Manaswi Saha

PhD Student in Computer Science

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Research Interests

Human Computer Interaction, Urban Informatics, Accessibility, Ubiquitous Computing, Internet of Things, Technology for Development

Education

University of Maryland, College Park — *College Park, USA*
Ph.D. in Computer Science (Advisor: Prof. Jon Froehlich) — *August 2015 - Present*
Dean's Fellowship 2015 - 2017

Vellore Institute of Technology (VIT) University — *Vellore, India*
Master of Computer Applications (MCA) — *July 2009 – May 2012*
Top 3 in the MCA batch of 2012

University of Mumbai — *Mumbai, India*
Bachelor of Science – Information Technology (B.Sc.IT) — *June 2006 – April 2009*
Top 3 in the B.Sc.IT batch of 2009

Honors & Awards

2016	**ACM-W Scholarship** ACM CHI 2016	*San Jose, USA*
2016	**CRA-W Grad Cohort Participation Grant** Grad Cohort Workshop 2016	*San Diego, USA*
2015	**Dean's Fellowship** University of Maryland, College Park (2015 – 2017)	*College Park, USA*
2014	**Microsoft Research India Travel Grant** ACM e-Energy 2014	*Cambridge, UK*
2012	**Merit Scholarship** VIT University (2009 – 2012)	*Vellore, India*
2012	**Certificate of Merit** Top 1% MCA batch (2009 - 2012)	*Vellore, India*
2009	**Certificate of Merit** Top 1% B.Sc.IT batch (2006 – 2009)	*Mumbai, India*
2009	**Certificate of Merit** 1st position for Final year B.Sc.IT Project	*Mumbai, India*

Publications

Peer-reviewed Conference Papers

2017   [P.5]   **Exploring Novice Approaches to Smartphone-Based Thermographic Energy Auditing: A Field Study**
Matthew L Mauriello, **Manaswi Saha**, Erica Brown, Jon E. Froehlich
ACM CHI 2017. Denver, USA. *(Acceptance Rate: 25% [606/2424])*

2015   [P.4]   **SensorAct: A Decentralized and Scriptable Middleware for Smart Buildings**
Pandarasamy Arjunan, **Manaswi Saha**, Haksoo Choi, Manoj Gulati, Amarjeet Singh, Pushpendra Singh, Mani B. Srivastava
IEEE UIC 2015. Beijing, China. *(Acceptance Rate: 30.6%)*

2014   [P.3]   **WattShare: Detailed Energy Apportionment in Shared Living Spaces within Commercial Buildings**
Shailja Thakur, **Manaswi Saha**, Amarjeet Singh, Yuvraj Agarwal
ACM BuildSys 2014. Memphis, USA. *(Acceptance Rate: 27%)*

     [P.2]   **EnergyLens: Combining Smartphones with Electricity Meter for Accurate Activity Detection and User Annotation**
Manaswi Saha, Shailja Thakur, Amarjeet Singh, Yuvraj Agarwal
ACM e-Energy 2014. Cambridge, UK. *(Acceptance Rate: 20%)*

| 2012 | [P.1] | **Bandwidth Management Framework for Multicasting in Wireless Mesh Networks**
Manaswi Saha, P. Venkata Krishna
IJIEE 2012. Vol. 2, No. 3. |

Peer-reviewed Extended Abstracts and Workshops

| 2016 | [EA.2] | **The Future Role of Thermography in Human-Building Interaction**
Matthew L. Mauriello, M. Dahlhausen, E. Brown, **Manaswi Saha**, Jon E. Froehlich
CHI 2016 Workshop: Future of Human-Building Interaction. San Jose, USA. |

| 2013 | [EA.1] | **SensorAct: Design and Implementation of Fine-grained Sensing and Control Sharing in Buildings**
Pandarasamy Arjunan, **Manaswi Saha**, Manoj Gulati, Nipun Batra, Amarjeet Singh, Pushpendra Singh
USENIX NSDI 2013. Poster. Lombard, USA. |

Patents

| 2017 | [Pa.1] | **Digital Content Output Control in a Physical Environment Based on a User Profile**
Manaswi Saha, Tom Jacobs, David Tompkins, Peter Fransen
Adobe Research. Filed in February 2017. Patent Pending. |

Talks and Conference Presentations

| 2017 | [T.4] | **Project Sidewalk: Assessing Urban Accessibility using Crowdsourcing and Google Street View**
Manaswi Saha, Jon Froehlich
HCIL Symposium 2017. College Park, Maryland. May 2017. |

| 2016 | [T.3] | **Interactive Computational Tools For Accessibility**
Manaswi Saha, Ladan Najafizadeh, Meethu Malu, Uran Oh, Lee Stearns
UMD Diversity in Computing Summit. College Park, Maryland. November 2016. |
| | [T.2] | **Tech+Design: Interaction Design For A Purpose**
Majeed Kazemitabaar, Soheil Behnezhad, **Manaswi Saha**, Liang He
Technica: Tech+X Talk Series. College Park, Maryland. November 2016. |

| 2014 | [T.1] | **EnergyLens: Combining Smartphones with Electricity Meter for Accurate Activity Detection and User Annotation**
Manaswi Saha, Shailja Thakur, Amarjeet Singh, Yuvraj Agarwal
Fifth International Conference on Future Energy Systems (ACM e-Energy). Cambridge, UK. June 2014. |

Research Experience

University of Maryland — *College Park, USA*
Graduate Research Assistant — *August 2016 – present*
Advisor: Prof. Jon Froehlich

Adobe Research — *San Jose, USA*
Research Intern — *May 2016 – August 2016*
Mentors: Tom Jacobs and David Tompkins

Indraprastha Institute of Information Technology, Delhi — *New Delhi, India*
Research Associate — *November 2012 – July 2015*
Advisor: Prof. Amarjeet Singh

Teaching Experience

University of Maryland, College Park   *College Park, USA*

Graduate Teaching Assistant   *August 2015 – May 2016*

Department of Computer Science

  CMSC132: Object-Oriented Programming II   *Spring 2016*
  CMSC131: Object-Oriented Programming I   *Fall 2015*

Mentorship

2017   Sage Chen, Sophomore, University of Michigan

           Aditya Dash, Senior, University of Maryland

           Steven Bower, Senior, University of Maryland

           Chirag Shankar, Junior, University of Maryland

           Ryan Holland, Senior, Montgomery Blair High School

           Anthony Li, Freshman, University of Maryland

           Maria Furman, Senior, University of Maryland

           Ji Hyuk Bae, Freshman, University of Maryland

Service

2016   Adobe Girls Who Code Mentor

2016   ACM CHI16 Student Volunteer

Courses Taken

University of Maryland, College Park

CMSC723: Computational Linguistics I, CMSC733: Computer Processing of Pictorial Information, CMSC838L: HCI Reading Seminar, CMSC818D: Human Factors in Security and Privacy, CMSC818G: Information Centric Design of Systems, CMSC634: Empirical Research Methods in Computer Science

VIT University (selected ones)

Discrete Mathematics, Data Structures, Operating Systems, Algorithm Analysis and Design, Pervasive Computing, Mobile Computing, Software Engineering, Database Management Systems, Open Source Programming, Computer Networks

Technical Skills

Programming Languages   ♥ Python, Java, C, C++, HTML/CSS, Shell Scripting, JavaScript

Data Analysis Tools   Python (pandas, numpy, matplotlib, sklearn)

Web Frameworks   Django, Play

Database Tools   MySQL, PostgreSQL, MongoDB

Software Tools   Latex, Github, Eclipse