Nipun **Batra**

PhD. SCHOLAR

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Education

Indraprashta Institute of Information Technology Delhi	*Delhi, India*
PH.D. SCHOLAR, COMPUTER SCIENCE (GPA 9.3/10)	*Jan 2012-Present*
Delhi College of Engineering	*Delhi, India*
BACHELORS OF ENGINEERING (HONS.), COMPUTER SCIENCE (GPA 9/10)	*Jul 2007 -April 2011*

Honors & Awards

2015	**Best presentation award**, Sensys 2015 Doctoral Colloqium	*Seoul, South Korea*
2015	**ACM Travel Grant**, Sensys 2015	*Seoul, South Korea*
2014	**Best demo award**, Buildsys 2014	*Memphis, USA*
2014	**ACM Travel Grant**, eEnergy 2014	*Cambridge, UK*
2012	**PhD Fellowship**, TCS Research and Development	
2012	**Travel and Lodging grant**, Microsoft Research Summer School	*Bangalore, India*
2010	**Systems engineering prize barrel**, AUVSI's student UAS competition	*Maryland, USA*
2009	**Young scientist travel grant**, Department of Science and Technology (Govt. of India)	*Delhi, India*
2009	**Director's award for best effort**, AUVSI's student UAS competition	*Maryland, USA*

Research Experience

IIIT Delhi	*Delhi, India*
GRADUATE RESEARCH ASSISTANT	*Jan. 2012 - Present*
University of Virginia (under Prof. Kamin Whitehouse)	*Charlottesville, Virginia, USA*
VISITING RESEARCHER	*Jul. 2014 - Apr. 2015*
Linux Android Network Systems Lab., DCE	*Delhi, India*
UNDERGRADUATE RESEARCH INTERN	*Dec. 2010 - Jun. 2011*
Unmanned Aircraft Systems Lab., DCE	*Delhi, India*
UNDERGRADUATE RESEARCH ENGINEERING INTERN	*Dec. 2008 - Jul. 2010*

Industrial Experience

Royal Bank of Scotland	*Gurgaon, India*
SOFTWARE ANALYST	*Jun. 2011 - Nov. 2011*
Goldman Sachs	*Bangalore, India*
ENGINEERING INTERN	*Jun. 2010 - Aug. 2010*

Invited Talks

2015	**University of Pennsylvania**, If you can measure it, can you improve it?	*Philadelphia, USA*
2015	**Carnegie Mellon University**, If you can measure it, can you improve it?	*Pittsburgh, USA*

Professional Service

2016	**Steering committee**, 3rd International NILM workshop	*Canada*
2014	**Program committee**, 2nd International NILM workshop	*Austin, Texas, USA*
2012-2016	**External reviewer**, Buildsys 2015, Ubicomp 2015, E-Energy 2015, E-Energy 2014, ASONAM 2013, E-Energy 2013, ICDM 2013, Buildsys 2013	

Publications

Conferences

[C1]   <u>Nipun Batra</u>, Amarjeet Singh, and Kamin Whitehouse. "If You Measure It, Can You Improve It? Exploring The Value of Energy Disaggregation". In: *Proceedings of the second ACM International Conference on Embedded Systems For Energy-Efficient Built Environments*. ACM. 2015.

[C1]   <u>Nipun Batra</u>, Jack Kelly, Oliver Parson, Haimonti Dutta, William Knottenbelt, Alex Rogers, Amarjeet Singh, and Mani Srivastava. "NILMTK: an open source toolkit for non-intrusive load monitoring". In: *Proceedings of the 5th international conference on Future energy systems*. ACM. 2014, pp. 265–276.

[C1]   <u>Nipun Batra</u>, Pandarasamy Arjunan, Amarjeet Singh, and Pushpendra Singh. "Experiences with Occupancy Based Building Management Systems". In: 2013, pp. 153–158.

[C1]   <u>Nipun Batra</u>, Haimonti Dutta, and Amarjeet Singh. "INDiC: Improved Non-Intrusive load monitoring using load Division and Calibration". In: 2013.

Workshops

[W1]   Oliver Parson, Grant Fisher, April Hersey, <u>Nipun Batra</u>, Jack Kelly, Amarjeet Singh, William Knottenbelt, and Alex Rogers. *Dataport and NILMTK: a building data set designed for non-intrusive load monitoring*. 2015.

[W1]   <u>Nipun Batra</u>, Manoj Gulati, Amarjeet Singh, and Mani B Srivastava. *It's Different: Insights into home energy consumption in India*. ACM, 2013.

[W1]   Pandarasamy Arjunan, <u>Nipun Batra</u>, Haksoo Choi, Amarjeet Singh, Pushpendra Singh, and Mani B. Srivastava. *SensorAct: A Privacy and Security Aware Federated Middleware for Building Management*. Toronto, Ontario, Canada, 2012. DOI: 10.1145/2422531.2422547. URL: http://doi.acm.org/10.1145/2422531.2422547.

Posters and Demos

[P1]   <u>Nipun Batra</u>, Manoj Gulati, Puneet Jain, Kamin Whitehouse, and Amarjeet Singh. *Bits and watts: improving energy disaggregation performance using power line communication modems: poster abstract*. ACM, 2014.

[P1]   Jack Kelly, <u>Nipun Batra</u>, Oliver Parson, Haimonti Dutta, William Knottenbelt, Alex Rogers, Amarjeet Singh, and Mani Srivastava. *Demo abstract: NILMTK v0. 2: A Non-intrusive Load Monitoring Toolkit for Large Scale Data Sets*. 2014.

[P1]   Pandarasamy Arjunan, Manaswi Saha, Manoj Gulati, <u>Nipun Batra</u>, Amarjeet Singh, and Pushpendra Singh. *SensorAct: Design and Implementation of Fine-grained Sensing and Control Sharing in Buildings*. 2013.

Tech. report

[R1]   <u>Nipun Batra</u>. *Non Intrusive Load Monitoring: Systems, Metrics and Use Cases*. 2015, pp. 501–502.

[R1]   <u>Nipun Batra</u>, Rishi Baijal, Amarjeet Singh, and Kamin Whitehouse. *How good is good enough? Re-evaluating the bar for energy disaggregation*. 2015.

[R1]   <u>Nipun Batra</u>, Amarjeet Singh, and Kamin Whitehouse. *Neighbourhood NILM: A Big-data Approach to Household Energy Disaggregation*. 2015.

[R1]   <u>Nipun Batra</u>, Amarjeet Singh, Pushpendra Singh, Haimonti Dutta, Venkatesh Sarangan, and Mani Srivastava. *Data Driven Energy Efficiency in Buildings*. 2014.