Magdalena Kachlicka

The Auditory, Language, Perception, Hearing and Attention Lab
Department of Psychological Sciences, Birkbeck University of London
Malet Street, WC1E 7HX London
✉ m.kachlicka@bbk.ac.uk
🌐 mkachlicka.github.io

Education

2023   Doctor of Philosophy (PhD), Psychology
Birkbeck University of London
Thesis: Perceptual strategies underlying second language acquisition
Supervisors: Dr Adam Tierney, Dr Kazuya Saito, and Prof Fred Dick

2020   Master of Philosophy (MPhil), Cognitive Science
University College London (UCL)
Thesis: Mapping acoustic and semantic dimensions of auditory perception
Supervisors: Prof Jian Kang and Prof Fred Dick

2018   Master of Science (MSc, Distinction), Psychological Research Methods
Birkbeck University of London
Thesis: Individual differences in auditory processing in second language learning
Supervisor: Dr Adam Tierney

2017   Bachelor of Science (BSc, First Class), Psychology
University of Nicosia
Thesis: Adaptation of the BHI-R Questionnaire from Polish to Greek and English Languages
Supervisor: Dr Marios Adonis

Research Experience

Oct 2023 – Present   Postdoctoral Researcher
Department of Psychological Sciences, Birkbeck University of London
Project: Dimension-selective attention and second language acquisition
Currently investigating attention, salience, and distractibility in auditory perception with behavioural and neuroimaging methods (e.g., neural tracking of phonological and lexical surprisal, representations of acoustic vs linguistic features and semantic similarity)

Apr 2020 – Sep 2023   Research Assistant
Institute of Education, University College London
Project: Does having a good ear promote successful second language speech learning?
Recruited +500 participants worldwide (UK, US, Japan, China) and collected online data, designed experimental tasks (language, musical, auditory tests and language assessments) on the Gorilla platform using built-in capabilities and JS scripting, processed and analysed data with R and MATLAB custom scripts, analysed speech acoustics using Praat software and Python Parselmouth package, contributed to multiple scientific publications

Jul 2022 – Oct 2022   Research Collaborator
University of Social Sciences and Humanities (Poznan, Poland)
Project: Speech acoustics and contents of narrative reconstructions of past events as indicators of cognitive processing of trauma and posttraumatic growth

Processed interview recordings with Adobe Audition, analysed speech acoustics using Python DisVoice and Parselmouth packages, processed interview transcripts and conducted sentiment analysis in R and Python NLTK

Oct 2018 – Sep 2020 Research Assistant
Department of Psychological Sciences, Birkbeck University of London
Recruited +50 participants and collected neuroimaging data with EEG and FFR using BioSemi ActiveTwo system, ran behavioural testing (language, musical and auditory tests), pre-processed neurophysiological data using Matlab and FieldTrip toolbox, conducted acoustic analyses of speech with Praat software, contributed to multiple group publications, published 1 first-author journal article

Jan 2017 – Apr 2017 Research Intern
Experimental Psychology Lab at University of Cyprus (Nicosia, Cyprus)
Project: The impact of visual imagery on the experience of pain: A comparison between altered visual feedback and distraction strategy
Measured maximum voluntary muscle contraction (MVC) and calculated baseline weight prior to training session, collected script data (consent forms and questionnaires), measured heart rate, EMG and skin conductance using BIOPAC M150 and AcqKnowledge Software during the training sessions with VR headset; gained knowledge of altered visual feedback paradigm, pain measurements and performance assessments

Apr 2015 – Dec 2020 Research Collaborator
University of Social Sciences and Humanities (Poznan, Poland)
Project: Meaning of life and personal growth as a result of trauma: a longitudinal study (2015-2019)
Transcribed over 500 interviews (up to 2 hours long each), anonymised participants' data and followed data safety sharing and management procedures, gained a working knowledge of McAdams Life Story Interview schedule, qualitative interview techniques and literature related to the role of personal narratives in personality development and post-traumatic growth

Publications

- Symons, A. E., **Kachlicka, M.**, Wright, E., Razin, R., Dick, F., & Tierney, A. (2023). 'Dimensional salience varies across verbal and nonverbal domains', PsyArXiv. https://doi.org/10.31234/osf.io/d4u93
- **Kachlicka M**, Patel AD, Liu F, & Tierney AT (2023) Weighting of cues to categorization of song versus speech in tone language and non-tone-language speakers. PsyArxiv. https://doi.org/10.31234/osf.io/dwfsz
- Saito K, Petrova K, **Kachlicka M**, Suzukida Y, Tierney A (2022) Training auditory processing promotes second language speech acquisition. *Journal of Experimental Psychology: Human Perception and Performance*, 48(12), 1410-1426.
- Saito K, **Kachlicka M**, Suzukida Y, Petrova K, Lee BJ, Tierney A (2022) Auditory precision hypothesis-L2: Dimension-specific relationships between auditory processing and second language segmental learning. *Cognition*, 229, 105236.
- Saito K, Hanzawa K, Petrova K, **Kachlicka M**, Suzukida Y, Tierney A (2022) Incidental and multimodal high variability phonetic training: Potential, limits, and future directions. *Language Learning*, 72(4), 1049-1091.
- **Kachlicka M**, Laffere A, Dick F, Tierney A (2022) Slow phase-locked modulations support selective attention to sound. *NeuroImage*, 252, 119024.
- Saito K, Macmillan K, **Kachlicka M**, Kunihara T, Minematsu N (2022) Automated assessment of second language comprehensibility: Review, training, validation, and generalization studies. *Studies in Second Language Acquisition*, 45(1), 234-263.
- Saito K, Macmillan K, Kroeger S, Magne V, Takizawa K, **Kachlicka M**, Tierney A (2022) Roles of domain-general auditory processing in spoken second language vocabulary attainment in adulthood. *Applied Psycholinguistics*, 43(3), 581-606.

- Saito K, Sun H, **Kachlicka M**, Alayo J, Nakata T, Tierney A (2022) Domain-general auditory processing explains multiple dimensions of L2 acquisition in adulthood. *Studies in Second Language Acquisition*, 44(1), 57-86.
- Mitchell A, Oberman T, Aletta F, **Kachlicka M**, Lionello M, Erfanian M, Kang J (2021) Investigating urban soundscapes of the COVID-19 lockdown: A predictive soundscape modeling approach. *The Journal of Acoustical Society of America*, 150, 4474–4488.
- Saito K, **Kachlicka M**, Sun H, Tierney A (2020) Domain-general auditory processing as an anchor of post-pubertal second language pronunciation learning: Behavioural and neurophysiological investigations of perceptual acuity, age, experience, development, and attainment. *Journal of Memory and Language,* 115, 104168.
- Mitchell A, Oberman T, Aletta F, Erfanian M, Kachlicka M, Lionello M, Kang J (2020) The Soundscape Indices (SSID) protocol: A method for urban soundscape surveys – questionnaires with acoustical and contextual information. *Applied Sciences*, 10(7), 2397.
- **Kachlicka M**, Saito K, Tierney A (2019) Successful second language learning is tied to robust domain-general auditory processing and stable neural representation of sound. *Brain & Language*, 192, 15-24.

Conference posters
- **Kachlicka M***, Symons AE, Saito K, Dick F, Tierney AT (2023) Effects of first language background and musical experience on cue weighting, attention and dimensional salience in speech and music. *Society for the Neurobiology of Language 15th Annual Meeting (23-26 October 2023, Marseille, France)*
- **Kachlicka M***, van den Bosch J, Kang J, Dick F (2022) Representations of natural sound categories. *FENS Summer School 'Artificial and natural computations for sensory perception' (22-28 May 2022, Bertinoro, Italy)*

Conference papers
- Mitchell A*, Oberman T, Aletta F, Erfanian M, **Kachlicka M**, Lionello M, Kang J (2020) Making cities smarter with new soundscape indices. *The Journal of the Acoustical Society of America*, *146*, 2873.
- Aletta F*, Oberman T, Mitchell A, Erfanian M, Lionello M, **Kachlicka M**, Kang J (2019) Associations between soundscape experience and self-reported wellbeing in open public urban spaces: a field study. *The Lancet*, 394(S17).

Talks
- 'Auditory processing in second language learning' at Brain & Language Seminar (February 2019), University of Helsinki, Finland

Teaching Experience
- **PSYCO07H7 Neuroimaging Methods** (PG); Birkbeck Department of Psychological Sciences – lecture on EEG data processing and analysis (2023-24)
- **PSYCO046 Introduction to Statistics in R** (1UG); UCL Psychology and Language Sciences Department – demonstrator and teaching assistant (2021-22 & 2022-23 & 2023-24)
- **PSYCO012 Research Methods in Psychology** (2UG); UCL Psychology and Language Sciences Department – research project coordinator (2020-21 & 2021-22)
- **Methods for Dummies Course** (PG); Wellcome Centre for Human Neuroimaging (UCL Institute of Neurology) – course organizer and content coordinator (2019-20 & 2020-21)
- **PSYCO005 Introduction to Psychological Experimentation** (1UG); UCL Psychology and Language Sciences Department – demonstrator (2019-20 & 2020-21)
- **COMP0016 Systems Engineering & Human-Computer Interaction** (2UG); UCL Interaction Centre, Department of Computer Sciences – teaching assistant (2019-20, & 2022-23)
- **COMP0067 App Engineering & Design & Human-Computer Interaction** (PG); UCL Interaction Centre, Department of Computer Sciences – teaching assistant (2019-20 & 2022-23)

Grants and Awards

- Albert Valdman Award for outstanding publication in Studies in Second Language Acquisition, 2022 https://doi.org/10.1017/S0272263123000098
- Travel Award, Computational Cognitive Modelling for Language Summer School, University of California Irvine, 2022
- Research Grant ($2000), Language Learning Dissertation Award, 2022 https://doi.org/10.1111/lang.12514
- Research Grant (£1120), Student Project Fund, University College London, 2021
- Bloomsbury Studentship, Birkbeck University and UCL IOE, 2020-2023
- Research Grant (£530), Student Project Fund, University College London, 2020
- ERC Studentship, ERC Advanced Grant to Prof J Kang No. 740696, 2018-2020
- JUCE Diversity Scholarship, Audio Developers Conference, 2019
- Student Travel Award, Real World Communication Workshop, University of Connecticut, 2018
- Kenway Legacy Scholarship, Birkbeck University, 2017-2018
- Scholarship Based on Academic Performance, University of Nicosia, 2016-2017

Professional Development

- Seventh Summer School on Statistical Methods for Linguistics and Psychology, Universität Potsdam, 2023
- Computational Cognitive Modelling for Language Summer School, University of California Irvine, 2022
- Cognition and Natural Sensory Processing Workshop (CNSP), 2022
- Artificial and Natural Computations for Sensory Perception Summer School, FENS, 2022
- Cognition and Natural Sensory Processing Workshop (CNSP), 2021
- Visceral Mind Summer School, Bangor University, 2019
- SPM for EEG Analyses Course, University College London, 2019
- EEG Training at Jonas & Silas Lab, Middlesex University, 2019
- Real World Eye Tracking Course, Royal Holloway University of London, 2019
- TMS for Cognitive Neuroscience Workshop, University College London, 2018
- Limbic Brain Anatomy Course, Neurocourses UK, 2017
- Human Brain Anatomy Course, Neurocourses UK, 2017