

# HAROON RASHID LONE

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## RESEARCH INTERESTS

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Internet-of-Things (IoT), Machine Learning, Data Science, Energy Sustainability, Smart Healthcare

## EDUCATION

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Indraprastha Institute of Information Technology Delhi (IIIT-D) Ph.D. in Computer Science	Delhi, India <i>2014 – 2019</i>
National Institute of Technology Rourkela Master's in Computer Science	Odisha, India <i>2011 – 2013</i>
University of Jammu Bachelor's in Information Technology	Jammu, India <i>2006 – 2010</i>

## PhD THESIS

*Title:* Detecting Anomalous Energy Consumption in Buildings Using Smart Meter Data  
*Advisor:* Prof. Pushpendra Singh

The thesis

- Presents techniques for identifying electrical energy wastage instances in buildings using smart-meters
- Evaluates energy disaggregation approaches for identifying appliances causing energy wastage
- Produces a four-year context-rich energy dataset collected from seven buildings of IIIT Delhi

## MASTER'S THESIS

*Title:* Localization in Wireless Sensor Networks  
*Advisor:* Prof. Ashok K. Turuk

This thesis presents techniques for localizing mobile wireless sensor nodes with minimum number of beacon nodes installed with a GPS unit.

## WORK EXPERIENCE

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Visiting Assistant Professor, University of South Dakota Department of Computer Science	South Dakota, USA <i>Aug., 2020 - present</i>
Postdoctoral Researcher, University of Virginia <i>Advisor: Prof. Laura Barnes</i>	Virginia, USA <i>May, 2019 - Aug., 2020</i>
Visiting Researcher, University of Strathclyde <i>Advisors: Prof. Vladimir Stankovic, Prof. Lina Stankovic</i>	Scotland, UK <i>Nov., 2017 - April, 2018</i>
Visiting Researcher, IIT Bombay <i>Advisor: Prof. Krithi Ramamritham</i>	Mumbai, India <i>Oct. - Dec., 2016</i>
Research Associate, IIIT Delhi <i>Advisor: Prof. Pushpendra Singh</i>	Delhi, India <i>Aug. - Dec., 2013</i>

## PUBLICATIONS

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### Journals

- **H. Rashid**, P. Singh, A. Singh. “I-BLEND, a Campus Scale Commercial and Residential Buildings Electrical Energy Dataset,” *Scientific Data, Nature*, 2019. [Impact factor = 6.7]
- **H. Rashid**, P. Singh, V. Stankovic, L. Stankovic. “Can Non-intrusive Load Monitoring be Used for Identifying an Appliances Anomalous Behaviour?” *Applied Energy, Elsevier*, 2019. [Impact factor = 7.9]
- **H. Rashid**, A. K. Turuk. “Dead Reckoning Localization Technique for Mobile Wireless Sensor Networks,” *IET - Wireless Sensor Systems*, 5(2), 2014. [CiteScore = 2.2]
- **H. Rashid**, A. K. Turuk. “Localization of Wireless Sensor Networks Using a Single Anchor Node,” *Wireless Personal communications - Springer*, 72(2), 2013. [Impact factor = 0.9]

### Conferences

- **H. Rashid**, S. Mendu, K. E. Daniel, M. L. Beltzer, B. A. Teachman, M. Boukhechba, L. E. Barnes. “Predicting Subjective Measures of Social Anxiety from Sparsely Collected Mobile Sensor Data.” Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, *IMWUT*, 2020.
- **H. Rashid**, V. Stankovic, L. Stankovic, P. Singh. “Evaluation of Non-Intrusive Load Monitoring Algorithms for Appliance-level Anomaly Detection,” *IEEE ICASSP*, Brighton, UK, 2019.
- **H. Rashid**, N. Batra, P. Singh. “Rimor: Towards Identifying Anomalous Appliances in Buildings,” *ACM BuildSys’18*, Shenzhen, China, 2018. [Acceptance rate = 37%]
- **H. Rashid**, P. Singh. “Monitor: An Abnormality Detection Approach in Buildings Energy Consumption,” *IEEE CIC’18*, Philadelphia, USA, 2018. [Acceptance rate = 26%]
- P. M. Mammen, H. Kumar, K. Ramamritham, **H. Rashid**. “Want to Reduce Energy Consumption, Whom should we call,” *ACM e-Energy’18*, Karlsruhe, Germany, 2018. [Acceptance rate = 22%]
- **H. Rashid**, P. M. Mammen, S. Singh, K. Ramamritham, P. Singh, P. Shenoy. “Want to Reduce Energy Consumption? Don’t Depend on the Consumers!” *ACM BuildSys’17*, Delft, The Netherlands, 2017. [Acceptance rate = 31%]
- **H. Rashid**, P. Singh, K. Ramamritham. “Revisiting Selection of Residential Consumers for Demand Response Programs,” *ACM BuildSys’17*, Delft, The Netherlands, 2017. [Acceptance rate = 31%]

## Posters

- **H. Rashid**, P. Singh. “Energy Disaggregation for Identifying Anomalous Appliance,” *ACM BuildSys’17*, poster session, Delft, The Netherlands, 2017.
- **H. Rashid**, P. Arjuna, P. Singh, A. Singh. “Collect, Compare, and Score: A Generic Data-driven Anomaly Detection Method for Buildings,” *ACM e-Energy’16*, poster session, Waterloo, Canada, 2016.

## HONOURS & AWARDS

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- Received Microsoft travel grant for BuildSys 2018
- Received SIGMOBILE travel grant for BuildSys 2017
- Received TCS Research Fellowship for a duration of 5 years
- Qualified GATE 2011 in Computer Science and Engineering with 96.14 percentile

## TEACHING EXPERIENCE

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- **Instructor** Artificial Intelligence, Fall 2020, University of South Dakota
- **Instructor** Statistical Modeling, Fall 2020, University of South Dakota
- **Instructor** Information Retrieval, Fall 2020, University of South Dakota
- **Instructor** Linear Statistical Modeling, Summer 2020, University of Virginia

## REFERENCES

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### **Pushendra Singh**

Professor  
Dept. of CSE  
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### **Laura Barnes**

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