeA: IoT-Based Autonomous Aerial Demarcation and Path-planning for Precision Agriculture", *Transactions on IoT, ACM*, Jan. 2020. [Link](#)
- J14. S. Misra, **A. Mukherjee**, "Phantom Networks: The Intangible Shoot-and-Scoot Communication Paradigm For Future Militaries", *IEEE Communications Magazine*, Feb. 2020. (IF=11) [Link](#)
- J13. **A. Mukherjee**, S. Misra, A. Sukrutha, N. S. Raghuwanshi "Distributed Aerial Processing for IoT-Based Edge UAV Swarms in Smart Farming", *Computer Networks (SI), Elsevier*, Published- Nov. 2019, DOI: <https://doi.org/10.1016/j.comnet.2019.107038>. (IF=3.03) [Link](#)
- J12. **A. Mukherjee**, S. Misra, N. S. Raghuwanshi, "A Survey of Unmanned Aerial Sensing Solutions in Precision Agriculture", *JNCA, Elsevier*, pp.102461, Oct 2019 DOI: 10.1016/j.jnca.2019. 102461 (IF=5.273) [Link](#)
- J11. **A. Mukherjee**, S. Misra, A. Atrish, "MiND: Mind Networked Device Architecture for Attention-Gated Ambient Assisted Living Systems", *IEEE Systems Journal*, Accepted- Mar 2019. (IF=4.463) [Link](#)
- J10. **A. Mukherjee**, S. Misra, V. S. P. Chandra, M. Obaidat, "Resource-Optimized Multi-Armed Bandit Based Offload Path Selection in Edge UAV Swarms", *IEEE IoT Journal (Special Issue on Advanced Computational Technologies in Mobile Edge Computing for Internet of Things)*, Nov. 2018. (IF=11.75) [Link](#)
- J9. **A. Mukherjee**, S. Misra, N. S. Raghuwanshi, S. Mitra, "Blind Entity Identification for Agricultural IoT Deployments", *IEEE IoT Journal*, vol.6, no. 2, pp. 3156–3163, Accepted- Oct 2018. (IF=11.75) [Link](#)
- J8. S. Misra, **A. Mukherjee**, A. Roy, "Knowledge Discovery for Enabling Smart Internet-of-Things: A Survey", *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, 8.6 (2018): e1276. (IF=2.541) [Link](#)
- J7. S. Misra, S. Goswami, C. Taneja, **A. Mukherjee**, Mohammad Obaidat, "A PKI Adapted Model for Secure Information Dissemination in Industrial Control and Automation 6LoWPANs", *IEEE ACCESS*, vol.3, no., pp.875,889, 2015, DOI: 10.1109/ACCESS.2015.2445817. (IF=4.095) [Link](#)
- J6. S Goswami, S Misra, C Taneja, **A. Mukherjee**, "Design and Implementation Analysis of a Public Key Infrastructure- enabled Security Framework for Zigbee Sensor Network", *International Journal of Communication Systems (IJCS)*, Int. J. Commun. Syst. (2014), Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/dac.2893, Nov 2014. [Link](#)
- J5. U. N. Thakur, S. Saha, **A. Mukherjee**, "A Proposed Architecture for Residue Number System based 1D 5/3 Discrete Wavelet Transform using Filter Bank and Lifting Scheme." *International Journal of Computer Applications*, Vol. 90, No.14, 2014.

- J4. **A. Mukherjee**, N. Pathak, A. Roy, "Heart Murmur Detection using Fractal Analysis of Phonocardiograph Signals." *International Journal of Computer Applications*, Vol. 88, No.12, 2014.
- J3. A. Roy, **A. Mukherjee**, "An Analysis of the Viability of using Katz Algorithm in differentiating Normal Heart Sounds from Cardiac Murmurs." *American Journal of Electronics & Communication*, Vol. 1, No.2, pp. 32-36, 2014.
- J2. **A. Mukherjee**, S. Chatterjee, K. Chatpadhyay, K. K. Ghosh, "A comparative study on the accuracy of ecg detection for arrhythmia by different wavelet families." *IEMIJMT*, Vol. 2, No.1, pp. 93-98, 2012.
- J1. S. Goswami, **A. Mukherjee**, A. Gupta, M. Kharbanda, P. Soni. "Visualization of Relationship among Library Users based on Circulation Data". *Defence Scientific Information and Documentation Centre Journal of Library and Information Technology (DJLIT)*, Vol. 30, No. 2, ISSN No. : 0974-0643. March 2010. [Link](#)

Conferences

- C14. F. Gazi, S. Misra, N. Ahmed, **A. Mukherjee**, N. Kumar, "UnRest: Underwater Reliable Acoustic Communication for Multimedia Streaming", IEEE GLOBECOM 2020, Dec 2020, Taipei, Taiwan. [Link-TBA](#)
- C13. N. Pathak, **A. Mukherjee**, S. Misra, "Reconfigurable Wearables for an Interoperable Healthcare IoT Framework", IEEE INFOCOM 2020, Jul 2020, Toronto, Canada. [Link-TBA](#)
- C12. S. Misra, P. Deb, N. Pathak, **A. Mukherjee**, "Blockchain-Enabled SDN for Securing Fog-Based Resource-Constrained IoT", IEEE INFOCOM 2020 Workshop (BlockSecSDN: Block-chain for Secure Software defined Networking in Smart Communities), Jul 2020, Toronto, Canada. [Link-TBA](#)
- C11. P. Deb, **A. Mukherjee**, S. Misra, A. Jamalipour "SkopEdge: A Traffic-Aware Edge-Based Auscultation Sound Monitor", IEEE ICC 2020, Jun 2020, Dublin, Ireland. [Link-TBA](#)
- C10. S. Misra, **A. Mukherjee**, A. Rehman, N. S. Raghuwanshi, "ROSE: Random Opportunistic and Selective Exploration for Cooperative Edge Swarm of UAVs", IEEE COMSNET 2020, Bengaluru, Jan 2020, India. [Link](#)
- C9. **A. Mukherjee**, S. Misra, N. Daw, D. Paul, "Fog-Based Visual Gesture Control and External Stabilization for micro-UAVs", IEEE Wireless Communications and Networking Conference (WCNC), Marrakech, Morocco, Apr. 2019. [Link](#)
- C8. **A. Mukherjee**, N. Pathak, S. Misra, S. Mitra, "Predictive Intra-Edge Packet-Source Mapping in Agricultural Internet of Things", IEEE Workshop on Communication, Computing, and Networking in Cyber Physical Systems, IEEE Globecom 2018, Abu Dhabi, Dec. 2018. [Link](#)
- C7. **A. Mukherjee**, S. Misra, N. S. Raghuwanshi, "SPA: A Sense-Predict-Actuate TDMA Latency Reduction Scheme in Networked Quadrotors", IEEE Wireless Communications and Networking Conference (WCNC), Apr. 2018, Barcelona, Spain. [Link](#)
- C6. **A. Mukherjee**, S. Misra, P. Khandelwal, "R2D2: Rotating-turret 2D-scanning and Dead-reckoning for Remotely Operated Rovers over Resource Constrained Network Systems", IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Dec. 2017, Bhubaneswar, India. [Link](#)
- C5. **A. Mukherjee**, S. Misra, P. Mangrulkar, Muttukrishnan Rajarajan, and Yogachandran Rahulamathavan, "SmartARM: A Smartphone-based Group Activity Recognition and Monitoring Scheme for Military Applications", IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Dec. 2017, Bhubaneswar, India [Link](#)
- C4. S. Misra, **A. Mukherjee**, D. Pal, S. Dalal, "u-OCEAN: An Underwater Omnidirectional Communication Environment using Acoustic Sensor Nodes", IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Dec. 2017, Bhubaneswar, India [Link](#)

- C3. S Goswami, S Misra, C Taneja, **A. Mukherjee**, “Securing Intra-communication in 6LoWPAN: A PKI Integrated Scheme”, IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), 2014, vol., no., pp.1,5, 14-17 Dec. 2014, doi: 10.1109/ANTS.2014.7057265. [Link](#)
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