

# PUSHPENDRA SINGH

Professor, Department of Computer Science and Engineering  
Founding Head, Center for Design and New Media  
(A TCS Foundation Initiative supported by Tata Consultancy Services)  
A-411, R&D Block  
IIIT-Delhi, Okhla III, New Delhi-20, India  
<http://www.pushpendrasingh.org>

Phone : +91 11 26907 458  
Email : [psingh@iiitd.ac.in](mailto:psingh@iiitd.ac.in)  
Alt : [singh.pushpendra@outlook.com](mailto:singh.pushpendra@outlook.com)

---

## EDUCATION

Degree	Discipline	Place	Year
Ph.D.	Computer Science & Engineering	Inria-Rennes, France	2004
M.Tech.	Computer Science & Engineering	IIT-Delhi, India	2000
B.Tech.	Computer Science & Engineering	IET, MJP Rohilkhand University, India	1999

## WORK EXPERIENCE - POSITIONS HELD

Designation	Place	Duration
Professor	Computer Science & Engineering, IIIT-Delhi	January, 2019 - Present
Founding Head	Center for Design and New Media, IIIT-Delhi	2018 - 2020
Founding Head	Dept. of Human-Centered Design, IIIT-Delhi	2018 - 2020
Associate Professor	Computer Science & Engineering, IIIT-Delhi	April, 2014 - Dec. 2018
Associate Dean (IRD)	IIIT-Delhi	April, 2014 - March 2017
Assistant Professor	Computer Science & Engineering, IIIT-Delhi	Oct. 2009 - April, 2014
Ingénieur Expert	Inria-Rocquencourt, France	Jan. 2008 - Oct. 2009
Research Associate	Newcastle University, UK	Dec. 2005 - Sep. 2007
Research Fellow	Portsmouth University, UK	Sep. 2004 - Aug. 2005

---

## AWARDS & HONORS

1. Recipient of Bill & Melinda Gates Foundation Award of \$100,000 for project on creating learning platform for community health workers.
2. Visvesvaraya Young Faculty Fellow, 2016 - 2021.
3. Institute-wide Outstanding Educator Award by the graduating batch of 2019 (UG+PG).
4. Institute-wide Outstanding Educator Award by the graduating batch of 2018 (UG+PG).
5. Institute-wide Outstanding Educator Award by the graduating batch of 2015 (UG+PG).
6. Teaching Excellence Letter for the course of Programming Cloud Services for Mobile Applications, 2016.

7. Teaching Excellence Letter for the course of Operating Systems, 2015.
8. Teaching Excellence Letter for the course of Programming Cloud Services for Mobile Applications, 2015.
9. Teaching Excellence Letter for the course of Operating Systems, 2013.
10. Teaching Excellence Letter for the course of Operating Systems, 2012.
11. Teaching Excellence Letter for the course of Computer Networks, 2012.

## GRANTS RECEIVED [ ~ 5 Crore INR or \$0.70 million in last 10 years as Principal Investigator]

---

### Ongoing

1. *“Design and Innovation Capacity Building in India/ DESINNO”*, I wrote the project and I am the PI and LEAR from IIIT-Delhi. The grant for IIIT Delhi is 148,1000 euros or 1.18 crore INR. The total grant (for 6 institutes) is 830,795 euros. It is one of the best opportunity to develop the design program and capacity building for IIIT-Delhi.
2. *“A Mobile-Based Training Platform for ASHA workers”*, Phase 1 : \$ 100,000, Bill & Melinda Gates Foundation, GCE Round 20, May 2018 - Dec. 2019. The Phase 2 award is \$ 1 million for three years (subject to successful completion of phase 1). *Only 35 awards were given to recipients from 17 countries out of 1500+ applications.* I am the sole investigator for the project.
3. *“NIHR Global Health Research Group on Psychosis Outcomes : the Warwick-India-Canada WIC Network”*, 43,20,000 INR, NIHR, UK Feb. 2018 - Feb. 2021. It is a multi-institutional project between UK, Canada, and India - The Warwick University is the lead team overall and AIIMS leads the Indian side; I am the PI from IIITD.
4. A proposal under SPARC scheme entitled *“Framework for Developing Training Model to Strengthen Diabetic Retinopathy Screening and Research in North India”*.

Total approved funding : 63,42,060 INR

Start date and duration : 20th March 2019, 2 years

PI (Indian) : Dr. Mona Duggal, PGIMER, Chandigarh

Co-PI (Indian) : Dr. Vishali Gupta, Dr. Sanjay Bhadada PGIMER-Chandigarh, Pushpendra Singh, IIIT-Delhi

PI (UK) : Marcia Zondervan, London School of Hygiene & Tropical Medicine, UK

Co-PI (UK) : Professor Geeta Menon, Frimley Health NHS Foundation Trust, UK and Dr Covadonga Bascaran, London School of Hygiene & Tropical Medicine, UK

5. A proposal under SPARC scheme entitled *“Expanding Innovation in MHealth for Maternal and Child Health : Training in MHealth Design and Evaluation”*.

Total approved funding : 68,38,499 INR Start date and duration : 31st May 2019, 2 years

PI (Indian) : Dr. Rashmi Bagga, PGIMER, Chandigarh

Co-PI (Indian) : Dr. Mona Duggal, PGIMER-Chandigarh, Dr. Praveen Kumar, PGIMER-Chandigarh, Dr. Ankita Kankaria, PGIMER-Chandigarh, Pushpendra Singh, IIIT-Delhi

PI (US) : Dr. Nadia Griffin Diamond Smith, UCSF, USA

Co-PI (US) : Dr. Alison El Ayadi, UCSF, USA

## Completed

1. “*HumanSense : Mobile Sensing and Data Analytics for Sustainability and Healthcare*”, 1,84,00,000 INR, ITRA, India, Feb. 2014 - Dec. 2018. The total outlay is above 2,61,00,000 INR allocated for three institutes. I lead the multi-institute team as the overall PI of the project.
2. “*Personalized Mobility Services for Urban Travelers*”, 10,02,421 INR, CEFIPRA-DST, India, Sep. 2014 - Aug. 2017.
3. “*A Mobile Device-centric Environment for Healthcare Delivery*”, 46,80,000 INR, DEiTY, India, April 2013 - March 2016. (total outlay was 69,22,000 INR for IIITD and PGIMER, Chandigarh. I led the multi-institute team).
4. “*Security Analysis of Networks*”, 1,98,000 INR, DRDO, India, Oct. 2012. The grant was to organize a week-long workshop on the mentioned topic.
5. “*Analysis of Ad-hoc Network*”, 15,00,000 INR, DRDO, India, August 2012 - Nov. 2013.
6. “*Development and Evaluation of Mobile Learning Techniques for Indian Masses*”, 5,11,000 INR, DST, India, March 2012 - Feb. 2015.

## Consultancy

1. *Central Board for Excise and Customs (CBEC), 2015-2017* : I am currently serving as a Technical Advisor to CBEC since 2015. My duties are to advise on technical matters specifically related to development of computing infrastructure and services. The consultancy started in the context of GST implementation and continues for upgradation of various services and applications offered by CBEC.
2. *181 helpline for Delhi Women in Distress, 2013 -2015* : I was appointed the nodal officer for the mentioned helpline by the Government of Delhi. The helpline had a mandate to be available 24x7 for grievances related to women from all over Delhi. We developed the entire software stack from scratch and maintained it for two years before handing over the entire system to Delhi Govt. The helpline received more than one million calls in its two years time. The system is still used by the Delhi govt.
3. *IFFCO Kisan Sanchar Ltd. (IKSL), 2010-2010* : IKSL serves a large number of farmers across India. This 6-month long project was targeted towards serving more than 700,000 farmers and fishermen across 18 states of India through their voice based value added services. The services were accessed by farmers and fishermen on their mobile phones. I consulted IKSL for scaling up and launching new voice-based services. The project successfully completed in 2010.

## PATENTS

1. Title : Escort Bot System and Method
  - Inventors : Pushpendra Singh, Shubham Singh, Kartik Maji, Taruvar Aggarwal
  - Applicant : Indraprastha Institute of Information Technology, Delhi
  - Indian Patent Application No. 201711013219
  - Filing Date : 13 April 2017
  - Status : Published and awaiting examination

## ENERGY DATASETS RELEASED to PUBLIC

---

- We release I-BLEND, 52 months of electrical energy dataset at a one-minute sampling rate from commercial and residential buildings of IIT-Delhi - an academic institute campus in an emerging economy, India. We also provide occupancy datasets at a 10-minute sampling rate for each of the campus buildings. The dataset is first such large dataset from India in the energy domain and public availability of such fine-granular data will allow users to perform different research tasks such as analyzing the impact of weather or occupancy schedule on energy consumption, detecting anomalies, and developing algorithms for predictive maintenance.

The permanent dataset link : <https://doi.org/10.6084/m9.figshare.c.3893581.v1>

- This dataset was created by inserting anomalies, following the methodology described in H. Rashid, P. Singh, V. Stankovic and L. Stankovic, "Can Non-Intrusive Load Monitoring be used for Identifying an Appliance's Anomalous Behaviour", Applied Energy, Jan 2018, in the measured power traces of seven household electrical load measurements, taken from the following publicly available datasets :
  1. Houses 115, 439, 490, 1463, and 3538 from the Dataport dataset (<https://www.pecanstreet.org/>)
  2. house iawe\_home from iAWE dataset (<http://iawe.github.io/>)
  3. house 6 from the REDD dataset (<http://redd.csail.mit.edu/>).

This dataset is useful in understanding the effect on anomalous appliance behaviour on energy consumption, especially for compressor-based appliances with a significant energy footprint.

The permanent dataset link : <https://doi.org/10.15129/d712ccac-21a1-40d2-8456-41217b62a6d5>

- This dataset was created by sifting through the REFIT dataset to detect load anomalies ; the rules for labelling anomalies are described in the accompanying ICASSP'19 paper, which should be referenced if the dataset is used. Five of the 20 houses of the REFIT dataset were included in this dataset, as they contained the largest number of detected anomalies. These are Houses 1, 10, 16, 18 and 20. At the time of release, this is the first detailed annotated dataset of anomalies within publicly available electrical load measurements. These are real anomalies, not simulated ones and are extremely useful in understanding anomalous behaviour of electrical appliances, as measured by smart meters. Anomalous behaviour of the following appliances is included in this dataset : Refrigerator, freezer, fridge-freezer, dishwasher, washing machine, tumble dryer, electrical heater and microwave. When using this dataset, please cite the following paper : H. Rashid, V. Stankovic, L. Stankovic and P. Singh, "Evaluation of Non-Intrusive Load Monitoring Algorithms for Appliance-level Anomaly Detection," Proc. IEEE 44th Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP), Brighton, UK, May 2019.

The permanent dataset link : <https://doi.org/10.15129/9729a2a0-11ce-4cce-b0d0-144c483fcb33>

## PhD STUDENTS

---

### PhD - awarded

1. *Garvita Bajaj*
  - Thesis : PickMe : Task Allocation in Mobile Crowdsensing
  - Date : 13th May, 2019.
  - Now with AQR Capital Management.
2. *Haroon Rashid*
  - Thesis : Detecting Anomalous Energy Consumption in Buildings using Smart Meter
  - Date : 18th March, 2019.
  - Recipient of TCS Research PhD Fellowship.
  - Now Post-doc researcher at University of Virginia, USA.
3. *Pandarasamy Arjunan*
  - Thesis : Middleware systems and analytics for energy management in buildings
  - Date : 23rd February, 2018.
  - Recipient of IBM Research PhD Fellowship. Jointly with Dr. Amarjeet Singh.
  - Now Post-doc researcher at Berkeley Education Alliance for Research in Singapore Limited (BEARS), Singapore.
4. *Siddhartha Asthana*
  - Thesis : Building efficient mobile systems and applications for supporting information exchange in resource limited settings
  - Date : 20th September, 2017.
  - Recipient of TCS PhD Fellowship.
  - Now Research Scientist at MasterCard
5. *Kuldeep Yadav*
  - Thesis : Geo-localization and Location-aware Opportunistic Communication for Mobile Phones.
  - Date : 20th January, 2014.
  - Recipient of Microsoft Research PhD Fellowship. Jointly with Dr. Amarjeet Singh & Dr. Vinayak Naik.
  - Now co-founder of VideoKen, previously Research Scientist at Xerox, Research, India.

### PhD - ongoing

1. *Deepika Yadav*, Aug. 2014 - Present
  - Thesis area : Mobile Learning Systems for Community Health Workers.
  - To submit by July 2020.
2. *Anupriya Tuli*, Jan. 2016 - Present
  - Thesis area : Mobile based Intervention for Menstrual Health.
  - Recipient of Visvesvaraya PhD student fellowship.
  - Co-advised with Dr. Neha Kumar, Georgia Institute of Technology, USA
3. *Jasmeet Kaur*, July 2018 - Present
  - Thesis area : Technology and Design solutions for Providing Safe Space for Women.
4. *Asra Sakeen Wani*, Jan. 2019 - Present
  - Thesis area : Learning Platforms for Community Health Workers.

## TEACHING EXPERIENCE

---

<i>Year</i>	<i>Course</i>	<i>Class Strength</i>	<i>Feedback (out of 5)</i>
Winter, 2019-20	Advanced Topics in Human-centered Computing (UG+PG)	13	Awaited
Monsoon, 2019-20	Mobile Computing (UG + PG)	185	3.93
Winter, 2018-19	Human-Computer Interaction (UG)	40	3.85
Monsoon, 2018-19	Computer Networks (UG)	147	3.85
Monsoon, 2017-18	Computer Networks (UG)	143	3.63
Winter, 2017-18	Mobile Computing (UG + PG)	154	3.87
Monsoon, 2016-17	Operating Systems (UG)	127	3.79
Winter, 2016-17	Mobile Computing (UG + PG)	180	3.97
Summer, 2016	Online NPTEL Course on Mobile Computing	13000+	
Monsoon, 2015-16	Operating Systems (UG)	139	4.0
Winter, 2015-16	Programming Cloud Services for Mobile Applications (UG + PG)	39	4.2
Monsoon, 2014-15	Operating Systems (UG)	117	3.62
Winter, 2014-15	Programming Cloud Services for Mobile Applications (UG + PG)	33	4.3
Monsoon, 2013-14	Operating Systems (UG)	117	3.73
Winter, 2013-14	Advanced Topics in Mobile Computing (UG + PG)	20	3.85
Monsoon, 2012-13	Operating Systems (UG)	117	4.19
Winter, 2012-13	Advanced Topics in Mobile Computing (UG + PG)	20	4.84
Monsoon, 2011-12	Advanced Programming (UG)	86	3.45
Winter, 2011-12	Computer Networks (UG)	86	4.37
Monsoon 2010-11	Operating Systems (UG)	60	3.35
Winter, 2010-11	Computer Networks (UG)	60	3.46
Winter, 2009-10	Computer Networks (UG, taught jointly)	60	3.61
Winter, 2009-10	Mobile Computing (PG, taught jointly)	3	5

## MASTER'S THESIS - AWARDED

1. *Ashutosh Gupta*, "Evaluating Interaction of a Lecture using Sound Data", 2018.
2. *Nagasuri Venkata Apurupa*, "A critical study of power consumption patterns in Indian Apartments", 2018.
3. *Joy Aneja*, "Analysing Space Utilization using Indoor Localization", 2016.
4. *Devika Sondhi*, "Optimizing smartphone energy consumption in sensor data collection and data transmission", 2015.
5. *Digvijay Singh*, "Enabling Ubiquitous Computing Applications using Existing Infrastructure", 2015.
6. *Kumar Abhinav*, "Trustworthiness in Crowdsourcing", 2015 (jointly advised with Anurag Dwarakath).
7. *Nitinder Mohan*, "Enabling Sender-Initiated Distributed Applications and Checkpointing in Content Centric Networks", 2015.
8. *Parul Gupta*, "Exploring Design Opportunities and challenges for technology in Women Distress Caller Helpline in India", 2015.
9. *Shruti Bansal*, "Can Technology mix with traditional classrooms", 2015.
10. *Anurag Rana*, "Autonomic agent for voice based data collection", 2015.
11. *Priyanka Singhal*, "Who wrote what ? : Authorship attribution for content specific long text and noisy short text", 2015.
12. *Shilpa Garg*, "Automated classification of vehicles using mobile based sensors", 2014.
13. *Amir Seyedi*, "Peer-to-peer Recommendation System", University of Paris-sud XI, 2009.

## MASTER'S SCHOLARLY PAPER/CAPSTONE

---

1. *Neha Rani*, Emergency Evacuation System, 2017.
2. *Prabhat Misra*, A Survey on Interactive Voice Response System (IVRs) in Developing Regions, 2017.
3. *Loveleen Girdhar*, Faculty Workspace, 2017.
4. *Nancy Agarwal*, Analysis of Mobility Data to Deduce Space Utilization Patterns, 2017.
5. *Deepak Sood*, Building a Distributed System for Collecting Health Data using Mobile Devices, 2017.
6. *Avantika Srivastava*, Institute Attendance System, 2017.
7. *Amandeep Singh*, A Web-based System to Collect Annual Report Data, 2016.
8. *Kirti Jain*, A Survey on MOOC and Mobile Learning, 2015.
9. *Priyanka Singh*, A Taxonomy Driven Survey of Collaborative Mobile Applications, 2014.
10. *Stuti Jain*, Mobile Intervention in the Field of Healthcare, 2014.
11. *Tarun Gupta*, Mobile Virtualization, 2014.
12. *Karisma Chug*, OpenFlow for Network Virtualization, 2014.
13. *Akshi*, Software Defined Networks, 2014.
14. *Prateek Sharma*, Various Interprocess Communication Checkpointing Algorithms and Security Aspects In Distributed Systems, 2014.
15. *Nishtha Ahuja*, A Literature Review of Mobile Learning, 2014.

## B.TECH THESIS

---

1. *Ayushi Srivastava*, Measuring Digital Literacy ; ongoing.
2. *Kanika Saini*, Analyzing Mass Behavior using Indoor Localization ; ongoing.
3. *Anushka Bhandari*, Developing Web-based Systems for Supporting Mobile-based Peer Learning ; 2019.
4. *Ashutosh Batabyal and Shreya Sharma*, Mobile Applications for Supporting People with Schizophrenia, 2019.
5. *Gursimran Singh*, Education Mobile App ; co-advised with Prof. Pankaj Jalote, 2018.
6. *Sarthak Madan and Shivam Rastogi*, Mobile Learning Platform, 2018.
7. *Parikshit Diwan*, Energy consumption prediction of residential building, 2018.
8. *Varun Jain*, Sangoshthi Mobile App, 2018.
9. *Kartik Maji, Shubham Sinha, and Taruvar Agarwal*, Escort Bot for Visually Challenged, *received Best BTP Award*, 2017.
10. *Abhishek Jain and Siddharth Jain*, Harmony Middleware, 2017.
11. *Kartik Gupta*, Information Capsule - Psychosocial Education Application, 2017.
12. *Saloni Gupta and Simran Saxena*, IIIT-Delhi Mobile App, 2017.
13. *Shubham Singh*, NMS Occupancy Web Application, 2016.
14. *Umang Arora*, Occupancy Mapping using SNMP Traps and Related Applications, 2016.
15. *Prateek Mehra*, Virtual Trial Room ; industrial BTP with Myntra.com ; nominated for Best BTP, 2015.
16. *Magus Verma*, Customer Return Notification Module ; industrial BTP with Amazon ; nominated for Best BTP, 2015.
17. *Utkarsh Gupta*, Sales Platform, industrial BTP with Myntra ; nominated for Best BTP, 2015
18. *Ayush Goel*, Webstore Themes and Widget Development, industrial BTP with Amazon ; nominated for Best BTP, 2015.
19. *Kshitiz Bakshi & Nishant Jain*, A Tool to Monitor OS Scheduler, Nominated for Best BTP award, 2014.
20. *Jyotika Dora and Devika Sondhi*, Analysis of Ad-hoc Networks, 2014.
21. *Digvijay Singh*, SNMP trap Service for Occupancy Detection ; Nominated for Best BTP award, 2014.
22. *Karan Kalra*, A Mobile Data Collection Framework for Mess Feedback, 2014.
23. *Abhishek Gupta*, Effective Content Distribution in Opportunistic Networks, 2014.

## SELECTED PROFESSIONAL SERVICES

---

- Co-organiser for SIGCHI summer school on Human-Centered AI 2019 at New Delhi, India.
- General co-chair for ICTD 2019
- Coordinator for DIC spoke at IIIT-Delhi
- Reviewer for CSCW 2019
- Reviewer for ACM ToCHI 2019
- Reviewer for SERB, DBT, 2018
- Technical Program Committee Member, ACM IUI, 2019, 2020
- Technical Program Committee Member, IEEE CIC, 2018
- Technical Program Committee member for BuildSys 2018
- Technical Program Committee Member, ICDCN, 2018, 2017, 2016



- Technical Program Committee Member, LCN, 2018, 2017, 2016, 2015
- Reviewer for DIS 2018, CHI 2017
- Reviewer for IEEE Transactions on Mobile Computing
- Reviewer for Pervasive and Mobile Computing (Elsevier)
- General co-Chair for NetHealth 2016
- Reviewer for grant proposals for CEFIPRA, India, 2013.
- Reviewer for grant proposals for Department of Science and Technology, India, 2013.
- External M.Tech. Thesis Examiner, IIT-Delhi, 2013.
- Organizer of a week-long Workshop on Network Security, IIIT-Delhi, Oct. 2012.
- Co-publicity Chair IEEE PerCom, 2012.
- Publicity Chair IEEE AOC, 2012.
- Technical Program Committee Member, IBM I-Care, India, 2012.
- Technical Program Committee Member, ICDCIT, India, 2012.
- Technical Program Committee Member, NetHealth, India, 2012.
- Technical Program Committee Member, 3rd International Conference on Mobile Communication Technology for Development (M4D2012), India, 2012.
- External M.Tech. Thesis Examiner, IIT-Delhi, 2011.
- Technical Program Committee Member, 4th International Conference on Contemporary Computing, 2011.
- Technical Program Committee Member, International workshop on Mobile P2P Data Management, Security and Trust, 2011.
- Co-publicity Chair ACM/IFIP/USENIX Middleware Conference, 2010.
- Technical Program Committee Member, 3rd International Conference on Contemporary Computing, 2010.

## SELECTED SERVICES TO THE INSTITUTE

---

- *Founding Head, Center for Design and New Media, 2018 - 2020* : It is a TCS supported Center which is focused for design and new media research. I am the founding head of the Center. I played a vital role in bringing the funding of 28 Crore INR ( USD 4 million) to IIIT and then setting up day-to-day working, mission, and vision of the Center.
- *Founding Head, Dept. of Human-Centered Design, 2018 - 2020* : I established the Dept. of Human-Centered Design and helped start the UG program, B.Tech. in Computer Science & Design and PhD in Human-Centered Design. I formed the department processes and policies for the smooth functioning of the dept. and the academic programs under the department.
- *Associate Dean (Innovation, Research, and Development), 2014-2017* : I was the first faculty at IIIT-Delhi to be appointed as Associate Dean (IRD) with the charge of Dean (IRD). As ADIRD, I brought several changes and improvements in the ways IRD department could support the innovation, research, and development activities in the institute. I set up the system of Intellectual Property (IP) reporting and filing patents and supporting the faculty and students throughout the process to make it easier for them to file patents. I also brought fundamental changes in existing rules of professional development account (PDA) of faculty to make it more flexible. As ADIRD, I played a major role in obtaining FIST grants for CSE (1 Crore INR or about 150,000 USD) and ECE (1.1 Crore or about 164,000 USD) ; and, I played the principal role in obtaining grants for 23 PhD fellowships for 5 years and 4 Young Faculty Fellowships for 5 years (about 7 Crore INR or 1.05 million USD) under the Visvesvaraya Fellowship scheme of the government.
- Member of PG Committee, 2017- 2018.
- Coordinator of M.Tech. (Mobile Computing), 2017-2018
- Nodal Officer for Visvesvaraya Fellowships, 2014 - 2017.
- Continuing Education Program Coordinator, 2014-2016.

- Member of PG Committee, 2014-2015
- Coordinator of PhD Admissions Committee 2014.
- Coordinator of M.Tech program in CSE at IIIT-Delhi, 2013 - 2014
- Organizer of IIIT-Delhi Research Showcase 2013 & 2014.
- Member of Institute Automation Committee, 2013 - Present.
- Coordinator of IIIT-Delhi Rolling PhD Admissions, 2013.
- Member of Regular PhD Admissions Interview Committee, 2013.
- Member of PG Committee, 2013 - Present.
- Member of the Senate, IIIT-Delhi, 2011-2013.
- Coordinator of IIIT-Delhi committee on Technologies for Education.
- Organizer of IIIT-Delhi Research Showcase 2013.
- Member of PhD Admissions Interview Committee, 2012.
- Member of Institute Automation Committee at IIIT-Delhi, 2012-Present.
- Member of PhD Admissions Interview Committee, 2011.
- Member of PhD Admissions Interview Committee, 2010.
- Member of Institute Technical Committee at IIIT-Delhi, 2010-2012.

## INVITED TALKS

---

1. “*Automatic Annotation of Voice Forum Content*”, Empower 2018, held at IIT-Delhi, India.
2. “*Mobile for Healthcare*”, ACM Expert Lecture at Shiv Nadar University, 2017, India.
3. “*A Mobile-device Centric Environment for Healthcare Delivery*”, NetHealth 2012, held with IEEE ComsNets, Bengaluru, India.
4. “*Research in the Wild : Experience and Challenges*”, Peer Mentorship Workshop, held with IEEE ICTD 2012, Georgia, USA.

## PUBLICATIONS [dblp]

---

### 2020

94. Ankur Pandey, Saru Brar, Inshita Mutreja, and Pushpendra Singh. (2020). Exploring Automated Q&A Support System for Maternal and Child Health in Rural India. 11 pages, *Accepted to be published as a full paper in Proceedings of the Third ACM SIGCAS Conference on Computing and Sustainable Societies, COMPASS' 2020*. .
93. Jasmeet Kaur and Pushpendra Singh. (2020). Understanding Engagement of Parents In Online Health Communities for Early Childhood. 4 pages, *Accepted to be published as a Note in Proceedings of the Eleventh International Conference on Information and Communication Technologies and Development, ICTD' 2020*. .
92. Anupriya Tuli, Shaan Chopra, Pushpendra Singh, and Neha Kumar. (2020). [Menstrual \(Im\)Mobilities and Safe Spaces](#). 15 pages, *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems, CHI' 2020*. (CORE A\*).

### 2019

91. Garvita Bajaj and Pushpendra Singh. (2020). [Understanding Preferences of Delhi Metro Users using Choice-Based Conjoint Analysis](#). 10 pages, , **IEEE Transactions on Intelligent Transportation Systems**. (Impact Factor : 5.744).
90. Deepika Yadav, Prerna Malik, Kirti Dabas, and Pushpendra Singh. (2019). [Feedpal: Understanding opportunities for Chatbots in Breastfeeding Education of Women in India](#). 30 pages, *Proceedings of the ACM on Human-Computer Interaction, Volume 3, Number CSCW, November 2019, Article No. 170, CSCW' 2019*. (CORE RANK A, ranked number 2 by Google Scholar in HCI area with h-median 79).
89. Deepika Yadav, Anushka Bhandari, and Pushpendra Singh. (2019). [LEAP: Scaffolding Collaborative Learning of Community Health Workers in India](#). 30 pages, *Proceedings of the ACM on Human-Computer Interaction, Volume 3, Number CSCW, November 2019, Article No. 169, CSCW' 2019*. (CORE RANK A, ranked number 2 by Google Scholar in HCI area with h-median 79).
88. Garvita Bajaj and Pushpendra Singh. (2019). [Evaluating the Impact of Battery Usage Patterns on Performance of Task Allocation Algorithms in Sparse Mobile Crowdsensing](#). 10 pages, *The 22nd ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems, ACM MSWIM*. (CORE RANK A)
87. Anupriya Tuli, Shruti Dalvi, Neha Kumar, Pushpendra Singh. (2019). ["It's a girl thing": Examining Challenges with Menstrual Health Education in India](#). 24 pages, *ACM Transactions on Computer-Human Interaction 26, 5, Article 29 (July 2019), ACM ToCHI*. (Scimagojr h-index : 78).
86. Haroon Rashid, Vladimir Stankovic, Lina Stankovic, Pushpendra Singh. (2019). [Evaluation of the Suitability of Non-Intrusive Load Monitoring for Appliance-level Anomaly Detection](#). 8325-8329, *2019 IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP*. (Oral presentation).
85. Haroon Rashid, Pushpendra Singh, Amarjeet Singh. (2019). [I-BLEND: A Campus Scale Commercial and Residential Buildings Electrical Energy Dataset](#). 12 pages, *Sci.Data. 6 :190015, Nature Scientific Data*. (Impact Factor : 5.862).
84. Sandeep Grover, Limalemla Jamir, Mona Duggal, Pushpendra Singh, Ritu Nehra. (2019). [Epidemiology of behavioral \(mobile\) addiction among school students in rural India](#). 30-38, *volume 40, Asian Journal of Psychiatry*. (Impact Factor : 1.06).

83. Haroon Rashid, Pushpendra Singh, Vladimir Stankovic, Lina Stankovic. (2019). [Can Non-intrusive Load Monitoring be used for Identifying Appliance's Anomalous Behavior?](#). 796-805, *volume 238, Applied Energy*. (Impact Factor : 7.90).

## 2018

82. Garvita Bajaj, Rachit Agarwal, Pushpendra Singh, Nikolaos Georgantas, Valerie Issarny. (2018). [4W1H for IoT Semantics](#). 65488 - 65506, , **IEEE Access**. (Impact Factor : 3.557).
81. Koushik Sinha Deb, Anupriya Tuli, Mamta Sood, Rakesh Chadda, Rohit Verma, Saurabh Kumar, Ragul Ganesh, Pushpendra Singh. (2018). [Is India ready for mental health apps \(MHapps\)? A quantitative-qualitative exploration of stakeholder perspective of Smartphone based solutions for managing severe mental illnesses in low resource settings](#). 19 pages, *PLOS ONE 13(9) : e0203353*, **PLOS ONE**. (Impact factor : 2.806, h-index : 241 from scimagojr).
80. Haroon Rashid, Nipun Batra, Pushpendra Singh. (2018). [Rimor: Towards Identifying Anomalous Appliances in Buildings](#). 10 pages, *In Proceedings of the 5th ACM International Conference on Systems for Energy-Efficient Built Environments, BuildSys '18*. (CORE RANK A).
79. Anupriya Tuli, Shaan Chopra, Neha Kumar, Pushpendra Singh. (2018). [Learning from and with Menstrupedia: Towards Menstrual Health Education in India](#). 20 pages, *Proceedings of the ACM on Human-Computer Interaction, Volume 2 Issue CSCW, November 2018, Article No. 174, CSCW'2018*. (CORE RANK A, ranked number 2 by Google Scholar in HCI area with h-median 79).
78. Deepika Yadav, Mayank Gupta, Malolan Chetlur, and Pushpendra Singh. (2018). [Automatic Annotation of Voice Forum Content for Rural Users and Evaluation of Relevance](#). 11 pages, *In Proceedings of the 1st ACM SIGCAS Conference on Computing and Sustainable Societies, COMPASS '18*. .
77. Bhanu Duggal, Jyothi Subramanyam, Mona Duggal, Pushpendra Singh, Meeta Rajiv Lochan, Archana Avhad, Usha Ram, Sayan Sen, Anurag Agrawal, Sujata Saunik, Koundinya Desiraju. (2018). [Survival outcomes post percutaneous coronary intervention: Why the hype about stent type? Lessons from a healthcare system in India](#). 14 pages, *PLOS ONE*, **PLOS ONE 13(5) : e0196830**. (Impact factor : 2.806, h-index : 241 from scimagojr).
76. Prabha S. Chandra, Soumya Parameshwaran, Veena A. Satyanarayana, Meiya Varghese, Lauren Liberti, Mona Duggal, Pushpendra Singh, Sangchoon Jeon, Nancy R. Reynolds. (2018). [I have no peace of mind — psychosocial distress expressed by rural women living with HIV in India as part of a mobile health intervention — a qualitative study](#). 525-531, *Volume 21, issue 5, Archives of Women's Mental Health*. (Impact Factor : 3.397, h-index : 59 from scimagojr).
75. Mona Duggal, Venkatesan Chakrapani, Lauren Liberti, Veena Satyanarayana, Meiya Verghese, Mohini Ranganathan, Mohini, Pushpendra Singh, Prabha Chandra, Nancy Reynolds. (2018). [Acceptability of mobile phone-based nurse-delivered counseling intervention to improve HIV treatment adherence and self-care behaviors among HIV-positive women in India](#). , *Volume 32, Issue 9, AIDS Patient Care and STDs*. (Impact Factor : 4.041, h-index : 71 from scimagojr).
74. Haroon Rashid and Pushpendra Singh. (2018). [Monitor: An Abnormality Detection Approach in Buildings Energy Consumption](#). 10 pages, *2018 IEEE 4th International Conference on Collaboration and Internet Computing , CIC '18*.
73. Garvita Bajaj and Pushpendra Singh. (2018). [Load-Balanced Task Allocation for Improved System Lifetime in Mobile Crowdsensing](#). 6 pages, *In Proceedings of the 19th IEEE international conference on Mobile data management, MDM '18*.

## 2017

72. Deepika Yadav, Pushpendra Singh, Kyle Montague, Vijay Kumar, Deepak Sood, Madeline Balaam, Drishti Sharma, Mona Duggal, Tom Bartindale, Delvin Varghese, and Patrick Olivier. (2017). [San-](#)

*goshthi: Empowering Community Health Workers through Peer Learning in Rural India*. 499-508, Proceedings of the 26th International Conference on World Wide Web, **WWW' 17**. (CORE RANK A\*).

71. Haroon Rashid, Pushpendra Singh, and Krithi Ramaritham. (2017). *Revisiting Selection of Residential Consumers for Demand Response Programs*. 4 pages, In Proceedings of the 4th ACM International Conference on Systems for Energy-Efficient Built Environments, **BuildSys'17**. (CORE RANK A).
70. Haroon Rashid, P. M. Mammen, S. Singh, K. Ramamritham, Pushpendra Singh, and Prashant Shenoy. (2017). *Want to reduce energy consumption?: don't depend on the consumers!*. 4 pages, In Proceedings of the 4th ACM International Conference on Systems for Energy-Efficient Built Environments, **BuildSys'17**. (CORE RANK A).
69. Haroon Rashid and Pushpendra Singh. (2017). *Poster: Energy Disaggregation for identifying anomalous appliance*. 4 pages, In Proceedings of the 4th ACM International Conference on Systems for Energy-Efficient Built Environments, **BuildSys'17**. (CORE RANK A).
68. Garvita Bajaj and Pushpendra Singh. (2017). *Mew: A Plug-n-Play Framework for Task Allocation in Mobile Crowdsensing*. 19-24, In Proceedings of the First ACM Workshop on Mobile Crowdsensing Systems and Applications, **CrowdSenSys at SenSys'17**.
67. Garvita Bajaj, Rachit Agarwal, Pushpendra Singh, Nikolaos Georgantas, Valerie Issarny. (2017). *A study of existing Ontologies in the IoT-domain*. 24 pages, , **Arxiv pre-print**.
66. Limalemla Jamir, Mona Duggal, Ritu Nehra, Pushpendra Singh, and Sandeep Grover. (2017). *Behavioral (Smartphone) Addiction among Rural and Urban School Students in North India*. , Partnership for Progress on the Digital Divide, **PPDD' 17**.

## 2016

65. Konstantinos Kazakos, Siddhartha Asthana, Madeline Balaam, Mona Duggal, Amey Holden, Limalemla Jamir, Nanda Kishore Kannuri, Saurabh Kumar, Amarendar Reddy Manindla, Subhashini Arcot Manikam, G. V. S. Murthy, Papreen Nahar, Peter Phillimore, Shreyaswi Sathyanath, Pushpendra Singh, Meenu Singh, Peter C. Wright, Deepika Yadav, and Patrick Olivier. (2016). *A Real-Time IVR Platform for Community Radio*. 343-354, In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, **CHI'16**. (CORE RANK A\*).
64. Nancy R. Reynolds, Veena Satyanarayana, Mona Duggal, Meiya Varghese, Lauren Liberti, Pushpendra Singh, Mohini Ranganathan, Sangchoon Jeon, and Prabha S. Chandra. (2016). *MAHILA: a protocol for evaluating a nurse-delivered mHealth intervention for women with HIV and psychosocial risk factors in India*. 9 pages, Volume 16 :352, **BMC Health Services Research**. (Impact factor : 2.548, h-index : 83 from scimagojr).
63. Mamta Sood, Rakesh K Chadda, Pushpendra Singh. (2016). *Mobile health (mHealth) in mental health: Scope and applications in low-resource settings*. 341-343, Volume 29, issue 6, **National Medical Journal of India**. (Impact factor : 1.412, h-index : 37 from scimagojr).
62. Anupriya Tuli, Pushpendra Singh, Mamta Sood, Koushik Sinha Deb, Siddharth Jain, Abhishek Jain, Manan Wason, Rakesh Chadda, and Rohit Verma. (2016). *Harmony: close knitted mhealth assistance for patients, caregivers and doctors for managing SMIs*. 1144-1152, Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing : Adjunct, **UbiComp : Adjunct**.
61. Garvita Bajaj, Rachit Agarwal, GEorgios Bouloukakakis, Pushpendra Singh, Nikolaos Georgantas, and Valerie Issarny. (2016). *Towards Building Real-time, Convencinet Route Recommendation System for Public Transit*. 5 pages, IEEE International Smart Cities Conference, **IEEE ISC' 16**.
60. Haroon Rashid, Pandarasamy Arjunan, Pushpendra Singh, and Amarjeet Singh. (2016). *Collect, compare, and score: a generic data-driven anomaly detection method for buildings*. 12 :1-12 :2,

**2015**

59. Siddhartha Asthana, Pushpendra Singh, and Parul Gupta. (2015). *Survival Analysis: Objective assessment of Wait Time in HCI*. 367-376, In Proceedings of the 2015 CHI Conference on Human Factors in Computing Systems, **CHI'15**. (CORE RANK A\*).
58. Pandarasamy Arjunan, Mani Srivastava, Amarjeet Singh and Pushpendra Singh. (2015). *OpenBAN: An Open Building ANalytics Middleware for Smart Buildings*. 70-79, International Conference on Mobile and Ubiquitous Systems : Computing, Networking and Services, **Mobiquitous'15**. (CORE Rank A).
57. Pandarasamy Arjunan, Harshad D Khadilkar, Tanuja Ganu, Zainul M Charbiwala, Amarjeet Singh, and Pushpendra Singh. (2015). *Multi-user energy consumption monitoring and anomaly detection with partial context information*. 35-44, , **BuildSys' 15**. (CORE RANK A).
56. Garvita Bajaj and Pushpendra Singh. (2015). *Sensing Human Activity for Assessing Participation in Evacuation Drills*. 1423-1432, , **UbiComp/ISWC'15 : Adjunct**.
55. Garvita Bajaj, Georgios Bouloukakis, Animesh Pathak, Pushpendra Singh, Nikolaos Georgantas, and Valérie Issarny. (2015). *Toward Enabling Convenient Urban Transit through Mobile Crowdsensing*. 290-295, 2015 IEEE 18th International Conference on Intelligent Transportation Systems, **IEEE ITSC'15**.
54. Pandarasamy Arjunan, Manaswi Saha, Haksoo Choi, Manoj Gulati, Amarjeet Singh, Pushpendra Singh, and Mani B Srivastava. (2015). *SensorAct: A Decentralized and Scriptable Middleware for Smart Energy Buildings*. 11-19, 2015 IEEE 12th Intl Conf on Ubiquitous Intelligence and Computing, **IEEE UIC'15**.
53. Garvita Bajaj and Pushpendra Singh. (2015). *Sahyog: A middleware for mobile collaborative applications*. 1-5, 2015 7th International Conference on New Technologies, Mobility and Security, **IEEE NTMS'15**.
52. Siddhartha Asthana and Pushpendra Singh. (2015). *Data Driven Usability: A Case for Adaptive Interfaces in Voice Based Menu Systems*. 57-64, Proceedings of the 15th New Zealand Conference on Human-Computer Interaction, **CHINZ'15**.
51. Siddhartha Asthana, Pushpendra Singh, and Shraddha Jain. (2015). *Adaptive framework for data transmission over GSM voice channel for developing regions*. 1-5, 2015 7th International Conference on New Technologies, Mobility and Security, **IEEE NTMS**.
50. Siddhartha Asthana and Pushpendra Singh. (2015). *Maareech: Usability Testing Tool for Voice Response System Using XML Based User Models*. 101-112, 17th International Conference on Human-Computer Interaction, **HCI' 15**.
49. Shruti Bansal and Pushpendra Singh. (2015). *Blending Active Learning in a Modified SPOC based Classroom*. 251-256, 2015 IEEE 3rd International Conference on MOOCs, Innovation and Technology in Education, **IEEE MITE'15**.
48. Rakshit Wadhwa, Pushpendra Singh, Meenu Singh, and Saurabh Kumar. (2015). *An EMR-enabled Medical Sensor Data Collection Framework*. 1-6, 2015 7th International Conference on Communication Systems and Networks, **IEEE COMSNETS'15**.
47. Rakshit Wadhwa, Apurv Mehra, Pushpendra Singh, and Meenu Singh. (2015). *A Pub/sub based Architecture to Support Public Healthcare Data Exchange*. 1-6, 2015 7th International Conference on Communication Systems and Networks, **IEEE COMSNETS'15**.
46. Nitinder Mohan and Pushpendra Singh. ( 2015). *CCNCheck: Enabling Checkpointed Distributed Applications in Content Centric Networks*. 2 pages, The fourth CCNx Community Meeting, **CCNxCon**.

## 2014

45. Shilpa Garg, Pushpendra Singh, Parameswaran Ramanathan, and Rijurekha Sen. (2014). *Vividhavana: Smartphone based Vehicle Classification and Its Applications in Developing Region*. 364-373, 11th International Conference on Mobile and Ubiquitous Systems : Computing, Networking and Services, **Mobiquitous' 14**. (CORE Rank A).
44. Utkarsh Gupta, Rushil Khurana, and Pushpendra Singh. (2014). *Making Organizations Pervasive Using Existing Infrastructure: Case Study Of A University*. 1-4, Proceedings of the 6th IBM Collaborative Academia Research Exchange Conference, **IBM I-CARE' 14**.
43. Astrid Kiehn, Pranav Raj, Pushpendra Singh. (2014). *A Causal Checkpointing Algorithm for Mobile Computing Environments*. 134-148, International Conference on Distributed Computing and Networking, **ICDCN' 14**.
42. Meenu Singh, Amit Agarwal, Pankaj Pant, Saurabh Kumar, Pushpendra Singh. (2014). *Telemonitoring - ECG through the use of mobile based technology*. , 10th International Conference of Telemedicine Society of India, .
41. Meenu Singh, Pushpendra Singh, Amit Agarwal, Pankaj Pant, Saurabh Kumar, Suresh Bhatt, Munish Kumar. (2014). *Telemonitoring the Pulmonary Function Test (PFT's) by using Tele-Spirometer*. , , **10th International Conference of Telemedicine Society of India**.

## 2013

40. Abhishek Gupta, Jatin Thapar, Amarjeet Singh, Pushpendra Singh, Vivek Srinivasan, and Vibhore Vardhan. (2013). *Simplifying and Improving Mobile Based Data Collection*. 45-48, Proceedings of the Sixth International Conference on Information and Communications Technologies and Development : Notes - Volume 2, **ICTD' 13**.
39. Vivek Srinivasan, Vibhore Vardhan, Snigdha Kar, Siddhartha Asthana, Rajendran Narayanan, Pushpendra Singh, Dipanjan Chakraborty, Amarjeet Singh, and Aaditeshwar Seth. (2013). *Airavat: An automated system to increase transparency and accountability in social welfare schemes in India*. 151-154, Proceedings of the Sixth International Conference on Information and Communications Technologies and Development : Notes - Volume 2, **ICTD' 13**.
38. Siddhartha Asthana and Pushpendra Singh. (2013). *MVoice: a mobile based generic ICT tool*. 5-8, Proceedings of the Sixth International Conference on Information and Communications Technologies and Development : Notes - Volume 2, **ICTD' 13**.
37. Pandarasamy Arjunan, Manaswi Saha, Manoj Gulati, Nipun Batra, Amarjeet Singh, and Pushpendra Singh. (2013). *SensorAct: Design and Implementation of Fine-grained Sensing and Control Sharing in Buildings*. 1, 10th USENIX Symposium on Networked Systems Design and Implementation, **NSDI' 13 Poster Track**.
36. Siddhartha Asthana, Pushpendra Singh, and Amarjeet Singh. (2013). *Assessing Designs of Interactive Voice Response Systems for Better Usability*. 183-192, , **HCII**.
35. Siddhartha Asthana, Pushpendra Singh, and Amarjeet Singh. (2013). *Design and Evaluation of Adaptive Interfaces for IVR Systems*. 1713-1718, CHI '13 Extended Abstracts on Human Factors in Computing Systems, **CHI EA' 13**. (CORE RANK A\*).
34. Siddhartha Asthana, Pushpendra Singh, and Amarjeet Singh. (2013). *Exploring Adverse Effects of Adaptive Voice Menu*. 775-780, CHI '13 Extended Abstracts on Human Factors in Computing Systems, **CHI EA' 13**. (CORE RANK A\*).
33. Nipun Batra, Pandarasamy Arjunan, Amarjeet Singh, and Pushpendra Singh. (2013). *Experiences with occupancy based building management systems*. 153-158, 2013 IEEE Eighth International Conference on Intelligent Sensors, Sensor Networks and Information Processing, **IEEE ISSNIP' 13**.

32. Siddhartha Asthana, Pushpendra Singh, and Amarjeet Singh. (2013). *Mocktell: Exploring Challenges of User Emulation in Interactive Voice Response Testing*. 427-428, Proceedings of the 4th ACM/SPEC International Conference on Performance Engineering, **ICPE' 13**.
31. Pushpendra Singh, Nikita Juneja, and Shruti Kapoor. (2013). *Using Mobile Phone Sensors to Detect Driving Behavior*. 53, Proceedings of the 3rd ACM Symposium on Computing for Development, **ACM DEV' 13**.
30. Siddhartha Asthana, Pushpendra Singh, and Amarjeet Singh. (2013). *A usability study of adaptive interfaces for interactive voice response system*. 34, Proceedings of the 3rd ACM Symposium on Computing for Development, **ACM DEV' 13**.
29. Kshitiz Bakhshi, Nishant Jain, Pushpendra Singh, and Arjun Ahuja. (2013). *MoSen: a middleware for mobile sensor programming*. 31, Proceedings of the 3rd ACM Symposium on Computing for Development, **ACM DEV' 13**.
28. Siddhartha Asthana, Pushpendra Singh, and Amarjeet Singh. (2013). *Exploring the usability of interactive voice response system's design*. 36, Proceedings of the 3rd ACM Symposium on Computing for Development, **ACM DEV' 13**.
27. Raghav Sethi, Naved Alam, Mayank Pundir, and Pushpendra Singh. (2013). *Bounced-Improving Data Availability through Replication in P2P Networks*. 1-2, 2013 Fifth International Conference on Communication Systems and Networks, **IEEE COMSNETS' 13**.

## 2012

26. Pandarasamy Arjunan, Nipun Batra, Haksoo Choi, Amarjeet Singh, Pushpendra Singh, and Mani B Srivastava. (2012). *SensorAct: a privacy and security aware federated middleware for building management*. 80-87, Proceedings of the Fourth ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings, **BuildSys' 12**. (CORE Rank A).
25. Siddhartha Asthana, Pushpendra Singh, Ponnurangam Kumaraguru, Amarjeet Singh, and Vinayak Naik. (2012). *Tring! tring!-an exploration and analysis of interactive voice response systems*. 1-10, 4th International Conference on Human Computer Interaction, **IndiaHCI' 12**.
24. Kuldeep Yadav, Vinayak Naik, Amarjeet Singh, Pushpendra Singh, and Umesh Chandra. (2012). *Low energy and sufficiently accurate localization for non-smartphones*. 212-221, 2012 IEEE 13th International Conference on Mobile Data Management, **IEEE MDM' 12**.
23. Pushpendra Singh, Amarjeet Singh, Vinayak Naik, and Sangeeta Lal. (2012). *CVDMagic: a mobile based study for CVD risk detection in rural India*. 359-366, Proceedings of the Fifth International Conference on Information and Communication Technologies and Development, **ICTD' 12**.

## 2011

22. Abhishek Bhardwaj, Pandarasamy Arjunan, Amarjeet Singh, Vinayak Naik, and Pushpendra Singh. (2011). *MELOS: a low-cost and low-energy generic sensing attachment for mobile phones*. 27-32, Proceedings of the 5th ACM workshop on Networked systems for developing regions, **NSDR' 11**.
21. Amarjeet Singh, Vinayak Naik, Sangeeta Lal, Raja Sengupta, and Deepak Saxena, Pushpendra Singh, Ankur Puri. (2011). *Improving the efficiency of healthcare delivery system in underdeveloped rural areas*. 1-6, 2011 Third International Conference on Communication Systems and Networks , **IEEE COMSNETS' 11**.

## 2010

20. Kuldeep Yadav, Vinayak Naik, Pushpendra Singh, and Amarjeet Singh. (2010). *Alternative localization approach for mobile phones without gps*. 1, ACM/IFIP/USENIX Middleware '10 Posters and Demos



Track, **Middleware Posters '10**. (CORE Rank A).

19. Kuldeep Yadav, Vinayak Naik, Amarjeet Singh, Pushpendra Singh, Ponnurangam Kumaraguru, and Umesh Chandra. (2010). *Challenges and novelties while using mobile phones as ICT devices for Indian masses: short paper*. 1-2, Proceedings of the 4th ACM Workshop on Networked Systems for Developing Regions, **NSDR' 10**.

## 2009

18. Amel Bennaceur, Pushpendra Singh, Pierre-Guillaume Raverdy, Valérie Issarny. (2009). *The iBI-COOP middleware: Enablers and services for emerging pervasive computing environments*. 1-6, 2009 IEEE International Conference on Pervasive Computing and Communications, **PerCom' 09**.

## 2008

17. Amy Weihong Guo, Phil Blythe, P.L. Olivier, Pushpendra Singh, Hai Nam Ha. (2008). *Using Immersive Video to Evaluate Future Traveller Information System*. 38-46, Volume 2, Issue 1, March 2008, *IET journal of Intelligent Transport Systems*. (impact factor : 1.387, h-index : 28 from scimagojr).

## 2007

16. Christian Kray, Patrick Olivier, A Weihong Guo, Pushpendra Singh, Hai Nam Ha, and Phil Blythe. (2007). *Taming context: A key challenge in evaluating the usability of ubiquitous systems*. 1-6, Proceedings of Workshop Ubiquitous Systems Evaluation at UbiComp, **USE - Workshop at Ubicomp' 07**.
15. Maria Uther, James Uther, Panos Athanasopoulos, Pushpendra Singh, and Reiko Akahane-Yamada. (2007). *Mobile adaptive CALL (MAC): a lightweight speech-based intervention for mobile language learners*. 2329-2332, 8th Annual Conference of the International Speech Communication Association, **Interspeech' 07**. (CORE RANK A)
14. Amy Weihong Guo, Philip Blythe, Richard Fairchild, P.L. Olivier, Pushpendra Singh, Hai Nam Ha. (2007). *Using Immersive Video to Evaluate Future Traveller Information System*. 4 pages, , **The 14th World Congress on Intelligent Transport Systems, Beijing, China**.
13. With members of NERVE project team. (2007). *NERVE: Innovative Technology to Address Tomorrow's Needs*. , 7th November 2007, **Sensors & Systems Magazine**.
12. With members of NERVE project team. (2007). *NERVE Part 2: Innovative Technology to Address Tomorrow's Needs*. , 5th December 2007, **Sensors & Systems Magazine**.

## 2006

11. Pushpendra Singh, Hai Nam Ha, Zhiwen Kuang, Patrick Olivier, Christian Kray, Phil Blythe, and Phil James. (2006). *Immersive video as a rapid prototyping and evaluation tool for mobile and ambient applications*. 264-264, Proceedings of the 8th conference on Human-computer interaction with mobile devices and services, **ACM MobileHCI' 06**.
10. Pushpendra Singh, Hai Nam Ha, Patrick Olivier, Christian Kray, Zhiwen Kuang, Amy Weihong Guo, Phil Blythe, and Phil James. (2006). *Rapid prototyping and evaluation of intelligent environments using Immersive Video*. 16-42, Proceedings of the Workshop Modeling and designing user assistance in intelligent environments, **MODIE workshop at MobileHCI' 06**.
9. Amy Weihong Guo, Philip Blythe, Patrick Olivier, Pushpendra Singh, Hai Nam Ha, Daniel G Jackson, and Philip James. (2006). *Future traveller information systems: impacts on modal shift*. 13 pages, , **Ask-IT**.

8. Amy Weihong Guo, Philip Blythe, Patrick Olivier, Pushpendra Singh, Hai Nam Ha, Daniel G Jackson, and Philip Heslop. (2006). *Assessing future traveller information systems*. 10 pages, , **The 13th World Congress on Intelligent Transport Systems**.

## 2005

7. Maria Uther, Iraide Zipitria, James Uther, and Pushpendra Singh. (2005). *Mobile Adaptive CALL (MAC): A case-study in developing a mobile learning application for speech/audio language training*. 191-195, *IEEE International Workshop on Wireless and Mobile Technologies in Education*, **IEEE WMTE' 05**.
6. Maria Uther, Pushpendra Singh, and James Uther. (2005). *Mobile Adaptive CALL (MAC): An adaptive s/w for computer assisted language learning*. 413-416, *IEEE/ACS International Conference on Pervasive Services* , **IEEE ICPS' 05**.
5. Maria Uther, Pushpendra Singh, Iraide Zipitria, James Uther. (2005). *MAC: An adaptive, perception-based speech remediation software for mobile Devices*. 6 pages, *Proceedings of the Workshop Student Modeling for Language Tutors*, **AIED Workshop' 05**.
4. Pushpendra Singh, Gilbert Cabillic, and Banatre Michel. (2005). *An Autonomic Fault Tolerance Solution for Mobile Devices*. 635-641, *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications*, **PDPTA' 05**.

## 2003

3. Pushpendra Singh, and Gilbert Cabillic. (2003). *A checkpointing algorithm for mobile computing environment*. 65-74, *Personal Wireless Communications, IFIP-TC6 8th International Conference*, **PWC' 03**.
2. Pushpendra Singh, and Gilbert Cabillic. (2003). *Successive Checkpointing Approach for Mobile Computing Environment*. 153-159, *Proceedings of the International Conference on Wireless Networks*, **ICWN' 03**.
1. Pushpendra Singh, and Gilbert Cabillic. (2003). *Fault Tolerance and Availability in Mobile Computing Environment*. 1261-1266, *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications*, **PDPTA' 03**.

## Book Chapters

1. Pushpendra Singh, "Mobile + Cloud: Opportunities and Challenges", *Mobile Application Development, Usability, and Security* (IGI Global, 2016), Mukherjea, Sougata, eds.
2. Amy Weihong Guo, Phil Blyth, P. L. Olivier, Pushpendra Singh, Hai Nam Ha, "An Evaluation of Future Traveller Information System and its Effectiveness in Demand Management Schemes", *Travel Demand Management and Road User Pricing : Success, Failure and Feasibility* (Routledge, Taylor & Francis Publishing, 2009), Sammer, Gerd & Saleh, Wafaa, eds.