

**Camellia Zakaria (Ph.D.)**  
Postdoctoral Research Fellow, University of Massachusetts Amherst  
[nczakaria.github.io](https://nczakaria.github.io), [linkedin.com/nczakaria](https://linkedin.com/nczakaria)

## EDUCATION

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JUL 2019 Doctorate (Ph.D.) in Information Systems  
AUG 2014 School of Information Systems, Singapore Management University

JUL 2013 Bachelor's in Science (Information Systems)  
AUG 2009 School of Information Systems, Singapore Management University  
Awards: Final year project – Best User Experience Award, Best Project Management Award

APR 2007 Diploma in Internet Computing with Merit  
APR 2004 School of Informatics, Temasek Polytechnic  
Awards: Final Year Project – Best Project 2007, Honor's List AY 2006-2007, Director's List AY 2005-2006

## EXPERIENCE

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PRESENT Postdoctoral Research Fellow  
OCT 2020 College of Information & Computer Sciences, University of Massachusetts Amherst  
Working on developing AI technologies for large-scale behavioral health applications.

APR 2020 Postdoctoral Research Fellow  
SEP 2019 School of Computing & Information Systems, Singapore Management University  
Worked on deploying a WiFi behavioral monitoring system in a local polytechnic to drive AI-mental health efforts for students.

JUL 2014 Research Engineer  
JUL 2013 School of Computing & Information Systems, Singapore Management University  
Worked on a 2D-graphics sketch and animation application for novices and assist in research work related to this tool.

AUG 2009 Research Lab Officer  
AUG 2007 Institute of Infocomm Research, Agency for Science, Technology and Research  
Worked on developing 3D graphics, animation and rendering to support research experiments on stereoscopic entertainment systems.

## PUBLICATION

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SleepMore: Sleep Prediction at Scale with Multi-Device WiFi Sensing  
Zakaria, C., Yilmaz, G., Mammen, P., Parkman, B., Chee, M., Shenoy, P., & Balan, R.  
MobiSys | Under review for Proceedings of the ACM International Conference on Mobile Systems, Applications, and Services (2022)

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**Does Mode of Digital Contact Tracing Affect User Willingness to Share Information? A Quantitative Study**

Zakaria, C., Foong, P.S., Lim, C.S., Pakianathan, V., Koh, G., & Perrault, S.

CHI | Proceedings of the ACM Conference on Human Factors in Computing Systems (2022)

**WiSleep: Scalable Sleep Monitoring and Analytics Using Passive WiFi Sensing**

Mammen, P., Zakaria, C., Molom-Ochir, T., Trivedi, A., Shenoy, P., & Balan, R.

HEALTH | Under review for ACM Transactions on Computing for Healthcare (2022)

**Analyzing the Impact of COVID-19 Control Policies on Campus Occupancy and Mobility via Passive WiFi Sensing**

Zakaria, C., Trivedi, A., Cecchet, E., Chee, M., Shenoy, P., & Balan, R.

TSAS | ACM Transactions on Spatial Algorithms and System. Special Issue on Contact Tracing (2022)

**FlowSense: Monitoring Airflow in Building Ventilation Systems Using Audio Sensing**

Chagglani, B., Zakaria, C., Lechowicz, A., Gummesson, J., & Shenoy, P.

IMWUT | Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (2022)

**Detection of Students' Workgroup Identification using Passively Sensed WiFi Infrastructure**

Zakaria, C., Balan, R., Lee, Y.

CSCW | Proceedings of the ACM on Human-Computer Interaction (2021)

**WiFiTrace: Network-based Contact Tracing for Infectious Diseases Using Passive WiFi Sensing**

Trivedi, A., Zakaria, C., Balan, R., Becker, A., Corey, G., & Shenoy, P.

IMWUT | Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (2021)

**StressMon: Scalable Detection of Perceived Stress and Depression Using Passive Sensing of Changes in Work Routines and Group Interactions**

Zakaria, C., Balan, R., Lee, Y.

CSCW | Proceedings of the ACM on Human-Computer Interaction (2019)

**Exploratory Analysis of Individuals' Mobility Patterns and Experienced Conflicts in Workgroups**

Zakaria, C., Goh, K., Lee, Y., & Balan, R.

MSCSS, MobiSys | Proceedings of the 5th ACM Workshop on Mobile Systems for Computational Social Science (2019)

**A Comparative Study of Pointing Techniques for Eyewear Using a Simulated Pedestrian Environment**

Roy, Q., Zakaria, C., Perrault, S., Nancel, M., Kim, W., Misra, A., & Cockburn, A.

INTERACT | 17th IFIP International Conference on Human-Computer Interaction (2019)

**Seeking independent management of problem behavior: A proof-of-concept study with children and their teachers**

Zakaria, C., Davis, R. C., & Walker, Z.

IDC | Proceedings of the 15th International Conference on Interaction Design and Children (2016)

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**Duplicate issue detection for the Android open-source project**

Jayarajah, K., Radhakrishnan, M., & Zakaria, C.

SoftwareMining, KDD | Proceedings of the 5th International Workshop on Software Mining (2016)

**K-Sketch: Digital Storytelling with Animation Sketches**

Davis, R. C., & Zakaria, C.

ICIDS | Interactive storytelling: 7th International Conference on Interactive Digital Storytelling (2014)

**Thesis: StressMon: Large Scale Detection of Stress and Depression in Campus Environment using Passive Coarse-grained Location Data**

Zakaria, C.

2019

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**SELECTED PROJECTS**

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**STRESSMON**

StressMon (previously known as StressAssess@Campus) has undergone validation from two phases of longitudinal study between Spring'18 to Fall'18 since the making of this video. Future development of this work includes extending passive-sensing capabilities to understand measures of social interaction and well-being such as social identification and sleep.

**WATCHME**

WatchMe is a first PhD work, close to my heart. This work is built on sufficient progress in mobile sensing and HCI to assume that wearable devices can detect the physical movements and sounds in most problem behaviours. For example, I am using the accelerometer for hand gesture recognition and microphone for detecting vocalizations. I hope to continue this work on building an independent behaviour management tool that provides effective intervention to child users only when it is necessary.

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**TEACHING AND LEADERSHIP ROLES**

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**AUG 2018 IS306: Interaction Design and Prototyping**

School of Computing & Information Systems, Singapore Management University  
Teaching assistant for HCI course.

**DEC 2012 Student Volunteer Co-Chair**

SIGGRAPH Asia, Student Volunteer Chair

Responsible for coordinating with conference programs and scheduling deployment of SV resources. Organized SV outreach program at Lucasfilm, SG.

**AUG 2008 Lab coordinator for CGI Lab**

Institute of Infocomm Research, Agency for Science, Technology and Research

Managed student artist interns in developing graphic work and producing animations with motion capture equipment

## ORGANIZATIONS

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- 2022 CHI 2022 LBW Program  
Currently serving on Late Breaking Work (LBW) Program Committee
- 2021 CHI 2021 LBW Program  
Served as Associate Chair for the Late Breaking Work (LBW) Program
- 2018 UbiComp 2018  
Served as Co-Chair of the Student Volunteer Program
- 2012 SIGGRAPH Asia 2012  
Served as Co-Chair of the Student Volunteer Program
- 2011 Singapore ACM SIGGRAPH Association  
Served as Secretary from 2010 to 2013

## SKILLS

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Languages	Java, Python, JavaScript, R, SQL
App/Technologies	SPSS, AWS, Git, Android development, Adobe After Effects/Premier/Photoshop/Illustrator, Autodesk Maya/3DMax
Research	Machine Learning, Quantitative and Qualitative Analyses, User Study Protocols, Writing / Presentation

## REFERENCES

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Dr. Rajesh Balan  
Associate Professor  
School of Computing and  
Information Systems, SMU  
Email: [rajesh@smu.edu.sg](mailto:rajesh@smu.edu.sg)

Dr. Zachary Walker  
Associate Professor  
Institute of Education,  
UCL  
Email: [zachary.walker@ucl.ac.uk](mailto:zachary.walker@ucl.ac.uk)

Dr. Youngki Lee  
Associate Professor  
Department of Computer Science  
and Engineering, SNU  
Email: [youngkilee@snu.ac.kr](mailto:youngkilee@snu.ac.kr)