

AYAN MONDAL

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Present Address

Department of Computer Science and Engineering
Indian Institute of Technology Kharagpur
Kharagpur - 721302

Permanent Address

Ashrampara (Teachers' Colony)
Basirhat, North 24 Parganas
West Bengal - 743411

Education

<i>Doctor of Philosophy, TCS Fellow</i> , Department of Computer Science and Engineering Indian Institute of Technology Kharagpur	Present
<i>Master of Science (by Research)</i> , School of Information Technology Indian Institute of Technology Kharagpur Thesis: <i>Distributed Energy Management in Smart Grid</i> Grade: 9.73	2015
<i>Bachelor of Technology</i> , Electronics and Communication Engineering St. Thomas' College of Engineering and Technology West Bengal University of Technology Grade: 8.99	2012
<i>Higher Secondary</i> , Pure Science West Bengal Council of Higher Secondary Education Percentage: 84.57	2008
<i>Secondary</i> , West Bengal Board of Secondary Education Percentage: 92	2006

Research Interests

Cloud, Big Data, Big Data Networking, Energy Management, Smart Grid Networking, Smart Grid Communication, Wireless Networks

Publications

Journals

- **A. Mondal**, S. Misra, and M. S. Obaidat, "Distributed Home Energy Management System with Storage in Smart Grid Using Game Theory," *IEEE Systems Journal*, 2015, DOI: 10.1109/JSYST.2015.2421941. [Published on May 22, 2015]
- **A. Mondal** and S. Misra, "Game-Theoretic Energy Trading Network Topology Control for Electric Vehicles in Mobile Smart Grid," *IET Networks*, 2014, DOI: 10.1049/iet-net.2014.0089. [Available online: January 7, 2015]
- S. Misra, T. Ojha, and **A. Mondal**, "Game-theoretic Topology Control for Opportunistic Localization in Sparse Underwater Sensor Networks," *IEEE Transactions on Mobile Computing*, vol. 14, no. 5, July 2014.

- S. Misra, G. Mali, and **A. Mondal**, “Distributed topology management for wireless multimedia sensor networks: exploiting connectivity and cooperation,” *International Journal of Communication Systems*, vol.27, no. 3, March 2014.
- S. Misra, S. Bera, **A. Mondal**, R. Tirkey, H.C. Chao, and S. Chattopadhyay, “Optimal Gateway Selection in Sensor-Cloud Framework for Health Monitoring,” *IET Wireless Sensor Systems*, vol. 3, no. 4, December 2013.

Conferences

- **A. Mondal** and S. Misra, “Game-theoretic Green Electric Vehicle Energy Networks Management in Smart Grid,” in *IEEE Advanced Networks and Telecommunication Systems (ANTS)*, Kolkata, India, December 2015.
- **A. Mondal** and S. Misra, “Dynamic Data Aggregator Unit Selection in Smart Grid: An Evolutionary Game Theoretic Approach,” in *Proceedings of the 11th IEEE India Conference on Emerging Trends and Innovation in Technology (INDICON)*, Pune, India, December 2014, pp. 1-6.
- **A. Mondal** and S. Misra, “Game-Theoretic Distributed Virtual Energy Cloud Topology Control for Mobile Smart Grid,” in *Proceedings of the 6th IEEE International Conference on Cloud Computing Technology and Science (CloudCom)*, Singapore, December 2014, pp. 54-61.
- A. Roy, **A. Mondal**, and S. Misra, “Connectivity Re-establishment in the Presence of Dumb Nodes in Sensor-Cloud Infrastructure: A Game Theoretic Approach,” in *Proceedings of Emerging Issues in Cloud (EIC) workshop in conjunction with the 6th IEEE International Conference on Cloud Computing Technology and Science (CloudCom)*, Singapore, December 2014, pp. 847-852.
- S. Misra, **A. Mondal**, S. Banik, M. Khatua, S. Bera, and M. S. Obaidat, “Residential Energy Management in Smart Grid: A Markov Decision Process-Based Approach,” in *Proceedings of IEEE International Conference on Internet of Things (iThings)*, Beijing, China, August 2013, pp. 1152-1157.
- **A. Mondal** and S. Misra, “Dynamic Coalition Formation in a Smart Grid: A Game Theoretic Approach,” in *Proceedings of IEEE International Workshop on Smart Communication Protocols and Algorithms (SCPA) in conjunction with IEEE International Conference on Communications (ICC)*, Budapest, Hungary, June 2013, pp. 1067-1071.

Memberships

Association for Computing Machinery (ACM) Student Member

Institute of Electrical and Electronics Engineers (IEEE) Student Member

IEEE Young Professionals

IEEE Communications Society

Referee Services

- Reviewer of IEEE Students Technology Symposium (IEEE TechSym), 2014
- Advancement on Mechanical and Manufacturing Engineering Technology (ADMMET), 2015
- Peer-reviewed multiple articles for International Journal of Communication Networks and Distributed Systems (Inderscience) (Springer)
- Peer-reviewed multiple articles for IEEE Communications Magazine

- Peer-reviewed multiple articles for Wireless Communications and Mobile Computing (WCMC) (Wiley)

Conference Chairmanship

- **Technical Program Co-Chair**, IEEE Students' Technology Symposium (TechSym), 2016
- **Technical Program Committee Member**, International Conference on Solar Energy & Building (ICSxEB), 2015
- **Technical Program Committee Member**, International Conference on Engineering & Computational Innovation Sciences (ENCINS), 2015
- **Technical Program Committee Member**, World Symposium on Mechatronics Engineering & Applied Physics (WSMEAP), 2015
- **Technical Program Committee Member**, Global Summit on Computer & Information Technology (GSCIT), 2015
- **Technical Program Committee Member**, International Conference on Single Processing & Data Mining (ICSPDM), 2015
- **Technical Program Committee Member**, Advancement on Mechanical and Manufacturing Engineering Technology (ADMMET), 2015

Teaching Assistantship

Underwater Sensor Networks: Theory and Simulations
Short-term Course
NPOL, DRDO
Sponsored by: DRDO

April 2016

Internet and Web-based Technologies
Department of Computer Science and Engineering
Indian Institute of Technology Kharagpur

January 2016 – May 2016

Professional Experience

Indian Institute of Technology Kharagpur
Sponsored Research and Industrial Consultancy
Sponsored by: DRDO

February 2016
(Senior Research Fellow)

Indian Institute of Technology Kharagpur
Sponsored Research and Industrial Consultancy
Sponsored by: DietY

August 2014 – January 2016
(Senior Project Officer)

Indian Institute of Technology Kharagpur
Sponsored Research and Industrial Consultancy
Sponsored by: DietY

August 2013 – July 2014
(Junior Project Officer)

Indian Institute of Technology Kharagpur
Sponsored Research and Industrial Consultancy
Sponsored by: DietY

August 2012 – July 2013
(Junior Project Assistant)

Technical Skills

- **Programming Languages:** C, C++, MATLAB, Java
- **Network Simulators:** NS-2 (basics), NS-3 (basics)
- **Web Technologies:** JavaScript, jQuery, CSS
- **Databases:** MySQL
- **Data Analytics:** Hadoop, R
- **Tools:** Latex, GnuPlot, Eclipse

Awards:

- **Merit scholarship** by Government of India Ministry of Human Resource Development Department of Higher Education for exemplary performance in Secondary Examination.
- **Merit scholarship** by Government of India Ministry of Human Resource Development Department of Higher Education based on performance in Higher Secondary Examination.
- **Winner** in *Poster presentation* on the 6th Research Scholars' Day 2015 of School of Information Technology, Indian Institute of Technology Kharagpur.
- **Institute** (Indian Institute of Technology Kharagpur) **Full Financial Grant** for the 11th IEEE India Conference on Emerging Trends and Innovation in Technology (INDICON), Pune, India, December 2014.
- **Institute** (Indian Institute of Technology Kharagpur) **Full Financial Grant** for the 6th IEEE International Conference on Cloud Computing Technology and Science (CloudCom), Singapore, December 2014.
- **TCS Fellowship** by TCS Research Scholar Program, 2015.

Achievements:

- **Ranked** 49th in *Secondary Examination* from State - West Bengal, India.
- **Ranked** 3rd in *Secondary Examination* from District - North 24 Parganas, West Bengal, India.
- **Elected** *Student Senate Member* (SSM) and *Vice-President* (VP) of Vikram Sarabhai Residential Complex, Indian Institute of Technology Kharagpur, Kharagpur, West Bengal, India for academic year 2014-2015.
- **Served** as *Departmental Research Scholar Representative* of School of Information Technology, Indian Institute of Technology Kharagpur for academic year 2014-2015.
- **Organizing team member** of *International Summer and Winter Term* (ISWT) *course* on “Enabling Internet of Things with Cloud and Big Data Networking” at Indian Institute of Technology Kharagpur, June 2015.
- **Organizing team member** of *AICTE/QIP Sponsored Short-term course* on “Internet of Things: Convergence of Sensing, Cloud and Big-Data Networking” at Indian Institute of Technology Kharagpur, July 2015.
- **Served** as *Departmental Research Scholar Representative* of School of Information Technology, Indian Institute of Technology Kharagpur for academic year 2015-2016.