**Thivya KANDAPPU**

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## Education

PhD, University of New South Wales, Australia, 2014

Bachelor of the Science of Engineering, University of Moratuwa, Sri Lanka, 2009

PhD in Electrical Engineering and Telecommunications, University of New South Wales, Australia, 2014

BSc. Eng (Hons) in Electronics and Telecommunication Engineering, University of Moratuwa, Sri Lanka, 2009

## Academic Appointments

Assistant Professor of Computer Science, School of Computing and Information Systems, SMU, Aug 2021 - Present

Visiting Assistant Professor of Computer Science, School of Computing and Information Systems, SMU, Apr 2021 - Aug 2021

Visiting Assistant Professor of Information Systems, School of Computing and Information Systems, SMU, Aug 2018 - Mar 2021

## RESEARCH

### Publications

Journal Articles [Refereed]

EyeTrAES : Fine-grained, low-latency eye tracking via adaptive event slicing, by SEN, Argha; BANDARA, Nuwan Sriyantha; GOKARN, Ila; KANDAPPU, Thivya; MISRA, Archan. (2024). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 8* (4), 1-32. https://doi.org/10.1145/3699745 (Published)

BreathPro: Monitoring breathing mode during running with earables, by HU, Changshuo; KANDAPPU, Thivya; LIU, Yang; MASCOLO, Cecilia; MA, Dong. (2024). *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 8* (2), 1-25. https://doi.org/10.1145/3659607 (Published)

A data-driven approach for scheduling bus services subject to demand constraints, by BRAHMANAGE, Janaka Chathuranga; KANDAPPU, Thivya; ZHENG, Baihua. (2023). *IEEE Transactions on Knowledge and Data Engineering, 35* (7), 6534-6547. https://doi.org/10.1109/TKDE.2022.3188243 (Published)

PrivacyPrimer: Towards privacy-preserving Episodic memory support for older adults, by KANDAPPU, Thivya; SUBBARAJU, Vigneshwaran; XU, Qianli. (2021). *Proceedings of the ACM on Human-Computer*

*Interaction, 5* (CSCW2), 1-32. (Published)

Book Chapters

Privacy in crowdsourced platforms, by KANDAPPU, Thivya; FRIEDMAN, Arik; SIVARAMAN, Vijay; BORELI, Roksana. (2015). In Sherali Zeadally and Mohamad Badra (Ed.), *Privacy in a digital, networked world* (pp. 57-84) Switzerland: Springer. https://doi.org/10.1007/978-3-319-08470-1_4 (Published)

Conference Proceedings

EyeGraph : Modularity-aware spatio temporal graph clustering for continuous event-based eye tracking, by BANDARA, Nuwan; KAMDAPPU, Thivya Kandappu ; SEN, Argha; GOKARN, Ila; MISRA, Archan. (2024.0). *Proceedings of 38th Annual Conference on Neural Information Processing Systems (NeurIPS 2024) : Vancouver, Canada, December 10-15,* Canada: NeurIPS. (Published)

Detecting foot strikes during running with earbuds, by HU, Changshuo; KANDAPPU, Thivya; STUCHBURY-WASS, Jake; LIU, Yang; TANG, Anthony; MASCOLO, Cecelia; MA, Dong. (2024.0). *BodySYS '24: Proceedings of the 10th Workshop on Body-Centric Computing Systems, Tokyo, June 3-7,* (pp. 35-40) New York: ACM. https://doi.org/10.1145/3662009.3662023 (Published)

PrivObfNet: A weakly supervised semantic segmentation model for data protection, by TAY, Chiat Pin; SUBBARAJU, Vigneshwaran; KANDAPPU, Thivya. (2024.0). *Proceedings of the 2024 IEEE/CVF Winter Conference on Applications of Computer Vision: Waikoloa, HI, January 4-8,* (pp. 2410-2420) Los Alamitos, CA: IEEE. https://doi.org/10.1109/WACV57701.2024.00241 (Accepted)

MetroWatch: A predictive system to estimate travel attributes using smart card data, by BRAHMANAGE, Janaka; KANDAPPU, Thivya; ZHENG, Baihua. (2023.0). *Proceedings of the 39th IEEE International Conference on Data Engineering (ICDE'23), Anaheim, CA, USA, 2023 April 3-7,* (pp. 3607-3610) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICDE55515.2023.00279 (Published)

Wearables for in-situ monitoring of cognitive states: Challenges and opportunities , by RADHAKRISHNAN, Meera; KANDAPPU, Thivya; GULATI, Manoj; MISRA, Archan . (2023.0). *Proceedings of the 2023 IEEE International Conference on Pervasive Computing and Communications Workshops and other Affiliated Events (PerCom Workshops), Atlanta, GA, March 13-17,* (pp. 671-676) New Jersey, USA: IEEE. https://doi.org/10.1109/PerComWorkshops56833.2023.10150270 (Published)

PrivAttNet: Predicting privacy risks in images using visual attention, by CHEN, Zhang; KANDAPPU, Thivya; SUBBARAJU, Vigneshwaran. (2021.0). *Proceedings of the 25th International Conference on Pattern Recognition, ICPR 2020, Virtual Conference, 2021 January 10-15,* Virtual Conference: (Presented)

PokeME: Applying context-driven notifications to increase worker engagement in mobile crowd-sourcing, by KANDAPPU, Thivya; MEHROTRA, Abhinav; MISRA, Archan; MUSOLESI, Mirco; CHENG, Shih-fen; MEEGAHAPOLA, Lakmal Buddika. (2020.0). *CHIIR '20: Proceedings of the 5th Conference on Human Information Interaction and Retrieval, Vancouver, March 14-18,* (pp. 3-12) New York: ACM. https://doi.org/10.1145/3343413.3377965 (Published)

Buscope: Fusing individual & aggregated mobility behavior for" live" smart city services, by MEEGAHAPOLA, Lakmal; KANDAPPU, Thivya; JAYARAJAH, Kasthuri; AKOGLU, Leman; XIANG, Shili; MISRA, Archan. (2019.0). *17th ACM International Conference on Mobile Systems, Applications, and Services, MobiSys 2019; Seoul; South Korea; Jun 17-21, 2019,* (pp. 41-53) New York: ACM. https://doi.org/10.1145/3307334.3326091 (Published)

A feasibility study on crowdsourcing to monitor municipal resources in smart cities, by KANDAPPU, Thivya; MISRAN, Archan; KOH, Desmond; TANDRIANSYAH, Randy Daratan; JAIMAN, Nikita. (2018.0). *Proceedings of the 27th International World Wide Web, WWW 2018; Lyon; France; April 23-27, 2018,* (pp. 919-925) New York: acm. https://doi.org/10.1145/3184558.3191519 (Published)

Privacy in context-aware mobile crowdsourcing systems, by KANDAPPU, Thivya; MISRA, Archan; CHENG, Shih-Fen; LAU, Hoong Chuin. (2017.0). *Proceedings of the IEEE International Conference on Pervasive Computing and Communications Workshops, PerCom Workshops 2017, Kona, Big Island, United States, March 13-17,* (pp. 231-236) New York: IEEE. (Published)

Collaboration trumps homophily in urban mobile crowdsourcing, by KANDAPPU, Thivya; MISRA, Archan; TANDRIANSYAH, Randy. (2017.0). *CSCW '17: Proceedings of the 2017 ACM Conference on Computer*

*Supported Cooperative Work and Social Computing; Portland, OR, February 25 - March 1,* (pp. 902-915) New York: ACM. https://doi.org/10.1145/2998181.2998311 (Published)

A campus-scale mobile crowd-tasking platform, by JAIMAN, Nikita; MISRA, Archan; DARATAN, Randy Tandriansyah; KANDAPPU, Thivya. (2016.0). *UbiComp '16: Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing, Heidelberg; Germany, September 12-16,* (pp. 297-300) New York: ACM. https://doi.org/10.1145/2968219.2971388 (Published)

TASKer: behavioral insights via campus-based experimental mobile crowd-sourcing, by KANDAPPU, Thivya; JAIMAN, Nikita; TANDRIANSYAH, Randy; MISRA, Archan; CHENG, Shih-Fen; CHEN, Cen; LAU, Hoong Chuin; CHANDER, Deepthi; DASGUPTA, Koustuv. (2016.0). *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing, UbiComp; Heidelberg; Germany; September 12-16, 2016,* (pp. 392-402) New York: ACM. https://doi.org/10.1145/2971648.2971690 (Published)

Demo: TA$Ker: Campus-scale mobile crowd-tasking platform, by JAIMAN, Nikita; KANDAPPU, Thivya; TANDRIANSYAH, Randy; MISRA, Archan. (2016.0). *MobiSys '16: Companion publications of the 14th Annual International Conference on Mobile Systems, Applications, and Services, Singapore, June 25-30,* (pp. 105-105) New York: ACM. https://doi.org/10.1145/2938559.2938587 (Published)

Campus-scale mobile crowd-tasking: deployment & behavioral insights, by Thivya Kandappu; Archan Misra; Shih-Fen Cheng; Nikita Jaiman; Randy Tandriansiyah; Cen Chen; Hoong Chuin Lau; Deepthi Chander; Koustuv Dasgupta. (2016.0). *Proceeding of 19th ACM Conference on Computer-Supported Cooperative Work and Social Computing, CSCW; San Francisco; United States; 27 February-2 March, 2016,* (pp. 800-812) New York: ACM. https://dl.acm.org/doi/10.1145/2818048.2819995 (Published)

PrivacyCanary: Privacy-aware recommenders with adaptive input obfuscation, by KANDAPPU, Thivya; FRIEDMAN, Arik; BORELLI, Roksan; SIVARAMAN, Vijay. (2015.0). *Proceeding of the 22nd Annual IEEE International Symposium on Modeling, Analysis and Simulation of Computer, and Telecommunication Systems, MASCOTS; Paris; France; September 9-11, 2014,* (pp. 453-462) Washington, DC: IEEE Computer Society. https://doi.org/10.1109/MASCOTS.2014.62 (Published)

Loki: A privacy-conscious platform for crowdsourced surveys, by KANDAPPU, Thivya; SIVARAMAN, Vijay, FRIEDMAN, Arik, BORELI, Roksana. (2014.0). *2014 6th International Conference on Communication Systems and Networks, COMSNETS; Bangalore; India; January 7-10: Proceedings,* (pp. 1-8) Piscataway, NJ: IEEE. https://doi.org/10.1109/COMSNETS.2014.6734877 (Published)

Exposing and mitigating privacy loss in crowdsourced survey platforms, by KANDAPPU, Thivya; SIVARAMAN, Vijay; FRIEDMAN, Arik; BORELL, Roksana. (2013.0). *Proceedings of the ACM CoNEXT Student Workshop; Santa Barbara, CA; United States; 2013 December 9.,* (pp. 13-15) Santa Barbara, USA: ACM. https://doi.org/10.1145/2537148.2537150 (Published)

A novel unbalanced tree structure for low-cost authentication of streaming content on mobile and sensor devices, by KANDAPPU, Thivya; SIVARAMAN, Vijay; BORELI, Roksana. (2012.0). *Proceedings of the 9th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), Seoul, South Korea, 2012 June 18-21,* (pp. 488-496) Washington, DC: IEEE Computer Society. https://doi.org/10.1109/SECON.2012.6275816 (Published)

## Research Grants

Singapore Management University

BeyondTravel: a Multimodal Travel Records Analytics Framework, Academic Research Fund (AcRF) Tier 2, Ministry of Education (MOE) , PI (Project Level): ZHENG Baihua , Co-PI (Project Level): Thivya KANDAPPU, 2020, S$544,872

Understanding Temporal Dynamics of Core Cognitive Functions for Individualised Learning, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Thivya KANDAPPU , Co-PI (Project Level): Archan MISRA, 2023, S$123,755.09

Leveraging Mobile Sensing to Provide Early Detection of Meltdowns in Children with Autism, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Rajesh Krishna BALAN, 2023, S$120,000

Context-aware Privacy Protection in Augmented Memory & Reality Applications, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Thivya KANDAPPU, 2019, S$91,200

## TEACHING

### Courses Taught

Singapore Management University

Undergraduate Programmes :

- Foundations of Cyber-Physical Systems
- Interconnection of Cyber Physical Systems
- IS/SMT Project Experience (Applications)
- Mobile & Pervasive Computing and Applications

Postgraduate Professional Programmes :

- Programming with Data

Postgraduate Research Programmes :

- Empirical Research Project 1