HAROON RASHID LONE

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RESEARCH INTERESTS

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

CURRENT RESEARCH WORK AT LINK LAB, UVA

I work as a Postdoctoral Researcher in an interdisciplinary project between Engineering, Psychology, and Environment departments of the UVA. The idea is to leverage wearables and mobile technology in identifying digital biomarkers for the detection of social anxiety in college students under natural settings.

EDUCATION

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

PhD THESIS

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

This 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

Postdoctoral Researcher, University of Virginia
Advisor: Prof. Laura Barnes
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Virginia, USA
May, 2019 - Present
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Visiting Researcher, University of Strathclyde
Advisors: Prof. Vladimir Stankovic, Prof. Lina Stankovic
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Scotland, UK
Nov., 2017 - April, 2018
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Visiting Researcher, IIT Bombay
Advisor: Prof. Krithi Ramamritham
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Mumbai, India
Oct. - Dec., 2016
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Research Associate, IIIT Delhi
Advisor: Prof. Pushpendra Singh
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Delhi, India
Aug. - Dec., 2013
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PUBLICATIONS

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**, 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*, Shenzen, 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

- 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

UNDERGRADUATE TEACHING EXPERIENCE

- **Teaching Assistant.** Computer Networks, with Prof. Pushpendra Singh, Fall 2018, IIIT-Delhi.

- **Teaching Assistant.** Advanced Programming, with Prof. Manish Sharotiya, Fall 2014, IIIT-Delhi.

- **Lab Assistant.** C++, with Prof. A. K. Turuk, Spring 2013, NIT Rourkela.

- **Lab Assistant.** Data Structure, with Prof. Ramesh Mohapatra, Fall 2012, NIT Rourkela.

- **Lab Assistant.** System Analysis and Design Lab, with Prof. Sujata Mohanty, Spring 2012, NIT Rourkela.

REFERENCES

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