RYSSA MOFFAT

POSTDOCTORAL RESEARCHER

RESEARCH SKILLS

Experimental techniques
• fNIRS • EEG • TMS
• Motion Capture
• Ultrasound tongue imaging
• Behavioural • Qualitative/Interviews

Programming
• R • Python • HTML • MATLAB

Software
• PsychoPy • OpenPose • Praat • Adobe

Natural languages
Fluent English, German, French
Intermediate Croatian, Finnish, Spanish

AWARDS & FELLOWSHIPS

2023 | Cortivision Pathfinder Program
2022 | ECR Travel Award to AS4SAN
2019 | Student Travel Award to CIAP
2019 | Graduate Research Funding, Maquarie University
2018-2022 | IDEALAB PhD Fellowship
2016-2018 | Erasmus+ Mobility Grant

TEACHING ACTIVITIES

July 2019 - Dec 2020

Macquarie University:
School of Psychological Sciences
• Delusions and Disorders of the Mind and Brain

Department of Linguistics
• Introductory Phonetics and Phonology
• Introduction to Psycholinguistics
• Phonological Analysis
• Language as Evidence

SUPERVISORY ROLES

Co-supervisor
• Jul 2022 - May 2023: Macquarie University MRes, Courtney Casale and Abigayle Peterson

Supervisor
• Jun-Sept 2023: Leonie Roos, DAAD RISE intern
• Mar-May 2023: Jonathon Clare, MURI intern
• Jul - Sept 2022: Annika Richter, DAAD RISE intern
• Feb-May 2022: Sabrina Diep, Research assistant

RECENT TRAINING

2022 | Deaf Awareness Training
2022 | Mental Health First Aid Training
2022 | Supervision Masterclass
2022 | Foundations of Supervision
2021 | Manawari Cultural Safety Training

EDUCATION

2018 - 2022
PhD in Cognitive Science (2018 - 2022)
Joint degree from Macquarie University, Newcastle University, Universities of Groningen & Potsdam
Thesis title: *Recognition and cortical haemodynamics of vocal emotions – an fNIRS perspective*
Advisors: Prof. David McAlpine, Prof. Deniz Baskent, Dr. Lindsey van Yper, Dr. Robert Luke

2016 - 2018
M.Sc. in Clinical Linguistics
Joint degree from Universities of Eastern Finland, Groningen & Potsdam
Thesis title: *Coarticulation as a synchronic predictor of reading dysfluency*
Advisors: Prof. Martijn Wieling, Dr. Aude Noiray

2012 - 2016
HBA, Major in German Language and Culture, Minor in Linguistics
University of Ottawa
Exchange year at University of Bonn (Oct 2014 - Oct 2015)

ACADEMIC EMPLOYMENT

June 2023 - present
Postdoctoral Researcher | Professorship for Social Brain Sciences, ETH Zürich
Social Brain in Action (SoBA) Lab
• Interpersonal motor synchrony • Intergenerational & human-robot interaction • fNIRS • Motion tracking • Aesthetic appreciation

Sept 2021 - May 2023
Postdoctoral Research Fellow |School of Psychological Sciences, Macquarie University
Social Brain in Action (SoBA) Lab
• Interpersonal motor synchrony • Human-Robot interaction • Inhibition • fNIRS • Aesthetic appreciation

Jan - Sep 2021
Research Assistant | School of Psychological Sciences, Macquarie University
Social Brain in Action (SoBA) Lab
• Child-Robot interaction • Artificial agent perception • Qualitative analysis

Mar - Dec 2018
Research Assistant | Department of Linguistics, University of Potsdam
Laboratory for Oral Language Acquisition (LOLA) & BabyLAB
• Lingual coarticulation • Developmental language disorders • Ultrasound imaging • fNIRS

May - Aug 2016
Research Assistant | Department of Neurology, RWTH Aachen University Hospital
Section for Clinical Cognition Sciences & Stroke/Aphasia Units
• Language production • TMS • EEG • Electrical pharyngeal stimulation

COMMUNITY INVOLVEMENT

2022 | Crestwood Secondary School, Canada & Camp Aspire, Maquarie University
Workshops on measuring motor synchrony, and maximising its social benefits for each Canadian and indigenous Australian highschool students

2022 | LEAP UP University Experience Day, Maquarie University
2021| Widening Participation, Maquarie University
Reading robot-buddy activities introducing robots and scientific practic with each refugee and indigenous Australian highschool students

RESEARCH OUTPUTS

Peer-reviewed Publications

1. **Moffat**, Baskent, Luke, McAlpine & van Yper. (2023). Cortical haemodynamic responses predict individual ability to recognise vocal emotions with uninformative pitch cues but do not distinguish different emotions. *Human Brain Mapping*. doi: 10.1002/hbm.26305

2. Caruana, **Moffat**, Blanco & Cross. (2023). Perceptions of intelligence & sentience shape children's interactions with robot reading companions. *Scientific Reports*. doi: 10.1038/s41598-023-32104-7

3. Caruana, **Moffat**, Blanco & Cross. Talk, listen and keep me company: A mixed methods analysis of children's perspectives towards robot reading companions. (2022). *Proceedings of the 10th International Conference on Human-Agent Interaction*. doi: 10.1145/3527188.3563917

Preprints

1. **Moffat** & Cross. Evaluations of dyadic synchrony: Observers' traits influence quantification and enjoyment of synchrony in mirror-game movements. Under review. doi: 10.31234/osf.io/b34kn

2. Casale*, **Moffat*** & Cross. Aesthetic evaluation of body movements shaped by embodiment and arts experience: Insights from behaviour and fNIRS. Under review. doi: 10.31234/osf.io/n24kc (*equal contribution)

3. **Moffat**, Casale & Cross. Mobile fNIRS for exploring inter-brain synchrony across generations and time. Under review. doi: 10.31234/osf.io/3kmux

4. **Moffat**, Caruana & Cross. Synchronised interactions with a peer observer increase self-monitoring during response inhibition: An fNIRS study. Under review at *Human Brain Mapping*. doi: 10.31234/osf.io/2n8sv

Workshops & Invited Talks

1. Workshop: McAlpine, Luke & **Moffat**. "Using fNIRS to map auditory cortical function". IERASG, Jul 2019.

2. Invited talk: **Moffat**, Baskent, Luke, McAlpine & van Yper. " Towards an fNIRS paradigm to map emotional prosody processing". Sunnybrook Health Science Centre, Feb 2020.

Conference Talks

1. **Moffat** & Cross. " Rose-tinted embodiment: Mirroring impacts enjoyment, empathy, and cortical activity when observing synchronous movements". fNIRSUK, Sept 2023.

2. **Moffat** & Cross. "Observer's traits predict accuracy of synchrony estimation and enjoyment of dyadic mirror-game movements". JAM 9, July 2023.

3. **Moffat**, Caruana & Cross. "Cortical correlates of inhibition when observed by synchronised vs. non-synchronised peers". SFN, Nov 2022.

4. **Moffat**, Baskent, Luke, McAlpine & van Yper. "Exploring metabolic responses to emotional prosody with fNIRS". Listen and Learn Workshop, Nov 2019.

5. **Moffat**, Baskent, Luke, McAlpine & van Yper. "Pilot: Processing emotional prosody in normal hearing listeners with fNIRS". CIAP, Jul 2019.

Conference Posters

1. **Moffat** & Cross. "Quantifying observed motor synchrony: Movement predictability and inter-individual traits predict accuracy". EPC, Apr 2023.

2. Casale, **Moffat** & Cross. "Art experience enhances enjoyment of dynamic human movement". EPC, Apr 2023.

3. **Moffat**, Caruana & Cross. "Cortical activity evoked by synchronised vs. non-synchronised peer observers as detected with fNIRS". fNIRS2022, Oct 2022.

4. Caruana, **Moffat**, Blanco & Cross. "A welcome social presence: Attentive and responsive robot reading buddies are preferred". AS4SAN, Jun 2022.

5. **Moffat**, Baskent, Luke, McAlpine & van Yper. "Cortical responses to vocal emotions with attenuated voice pitch variation measured with fNIRS". sfNIRS, Oct 2021.

6. **Moffat**, Baskent, Luke, McAlpine & van Yper. "Pilot: Mapping emotional prosody in normal hearing listeners with fNIRS". ARO, Jan 2020.

7. **Moffat**, Baskent, Luke, McAlpine & van Yper. "Pilot: Using fNIRS to explore emotional prosody perception". SPIN, Jan 2020.