

# CAMELLIA ZAKARIA

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## RESEARCH KEYWORDS

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smart health, mobile and ubiquitous sensing, human computer interaction, applied machine learning

## EXPERIENCE

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**Assistant Professor** *2023 - Present*

University of Toronto, Canada

Biostatistics Division & Institute of Health Policy, Management and Evaluation

Dalla Lana School of Public Health

**Postdoctoral Research Fellow** *2020 - 2023*

University of Massachusetts Amherst (UMASS Amherst), USA

Manning College of Information and Computer Sciences

**Postdoctoral Research Fellow** *2020*

Singapore University of Technology and Design (SUTD), Singapore

Information Systems Technology and Design Pillar

**Research Engineer** *2013 - 2014*

Singapore Management University (SMU), Singapore

School of Computing and Information Systems

**Undergraduate Research Intern** *2012*

Singapore Management University (SMU), Singapore

Living Analytics Research Center

**Lab Officer** *2007 - 2009*

Agency for Science, Technology and Research (ASTAR), Singapore

Institute for Infocomm Research

## EDUCATION

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**Singapore Management University, Singapore**

School of Computing and Information Systems

Ph.D. in Information Systems

*2014 - 2019*

B.Sc in Information Systems

*2009 - 2013*

**Carnegie Mellon University, USA**

Heinz College of Information Systems and Public Policy

Exchange Student during Fall

*2016*

**Temasek Polytechnic, Singapore**

School of Informatics

Diploma in Internet Computing

*2004 - 2007*

## PUBLICATION

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1. **C. ZAKARIA**, P. S. Foong, P. VS Pakianathan, and G. H. C. Koh, "Who are the Digital Proxies?: Results from a Survey on the Prevalence and Predictors of Digital Proxy Behavior in the United States," *In review* for the Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI), 2024.

2. B. Chhaglani, **C. ZAKARIA**, R. Peltier, J. Gummeson, and P. Shenoy, “AeroSense: Sensing Aerosol Emissions from Indoor Human Activities,” *In review* for the Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2024.
3. A. Atrey, **C. ZAKARIA**, R. Balan, and P. Shenoy, “W4-groups: Modeling the who, what, when and where of group behavior via mobility sensing,” Proceedings of the ACM on Human-Computer Interaction (CSCW), 2024. [To appear]
4. P. Mammen, **C. ZAKARIA**, and P. Shenoy, “SleepLess: Personalized Sleep Monitoring Using Smartphones and Semi-supervised Learning,” 17<sup>th</sup> EAI International Conference on Pervasive Computing Technologies for Healthcare, 2023. [To appear]
5. **C. ZAKARIA**, G. Yilmaz, P. Mammen, M. Chee, R. Balan, and P. Shenoy, “SleepMore: Inferring Sleep Duration at Scale via Multi-Device WiFi Sensing,” Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 2023.
6. **C. ZAKARIA**, P. S. Foong, C. S. Lim, P. VS Pakianathan, G. H. C. Koh, and S. T. Perrault, “Does mode of digital contact tracing affect user willingness to share information? a quantitative study,” Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI), pp. 1–18, 2022.
7. **C. ZAKARIA**, A. Trivedi, E. Cecchet, M. Chee, P. Shenoy, and R. Balan, “Analyzing the impact of covid-19 control policies on campus occupancy and mobility via wifi sensing,” ACM Transactions on Spatial Algorithms and Systems (TSAS), vol. 8, no. 3, 2022.
8. B. Chhaglani, **C. ZAKARIA**, A. Lechowicz, J. Gummeson, and P. Shenoy, “Flowsense: Monitoring airflow in building ventilation systems using audio sensing,” Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), vol. 6, no. 1, pp. 1–26, 2022.
9. **C. ZAKARIA**, Y. Lee, and R. Balan, “Detection of social identification in workgroups from a passively-sensed wifi infrastructure,” Proceedings of the ACM on Human-Computer Interaction (CSCW), vol. 5, pp. 1–19, 2021.
10. A. Trivedi, **C. ZAKARIA**, R. Balan, A. Becker, G. Corey, and P. Shenoy, “Wifitrace: Network-based contact tracing for infectious diseases using passive wifi sensing,” Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), vol. 5, no. 1, pp. 1–26, 2021.
11. **C. ZAKARIA**, R. Balan, and Y. Lee, “Stressmon: Scalable detection of perceived stress and depression using passive sensing of changes in work routines and group interactions,” Proceedings of the ACM on Human-Computer Interaction (CSCW), vol. 3, no. 37, pp. 1–29, 2019.
12. Q. Roy, **C. ZAKARIA**, S. Perrault, M. Nancel, W. Kim, A. Misra, and A. Cockburn, “A Comparative Study of Pointing Techniques for Eyewear Using a Simulated Pedestrian Environment,” Proceedings of the IFIP Conference on Human-Computer Interaction (INTERACT), pp. 625–646, 2019.
13. **C. ZAKARIA**, R. C. Davis, and Z. Walker, “Seeking independent management of problem behavior: A proof-of-concept study with children and their teachers,” Proceedings of the 15th International Conference on Interaction Design and Children (IDC), pp. 196–205, 2016.

#### **Demo/Poster/Workshop Paper:**

1. A. Souza, M. Shenoy, and **C. ZAKARIA**, “Empowering User-Centered Carbon Management: Bridging Individual Preferences and Sociotechnical Advancements,” *In review* for the 1<sup>st</sup> International Workshop on Cyber-Physical-Social Infrastructure Systems, 2023.

2. B. Chagglani, **C. ZAKARIA**, J. Gummeson, and P. Shenoy, "BreathEasy: Exploring the Potential of Acoustic Sensing for Healthy Indoor Environments," Proceedings of the 1st International Workshop on Advances in Environmental Sensing Systems for Smart Cities, pp. 25-30, 2023.
3. **C. ZAKARIA**, K. Goh, Y. Lee, and R. Balan, "Exploratory Analysis of Individuals' Mobility Patterns and Experienced Conflicts in Workgroups," Proceedings of the 5th ACM Workshop on Mobile Systems for Computational Social Science, pp. 27-31, 2019.
4. K. Jayarajah, M. Radhakrishnan, and **C. ZAKARIA**, "Duplicate issue detection for the android open source project," Proceedings of the 5th International Workshop on Software Mining, pp. 24-31, 2016.
5. **C. ZAKARIA**, and R. Davis, "Wearable application to manage problem behavior in children with neurodevelopmental disorders," Proceedings of the 14th Annual International Conference on Mobile Systems, Applications, and Services Companion, pp. 127-127, 2016.
6. R. Davis, and **C. ZAKARIA**, "K-Sketch: Digital storytelling with animation sketches," International Conference on Interactive Digital Storytelling, pp. 242-245, 2014.

## AWARDS & MEDIA

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<b>BBC Worklife:</b> The Campus as a Laboratory, Making an Impact	<i>2019</i>
<b>Research@SMU:</b> Monitoring and Addressing Stress	<i>2019</i>
Awarded Best User Experience and Best Project Management for final year capstone, SMU	<i>2013</i>
Awarded Best Project Award for final year capstone, TP	<i>2007</i>
Awarded Honor's List during third-year study, TP	<i>2006</i>
Awarded Directors's List during second-year study, TP	<i>2005</i>

## SERVICE

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<b>COMSNETS:</b> Publicity Co-Chair	<i>2023</i>
<b>ACM CHI:</b> Late Breaking Work Program Committee, Assoc. Chair	<i>2021-2023</i>
<b>ACM IMWUT:</b> Student Volunteer Co-chair	<i>2018</i>
<b>ACM SIGGRAPH Asia:</b> Student Volunteer Co-chair	<i>2012</i>
<b>ACM SIGGRAPH Singapore Chapter:</b> Secretary	<i>2010-2013</i>
<b>ACM IMWUT, CSCW, CHI:</b> Active reviewer	<i>2018 - Present</i>

## TEACHING

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<b>Program Co-director</b> UMass Amherst Summer Turing Program	<i>2022-2023</i>
<b>Teaching Assistantship</b> SMU IS306 course	<i>2015</i>

## REFERENCES

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**Dr. Prashant SHENOY**

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College of Information and Computer Sciences,  
University of Massachusetts Amherst, USA  
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