

Adam C Roberts – Curriculum Vitae

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Research Focus

Urban resilience and human-centric systems researcher with over 15 years of experience leading interdisciplinary projects on human-environment systems, liveability, mental health and psychosocial resilience in Asian cities. Expertise in systems approaches to resilience, combining environmental psychology, human factors, and cognitive science. Strong record of high-impact publications, successful grants (NRF Cities of Tomorrow, MOE Science of Learning), and collaborations with policy and industry to translate research into urban practice.

Research Experience

- April 2026 – Present **Assistant Professor of Urban Resilience (Research)**
SMU Urban Institute, Singapore Management University, Singapore
Focus: Urban resilience, human-environment systems, behavioural science
Role includes: Conducting independent and collaborative research, leading and contributing to competitive grant applications. Publishing research in peer-reviewed journals and contributing to the institute's research profile. Engaging with interdisciplinary collaborators and external stakeholders across academia, government, and industry. Supporting research translation, synthesis, and impact-oriented outputs at institute level.
- Jan 2024 – April 2026 **Senior Researcher & Cluster Coordinator, Sensemaking for Resilience**
Future Resilient Systems, Singapore-ETH Centre (SEC), Singapore
Focus: Social systems, human-environment systems, human-machine systems
Role includes: Leading the Sensemaking for Resilience cluster, coordinating two research modules and six interdisciplinary teams working on urban resilience. Integrating research outputs, co-authoring reports, supervising postdoctoral researchers and RAs.
- Oct 2020 – Dec 2023 **Postdoctoral Researcher**
Future Resilient Systems, Singapore-ETH Centre (SEC), Singapore
Focus: Social systems, human-machine systems
Role includes: Leading the work on Financial Resilience and interactions with new technologies. Supervising research interns and masters students. Represented the module at academic and policy events, strengthening international collaborations and links with industry.
- 2018 – Oct 2020 **Senior Research Fellow**
School of Mechanical and Aerospace Engineering, Nanyang Technological University (NTU), Singapore
Focus: Human-environment systems, socio-technical systems
Role includes: Led work on cognitive effects of Indoor Environmental Quality through laboratory tests and fieldwork, using simultaneous multi-subject EEG and creativity tasks. Supervised PhD and project students.
- 2015 – 2018 **Senior Research Fellow**
School of Civil and Environmental Engineering, NTU, Singapore
Focus: Human-environment systems, socio-technical systems
Role includes: Coordinated across psychology, social, health and architecture workstreams in a major national project on urban underground space. Supervised RAs, integrated findings across disciplines, and delivered technical reports and presentations to JTC and MND. Advanced human-environment systems research on workplace well-being, spatial perception, and psychosocial responses to novel built environments.
- 2011 – 2015 **Postdoctoral Researcher & Laboratory Manager**
Faculty of Linguistics, Philology & Phonetics, University of Oxford, UK
Focus: Cognitive systems, sociolinguistic systems
Role includes: Conducted research on phonological mental representation. Managed lab, trained staff and students in methods and statistics.

- 2008 – 2011 **Technical Officer (postdoctoral position)**
Faculty of Linguistics and Department of Experimental Psychology, University of Oxford, UK
Focus: Cognitive systems
Role includes: Conducted experimental research on processing asymmetries in cognitive systems. Supported projects across psychology and linguistics through methodological and technical expertise.
- 2007 – 2008 **Research Assistant**
Human Factors Research Group, Department of Psychology, University of Sheffield, UK
Focus: Cognitive systems, human-machine systems
Role includes: Conducted research on brain-computer systems and adaptive automation through the use of psychophysiological indicators of effort and fatigue.

Education

- 2005 - 2009 **PhD Cognitive Neuroscience**
Department of Psychology, University of Sheffield, UK
Thesis: Brain markers of executive control in task management
- 2000 - 2004 **MNeurosci/AI (Honours) Neuroscience and Artificial Intelligence**
Department of Optometry & Neuroscience, UMIST, Manchester, UK
Thesis: The cortical basis of colour vision

Urban & International Fieldwork

- 2015 – 2018 **Singapore**
Workplace studies on indoor environmental quality, liveability, employee well-being. Quantitative surveys, health assessments, cognitive tasks with employees of SMRT, SBS, Keppel DHCS in aboveground and underground offices, control rooms, and workshops. Provided evidence on how indoor environmental quality and spatial design affect employee resilience and performance in dense urban systems
- 2017 **Springfield Underground, Missouri, USA**
Qualitative interviews, quantitative surveys and health assessments of underground workers. Supervision of postdoc and RAs. Produced a stakeholder report to inform underground space development.
- 2016 **Røyken / Oslo, Norway; Stockholm, Sweden**
Comparative qualitative and ethnographic study of underground work facilities. Supervision of postdoc and two RAs. Produced a stakeholder report for cross-national policy lessons.
- 2015 **Nanjing / Beijing / Fuzhou / Shanghai, China**
Comparative qualitative, quantitative, and ethnographic assessment of underground offices, shops, theatres, museums. Supervision of postdoc and RAs in cross-city research.
- 2015 **Kolkata, India**
Study of speakers of Bengali through mismatch negativity. Supervision of five RAs.
- 2014 **Trondheim, Norway**
Study of speakers of Trøndersk dialect through EEG measures. Supervision of one RA.
- 2013 **Kolkata, India**
Study of speakers of Bengali through ERP and behavioural experiments. Supervision of two RAs.
- 2012 **Kolkata, India**
Study of speakers of Bengali through N400 and reaction time. Supervision of two RAs.

Funding

Grants Received

- 2024 - 2028 **Promoting Early Book Reading at Home: An Intervention with Enhanced eBooks**
Funding Source: MOE Science of Learning Grant, Singapore
Funding: S\$ 1,312,004
Role: Co-Investigator (Time Commitment: 8%)
Contribution: Co-wrote proposal
Focus: Child development, digital literacy tools, social systems
- 2024 - 2027 **Population Mental Health Risk Prediction via Linkage of Multi-Modal Spatiotemporal Environmental Data To Population-Representative, Longitudinal Clinical Measures of Individual Mental Health (PRISMS)**
Funding Source: NRF Cities of Tomorrow R&D Programme Grant, Singapore
Funding: S\$ 999,050
Role: Co-Investigator (Time Commitment: 10%)
Contribution: Co-wrote proposal
Focus: Linking human-environment systems with urban mental health outcomes
- 2021 - 2023 **Estimating Economic Losses from Cascading Infrastructure Disruptions**
Funding Source: NRF Intra-CREATE Seed Collaboration Grant, Singapore
Funding: S\$ 191,252
Role: Co-Investigator
Contribution: Co-wrote proposal
Focus: Urban Infrastructure interdependencies and socio-technical systems
- 2016 **Ambulatory EEG (equipment grant)**
Funding Source: NTU-JTC-I3C Block grant
Funding: S\$ 100,925
Role: Collaborator
Contribution: Wrote proposal
Focus: Neurophysiological monitoring in applied contexts
- 2011 - 2016 **WORDS: Asymmetry, change and processing in phonological mental representation**
Funding Source: ERC FP7 grant, EU (ERC 269670)
Funding: £ 1,894,230
Role: Postdoctoral Research Fellow & Laboratory Manager
Contribution: Co-wrote proposal
Focus: Cross-linguistic cognitive systems
- 2010 - 2011 **Experimental approach to the mental lexicon**
Funding Source: John Fell Award, UK
Funding: £ 5,728
Role: Technical Officer
Contribution: Co-wrote proposal
Focus: Language processing and cognitive systems

Grants Under Consideration

- 3 years
duration
(shortlisted) **Evidence-Based and User Perception-Driven Approach to Enhancing Urban Design Guidelines for Outdoor Public Spaces in Singapore**
Funding Source: NRF Cities of Tomorrow R&D Programme Grant, Singapore
Funding: S\$ 1,696,255
Role: Co-PI (Time Commitment: 10%)
Focus: Human-environment systems and urban liveability

Academic Service and Leadership

Collaborations with Industry & Policy Translation

- 2024 – Present **Gensler** – Use and design of Privately Owned Public Spaces for social health
- 2024 – 2025 **Quakecore, New Zealand** – Examination of technological risk and future disaster-proofing
- 2023 – 2025 **Lloyd's Register Foundation Institute for the Public Understanding of Risk, NUS** – Developing future research projects on co-occurring hazards and communication of risks to the general public
- 2023 - 2025 **Institute of Policy Studies, NUS** – Collective action in digitalised communities
- 2023 – 2025 **Centre for Liveable Cities** – Developing a methodology to identify Social Archetypes and test how they are affected by future disruptions
- 2023 – 2024 **Aboitiz Data Innovation** – Financial resilience and use of GCash in the Philippines
- 2022 – 2025 **Appleton Institute for Behavioural Science, Central Queensland University** – Examining interventions to reduce risk in rail operations
- 2022 – 2023 **Monetary Authority of Singapore** – Student projects on behavioural inoculation against financial scams
- 2022 – 2023 **Credit Suisse** – Student projects on financial literacy
- 2021 – 2023 **Aboitiz Data Innovation** – Student projects on property valuation and automated satellite imagery analysis
- 2021 – 2023 **TWINT** – Financial resilience and the use of e-wallets in Switzerland
- 2018 – 2025 **Research Institute for Smart Aging, Hong Kong** – Climate resilience for older adults
- 2018 – 2020 **Camfil Asia Pacific** – Indoor Air Quality and cognitive performance
- 2015 – 2018 **JTC** – Research collaboration on underground space use

Professional Leadership

- 2025 - Present Special Interest Chair Aging & Disability, Human Factors & Ergonomics Society Singapore
- 2025 Panel Organiser and Moderator – Ergonomics & Hygiene 2025 Panel on Leveraging Technology for Safety and Well-being
- 2019 Scientific Convenor – Human Factors & Ergonomics Society Singapore Symposium
- 2010 - 2011 Chair – Inter-departmental Committee, University of Oxford

Conference Organisation

- 2026 Special Program Chair – Asian Conference on Ergonomics & Design, Singapore
- 2024 Conference Committee – International Conference on Resilient Systems, Singapore
- 2012 Conference Committee – Tone and Intonation in Europe (TIE) Conference, Oxford, UK
- 2006 Conference Committee – Human Factors & Ergonomics Society Europe Conference, Sheffield, UK

Honours and awards

- 2014 University of Oxford Reward & Recognition Scheme - Award for Excellence in the Humanities

Mentorship & Capacity Building

Cluster Coordinator, Sensemaking for Resilience, Singapore-ETH Centre (SEC): responsible for organising two modules comprising six research teams, fostering collaboration across disciplines.

Academic Mentor – Dr Yoolim Kim, Korea Institute, Harvard University (2020–2022).

Deputy Director, Psychology Module, NTU Underground Space Project: directly supervised two research assistants and provided guidance and mentorship to postdocs and RAs across multiple workstreams.

Laboratory Manager, University of Oxford: trained staff and students in laboratory methods, EEG, psychological research design, and statistical analysis; managed the development and use of multiple experimental facilities.

Extensive supervision of postdocs, PhD candidates, and undergraduate project students at NTU, SEC, Oxford.

Science Communication & Community Engagement

2024 - Present Volunteer, Singapore Otter Working Group

2024 Let's Talk Clean Air Podcast – Enhancing Creativity with IAQ
<https://open.spotify.com/episode/4i7FW64UvM0Yukl69VjF2y>

2021 Imagined Tomorrow Podcast – What if Indian Cities Expanded Underground?
<https://open.spotify.com/episode/4Yn5uOYd3yOowLrhgomAAQ>

2019 Featured in Going Underground, Channel News Asia / Channel 5
<https://video.toggle.sg/en/series/going-underground/ep1/825960>

2016 Featured in IT Figures – Home Small Homes, Channel News Asia
<http://video.toggle.sg/en/video/series/it-figures-s4/ep13/366597>

Editorial & Reviewing

2023 - Present Associate Editor – Urban Lifeline

2023 Topic Editor - Frontiers in Psychiatry – Cities and Mental Health

2016 - Present Review Editor - Frontiers in Neuroscience – Neural Technology; Frontiers in Neuroscience – Neuromethods

2008 - Present Regular Reviewer – Applied Ergonomics, Tunnelling and Underground Space Technology, Building & Environment, Indoor Air

Occasional Reviewer - Frontiers in Psychology, Neuropsychologia, IET Intelligent Transport Systems

Research Methods & Technical Expertise

Research Methods: EEG / ECG / EDA, eyetracking, VR, behavioural testing, surveys, interviews, focus groups, ethnography, user shadowing

Data Analysis & Modelling: Mixed-effects modelling, Structural Equation Modelling, multivariate statistics, psychometrics, R, Python, Matlab

Human Factors & Systems: Design & evaluation of human-machine systems, socio-technical systems analysis, ergonomics & usability, indoor environmental quality monitoring, translation of human-environment research into urban design recommendations

Laboratory & Project Leadership: Design & management of experimental laboratories (Oxford, NTU, SEC), training staff and students in methods and analysis, coordinating interdisciplinary research teams across psychology, engineering, and urban studies

Teaching & Supervision

Lecturing

- 2025 - 2026 *Singapore University of Social Sciences*
HFS103 Psychology for Human Factors, School of Science & Technology
- Undergraduate course (~50 students), taught independently
 - Emphasises systems thinking and safety
- NIE352 Interdisciplinary Problem Solving, College of Interdisciplinary & Experiential Learning
- Undergraduate course (~60 students), taught independently
 - Transdisciplinary urban & social projects
- 2021 - 2024 *ETH Zürich*
851-0252-10L Project in Behavioural Finance, Chair of Cognitive Science
- Postgraduate elective course (~20-25 students), co-taught with colleagues
 - Flipped classroom format, student project teams for digital resilience
- 2008 - 2015 *University of Oxford*
General Linguistics VIII: Introduction to psycholinguistics (~80 students)
Psycholinguistics XII (~ 50 students)
- 2007 - 2008 *University of Sheffield*
Introduction to computing with MacOS X (~60 students)

Tutorials

- 2008 - 2015 *University of Oxford*
Psycholinguistics (~5 students)
Statistics & research methods for psycholinguistics (~20 students)
Neurolinguistics (~10 students)
Quantitative methods in linguistics (~20 students)
Connectionist models and cognitive processes (~30 students)
- 2007 - 2013 *University of Sheffield*
Psychophysiology: Recording and analysis for engineers (~3 students)
Psychophysiology practicals (~5 students)

Project Supervision

- 2019 - 2021 Final Year Project (FYP) Supervisor, *School of Mechanical and Aerospace Engineering, NTU*
Lau Wee Siang: Indoor Air Quality and creativity
Raymond Leow Jian Jie: Indoor Air Quality and memory
Timothy Shong Guo Hui: Effect of air cleaners on particulate matter
Andre Choo Hao Wei: Effect of air cleaners on volatile organic compounds
- 2019 - 2020 Final Year Project (FYP) Supervisor, *School of Civil and Environmental Engineering, NTU*
Cerwyn Gian Budiman: Effect of Lighting on Response Inhibition in Real and Virtual Offices
Siti Maryam BTE Zhuraimi: Augmented Reality in Civil Engineering Education
Chee Elynne: Perceptions toward Live Greenery in Singapore's underground MRT stations
Fouzan Hamdi Bin Harun: Evacuation Preparedness and Safety Perception through a 3D Game Environment
- 2019 - 2020 URECA project supervisor, *School of Mechanical and Aerospace Engineering, NTU*
Effect of changes in IAQ influenced by 3D printing pens on cognition (UG, 2 students)
- 2015 - 2016 URECA project supervisor, *School of Civil and Environmental Engineering, NTU*
Singapore Deep City Urban Planning (UG, 4 students)
- 2011 - 2013 MPhil project supervisor, *Faculty of Linguistics, University of Oxford*
Lara Ehrenhofer: ERP responses to gemination in Swiss German

Publications & research outputs

h-index
22

i10
35

Citations
1443

Journal articles

1. Li, M., Borzino, N., **Roberts, A. C.**, Joerin, J., & Schubert, R. (2026). Enhancing social resilience: How social archetypes matter for designing effective policies—A case study for Singapore. *Cities*, 171, 106745.
2. Sun, H., **Roberts, A.**, Loh, J., & Moh, Y. (2025). Language proficiency over nonverbal sound effects in children's eBook incidental word learning. *Language Learning & Technology*, 29(3), 135–156. <https://doi.org/10.64152/10125/73649>
3. Rubio, L. S., **Roberts, A. C.**, & Kim, Y. (2025). The role of script in Kyrgyz identity: Examining attitudes toward Kyrgyz script, Cyrillic, and Latinization. *Applied Linguistics*, amaf013.
4. Jung, C., **Roberts, A. C.**, Ixmata Schaaff, J. E., & Kim, Y. (2025). Divergent Perspectives on Identifying Heritage Speakers: Unravelling the Complex Differences in How Speakers See Themselves and Others. *Journal of Language, Identity & Education*, 1-13.
5. Lee, E. H., **Roberts, A. C.**, Kwok, K. W., Car, J., Soh, C. K., & Christopoulos, G. (2025). Towards the Vertical City: psychosocial mechanisms for human-centered underground office spaces. *Scientific Reports*, 15(1), 7107.
6. Tan, Z., Christopoulos, G., **Roberts, A. C.**, Ren, G., Ouyang, W., Lo, K., & Ho, C. (2025). The comparative thermal experience of young and old pedestrians in urban green spaces and in densely built areas. *Urban Forestry & Urban Greening*, 128712.
7. Lee, K. C., Gao, J., Leung, H. K., Wu, B. W. Y., **Roberts, A.**, Thach, T. Q., & Sik, H. H. (2024). Modulating Consciousness through Awareness Training Program and Its Impacts on Psychological Stress and Age-Related Gamma Waves. *Brain Sciences*, 14(1), 91.
8. Arikrishnan, S., **Roberts, A. C.**, Lau, W. S., Wan, M. P., & Ng, B. F. (2023). Experimental study on the impact of indoor air quality on creativity by Serious Brick Play method. *Scientific Reports*, 13(1), 15488.
9. Gao, J., Sun, R., Leung, H. K., **Roberts, A.**, Wu, B. W. Y., Tsang, E. W., ... & Sik, H. H. (2023). Increased neurocardiological interplay after mindfulness meditation: a brain oscillation-based approach. *Frontiers in Human Neuroscience*, 17, 1008490.
10. Olszewska-Guizzo, A., Russo, A., **Roberts, A. C.**, Kühn, S., Marques, B., Tawil, N., & Ho, R. C. (2023). Cities and mental health. *Frontiers in Psychiatry*, 14.
11. Kim, Y., & **Roberts, A. C.** (2023). Heritage learners are more sensitive to effects of script: Evidence from Korean. *Language & Communication*, 89, 92-100.
12. Lee, K. F. A., Lee, E. H., **Roberts, A. C.**, Car, J., Soh, C. K., & Christopoulos, G. (2022). Effects of fun-seeking and external locus of control on smoking behaviour: a cross-sectional analysis on a cohort of working men in Singapore. *BMJ open*, 12(10), e061318.
13. Kaszas, D., & **Roberts, A. C.** (2023). Comfort with varying levels of human supervision in self-driving cars: Determining factors in Europe. *International journal of transportation science and technology*, 12(3), 809-821.
14. Kotzor, S., **Roberts, A. C.**, Wetterlin, A., Reetz, H., & Lahiri, A. (2022). Bengali nasal vowels: lexical representation and listener perception. *Phonetica*. <https://doi.org/10.1515/phon-2022-2017>
15. Sun, H., **Roberts, A. C.**, & Bus, A. (2022). Bilingual children's visual attention while reading digital picture books and story retelling. *Journal of Experimental Child Psychology*, 215, 105327. <https://doi.org/10.1016/j.jecp.2021.105327>
16. Yap, HS, **Roberts, AC**, Luo, C, Tan, Z, Lee, EH, Thach, TQ, Kwok, KW, Car, J, Soh, CK, & Christopoulos, G. (2021) The importance of air quality for underground spaces: An international survey of public attitudes. *Indoor Air*. 2021; 00: 1– 13. <https://doi.org/10.1111/ina.12863>
17. Su, Y., **Roberts, A. C.**, Yap, H. S., Car, J., Kwok, K. W., Soh, C. K., & Christopoulos, G. I. (2020). White-and Blue-collar workers responses towards underground workspaces. *Tunnelling and Underground Space Technology*, 105, 103526.
18. Venugopal, V., **Roberts, A. C.**, Kwok, K. W., Christopoulos, G. I., & Soh, C. K. (2020). Employee Experiences in Underground Workplaces: A Qualitative Investigation. *Ergonomics*, DOI: 10.1080/00140139.2020.1780306
19. Thach, T. Q., Mahirah, D., Sauter, C., **Roberts, A. C.**, Dunleavy, G., Nazeha, N., ... & Car, J. (2020). Associations of perceived indoor environmental quality with stress in the workplace. *Indoor Air*.

20. Tan, Z., **Roberts, A. C.**, Lee, E. H., Kwok, K. W., Car, J., Soh, C. K., & Christopoulos, G. (2020). Transitional areas affect perception of workspaces and employee well-being: A study of underground and above-ground workspaces. *Building and Environment*, 106840.
21. Thach T-Q, Mahirah D, Dunleavy G, Zhang Y, Nazeha N, Rykov Y, Nah, A, **Roberts, A. C.**, Christopoulos, G. I., Soh, C-K, & Car, J. (2020) Association between shift work and poor sleep quality in an Asian multi-ethnic working population: A cross-sectional study. *PLoS ONE* 15(3): e0229693. <https://doi.org/10.1371/journal.pone.0229693>
22. Rykov, Y., Thach, T. Q., Dunleavy, G., **Roberts, A. C.**, Christopoulos, G., Soh, C. K., & Car, J. (2020). Activity Tracker–Based Metrics as Digital Markers of Cardiometabolic Health in Working Adults: Cross-Sectional Study. *JMIR mHealth and uHealth*, 8(1), e16409.
23. Thach, T.Q., Mahirah, D., Dunleavy, G., Nazeha, N., Zhang, Y., Tan, C.E.H., **Roberts, A.C.**, Christopoulos, G., Soh, C.K. & Car, J. (2019). Prevalence of sick building syndrome and its association with perceived indoor environmental quality in an Asian multi-ethnic working population. *Building and Environment*, 106420. <https://doi.org/10.1016/j.buildenv.2019.106420>
24. Sun, H., Loh, J., & **Roberts, A. C.** (2019). Motion and Sound in Animated Storybooks for Preschoolers' Visual Attention and Mandarin Language Learning: An Eye-Tracking Study With Bilingual Children. *AERA Open*, 5(2), 2332858419848431.
25. Lee, E.H., Luo, C., Sam, Y.L., **Roberts, A.C.**, Kwok, K.W., Car, J., Soh, C.K. & Christopoulos, G.I. (2019). The underground workspaces questionnaire (UWSQ): Investigating public attitudes toward working in underground spaces. *Building and Environment*, 153, 28-34. <https://doi.org/10.1016/j.buildenv.2019.02.017>
26. **Roberts, A. C.**, Yap, H. S., Kwok, K. W., Car, J., Soh, C. K., & Christopoulos, G. I. (2019). The cubicle deconstructed: Simple visual enclosure improves perseverance. *Journal of Environmental Psychology*, 63, 60-73.
27. **Roberts, A. C.**, Yeap, Y. W., Seah, H. S., Chan, E., Soh, C. K., & Christopoulos, G. I. (2019). Assessing the suitability of virtual reality for psychological testing. *Psychological Assessment*, 31(3), 318.
28. Tan, Z., Chung, S. C., **Roberts, A. C.**, & Lau, K. K. L. (2019). Design for climate resilience: influence of environmental conditions on thermal sensation in subtropical high-density cities. *Architectural Science Review*, 1-11.
29. Tan, Z., Lau, K. K.-L., **Roberts, A. C.**, Chao, S. T.-Y., & Ng, E. (2019). Designing Urban Green Spaces for Older Adults in Asian Cities. *International Journal of Environmental Research and Public Health*, 16(22), 4423. MDPI AG. <http://dx.doi.org/10.3390/ijerph16224423>
30. Dunleavy, G., Sathish, T., Nazeha, N., Soljak, M., Visvalingam, N., Bajpai, R., Yap, H.S., **Roberts, A.C.**, Thach T-Q, Tonon, A.C. & Christopoulos, G. (2019). Health Effects of Underground Workspaces (HEUW) cohort in Singapore: study design and baseline characteristics. *Epidemiology and Health*.
31. **Roberts, A. C.**, & Christopoulos, G. I. (2018). Comment on "Using functional Magnetic Resonance Imaging (fMRI) to analyze brain region activity when viewing landscapes". *Landscape and Urban Planning*, 172, 25–28. <http://doi.org/10.1016/j.landurbplan.2017.12.006>
32. Tan, Z., **Roberts, A. C.**, Christopoulos, G. I., Kwok, K.-W., Car, J., Li, X., & Soh, C.-K. (2018). Working in underground spaces : Architectural parameters, perceptions and thermal comfort measurements. *Tunnelling and Underground Space Technology*, 71(August 2017), 428–439. <http://doi.org/10.1016/j.tust.2017.09.002>
33. Lee, E. H., Christopoulos, G. I., Kwok, K. W., **Roberts, A. C.**, & Soh, C. (2017). A psychosocial approach to understanding underground spaces. *Frontiers in Psychology*, 8(452). <http://doi.org/10.3389/fpsyg.2017.00452>
34. Kotzor, S., Wetterlin, A., **Roberts, A.C.**, & Lahiri, A. (2016). Processing of Phonemic Consonant Length: Semantic and Fragment Priming Evidence from Bengali. *Language and Speech*; doi:10.1177/0023830915580189
35. **Roberts, A. C.**, Christopoulos, G. I., Car, J., Soh, C-K. & Lu, M. (2016). Psycho-biological factors associated with underground spaces: the new era of Cognitive Neuroscience. *Tunneling and Underground Space Technology*, 55, 118-134.
36. **Roberts, A. C.**, Kotzor, S., Wetterlin, A., & Lahiri, A. (2014). Asymmetric processing of durational differences - electrophysiological investigations in Bengali. *Neuropsychologia*; 58: 88-98. doi:10.1016/j.neuropsychologia.2014.03.015
37. **Roberts, A. C.**, Wetterlin, A., & Lahiri, A. (2013). Aligning mispronounced words to meaning: Evidence from ERP and Reaction Time studies. *The Mental Lexicon*, 8(2): 140-163.
38. Ting, C-H., Mahfouf, M., Nassef, A., Linkens, D.A., Panoutsos, G., Nickel, P., **Roberts, A.C.**, & Hockey, G.R.J. (2010), Real-Time Adaptive Automation System Based on Identification of Operator Functional State in Simulated Process Control Operations. *Systems, Man and Cybernetics, Part A: Systems and Humans, IEEE Transactions on*, 40(2): 251-262.

39. Hockey, G.R.J., Nickel, P., **Roberts, A.C.**, & Roberts, M.H. (2009). Sensitivity of candidate markers of psychophysiological strain to cyclical changes in manual control load during simulated process control. *Applied Ergonomics*; 40(6):1011-8.

Book Chapters & Technical Reports

1. Kim, Y., Phillips, L., & **Roberts, A. C.** (2025). The Covert Effects of Script on Second Language (L2) Processing: Evidence from Korean, Croatian, and French L2 Learners of English. In *Handbook on the Korean Language and Literacy: Insights into Hangul and Text Processing* (pp. 497-515). Cham: Springer Nature Switzerland.
2. Schubert, R., Joerin, J., Li, M., & **Roberts, A. C.** (2025). Social Archetypes and Social Resilience–Framework and Methodology. https://ethz.ch/content/dam/ethz/special-interest/dual/frs-dam/documents/250120-SA-Framework-and-Methodology_WP8_Final_pdf.pdf
3. Ehrenhofer, L., **Roberts, A. C.**, Kotzor, S., Wetterlin, A. & Lahiri, A (2017). Asymmetric processing of consonant duration in Swiss German. *Phonetics and Phonology of Geminate Consonants*. Oxford: Oxford University Press.
4. Nickel, P., **Roberts, A.C.**, Roberts, M.H., & Hockey, G.R.J. (2008). Inter-individual differences in executive control activity during simulated process control: Comparison of performance and physiological patterns. In D. de Waard, F. Flemisch, B. Lorenz, H. Oberheid, & K. Brookhuis (Eds.) *Human Factors for assistance and automation*. Maastricht: Shaker Publishing.
5. Nickel, P., **Roberts, A.C.**, Roberts, M.H., & Hockey, G.R.J. (2007). Development of a cyclic loading method for the study of patterns of breakdown in complex performance under high load. In D. de Waard, G.R.J. Hockey, P. Nickel, & K. Brookhuis (Eds.), *Human Factors Issues in Complex System Performance*. Maastricht: Shaker Publishing.
6. Roberts, M.H., **Roberts, A.C.**, Nickel, P., & Hockey, G.R.J. (2007). Training operators in Micro-World simulations. In D. de Waard, G.R.J. Hockey, P. Nickel, & K. Brookhuis (Eds.), *Human Factors Issues in Complex System Performance*. Maastricht: Shaker Publishing.
7. Nickel, P., **Roberts, A.C.**, & Hockey, G.R.J. (2005). Assessment of high risk operator functional state markers in dynamic systems – preliminary results and implications. In Dick De Waard & Antonella Toffetti (eds.), *Human Factors in Industrial and Consumer Products and Services*. Maastricht: Shaker Publishing.

Invited Lectures

1. The Science of Space: How Our Brains Respond to the Built Environment. *The Silent Barrier: Workplace Acoustics & Employee Wellbeing, CoreNet Global, Singapore* 2025
2. Developing Resilient Urban Populations. *First International Symposium on Urban Lifeline, Nanjing, China.* 2024
3. Testing Executive Function using a Virtual Laboratory. *Monash Behavioural Business Lab Annual Symposium, Australia* 2023
4. Understanding how SGQR apps could affect financial resilience. *BIRU Brownbag, Monetary Authority of Singapore, Singapore.* 2023
5. Developing Individual Resilience. *University of Basel, Switzerland.* 2023
6. What is resilience in a digitized society? *Behavioural Studies Colloquium, ETH Zürich, Switzerland.* 2023
7. The Interplay between Financial Resilience and Mobile Wallet E-Payment Adoption, *ETH Risk Center, ETH Zürich, Switzerland.* 2023
8. Collaborative Research. *Unleashing Scientific Writing and Publishing Skills, Mindanao State University, Marawi, Philippines.* 2023
9. Developing Psychological Resilience. *KETTS Talk, School of Psychology, University of Nottingham Malaysia.* 2022
10. Working in the Future Resilient City. *World Young Scientist Summit 2020: International Symposium of the Resilient City, Wenzhou, China.* 2020
11. Using Adaptive Automation to Improve Safety. *The Human Factors and Ergonomics Society Singapore (HFESS) Symposium 2019, Singapore.* 2019
12. The Human Factor in Underground Workspaces. *The 1st International Conference on Exploration and Utilization of Underground Space (EUUS 2019), Wuhan, China.* 2019
13. Encouraging Underground Space Use: The Case for Indoor Environmental Quality. *The 1st International Conference on Exploration and Utilization of Underground Space (EUUS 2019), Wuhan, China.* 2019
14. Human-Centric Underground Workspaces: Results of a multidisciplinary, multi-year study. *MND Urban Sustainability R&D Congress 2019, Singapore.* 2019

15. The science of reading comics. *The Starving Artist Fair, SCAPE, Singapore.* 2017
https://youtu.be/ZvGuhGnF_d0
16. Eye-Tracking of Navigation in Indoor Environments. *Understanding Human Behaviour: An Eye Tracking Workshop and Discussion, Institute on Asian Consumer Insight, Nanyang Technological University, Singapore.* 2016
17. Human-centric development of modern urban spaces. *Department of Psychology, BINUS University, Indonesia.* 2016
18. The effect of environment on cognition. *Department of Psychology, BINUS University, Indonesia.* 2016
19. Processing consonant length in Bengali: behavioural and ERP evidence. *Speech Lunch, Faculty of Linguistics, University of Oxford, UK.* 2013
20. Real-time Adaptive Control of Automation in Response to Operator Strain. *School of Engineering, University of Warwick, UK.* 2011

Expert Panellist

1. The Silent Barrier: Workplace Acoustics & Employee Wellbeing. *CoreNet Global, Singapore* 2025
2. The Future Resilient City. *World Young Scientist Summit 2020: International Symposium of the Resilient City, Wenzhou, China.* 2020
3. Workplace Safety. *The Human Factors and Ergonomics Society Singapore (HFESS) Symposium 2019, Singapore.* 2019
4. Encouraging Underground Space Use. *The 1st International Conference on Exploration and Utilization of Underground Space (EUUS 2019), Wuhan, China.* 2019

Refereed Conference Papers

1. **Roberts, A. C.**, Soh, C. K., Yap, H. S., Car, J., Kwok, K. W., & Christopoulos, G. (2023, November). The Role of Worker Satisfaction in the Underground Environment with Job Satisfaction and Turnover Intent. In *Conference of the Associated research Centers for the Urban Underground Space* (pp. 9-14). Singapore: Springer Nature Singapore.
2. Soh, C. K., **Roberts, A. C.**, Marimuthu, V., Car, J., Kwok, K. W., & Christopoulos, G. (2023, November). SWOT Analysis of Underground Work Spaces. In *Conference of the Associated research Centers for the Urban Underground Space* (pp. 617-622). Singapore: Springer Nature Singapore.
3. **Roberts, A. C.**, Arikrishnan, S., Xiong, J., Ng, B. F., & Wan, M. P. (2020, November). The effect of sick building syndrome and perceived air quality on memory and cognition. *The 16th Conference of the International Society of Indoor Air Quality and Climate: Creative and Smart Solutions for Better Built Environments, Indoor Air 2020.* Seoul (South Korea).
4. Arikrishnan, S., **Roberts, A. C.**, Ng, B. F., Soh, C. K., & Wan, M. P. (2020, November). Associations between Indoor Air Quality and cognitive health: A randomised masked trial in the tropics. *The 16th Conference of the International Society of Indoor Air Quality and Climate: Creative and Smart Solutions for Better Built Environments, Indoor Air 2020.* Seoul (South Korea).
5. **Roberts, A. C.**, Christopoulos, G. I., Yap, H. S., Car, J., Kwok, K. W., & Soh, C. K. (2018, August). Attention and Vigilance: A large scale workplace study. In *Congress of the International Ergonomics Association* (pp. 151-158). Springer, Cham.
6. Luo, C., Christopoulos, G. I., **Roberts, A. C.**, Pillay, A., & Soh, C. K. (2018, August). The Influence of Room Size on Error Monitoring: Evidence from Event-Related Potential Responses. In *Congress of the International Ergonomics Association* (pp. 386-391). Springer, Cham.
7. Soh, C. K., Marimuthu, V., Christopoulos, G. I., **Roberts, A. C.**, Car, J., & Kwok, K. W. (2018, August). Underground Workspaces: A Human Factors Approach. In *Congress of the International Ergonomics Association* (pp. 764-772). Springer, Cham.
8. Venugopal, V., Jenssen, G. D., **Roberts, A. C.**, Kwok, K. W., Tan, Z., Christopoulos, G. I., & Soh, C. K. (2018, August). Digging Deep: The Effect of Design on the Social Behavior and Attitudes of People Working in Underground Workplaces in Europe. In *Congress of the International Ergonomics Association* (pp. 791-802). Springer, Cham.
9. Soh, C. K., Marimuthu, V., **Roberts, A. C.**, Car, J., Kwok, K. W. & Christopoulos, G. I., (2018, November). Developing and communicating high-value, human-centered underground work spaces: Results of a multidisciplinary, multi-year study. In *ACUUS 2018 - 16th World Conference of the Associated Research Centers for the Urban Underground Space: Integrated Underground Solutions for Compact Metropolitan Cities, Conference Proceedings*, 10-19. Hong Kong.
10. **Roberts, A. C.**, Christopoulos, G. I., Yap, H. S., Tan, Z., Venugopal, V., & Soh, C. K. (2018, November). Does knowing you're underground affect your perception of the space? In *ACUUS 2018 - 16th World Conference of the Associated Research Centers for the Urban*

Underground Space: Integrated Underground Solutions for Compact Metropolitan Cities, Conference Proceedings, 530–537. Hong Kong.

11. Tan, Z., **Roberts, A. C.**, Lee, E. H., Christopoulos, G. I., Kwok, W. W., Car, J., & Soh, C. K. (2018, November). Architectural design, perception, and health in underground working environments. In *ACUUS 2018 - 16th World Conference of the Associated Research Centers for the Urban Underground Space: Integrated Underground Solutions for Compact Metropolitan Cities, Conference Proceedings*, 538–543. Hong Kong.
12. Su, Y., **Roberts, A. C.**, Luo, C., Yap, H. S., Chan, E., Car, J., Kwok, K. W., Soh, C. K., & Christopoulos, G. I. Shall We have underground office spaces? Underground workspaces do not affect office work's perception of workspace and job satisfaction. (2018). In *ACUUS 2018 - 16th World Conference of the Associated Research Centers for the Urban Underground Space: Integrated Underground Solutions for Compact Metropolitan Cities, Conference Proceedings*, 524–529. Hong Kong.
13. **Roberts, A. C.**, Christopoulos, G., & Soh, C. K. (2018). An experimental investigation of the effect of cubicles on perseverance. The 33rd Annual Society for Industrial and Organizational Psychology Conference, Chicago, IL (USA). <https://doi.org/10.31234/osf.io/53ebh>
14. Soh, C.-K., Christopoulos, G., **Roberts, A.C.**, & Lee, E.-H. (2016). Human-centered development of underground work spaces. *Procedia Engineering*, 165, 242–250. <http://doi.org/10.1016/j.proeng.2016.11.796>
15. Nassef, A., Mahfouf, M., Linkens, D.A., Elsamahy, E., **Roberts, A.C.**, Nickel, P., Hockey, G.R.J., & Panoutsos, G. (2010). The Assessment of Heart Rate Variability (HRV) and Task Load Index (TLI) as Physiological Markers for Physical Stress. *IFMBE Proceedings*, 25/13, p146-149.
16. Ting, C-H., Mahfouf, M., Linkens, D.A., Nassef, A., Nickel, P., **Roberts, A.C.**, Roberts, M.H., & Hockey, G.R.J. (2008). Real-time adaptive automation for performance enhancement of operators in a human-machine system. *16th Mediterranean Conference on Control and Automation*, Ajaccio, Corsica (France), pp. 552-557.
17. Nassef, A., Ting, C-H., Mahfouf, M., Linkens, D.A., Nickel, P., Hockey, G.R.J., & **Roberts, A.C.** (2008). A new framework for real-time adaptive fuzzy monitoring and control for humans under psychophysiological stress, *Biosignals 2008, International Conference on Bio-inspired Systems and Signal Processing*, Funchal, Madeira (Portugal), pp. 320-325.
18. Zhang, J.; Mahfouf, M.; Linkens, D.A.; Nickel, P.; Hockey, G.R.J. & **Roberts, A.C.** (2007). Adaptive Fuzzy Model of Operator Functional State in Human-Machine System: A Preliminary Study. In J.W. Gardner (ed.), *Biomedical Engineering – BioMED 2007 (Proceedings of the 5th International Conference on Biomedical Engineering, February 14-16, 2007, Innsbruck, Austria)*. Calgary: ACTA Press, 555-017: 118-123. [ISBN 978-0-88986-648-5].
19. Ting, C-H., Mahfouf, M., Linkens, D.A., Nassef, A., Nickel, P., Hockey, G.R.J., & **Roberts, A.C.** (2007), Towards on-line supervision and control of operational functional state (OFS) for subjects under mental stress. *IEEE/NIH Life Science Systems and Applications Workshop (LISSA 2007)*. Bethesda, MD (USA), pp. 77-80.
20. Zhang, J., Nassef, A., Mahfouf, M., Linkens, D.A., Hockey, G.R.J., Nickel, P., & **Roberts, A.C.** (2006). Modelling and spectral analysis of HRV of operators subjected to physical and mental workloads. In IFAC (Ed.). *Proceedings of the 6th International Federation of Automatic Control Symposium on Modelling and Control in Biomedical Systems (including Biological Systems)*. Oxford: Elsevier, pp. 189-194. [ISBN 0-08-044530-6]
21. Hockey, G.R.J., Nickel, P., **Roberts, A.C.**, Mahfouf, M. & Linkens, D.A. (2006). Implementing adaptive automation using on-line detection of high risk operator functional state. In ISSA Chemistry and Machine and System Safety Sections (eds.), *Design Process and Human Factors Integration: Optimising Company Performance (1/004:1-13)*. Paris: INRS.
22. Nickel, P., Hockey, G.R.J., **Roberts, A.C.**, & Roberts, M.H. (2006). Markers of high risk operator functional state in adaptive control of process automation. *Proceedings of the IEA 2006 congress*, Maastricht, The Netherlands.

Refereed Conference Abstracts

1. **Roberts, A. C.**, Soh, C-K., & Christopoulos, G. (2023). The Role of Worker Satisfaction in the Underground Environment with Job Satisfaction and Turnover Intent. *18th World Conference of the Associated Research Centers for the Urban Underground Space*, November 1-4 2023, Singapore.
2. **Roberts, A. C.**, Soh, C-K., & Christopoulos, G. (2023). SWOT analysis of underground workspaces. *18th World Conference of the Associated Research Centers for the Urban Underground Space*, November 1-4 2023, Singapore.
3. **Roberts, A. C.**, Andraszewicz, S., Popelka, D., Wettstein, L., & Hölscher, C. (2023). The relationship between Financial and Psychological Resilience and Mental Health: A cross-

- cultural survey in Singapore and Switzerland. *Annual Meeting of the Society of Behavioural Health, Singapore*, October 28 2023, Singapore.
4. Andraszewicz, S., **Roberts, A. C.**, Wettstein, L., Popelka, D., & Hölscher, C. (2023). The Role of Technology Adoption in Psychological and Financial Resilience. *International Conference on Resilient Systems (ICRS) 2023*, June 28-30 2023, CDMX, Mexico.
 5. **Roberts, A.C.**, Lee, E-H., Christopoulos, G. & Soh, C-K. (2016). Human Factors of underground spaces: Psychological, social and health parameters. *Applied Human Factors and Ergonomics 2016*, July 27-31 2016, Orlando, FL, USA. https://youtu.be/YZVBYH_TSk
 6. Ong, C-W., **Roberts, A.C.**, Lee, E-H., Christopoulos, G. & Soh, C-K. (2016). Effect of desk position on frustration and decision making in lone working. *Applied Human Factors and Ergonomics 2016*, July 27-31 2016, Orlando, FL, USA.
 7. Lee, E.H., Christopoulos, G.I., Liew K.H. & **Roberts, A.C.** (2016). The influence of enclosed spaces on perceived sense of control. 28th Annual Convention of Association for Psychological Science, 2016, Chicago, IL, USA.
 8. **Roberts, A.C.**, Wetterlin, A., Kotzor, S. & Lahiri, A. (2014). Cross-linguistic studies of allophonic durational differences. *Mental lexicon 2014*, September 30 - October 2 2014, Niagara-on-the-lake, Ontario, Canada.
 9. Wetterlin, A., **Roberts, A.C.**, Kotzor, S., Koreman, J., & Lahiri, A. (2014). Asymmetric processing of word accent in Norwegian. *Tone and Intonation in Europe*, September 10-12 2014, Utrecht, Netherlands.
 10. **Roberts, A.C.**, Kotzor, S., Wetterlin, A. & Lahiri, A. (2014). Pre-attentive processing of consonantal duration contrasts. *Architectures and Mechanisms for Language Processing XX*, September 3-6 2014, Edinburgh, UK.
 11. Ehrenhofer, L., **Roberts, A.C.**, Wetterlin, A., Kotzor, S., & Lahiri, A. (2014) When Less is Not Enough: Processing Variation in Geminate Duration in Swiss German. 2014 Annual Meeting of the Linguistics Association of Great Britain, September 1-5 2014, Oxford, UK.
 12. Kotzor, S., **Roberts, A.C.**, Wetterlin, A. & Lahiri, A. (2014). Pre-attentive processing of duration contrasts: an MMN study. *Society for the Neurobiology of Language*, August 27-29 2014, Amsterdam, Netherlands.
 13. **Roberts, A. C.**, S. Kotzor, A. Wetterlin, & A. Lahiri. (2014). Cross-linguistic differences in automatic perception of allophonic vowel duration. *Society for the Neurobiology of Language*, August 27-29 2014, Amsterdam, Netherlands.
 14. Wetterlin, A., **Roberts, A.C.**, Kotzor, S., Koreman, J., & Lahiri, A. (2014). Asymmetric processing of word accent in Norwegian. *Society for the Neurobiology of Language*, August 27-29 2014, Amsterdam, Netherlands.
 15. **Roberts, A.C.**, Kotzor, S., Wetterlin, A. & Lahiri, A. (2014). Neurolinguistic evidence for asymmetric processing of consonant duration. *LabPhon 14 - The 14th Conference on Laboratory Phonology*, July 25-27 2014, NINJAL, Tokyo, Japan.
 16. Kotzor, S., **Roberts, A.C.**, & Lahiri, A. (2013). Processing consonant length in Bengali: ERP and behavioural evidence. *Linguistics Association of Great Britain Annual Conference*, August 28-31 2013, SOAS, London, UK.
 17. **Roberts, A.C.**, Wetterlin, A., & Lahiri, A. (2013). Asymmetry in semantic activation by mispronounced words: evidence from ERP and reaction time studies. *Poster presented at the Cognitive Neuroscience Society Conference, April 2013, San Francisco, USA.*
 18. Kotzor, S., Wetterlin, A., **Roberts, A.C.**, & Lahiri, A. (2013). Processing consonant length in Bengali: behavioural and ERP evidence. *ICPP2013*, January 25-27 2013, NINJAL, Tokyo, Japan.
 19. **Roberts, A.C.**, Wetterlin, A., & Lahiri, A. (2012). Semantic activation by mispronounced words: evidence from ERP and reaction time studies. Poster presented at The Mental Lexicon, Montreal, Canada.
 20. Kotzor, S., Wetterlin, A., **Roberts, A.C.**, & Lahiri, A. (2012). Processing consonant length in Bengali: ERP and behavioural evidence. Poster presented at The Mental Lexicon, Montreal.
 21. **Roberts, A.C.**, Kotzor, S., Wetterlin, A., & Lahiri, A. (2012). Processing perception: Geminate in Bengali. Paper presented at Categories & Gradience Workshop, June 26, 2012, Cambridge.
 22. Lahiri, A., & **Roberts, A.C.** (2011). Asymmetry in word recognition: phonological, historical, psycholinguistic and neurolinguistic evidence. Paper presented at LAGB, September 8-11, 2011, Manchester, UK.
 23. **Roberts, A.C.** (2010). Psychological Aspects of Prosody in Perception: Measuring The Effort Behind Everyday Listening. Paper Presented at the Annual Aspects of Prosody Workshop, June 28-29, 2010, Oxford, UK.
 24. **Roberts, A.C.**, Hockey, G.R.J., Roberts, M.H., Nassef, A., Mahfouf, M., Linkens, D.A., & Ting, C-H. (2008) *Real-time Adaptive Control of Automation in Response to Operator Strain*. Paper presented at the Annual Meeting of the Human Factors and Ergonomics Society (Europe Chapter), Soesterberg, Netherlands.

25. **Roberts, A.C.**, Nickel, P., & Hockey, G.R.J. (2007). *Frontal theta changes as precursors of performance breakdown in manual process control: evidence for markers of cognitive strain and executive fatigue?* Paper presented at the British Psychological Society Psychobiology 22nd Annual Scientific Meeting, September 3–5, 2007, Windermere, UK.
26. Mahfouf, M., Zhang, J., Linkens, D.A., Nassef, A., Nickel, P., Hockey, G.R.J., & **Roberts, A.C.** (2007). *Adaptive fuzzy approaches to modelling operator functional states in a human-machine process control system.* Paper presented at FUZZIEEE2007, July 23-26, 2007, UK