

CURRICULUM VITAE

Owen Noel Newton Fernando
Senior Lecturer
School of Computer Science and Engineering

Academic Qualifications

2006 PhD (Computer Science and Engineering), University of Aizu, Japan
2003 MSc (Computer Science and Engineering), University of Aizu, Japan
1998 BSc in Computer Science, University of Colombo, Sri Lanka

Summary of Working Experience

Jan 2015 – Present	Senior Lecturer, School of Computer Science and Engineering, Nanyang Technological University, Singapore
Apr 2012 – Dec 2014	Senior Research Fellow, Nanyang Technological University, Singapore
Jan 2010 – Apr 2012	Associate Faculty, SIM University, Singapore
Jan 2011 – Mar 2012	Senior Research Fellow, National University of Singapore, Singapore
Oct 2007 – May 2008	Visiting Researcher, Kyoto University, Japan
Apr 2007– April 2007	Visiting Researcher, University of Electro-Communications, Japan
Nov 2006 – Dec 2010	Research Fellow, National University of Singapore, Singapore
Oct 2003 – Sep 2006	Research Assistant, University of Aizu, Japan
Oct 2001 – Sep 2003	Research Assistant, University of Aizu, Japan
Dec 1998 – Aug 2001	Systems Analyst, Peoples Bank, Sri Lanka
Aug 1998 – Aug 2001	Part-Time Instructor, University of Colombo, Sri Lanka
Jan 1998 – Dec 1998	Programmer, SCS Lanka, Sri Lanka

RESEARCH SUMMARY

Key Areas of Research

- Human-Computer Interaction
- Human-Computer Interaction in Education
- Human-Computer Interaction in Educational Technology
- Multimodal Interfaces and Interactive Systems
- Crowdsourcing & Social Computing

Research Awards / Recognition

Year	Research Award / Recognition
2023	Research work related to “The Hidden Shrines of Singapore: Mapping and Narrating Multi-Religious Heritages (NHB HRG Grants)” invited to publish MUSE SG special issue (The article is available on printed MUSE SG, vol. 16, issue. 1, pp. 54–61, 2023). This special issue celebrated the National Heritage Board's (NHB) 30th anniversary.
2020	Nanyang Research Programme (2020): Participation Awards have been given out to student (Ren Zhengdao – Nanyang Junior College) participants for Nanyang Research Programme – Junior Researcher
2019	Nanyang Research Programme (2019): Participation Awards have been given out to student (Chan Yoke Chea Lucas – Victoria Junior College) participants for Nanyang Research Programme / Nanyang Research Programme – Junior Researcher
2019	The ICA (International communication Association) Outstanding Applied/ Public Policy Research Award 2019) for the project called “Mo-Buzz”
2016	“Twittener” received an honorary mentioning at the NTU Hackathon 2016, Collage of Engineering, Nanyang Technological University
2016	“Smart Museum” received an honorary mentioning at the NTU Hackathon 2016, Collage of Engineering, Nanyang Technological University
2015	Research Commercialization via Spinoffs award for “Point and Search Augmented Reality Solution for Mobile Devices (NTU TD Ref: TD/254/13),” Nanyang Technological University, NTUitive Pte. Ltd
2015	Research Commercialization via Spinoffs award for "Socially Mediated System for Vector- Borne Diseases Surveillance engagement (NTU Ref: TD/248/14),” Nanyang Technological University, NTUitive Pte. Ltd
2014	“Sensing Environment through Mobile” received an honorary mentioning the Neo Ubimedia MindTrek Awards, in Tampere Finland
2011	“Selective Inductive Powering System for Paper Computing” won the first prize from the Nokia UbiMedia MindTrek Awards, Tampere, Finland
2011	The paper titled "A Multimodal Virtual Anatomy Learning Tool for Medical Education," has been selected as the best paper for the session on 'Learning Technologies / Strategies for Assessing Student Learning and Teaching,' at the 2nd International Conference on Education, Training and Informatics (ICETI 2011), held in Orlando, Florida, USA
2011	Poetry Mix-up: Winner of the "Integrated Art Competition", LTA of Singapore, Awarded First Prize for “Poetry Mix-up,” which is permanently installed at the Kent Ridge Station of the new subway “Circle Line.”
2010	“AmbiKraf” received an honorary mentioning at the Nokia UbiMedia MindTrek Awards, in Tampere Finland (2010)
2010	Petimo: social networking robot for children, won the first prize in an international innovation competition in Milan Milan, Italy
2009	Petimo: Winner of the C4C (Como for Children) Competition at IDC 2009 (The 8th International Conference on Interaction Design and Children): Learning and Playing in the pre-school of the future, Como, Italy
2008	Babbage Cabbage: Babbage Cabbage Empathetic Living Media was one of three prize winners of the International NOKIA Ubimedia MindTrek

2007	A paper describing a “Spatial Audio for Mobile interfaces” won the third prize (Demo Category) at the MobileHCI Conference, Singapore
2004 – 2006	Japanese Government Scholarship (MEXT: Monbukagakusho),
2002 – 2003	Japanese Government Scholarship (MEXT: Gakushu-Shoreihi) for outstanding scholastic performance (Japan)
2001 – 2002	Distinguished Laksakura Award from the Herath Foundation (Japan)

Keynote Presentation

1. Keynote Speaker (Fully funded): The Eighteenth International Symposium on Spatial Media (ISSM'17-'18) 2018, Aizuwakamatsu, Japan, March 2-4, 2018.

Invited Presentations

1. Invited Speaker: NUS Industry Liaison Office’s Special Interest Group (SIG) event on “Virtual, Mixed and Augmented Reality” October 2nd, 2009.
2. Guest Speaker: ITE International Student Seminar 2009 for the Youth Tek! June 19th, 2009.
3. Invited Speaker: Minimally Invasive Surgery Symposium (MIS) in 41st Singapore-Malaysia Congress of Medicine, Singapore, July 19th–22nd, 2007. (Title: Operating Theater and Digital Age).
4. Invited as a Contributor: Wired NextFest 2007. “Metazoa Ludens” received the honor of being selected as the top 100 visionary and high impact technology works in the world by the USA based WIRED magazine, and I represented MXR lab to demonstrate “Metazoa Ludens” in the Wired NextFest, September 13th–16th, 2007.

Research Funding

External Grants

Role	Year	Project Title	Amount (\$)	Source of Grant
PI	2016 - 2018	Socially Mediated Augmented Reality for Enhanced User Experience and Customer Engagement	148,000	Edge Lab Initiative (AIA)
Co-PI	2018 - 2020	The Hidden Shrines of Singapore: Mapping and Narrating Multi-Religious Heritages	## (70,000)	NHB HRG Grant
Co-PI	2017 - 2019	Productive Failure via Educational Games for Tertiary Education	50,000 (285,866.40)	MOE-TRF Grant
Co-PI	2010 - 2012	Research in Augmented Reality for	### (1,880,000)	Ministry of Deference

		Military Applications		(MINDEF)
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CO-PI for the project “The Hidden Shrines of Singapore: Mapping and Narrating Multi-Religious Heritages,” NHB HRG Grants, S\$ 70,000 (2018). I did research and development of this project together with a few part-time student assistants. I have also published a technical paper at the 2019 Cyberworlds conference as a leading author.

CO-PI for the project titled “Research in Augmented Reality for Military Applications,” (S\$1.88 million by Ministry of Défense (MINDEF), Singapore (2010). I conducted this research while I was working as a senior research fellow at IDMI Institute, NUS. I havewritten this proposal together with the PI and presented it to MINDEF several times to obtain the grant. The PI was also the center director; hence, he was busy with several other responsibilities. Therefore, I led the team of ten people, including several senior researchers,to achieve the deliverables. My contributions include weekly research meetings, monthly meetings with MINDEF, report submissions, and leading the team in several aspects of the research and development process.

Internal Grants

Role	Year	Project Title	Amount (S\$)	Source of Grant
PI	2025 - 2027	AlgoGPT: Advancing Data Structures Learning through Multi-Agent AI, Cognitive Load Management, and SRL Strategies	40,000	NTU-EdeX
CO-PI	2025 - 2026	Improving Graduate Students' Critical Reasoning and Academic Writing with GenAI Tools	5,000 # (104,897.92)	NIE's Incentivising ICT Use Innovation (I3G) Grant
PI	2017 - 2019	Twittener: Twitter Speech Synthesis with Natural Language Processing	50,000	MOE AcRF Tier 1
PI	2016 - 2018	Assessing Source Code of Undergraduate/Postgraduate with Code Quality Assessment Tool (CQAT)	18,000	NTU-EdeX
Co-PI	2022 - 2024	Migrant Deities: The Sacred Pantheon in Singapore, Their Sacred Spaces, Their Communities of Worship, and Their Religious Networks in and Outside the Island	## (89,000)	MOE AcRF Tier 1
Co-PI	2017 - 2018	Personalized Interventions During E-lecture	### (40,000)	NTU-EdeX

Collaborator	2013 - 2014	Potential Acceptance of a Mobile Phone Based Influenza Communication System among Adolescents, Parents, and Teachers: Role of Peers and Social Influence	##### (84,880)	MOE AcRF Tier 1
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Co-PI for the project “Improving Graduate Students’ Critical Reasoning and Academic Writing with GenAI Tools,” funded under the NIE Incentivising ICT Use Innovation (I3G) Grant (Total Award: S\$104,897.92, 2025). An allocation of S\$5,000 supports my role as Co-PI. I oversee research and development activities focused on the pedagogical integration of Generative AI tools to enhance graduate students’ critical reasoning and academic writing.

CO-PI for the project “Migrant Deities: The Sacred Pantheon in Singapore, Their Sacred Spaces, Their Communities of Worship, and Their Religious Networks in and Outside the Island,” MOE AcRF Tier 1, S\$ 89,000 (2022). I will work with part-time students to conduct research and development of the Migrant Deities system.

CO-PI for the project “Personalized interventions during e-lecture,” NTU-EdeX Grants, M4082010.020, S\$ 40,000 (2017). I worked with part-time students to conduct research and development of the e-learning system. I conducted user studies and managed to publish a paper at the 2018 ICARCV conference

Collaborator for the project titled “Potential Acceptance of a Mobile Phone Based Influenza Communication System among Adolescents, Parents, and Teachers: Role of Peers and Social Influence,” MOE AcRF Tier 1, 2013-T1-002-062, S\$84,880.00(2013). I did this project when I was working as a senior research fellow at the COSMIC Centre at NTU. I contributed to this research in different ways. For instance, I worked with a couple of research engineers to design, develop, and deploy the system. Besides that, I helped them in conducting user studies, as well.

Citation Summary

Database	Citation Count		H-index
	without self-citations	with self-citations	
Google Scholar		1656	21

Publications (in chronological order, starting with the most recent)

- ^ Denotes corresponding author.
- ~ Denotes PI/Supervisor/Team Lead
- ** Denotes directly supervised research staff, i.e., POs, RAs, RFs, postdocs, etc.
- * Denotes PhD students (supervised or co-supervised)
- ## Denotes Tier 1A papers
- # Denotes Tier 1B papers / Tier 1 Conference

Journal Papers

1. **Lindong Li**, Linbo Qing, Liuyi Tao, Pingyu Wang, Honggang Chen, Owen Noel Newton Fernando, and **Weisi Lin** (2026). "RelPosGAR: Hierarchical relative position-aware interaction modelling for weakly supervised skeleton-based group activity recognition," *Pattern Recognition*, Volume 176, 2026, pages: 113251, ISSN 0031-3203. [Impact Factor (2026): 7.6]. ##
2. **May O. Lwin**, S. Vijaykumar, S. Foo, **O. N. N. Fernando**, Lim, C. K. Panchapakesan, and P. Wimalaratne (2016). "Social media-based civic engagement solutions for dengue prevention in Sri Lanka: Results of receptivity assessment," *Health Education Research* (2016) 31 (1): pp. 1-11. [Impact Factor (2023): 2.2]. # (O. N. N. Fernando and May O. Lwin contributed equally to the paper.)
3. **May O. Lwin**, S. Vijaykumar, V. Rathnayake**, G. Lim, C. Panchapakesan, S. Foo, **O. N. N. Fernando** (2016). "A Social Media mHealth Solution to Address the Needs of Dengue Prevention and Management in Sri Lanka," *Journal of Medical Internet Research*, 18(7), e149. [Impact Factor (2023): 7.2]. ## (O. N. N. Fernando and May O. Lwin contributed equally to the paper.)
4. **May O. Lwin**, S. Vijaykumar, G. Lim, **O. N. N. Fernando**, V. S. Rathnayake**, and S. Foo (2015). "Baseline Evaluation of a Participatory Mobile Health Intervention for Dengue Prevention in Sri Lanka." *Health Education & Behavior* (2015): 43(4): pp. 471-479. [Impact Factor (2023): 4.2]. (O. N. N. Fernando and May O. Lwin contributed equally to the paper.)
5. **May O. Lwin**, S. Vijaykumar, **O. N. N. Fernando**, Y. L. A. Cheong, V. S. Rathnayake, G. Lim, Y. L. Theng, S. Chaudhuri, S. Foo (2014), "A 21st century approach to tackling dengue: Crowdsourced surveillance, predictive mapping and tailored communication," *Acta tropica*, 130 (2014): pp. 100-107. [Impact Factor (2022): 2.7]. (O. N. N. Fernando and May O. Lwin contributed equally to the paper.)
6. **H. A. Samani**, E. Saadatian, N. Pang, D. Polydorou, O. N. N. Fernando, R. Nakatsu, and J.T. K. V. Koh (2013), "Cultural Robotics: The Culture of Robotics and Robotics in Culture," *International Journal of Advanced Robotic Systems*, 2013: 10 (12). [Impact Factor (2023): 2.3].
7. R. L. Peiris, J. T. K. V. Koh, M. J. Tharakan, **O. N. N. Fernando**, and **A. D. Cheok** (2013), "AmbiKraf Byobu: Merging Technology with Traditional Craft," *Interacting with Computers*, Oxford University Press, 2013: 25 (2), pp. 173-182. [Impact Factor (2023): 1.3]. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
8. K. Zhu, H. Nii, **O. N. N. Fernando**, J. T. K. V. Koh, K. Aue, and **A. D. Cheok** (2013), "Designing Interactive Paper-Craft Systems with Selective Inductive Power Transmission," *Interacting with Computers*, Oxford University Press 2013: 25 (2), pp. 143-153. [Impact Factor (2023): 1.3] (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
9. R. L. Peiris, M. J. Tharakan, **O. N. N. Fernando**, and **A. D. Cheok** (2013), "AmbiKraf: Non-emissive, ubiquitous textile display," *Multimedia Tools and Applications*, Springer, 2013: 66 (1), pp. 81-94. [Impact Factor (2023): 3.6] # (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
10. **A. D. Cheok**, and **O. N. N. Fernando** (2012). "Kawaii/cute interactive media," *Universal Access in the Information Society*, 11(3), pp. 295-309. [Impact Factor (2023): 2.9] (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)

11. **A. D. Cheok**, R. T. K. C. Tan, R. L. Peiris, O. N. N. Fernando, K. S. The, I. J. P. Wijesena, and S. Y. Ping (2011), "Metazoa Ludens: Mixed Reality Interaction and Play for Small Pets and Humans," *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, 41 (5), pp. 876-891, [**Impact Factor (2023): 8.7**]. ##
12. C. Edirisinghe, K. Zhu, N. Ranasinghe, E. T. Khoo, J. P. Wijesena, **O. N. N. Fernando**, and **A. D. Cheok** (2011), "Modeling literary culture through interactive digitalmedia," *Virtual Reality*, Springer, 2011: 15 (1), pp. 239-247. [**Impact Factor (2023): 5.5**]. # (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
13. H. A. Samani, O. N. N. Fernando, and **A. D. Cheok** (2011), "An Affective Interactive Audio Interface for Lovotics," *CiE: Computers in Entertainment*, 2011: 9(2), pp. 1-14. [**Impact Factor (2018): 1.10**].
14. K. Zhu, N. Ranasinghe, C. Edirisinghe, **O. N. N. Fernando**, and **A. D. Cheok** (2011), "Poetry Mix-Up," *CiE: Computers in Entertainment*, 9(2), pp. 1-15. [**Impact Factor (2018): 1.10**]. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
15. A. D. Aberathne, K. Zhu, N. Ranasinghe, C. Edirisinghe, **O. N. N. Fernando**, and **A. D. Cheok** (2011), "Connected on and Offline Safe Social Networking for Children," *CiE: Computers in Entertainment*, 9(2), pp. 1-8. [**Impact Factor (2018): 1.10**] (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
16. **A. D. Cheok**, **O. N. N. Fernando**, D. Aberathne, C. Edirisinghe, N. Ranasinghe, K. Zhu, K. Karunanayaka, R. L. Peiris*, and N. L., Ma (2011) "Petimo: Children's companion for social networking," *Journal of Japan society of Kansei Engineering*, 2011: 10(2), pp. 86-90. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
17. **M. Cohen**, **O. N. N. Fernando**, U. C. Dumindawardena, and M. Kawaguchi (2009), "Duplex Narrowcasting Operations for Multipresent Groupware Avatars on Mobile Devices," *IJWMC: Int. J. of Wireless and Mobile Computing (Special Issue on Mobile Multimedia Systems and Applications)*, 2009: 3(4), pp. 280-287. [**Impact Factor (2023): 0.49**] (O. N. N. Fernando and M. Cohen contributed equally to the paper.)
18. **A. D. Cheok**, R. L. Peiris, C. L. Fernando, O. N. N. Fernando, and E. T. Khoo* (2009), "Energy and Touch-Information for Body-worn Ubiquitous Computing," *International Journal of Energy Technology and Policy*, 2009: 7(2), pp. 137-166. [**Impact Factor (2023): 0.83**]
19. **A. D. Cheok**, M. Haller, **O. N. N. Fernando**, and J. P. Wijesena (2009), "Mixed Reality Entertainment and Art," *International Journal of Virtual Reality*, 2009: 8(2), pp. 83-90. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
20. **A. D. Cheok**, O. Michiko, **O. N. N. Fernando**, and T. Merritt (2008), "Designing Cute Interactive Media," *Innovation (Interactive Digital Media)*, 2008: 8 (3), pp. 8-9. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
21. **A. D. Cheok**, H. Ishii, J. Osada, **O. N. N. Fernando**, and T. Merritt (2008), "Interactive Play and Learning for Children," *International Journal of Advances in Human-Computer Interaction (Special Issue on Interactive Play and Learning for Children)*, Hindawi Publishing Corporation, 2008, Article ID 341615, 3 pages. [**Impact Factor (2023): 2.9**] (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
22. **A. D. Cheok**, **O. N. N. Fernando**, J. P. Wijesena, A. R. Mustafa, A. K. Barthoff, and N. Tosa (2008), "BlogWall: Social and Cultural Interaction for Children," *International*

Journal of Advances in Human-Computer Interaction (Special Issue on Interactive Play and Learning for Children), Hindawi Publishing Corporation, 2008, Article ID 341615, 8 pages. [Impact Factor (2023): 2.9] (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)

23. **A. D. Cheok, O. N. N. Fernando**, and L. Wei (2008), "The Magical World of Mixed Reality," *Innovations*, 2008: 8 (1), pp. 8–9. (Main Authors contributed equally to the paper). (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
24. **M. Cohen**, N. A. Bolhassan, and **O. N. N. Fernando** (2007), "A Mixed Reality Application: A Multiuser Multiperspective Stereographic QTVR Browser Complemented by Java3D Visualizer and Emulator," *Presence: Teleoperators and Virtual Environments*, The MIT Press, 2007: 16 (4) pp. 414-438. [Impact Factor (2023): 1.1] (O. N. N. Fernando and M. Cohen contributed equally to the paper.)
25. **O. N. N. Fernando**[^], K. Adachi, U. Duminduwardena, M. Kawaguchi, and M. Cohen (2006), "Audio Narrowcasting and Privacy for Multipresent Avatars on Workstations and Mobile Phones," *IEICE Trans. on Information and Systems*, 2007: E89-D (1), pp. 73–87. [Impact Factor (2022): 0.695]
26. U. C. Dumindawardena, K. Adachi, M. Kawaguchi, **O. N. N. Fernando**, and **M. Cohen** (2004). "Narrowcasting Operations for Multipresent Chatspace Avatars in Collaborative Virtual Environments," *3D Forum: J. of Three-Dimensional Images*, 2004: 18(1), 129–135, ISSN 1342-2189. (O. N. N. Fernando and M. Cohen contributed equally to the paper.)
27. **O. N. N. Fernando**[^], M. Cohen, N. A. Bolhassan, D. Wanasinghe, and T. Kanno (2002), "Mobile Control in Cyberspace of Image-based & Computer Graphic Scenes and Spatial Audio Using Stereo QTVR and Java3D," *3D Forum: J. of Three-Dimensional Images*, vol. 16, no. 4, pp. 101–106, December 2002. ISSN 1342-2189.

Book Chapters

1. **A. D. Cheok, O. N. N. Fernando**, R. M. Narangoda, R. A. N. Ranasinghe, and S. G. Isuru (2010), "Petimo: Safe Social Networking Robot for Children," *Educational Games: Design, Learning, and Applications*, ed. Frank Columbus. Nova Science Publishers, Inc., 2010, pp. 351-372. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
2. **A. D. Cheok, O. N. N. Fernando**, R. A. N. Ranasinghe, Z. Kening, and C. P. D. Edirisinghe (2010), "BlogWall: Promoting Social Communication through Mobile Technology in Sri Lanka," *Mobile Information Communication Technologies Adoption in Developing Countries: Effects and Implications*, ed. Professor Ahmed Gad Abdel-Wahab. IGI Global (Formerly Idea Group Inc), 2010, 13 pages. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
3. **A. D. Cheok, O. N. N. Fernando**, Z. Kening, C. P.D. Edirisinghe, E. T. Khoo, R. A. N. Ranasinghe, "Interactive Technology and Digital System to Explore Culture: Media Me, Blog- Wall and Confucius Computer," *Springer (Art and Technology of Entertainment Computing and Communication)*, ISBN: 978-1-84996-136-3, 2010. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
4. **A. D. Cheok**, R. L. Peiris, C. L. Fernando, O. N. N. Fernando, **K. C. Tan**, J. P. Wijesena and A. S. Hooman, "Metazoa Ludens," *Springer (Art and Technology of Entertainment Computing and Communication)*, ISBN: 978-1-84996-136-3, 2010.

5. **A. D. Cheok, O. N. N. Fernando**, T. Merritt, Y. Morisawa, R. L. Peiris, C. L. Fernando, S. G. Isuru, A. I. Withana, C. P.D. Edirisinghe, R. A. N. Ranasinghe, Z. Kening, M. Dayarathne, M. Danjo, M. Tuters, D. Aberathne, and R. M. Narangoda, "Cute Interactive System," *Springer (Art and Technology of Entertainment Computing and Communication)*, ISBN: 978-1-84996-136-3, 2010. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
6. **A. D. Cheok, O. N. N. Fernando**, and L. Wei, "Interactive Theatre Experience with 3D Captured Actors and Spatial Sound," *Springer (Art and Technology of Entertainment Computing and Communication)*, ISBN: 978-1-84996-136-3, 2010. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)

Conference Papers (Full Papers)

1. Y. W. Tuck, Y. C. L. Kyle,* T. J. H. Mark, O. C. Ann, T. R. Merritt, **V. L. F. Victor, O. N. N. Fernando[^]** (2026). "Automated Lesson Analysis for Lesson Microgenres and Spatial Pedagogy," *Redesigning Pedagogy International Conference 2026: Growing Future-Ready Teachers and Learners: Collaborative Research for Educational Change*, Conference Proceedings, Nanyang Technological University, National Institute of Education, Singapore. (Accepted as a full paper).
2. P. S. Win, G. W. Qiming, M. Bansal, **O. C. Ann, L. F. Siong, O. N. N. Fernando** (2026). "NALA-Assess: A Learning Analytics–Driven Generative AI Agent for Self-Regulated Learning," *Redesigning Pedagogy International Conference 2026: Growing Future-Ready Teachers and Learners: Collaborative Research for Educational Change*, Conference Proceedings, National Institute of Education, Nanyang Technological University, Singapore, 2–4 June 2026. (Accepted as a full paper).
3. Y. H. Goh, W. Y. Tan, **L. F. Siong**, A. T. S. Keong, **O. C. Ann**, S. N. S. Hwee, **O. N. N. Fernando** (2026). "Microteaching Simulation for Teaching Assistants," *Redesigning Pedagogy International Conference 2026: Growing Future-Ready Teachers and Learners: Collaborative Research for Educational Change*, Poster Proceedings, National Institute of Education, Nanyang Technological University, Singapore, 2–4 June 2026. (Accepted as a poster).
4. **V. L. Fei**, T. J. H. Mark, O. C. Ann, T. C. You, **O. N. N. Fernando** (2026). "Designing and Implementing Generative AI Chatbots for Improving Graduate Students' Critical Reasoning and Academic Writing," *Redesigning Pedagogy International Conference 2026: Growing Future-Ready Teachers and Learners: Collaborative Research for Educational Change*, Conference Proceedings, National Institute of Education, Nanyang Technological University, Singapore, 2–4 June 2026. (Accepted as a full paper).
5. W. Z. Chee,* C. A. Ong, **O. N. N. Fernando[^]** (2025). "Transformative Pedagogy in Object-Oriented Programming: The COOP Model and AI-Enhanced Case-Based Learning," *TENCON 2025-2025 IEEE Region 10 Conference (TENCON)*, 27-30 October 2025, Sabah, MALAYSIA, pp. 973–977.
6. X. H. Chen*, B. Yu*, H. Fan*, Muhammad Firdaus Bin Azizan*, C. A. Ong, T. Merritt, **O. N. N. Fernando[^]** (2025). "AI-based Health Assistant for Young Adults," *HCI 2025: Proc. of the International Conference on Human-Computer Interaction*, 22-27 June 2025, Gothenburg, Sweden, pp. 263–280.

7. **H. Samani**, A. Zarak, D. R. Davies, **O. N. N. Fernando** (2024). "Robotic Cognitive Behavioural Therapy: rCBT," ICSR 2024: International Conference on Social Robotics, 17-19 August 2024, Singapore, pp 133-142.
8. Y. Oo*, **O. N. N. Fernando**[^] and D. Rajan, "MyHistory: Automatic Photo Album Creation," 2024 IEEE Conference on Artificial Intelligence (CAI), 25-27 June 2024, Singapore, pp. 963-968.
9. J. Yuen* and **O. N. N. Fernando**[^] (2024). "Twittener: Improving News Experience with Sentiment Analysis and Trend Recommendation," HCII 2024: Proc. of the International Conference on Human-Computer Interaction, June 2024, Washington DC, USA, pp 417-433.
10. R. Ang* and **O. N. N. Fernando**[^] (2024). "Enhancing Tourist Safety: Introducing Voyager, a Comprehensive Mobile Application for Informed and Secure Travel," HCII 2024: Proc. of the International Conference on Human-Computer Interaction, June 2024, Washington DC, USA, pp 135-156.
11. W. J. Heng* and **O. N. N. Fernando**[^] (2024). "ChatAlone: An Offline Anonymous Messaging Application for Enhanced Privacy and Open Communication," HCII 2024: Proc. of the International Conference on Human-Computer Interaction, June 2024, Washington DC, USA, pp 166-175.
12. C. Y. Hung, **O. N. N. Fernando**, C. Y. Wang, K. W. Chen, **H. Samani**, **C. Y. Yang** (2023). "Improving Clinical Decision-Making with Polynomial Regression-Based Real Patient State Estimation," Proc. of the 2023 International Automatic Control Conference, Penghu, Taiwan, 26-29 Oct 2023, pp 1-6.
13. **S. R. Meegama**, **O. N. N. Fernando**, and S. H. W. Yuan (2023), "Smell Sacred Spaces: Hidden Shrines in Singapore," *MUSE SG*, 2023: 16 (1), pp 54-61. (O. N. N. Fernando and S. R. Meegama contributed equally to the paper.).
14. W. T. Wong*, **O. N. N. Fernando**[^], C. Panchapakesan, J. K. S. Jia (2021). "Foodscover: Eliminating food waste in the retail sector through technology," *Proc. of the International Conference on Cyberworlds (CW '19)*, September 28-30, 2021, Caen, France, 2021, pp. 85-92. (W. T. Wong was my FYP student).
15. **O. N. N. Fernando**[^], V. T. Kannappan, X. Tan, J. Y. J. Hong, A. Chattopadhyay, and H. S. Seah (2019). "Learning data structures through game-based learning," *Proc. of the 17th International Conference on Virtual-Reality Continuum and its Applications in Industry (VRCAI '19)*, November 14-16, 2019, Brisbane, QLD, Australia, pp. 1-9.
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Conference Papers (Short Papers)

1. D. K Kothari*, **O. N. N. Fernando**[^] (2024). "Enhancing Human-Computer Interaction through AI: A Study on ChatGPT in Educational Environments," IEEE Conference on Artificial Intelligence (CAI), 25-27 June 2024, Singapore, pp 500-503.
2. Z. W. Tan*, C. S. Gadepalli* and **O. N. N. Fernando**[^] (2024). "AlgoTutor: An Integrated Learning Platform for Data Structures and Algorithms with Real-Time Guidance and Interactive Visualizations," HCII 2024: Proc. of the International Conference on Human-Computer Interaction, June 2024, Washington DC, USA , pp 29-38.
3. D. Xia* and **O. N. N. Fernando**[^] (2023). "SkinDiseaseGLM: An Automated Interactive Chat-based Skin Disease Diagnosis System using Large Language Model," Proc. of the International Conference on AI in Medicine (iAIM 2023 Demo Track), 4 pages, August 2023 (To be published). (D. Xia is my Master student).
4. L. Y. Heng* and **O. N. N. Fernando**[^] (2023). "Animal Hunt: AI-based Animal Sound Recognition Application," HCII 2023: Proc. of the International Conference on Human-Computer Interaction, Communications in Computer and Information Science, vol 1836, Springer, July 2023, pp 465-474. (L. Y. Heng was my FYP student).
5. J. N. Y Xin*, C. W. Cheng*, T. T. Dung* and **O. N. N. Fernando**[^] (2023). "Interactive Course Materials in Higher Institute Learning," HCII 2023: Proc. of the International Conference on Human-Computer Interaction, Communications in Computer and Information Science, vol 1834, Springer, July 2023, pp 325-333. (J. N. Y Xin is my URECA student).
6. P. S. Sundar* and **O. N. N. Fernando**[^] (2023). "iWill: A real-time mobile application to expedite first-aid and reduce casualties," HCII 2023: Proc. of the International Conference on Human-Computer Interaction, Communications in Computer and Information Science, vol 1834, Springer, July 2023, pp 156-162. (P. S. Sundar was my FYP student).
7. R. Ang* and **O. N. N. Fernando**[^] (2023). "Voyaging: Crowdsorce application for safe travelling experience," HCII 2023: Proc. of the International Conference on Human-Computer Interaction, Communications in Computer and Information Science, vol 1834, Springer, July 2023, pp 3-9. (R. Ang is my current FYP student).
8. Z. Cai*, **O. N. N. Fernando**[^], Y. O. Jia* (2022). "PoseBuddy: Pose Estimation Workout Mobile Application," Proc. of the International Conference on Cyberworlds (CW '22), September 27-29, 2022, Kanazawa, Japan, 2022, pp. 151-154. (Z. Cai was my FYP student).
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10. L. J. Bryan*, **O. N. N. Fernando**[^], S. A. Meegama, H. S. W. Yuan, and F. B. H. Muhammad (2019). "Finding Hidden Shrines using AR and Clustering Techniques," Proc. of the International Conference on Cyberworlds (CW '19), October 02-04, 2019, Kyoto, Japan 2019, pp. 348-351. (L. J. Bryan was my FYP student).

11. J. J. Gan* and **O. N. N. Fernando[^]** (2019). "Augmented Reality Hologram," Proc. of the International Conference on Cyberworlds (CW '19), October 02-04, 2019, Kyoto, Japan 2019, pp. 352-355. (J. J. Gan was my FYP student).
12. V. T. Kannappan, **O. N. N. Fernando**, **A. Chattopadhyay**, X. Tan, J. Y. J. Hong, H. S. Seah, H. E. Lye (2019), "La Petite Fee Cosmo: Learning Data Structures Through Game-Based Learning," 2019 International Conference on Cyberworlds (CW), Kyoto, Japan, 2019, pp. 207-210. (O. N. N. Fernando and A. Chattopadhyay contributed equally to the paper.)
13. P. Kusuma*, V. U. Wanniarachchi**, **O. N. N. Fernando[^]**, and W.K. Ng (2018). "Audio Fingerprint Application for the Media Industry," *Proc. of the ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers (UbiComp '18)*. ACM, New York, NY, USA, 114-117. # (P. Kusuma was my URECA/ FYP Student)
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17. Y. Fernandopulle**, R. W. Meurzec, H. Q. Ng, F. Akmaruddin, and **O. N. N. Fernando[^]**. 2017. "Twittener: Listen to your Twitter Feed." *Proc. of the 2017 ACM SIGCHI Conference on Creativity and Cognition (C&C '17)*. ACM, New York, NY, USA, 260-262. (Y. Fernandopulle was my former research engineer).
18. **M. J. Rissanen**, H. Iroshan**, **O. N. N. Fernando**, W. Toh, J. Hong, S. Vu, N. Pang, and S. Foo (2013). "UbiRing my bell," CHI EA'13: Proc. of the ACM SIGCHI Conference on Human Factors in Computing Systems Extended Abstracts, Paris, France, April 17- May 2, 2013, ACM, pp. 2865–2866 # (O. N. N. Fernando and M. J. Rissanen contributed equally to the paper.)
19. **H. A. Samani**, **E. Saadatian**, O. N. N. Fernando, D. Polydorou, N. Pang, R. Nakatsu (2013). "Towards the Definition of Cultural Robotics," *International Conference on Culture and Computing (Culture Computing)*, Kyoto, Japan, Sep 16-18, 2013, pp 167-168.
20. **O. N. N. Fernando[^]**, C. Deshan**, N. Pang, and R. Nakatsu, (2012). "Mobile augmented reality for Bukit Brown cemetery navigation," *VRCAI: Proc. of the 11th ACM SIGGRAPH International Conference on Virtual-Reality Continuum and its Applications in Industry*, December 2-4, 2012, Singapore, pp. 59–62.

21. D. Aberathne, R. L. Peiris, N. Ranasinghe, **O. N. N. Fernando**, and **A. D. Cheok**, "Food internet communication," ACE: Advances in Computer Entertainment Technology, pp 49-52, Taipei, Taiwan, November 17-19, 2010. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
22. **A. D. Cheok**, **O. N. N. Fernando**, C. L. Fernando, Z. Kening, A. I. Withana, R. A. N. Ranasinghe, Y. Morisawa, K. T. Karunannayeka, M. Danjo, S. G. Isuru, R. M. Narangoda, N. L. Ma, M. Dayarathne, R. L. Peiris, K. S. Teh, D. Aberathne, C. P. D. Edirisinghe, K. Hoogendoorn, H. Junsong, and W. W. Thang, "Petimo: children's companion for safe social networking," SIGGRAPH ASIA '09: ACM SIGGRAPH ASIA 2009 Art Gallery Emerging Technologies: Adaptation, pages 80-80, Yokohama, Japan, December 16 - 19, 2009.# (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
23. R. L. Peiris, **A. D. Cheok**, K. S. The, **O. N. N. Fernando**, Y. Wen, J. A. Lim, Y. Pan, D. Polydorou, K. P. Ong, and J. T. Mili, "AmbiKraf: An embedded non-emissive and fast changing wearable display," ACM SIGGRAPH2009: Proc. of the 36th Int. Conf. and Exhibition on Computer graphics and interactive techniques, New Orleans, Louisiana, United States, August 3-7, 2009. # (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
24. R. L. Peiris, **A. D. Cheok**, K. S. The, **O. N. N. Fernando**, M. Tharakan, K. Hoogendoorn, W. Yingqian*, A. Lim, and Y. Pan, "AmbiKraf: An embedded non-emissive and fast changing wearable display," iTokyo '09: In Proceedings of Interactive Tokyo, Tokyo, Japan, October 24, 2009. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
25. R. L. Peiris, **A. D. Cheok**, K. S. Teh, **O. N. N. Fernando**, M. Tharakan, K. Hoogendoorn, W. Yingqian, A. Lim, and Y. Pan, "AmbiKraf: An embedded non-emissive and fast changing wearable display," In Smart Textile Salon 2009, Prototype Exhibition, Ghent, Belgium, September 25, 2009. (O. N. N. Fernando and A. D. Cheok contributed equally to the paper.)
26. K. Kanno, **O. N. N. Fernando**, A. Bolhassan, S. Narita, and **M. Cohen**, ""Personal Practically Panoramic" Multimodal Interfaces," Proc. EDT: Emerging Display Technologies (IEEE-VR Workshop), ed. A. Simon, G. Welch, M. Bolas, Alexandria, Virginia, USA, pp. 37-40, March 2006. (O. N. N. Fernando and M. Cohen contributed equally to the paper.)
27. **O. N. N. Fernando**[^], "Narrowcasting and Privacy for Multipresent Avatars on Workstations and Mobile Phones in Collaborative Virtual Environments," Proc. AC 2006: IADIS Int. Conf. on Applied Computing (Doctoral Consortium), San Sebastian, Spain, pp. 715-719, February 2006. ISBN 972-8924-09-7.
28. **M. Cohen** and **O. N. N. Fernando**, "Narrowcasting Attributes for Presence Awareness," Proc. CHI'05 Wkshp. on Awareness Systems: Known Results, Theory, Concepts, and Future Challenges, Portland, April 2005. (O. N. N. Fernando and M. Cohen contributed equally to the paper.)
29. A. D. Bolhassan, **M. Cohen**, **O. N. N. Fernando**, and W. L. Martens, "Image-based Stereoscopic Navigation in Collaborative Virtual Environments," Proc. IWGMCV'03: Int. Wkshp. on Geometric Modelling, Computing, and Visualization, University of Aizu, Aizu-

Wakamatsu, Japan, July 2003. (O. N. N. Fernando and M. Cohen contributed equally to the paper.)

30. N. A. Bolhassan, **M. Cohen**, and **O. N. N. Fernando**, "Stereographic QTVR with Synchronized Spatial Audio," IWEC2002: First Int. Wkshp. on Entertainment Computing, Chiba, Japan, May 2002. (O. N. N. Fernando and M. Cohen contributed equally to the paper.)

Others (Public Exhibits)

1. Final year project ("ARHolo") exhibited for the public during the virtual Open House in 2020 (February 28, 2020).
2. Four Final year project ("Air Miles Aggregator System", "Augmented Reality Hologram", "The Hidden Shrines of Singapore: Mapping and Narrating Multi-Religious Heritages" and "Songs for sustainable peace and development") exhibited for the public during the Open House in 2019 (March 02, 2019).
3. Eight Final year projects ("Snake pattern detection algorithm", "Twittener: Listen to what's happening on Twitter", "Audio Fingerprint application for media industry", "Natural Feature tracking solution for outdoor Augmented Reality", "Web and Mobile based GPS Trail Visualizer" "Mobile based museum navigation system", "Eventify: Nearby Events", and "Acoustic Fingerprinting") exhibited for the public during the SCSE Technoinnovation (May 12, 2018).
4. Four Final year project ("Natural Feature tracking solution for outdoor Augmented Reality", "Web and Mobile based GPS Trail Visualizer", "Mobile based museum navigation system" and "Audio Fingerprint application for media industry") exhibited for the public during the Open House in 2018 (March 03, 2018).
5. Four Final year projects ("Prof. Who", "Twittener", "Natural feature tracking solution for outdoor Augmented Reality" and "Web- and Mobile-based solutions for GPS Trail Visualizer") exhibited for the public during the Open House in 2017 (March 04, 2017).
6. Final year project, "Prof. Who" was used to facilitate more information about SCSE Projects and SCSE Professors during the Open House in 2017 (March 04, 2017).
7. Social media and Assistive technologies for underserved communities, Media Exploit, Singapore (October 1st, 2013).
8. Social media and Assistive technologies for underserved communities, Tech Innovation, Singapore (September 24th, 2013).
9. Poetry Mix-up was shown at the Art Centre Nabi, Korea (July 1st to July 31, 2011).
10. "Petimo: children's companion for safe social networking," SIGGRAPH ASIA '09: ACM SIGGRAPH ASIA 2009 Art Gallery & Emerging Technologies: Adaptation, Yokohama, Japan, December 16-19, 2009.

11. "AmbiKraf: An embedded non-emissive and fast changing wearable display," In Digital Content Expo Exhibition, Tokyo, Japan, October 20-25, 2009.
12. "Babbage Cabbage: Biological Empathetic Media, "Laval Virtual ReVolution, Laval, France, April 22-26, 2009.
13. BlogWall was shown at X-periment exhibition, Marina Square Singapore (August 2008).
14. "Metazoa Ludens," Wired NextFest 2007, LA, USA, September 13-16, 2007.
15. "Hitch-Haiku," SIGGRAPH 2007 Art Gallery: Global Eyes, San Diego, California, USA, August 5-9, 2007.
16. BlogWall selected as a permanent display at the Singapore Science Centre (April 2007).
17. BlogWall was shown at the University Cultural Centre Exhibition, March 2007.
18. BlogWall was shown at the 9 Billion Mouths to Feed Exhibition in Singapore Science Centre (April to July 2007).

Others (Press, Media, and Magazine Articles)

1. Dengue Free Child app (2018): Dengue Free Child app for the school children was featured on several TV channels, Radio and Newspapers in Sri Lanka (<https://www.youtube.com/watch?v=F4WPWRuAnP8>).
2. Mo-Buzz (2015): Mo-Buzz Dengue for the public was featured on several TV channels, Radio and Newspapers in Sri Lanka (<http://www.mo-buzz.org/srilanka/>).
3. Mo-Buzz (2013): Socially Mediated System for Dengue Public Health Surveillance, Communication and Engagement system was featured in several TV channels (Sri Lanka: SLRC, ITN, and Derana), Radio (Sri Lanka: SLBC, TNL Radio, Sooriyan FM) and Newspapers (Sri Lanka: Daily FT, Daily Ceylon Today, Sunday Island, Sunday Virakesari, Daily Island, Daily News, and Daily Rivira)
4. Mo-Buzz: Socially Mediated System for Dengue Public Health Surveillance, Communication and Engagement, Article in newspaper, Straits Times on June 11, 2013.
5. Set poetry in motion, just send a text message (Poetry Mixup): Article in newspaper Straits Times on September 17, 2011.
6. Mixed Reality Lab on Discovery Science Channel "Future of Communication," 2009.
7. Social Networking Robot for Children: Article in newspaper Lianhe Zaobao, May 31, 2009.
8. Social Networking Robot for Children: Article in newspaper Straits Times on June 16, 2009
9. Social Networking Robot for Children: appeared in NUS' News Portal: http://newshub.nus.edu.sg/headlines/0609/keio_03Jun09.php/

10. Babbage Cabbage: Empathetic Living Media appeared in NUS' Research Gallery:
<http://www.nus.edu.sg/research/rg158.php/>
11. Article about Metazoa Ludens in Axis Design Magazine, December 2007.

Innovation

Patents Filed

1. A. D. Cheok, O. N. N. Fernando, "Petimo - platform for social networking," Filing Date: 31 May 2010, Ref: 10139N-US/PRV.
(<https://patents.google.com/patent/US20110291953A1/>)

Technology Disclosure Filed

1. O. N. N. Fernando, P. S. Rajesh and O. C. Ann, "AIVIEW: Helping students prepare for Software Engineering technical interviews using Large Language Models," Filing Date: 28 April 2025, NTU Ref: 2025-208.
2. O. N. N. Fernando and H. W. Jie, "Listener: Improving News Experience with AI Added Context and Text-to-Speech," Filing Date: 22 March 2024, NTU Ref: 2024-110.
3. O. N. N. Fernando K. W. R. and Ang, W. K. Ng, "Voyager: Crowdsourced Application for Safe Travelling Experience," Filing Date: 19 July 2023, NTU Ref: 2023-303.
4. O. N. N. Fernando and N. H. Tien, "RecipeAI: AI-powered recipe generator and cooking mobile application," Filing Date: 24 March 2023, NTU Ref: 2023-136.
5. O. N. N. Fernando and L. Y. Heng, "AnimalHunt: AI-Based Animal Sound Recognition Application," Filing Date: 23 March 2023, NTU Ref: 2023-131.
6. O. N. N. Fernando and Z. Cai, "Pose Estimation Workout Mobile Application," Filing Date: 28 November 2022, NTU Ref: 2022-435.
7. O. N. N. Fernando and M. Z. B. Jamal, "A Crowdsourced Application for Finding Best Places for Peace and Quiet," Filing Date: 28 November 2022, NTU Ref: 2022-433.
8. O. N. N. Fernando, E. Y. H. Wei, and P. Gopalakrishnakone, "Snake Alert: Snake Awareness System Using Clustering and Deep Learning Technologies," Filing Date: 16 July 2019, NTU Ref: 2019-190.
9. O. N. N. Fernando, V. U. Wanniarachchi, F. Nelin, and Y. Fernandopulle, "Mobile Based Museum Navigation System," Filing Date: 14 March 2017, NTU Ref:TD/070/17.
10. O. N. N. Fernando, Y. Fernandopulle, and NG W. K., "Twitter Speech Synthesis with Natural Language Processing," Filing Date: 09 March 2017, NTU Ref:TD/068/17.
11. O. N. N. Fernando, D. W. C. Hian and R. W. Meurzec "OCEAN Application Recommendation System," Filing Date: 08 March 2017, NTU Ref:TD/059/17.
12. A. Chattopadhyay and O. N. N. Fernando, "Trust Based Social Network For E-Commerce

Transactions,” Filing Date: 02 September 2016, NTU Ref: TD/288/16.

13. T. Y. Leng, O. N. N. Fernando, C. Deshan, and S. Foo, “AVOT - Automated Virtual Observation Therapy,” Filing Date: 03 November 2014, NTU Ref: TD/305/14.
14. Y.M.K. Priyadarshana, S.P. Wimalaratne, O. N. N. Fernando, May O. Lwin, and S. Foo, “PWODS: Personalized Wearable Obstacle Detection System for Visually Impaired People,” Filing Date: 27 October 2014, NTU Ref: TD/288/14.
15. R. Poovaiah, R. Motiyar, A. Poovaiah, and O. N. N. Fernando, “A Conductive Strip (CS) Enabled Reminder- Dispensing-Tracking System for Medicines,” Filing Date: 10 February 2014, NUS ILO Ref:14138N.
16. O. N. N. Fernando, C. Deshan, N. Pang, H. Y. Jack Jeffrey, and S. Foo, “Point-and- search Augmented Reality Solution for Mobile Devices,” Filing Date: 17 October 2013, NTU Ref: TD/254/13.
17. O. N. N. Fernando, H. Y. J. Jeffrey, M. J. Rissanen, and S. Foo, “Help!Tag easy-to-use social media enabled help request system for eldercare,” Filing Date: 23 April 2013, NTU Ref: TD/103/13.
18. M. J. Rissanen and O. N. N. Fernando, “Ubiquitous shortcuts – General purpose camera-based computer command method,” Filing Date: 30 November 2012, Ref: PAT/149/12/12/USPRV.
19. O. N. N. Fernando, S. Foo, T. Y. Leng, H. Y. J. Jeffrey, R. Poovaiah, and A. S. Poovaiah, “CuePbox: Virtual and Physical Pillbox System,” Filing Date: 02 August 2012, Ref: PAT/149/12/12/US PRV.
20. A. D. Cheok, R. L. Peiris, K. S. Teh, O. N. N. Fernando, M. Tharakan, “An Embedded Nonemissive and Fast Changing Fabric Display,” Filing Date: 5 February 2010, Ref: 09253N-US/PRV.

Technology Disclosure Licensed

21. Technology Disclosure (W. K. Ng, M. H B. U C E Bandara, M. H. S. Tharaka, and O. N. N. Fernando, “Design and Implementation of Blockchain on Distributed Database System,” Filing Date: 30 July 2018, **NTU Ref:2018-225.**) on Design and Implementation of Blockchain on Distributed Database System was licensed to the company CME Private Limited on August 8th, 2018, for S\$70,000. Latency of transaction is a core problem associated with all leading blockchain networks, which deviates most of the platforms from real time transaction processing capability (Bitcoin takes 10 minutes to verify a transaction). We incorporated blockchain features into fault tolerant, highly available and high throughput compatible Cassandra distributed database for this project.
22. Technology Disclosure (O. N. N. Fernando, Lee N. Y. H., and NG W. K., “Eventify – Nearby Events,” Filing Date: 31 October 2017, **NTU Ref: TD/305/17.**) on Eventify: Nearby Events was licensed to the company Newtonis Technologies Private Limited on March 2018 for S\$1000. This projectsuggests nearby events to the users based on common interests and proximity. It allows anyone to create an event via the platform and have it broadcasted to

potential participants in real-time.

23. Technology Disclosure (May O. Lwin, O. N. N. Fernando, S. Vijaykumar, V. Ratnayake, and S. Foo, "Socially Mediated System for Vector-Borne Diseases Surveillance engagement," Filing Date: 18 September 2014, **NTU Ref: TD/248/14.**) on Socially Mediated System for Vector-Borne Diseases Surveillance, Engagement, and Communication was licensed to the SKOLL GLOBAL THREATS FUNDS on September 2017 for S\$5000. This project, called Mo— Buzz, a mobile participatory system for dengue surveillance which was launched in Colombo, Sri Lanka. This research received widespread publicity and news coverage in Sri Lanka (Sri Lankan Newspapers and TV channels over the period of March-April 2018). It has made significant impact in helping combating Dengue among schoolchildren with the 'DengueFreeChild' app. The app enables users to proactively report of Dengue or suspected Dengue fever so that action can be taken to the premises around which the infection is prevalent for mosquito breeding areas as well as to alert other parents to keep a keen eye on Dengue-like symptoms in their own children(<https://www.youtube.com/watch?v=F4WPWRuAnP8>).

Entrepreneurship

1. Year: 2018
2. Company Name: Newtonis Technologies Private Limited
3. Industry: Software Consultancy and Software Development
4. Persons involved: Dr. Owen Noel Newton Fernando and A/Prof. Ng Wee Keong
5. Short description of product: Eventify: Nearby Events: This project suggests nearby events to the users based on common interests and proximity. It allows anyone to create an event via the platform and have it broadcasted to potential participants in real-time.
6. Major terms of licensing agreement with NTU: Technology Disclosure (TD/305/17) on Eventify: Nearby Events was licensed to the company Newtonis Technologies Private Limited on March 2018 for S\$1000. This is an evaluation license to assess the feasibility of the commercialization.
7. Investments and/or revenue: In 2019, Newtonis Technologies Private Limited entered into an agreement with TechBridge Ventures to provide software consultancy services. In 2022, Newtonis Technologies Private Limited also entered into an agreement with KTC GLOBAL ENTERTAINMENT PTE. LTD, Singapore. Currently, Newtonis is offering consultancy services to KTC GLOBAL ENTERTAINMENT PTE. LTD for multiple projects, with the objective of generating revenue for the company.

TEACHING SUMMARY

Courses Taught (Last 3 years)

Course Code	Course Title	Academic Year	Course Level
CE6121 [Former DM6121]	Human Computer Interaction Theory and Practice	AY16 – Present (Lectures)	PG
SC1007	Data Structure and Algorithm	AY20– Present (Lectures, Tutorials and Labs)	UG

SC3061 (Former CZ2004)	Human Computer Interaction	AY15 – Present (Lectures , Tutorials and Labs)	UG
CT2009	Design Thinking	AY25 – Present (Lectures , Tutorials and Labs)	UG
CT2010	Capstone Project	AY25 – Present (Lectures , Tutorials and Labs)	UG
CT3101	UX/UI Design	AY26 – Present (Lectures , Tutorials and Labs)	UG
CE2006/CZ2006	Software Engineering	AY15 – Present (Tutorial and Labs)	UG
SC1003	Introduction to Computational Thinking and Programming	AY21– Present (Tutorial and Labs)	UG
CE3004/CZ3004	Multidisciplinary Design Project	AY15 – Present (Labs only)	UG
	Human Computer Interaction (Summer Course)	June 22, 2020 – 22 July 2020 June 22, 2022 – 22 July 2022 June 28, 2023 – 29 July 2023 June 24, 2024 – 28 July 2024 June 25, 2025 – 17 July 2025 (Lectures , Tutorials and Labs)	UG

Academic Supervision and Mentoring

Curren PhD students (Internal)

No.	PhD Student	Period	Role	Thesis/ Project Title	Current Status
<i>Current</i>					
1	Yeo Shi Jing	2025 – 2029	Co-Supervisor	Improving blockchain scalability through multi-layers	Ongoing supervision.

Curren PhD students (External)

No.	PhD Student	Period	Role	Thesis/ Project Title	Current Status
<i>Current</i>					

1	Ms. Nuha Fareed (Faculty of Information Technology, University of Moratuwa, Sri Lanka)	2025 – 2029	External Supervisor	Developing an AI-Driven Approach to Transform Natural Language Requirements into UML Diagrams	Ongoing supervision.
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Master's students (By Research Only)

No.	Master's Student	Period	Role	Thesis/ Project Title	Current Status
Current					
1	XIA DENENG	2023 – 2024	Main Supervisor	SkinDiseaseGLM: An Automated Interactive Chat-based Skin Disease Diagnosis System using Large Language Model	M.ENG Part-time. Graduated

Research Staff

No	Research Staff	Appointment	Period		Project Title	Current Status
			From	To		
1	V. U. Wanniarachchi	Research Assistant	2016	2018	Various Projects	Research Fellow The University of Auckland
2	Y. Fernandopulle	Research Engineer	2016	2018	Various Projects	Solution Architect Sim Centric Sri Lanka
3	C. Deshan	Research Engineer	2012	2014	Various Projects	Solution Architect Inova Technologies Sri Lanka
4	V. S. Rathnayake	Research Engineer	2012	2014	Various Projects	Operational Director SoftSolvo, Sri Lanka
5	H. Iroshan	Research Engineer	2012	2014	Various Projects	Lead Engineer CHAMP Cargo systems Singapore

Master's students (By Coursework) & Undergraduate Students

No. Graduated (Since joining NTU)			No. Currently Supervising		
MSc#	FYP	URECA	MSc#	FYP	URECA
12	120	30	2	17	6

MSc students (by coursework), include those taking either dissertation or Independent StudyModule.

Teaching Grants

Role	Year	Amount (S\$)	Source of Grant
PI	2016 - 2018	18,000	NTU-Edex
Co-PI	2017 - 2019	50,000 (285,866.40)	MOE-TRF Grant
Co-PI	2017 - 2018	0.00 (40,000)	NTU-Edex

SERVICE SUMMARY

School

Period of appointment	Role
2025 – 2027	B.Tech FYP Coordinator
2025 – 2027	B.Tech Coordinator
2025 – 2027	Outreach Committee Member
2018 – 2027	FYP Coordinator (Part-Time)
2026	Contributor: Demonstrated 2 final year projects for NTU Open House
2026	SCSE Representative: NTU Open House
2025	CCDS Representative for Representatives for the Service-Learning taskforce
2023	Assessor: NTU-A*STAR-HCI H3 Science Research - Oral Assessment
2023	Judge: SCSE Computing Challenge, College of Engineering, NTU
2023	Assessor: NTU-A*STAR-HCI H3 Science Research - Research Paper Assessment
2020 – Present	TAC Member for 3 PhD Students
2020	Contributor: Demonstrated 1 final year project for NTU Virtual Open House
2019, 2021	SCSE Representative: NTU Open House
2019	Contributor: Demonstrated 4 final year projects for NTU Open House
2018	Contributor: Demonstrated 4 final year projects for NTU Open House

2018	Contributor: Demonstrated 8 final year projects for SCSE Techno innovation
2017 – Present	Workshop Instructor (Outreach Workshop)
2017 – 2019	NRP Committee Member: The Nanyang Research Programme
2017	Contributor: Demonstrated 4 final year projects for NTU Open House

University

Period of appointment	Role
2023	Judge: James Dyson Foundation the Curious Engineer Design-athon 2023
2020 – Present	Faculty-in-Residence / Hall Fellows
2016	Judge: NTU Hackathon 2016, College of Engineering, NTU

Academic Community

Period of appointment	Role
2025 – Present	Organizing Committee Member: 2025 International Conference on Artificial Intelligence and Education (ICAIE 2025),
2025 – Present	Organizing Committee Member: 2025 2nd International Conference on Industrial Automation and Robotics (IAR 2025)
2025 – Present	External Supervisor: Faculty of Information Technology, University of Moratuwa, Sri Lanka
2022 – Present	External Supervisor: School of Physics, Engineering & Computer Science at the University of Hertfordshire
2019 – 2022	External Examiner: Auckland Bioengineering Institute, The University of Auckland
2019 – 2020	Panel Member (Mid-Term Review): Behavioral Studies in the Energy, Water, Waste and Transportation Sectors (BSEWWT) Mid-Term Review (MTR) Panel, Singapore
2019	Session Chair: International Conference on Cyberworlds (CW '19), Kyoto, Japan.
2018	Special Session Chair: The International Conference on System Science and Engineering 2018 (ICSSE 2018), National Taipei University, Taiwan.
2017	Judge: Singapore Science and Engineering Fair
2015 – 2019	External Supervisor: Department of Electrical Engineering, National Taipei University
2014	Program Committee: SIGCHI 2014: Workshop on Assistive Augmentation in ACM SIGCHI Conference on Human Factors in Computing Systems Factors in Computing Systems
2013 – Present	Associate Editor: Entertainment Computing (ELSEVIER)

2012	Guest Editor: Advances in Human-Computer Interaction: (AHCI: Issue on Computer Games in Education)
2011	Publicity Co-Chair: Advances in Computer Entertainment
2011	Publicity Co-Chair: IEEE Virtual Reality, Singapore
2011	Publicity Co-Chair: International Symposium on VR Innovation
2011	Program Committee: International Symposium on VR Innovation
2010 – 2018	Program Committee: Springer ICEC: International Conference on Entertainment Computing
2010 – 2012	Program Committee: IEEE VR: Virtual Reality
2010 – 2012	Associate Editor: ACM Computers in Entertainment
2008	Track Co-Chair: Interactive Digital Media track in International Simulation and Gaming Association 40th Annual Conference
2008	Organizing Co-Chair: Designing Cute Interactive Media Workshop in conjunction with DIS2008: Designing Interactive Systems
2007 – 2012	Program Committee: ACM ACE: Advances in Entertainment Computing
2007	Organizing Chair: Interactive Design Art and Technology (An event of Ars Electronica, Creative Korea, and Interactive Tokyo), Science Centre, Singapore
2007	Organizing Chair: Mixed Reality Entertainment and Art Workshop in conjunction with Sixth IEEE and ACM International Symposium on Mixed and Augmented Reality
2007	Organizing Chair: Spatial Audio for Mobile Devices Workshop in conjunction with Ninth Int. Conf. on Human Computer Interaction with Mobile Devices and Services: Mobile- HCI'07, National University of Singapore, Singapore
2007	Organizing Co-Chair: MobiMundi: Exploring the Impact of Current and Emerging Mobile Technologies and Services on Society Workshop in conjunction with Ninth Int. Conf. on Human Computer Interaction with Mobile Devices and Services: MobileHCI'07, National University of Singapore, Singapore
2007	Publicity Chair: Ninth Int. Conf. on Human Computer Interaction with Mobile Devices and Services: MobileHCI'07, National University of Singapore, Singapore
2007	Guest Editor: Advances in Human-Computer Interaction (AHCI: Issue on Interactive Play and Learning for Children)
2006	Coordinator: Spatial Media Group Public Lecture, University of Aizu, Aizu-Wakamatsu, Japan
2006	Demonstration Chair: Sixth Int. Wkshp. on Spatial Media: IWSM'05-'06, University of Aizu, Aizu-Wakamatsu, Japan
2005	Demonstration Chair: Fifth Int. Wkshp. on Spatial Media: IWSM'04-'05, University of Aizu, Aizu-Wakamatsu, Japan
2004 – 2005	Demonstration Chair: Lab demonstrations for local high schoolstudents, University of Aizu, Aizu-Wakamatsu, Japan
	As a Reviewer <ul style="list-style-type: none"> 1. SIGCHI: Augmented Human Conference 2. Entertainment Computing (Elsevier) 3. ACM Transactions on Multimedia Computing, Communications and Applications

	<ol style="list-style-type: none">4. CiE: ACM Computers in Entertainment5. AHCI: Advances in Human-Computer Interaction6. Springer ICEC: International Conference on Entertainment Computing7. ACM ACE: International conference on Advances in Entertainment Computing8. IEEE VR: Virtual Reality9. International Conference on Human-Computer Interaction with Mobile Devices and Services10. SIGCHI: ACM CHI Conference on Human Factors in Computing Systems11. Augmented Human International Conference
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