

# CAMELLIA ZAKARIA

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## RESEARCH INTERESTS

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Cyber-physical systems, Applied machine learning, Big-data analytics and data-driven systems, Health and Smart cities.

## EXPERIENCE

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### Postdoctoral Research Fellow

*October 2020 - Present*

University of Massachusetts Amherst (UMASS Amherst), USA  
Manning College of Information and Computer Sciences

### Postdoctoral Research Fellow

*2019*

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, 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.

[2] **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.

- [3] B. Chhaglani, **C. ZAKARIA**, A. Lechowicz, J. Gummesson, 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.
- [4] **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.
- [5] 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.
- [6] **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.
- [7] 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.
- [8] **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.

#### **In Revision/Review:**

- [9] **C. ZAKARIA**, G. Yilmaz, P. Mammen, M. Chee, R. Balan, and P. Shenoy, “Sleepmore: Scalable detection of perceived stress and depression using passive sensing of changes in work routines and group interactions,” *Under major revisions for Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2023.
- [10] A. Atrey, **C. ZAKARIA**, R. Balan, and P. Shenoy, “W4-groups: Modeling the who, what, when and where of group behavior via mobility sensing,” *In review for the Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, 2023.
- [11] P. M. Mammen, **C. ZAKARIA**, T. Molom-Ochir, A. Trivedi, P. Shenoy, and R. Balan, “Wisleep: Scalable sleep monitoring and analytics using passive wifi sensing,” *Under major revisions for the ACM Transactions on Computing for Healthcare (HEALTH)*, 2023.

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

- [12] **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.
- [13] 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.
- [14] **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.
- [15] 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	2019
<b>Research@SMU:</b> Monitoring and Addressing Stress	2019
Awarded Best User Experience and Best Project Management for final year capstone, SMU	2013
Awarded Best Project Award for final year capstone, TP	2007
Awarded Honor's List during third-year study, TP	2006
Awarded Directors's List during second-year study, TP	2005

## SERVICE

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

## TEACHING

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

## REFERENCES

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### **Dr. Prashant SHENOY**

Distinguished Professor and Associate Dean  
College of Information and Computer Sciences,  
University of Massachusetts Amherst, USA  
Email: [shenoy@cs.umass.edu](mailto:shenoy@cs.umass.edu)

### **Dr. Zachary WALKER**

Head of Department  
Psychology and Human Development,  
Institute of Education,  
University College London, UK  
Email: [zachary.walker@ucl.ac.uk](mailto:zachary.walker@ucl.ac.uk)

### **Dr. Rajesh BALAN**

Associate Professor (PhD Advisor)  
School of Computing and Information Systems,  
Singapore Management University, Singapore  
Email: [rajesh@smu.edu.sg](mailto:rajesh@smu.edu.sg)