

# Jonathan Z. Ong (He/Him)

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## EDUCATION

### Nanyang Technological University

Singapore

MA in Psychology, GPA: 5.00/5.00

Jan 2023–Jun 2025

Advisors: Professors Victoria Leong and George Augustine

*Project: Sociometric AI Screening Tool to Risk-Stratify Infant Neurodevelopmental Trajectories*

- Collected, preprocessed, and analyzed multimodal time-series data—including EEG, ECG, and behavioral data—from parent–child dyads using MATLAB, R, and Python.
- Designed and optimized naturalistic tasks to assess executive functions and neurodevelopmental trajectories in children aged 6–36 months, in a parent-child social interactive context.
- Developed analytical pipelines to generate rich behavioral data from well-designed ethograms, performed data wrangling to synchronize multimodal data streams, and computed novel metrics as precursors of executive functions.

*Project: Optogenetic Parent-Offspring Mouse Model of Neural Synchrony and Social Learning*

- Modified the social transmission of food preference paradigm for dam-pup dyads, compatible with optogenetics and behavioral recording, to investigate the neurobehavioral mechanisms of social learning.
- Managed mouse husbandry, including breeding, genotyping, and maintenance of transgenic lines, with strict adherence to animal welfare and ethical standards.
- Performed brain harvests and immunohistochemistry to verify optogenetic manipulation in the medial prefrontal cortex.
- Thesis: Interpersonal Neural Synchrony Mechanisms for Parent-Offspring Social Learning.

### Monash University

Malaysia

BPsych(Hons), GPA: 4.00/4.00, Best Graduate Award

Mar 2021–Dec 2021

*Thesis: The Relationship between Romantic Dispositions and Romantic Need Prioritization in Single Adult Malaysians: The Moderating Role of Gender*

### Monash University

Malaysia

BPsych, GPA: 3.92/4.00, Best Graduate Award

Jul 2017–Jul 2020

## HONORS & AWARDS

### A\*STAR Fully-Sponsored Master's Studentship (~70,000 USD)

Jan 2023–Jan 2025

Nanyang Technological University (PI: Professor Victoria Leong)

### Two-Time Best Graduate Award Recipient

2020, 2021

BPsych and BPsych(Hons), Monash University Malaysia

### Graduate Pathway Research Scholarship (~2,400 USD)

2021

BPsych(Hons), Monash University Malaysia

### Undergraduate Studies Loan Exemption (~6,200 USD)

2021

BPsych, Malaysian National Higher Education Fund Corporation

### Monash High Achiever Award (~1,100 USD)

2019

BPsych, Monash University Malaysia

## RESEARCH EXPERIENCE

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### Nanyang Technological University

Singapore

Research Assistant; PI: Professor Victoria Leong

Jan 2024–Present

*Project: Assessing Social Influences on Executive Function in Infants*

- Coordinating an interdisciplinary team of psychologists, neuroscientists, engineers, and AI/data scientists to develop novel social interaction metrics for clinical and commercial applications.

### Sunway University

Malaysia

Research Assistant; PI: Professor Alexandre Schaefer

Jul 2022–Nov 2022

*Project: Aging, Health and Well-Being (AGEWELL)*

- Conducted community outreach to recruit a socioeconomically diverse Malaysian cohort aged 60 and above and administered neuropsychological assessments to evaluate executive functions alongside EEG data acquisition.
- Preprocessed EEG data and computed event-related potentials as markers of cognitive aging in MATLAB.
- Performed general linear modeling in R to investigate the protective role of cognitive reserve against cognitive decline in older adults.

### Monash University

Malaysia

Research Assistant

2018–2022

- Conducted literature reviews and applied qualitative methods including transcription, Malay-to-English translation, and thematic coding to investigate cultural differences in cancer stigma (PI: Professor Elizabeth Jones).
- Collected and analyzed dyadic social interaction data from questionnaires and behavior coding to examine individual differences in social perceptions using the Actor-Partner Interdependence Model (PI: Dr. Goh Pei Hwa).
- Co-organized the first and second Southeast Asian Indigenous Psychology Scientific Meeting, 2021 and 2022, marking the inaugural gathering of Southeast Asian Indigenous Psychology scholars (Supervisor: Dr. Rachel Sing-Kiat Ting).

## PEER-REVIEWED PUBLICATIONS

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Goh, P. H., & Ong, J. Z.\* (2022). It's a guy thing: Sex as a moderator of the relationship between social anxiety and perception of interpersonal warmth in initial heterosexual interactions. *Asian Journal of Social Psychology*, 25(4), 806–815. <https://doi.org/10.1111/ajsp.12536>

Ham, G. X., Ong, J. Z., Augustine, G. J., & Leong, V. (2024). Protocol to study dam-pup social transmission using a modified paradigm for transmission of food preference. *STAR Protocols*, 5(2), 103077. <https://doi.org/10.1016/j.xpro.2024.103077>

## IN PREPARATION

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Koh, D. M., Ong, J. Z., & Goh, P. H. (Revised and resubmitted). Helicopter parenting and social competence among single Malaysian adults: Filial piety as a moderator. *Journal of Adolescent Development*.

Vafa, S., Ong, J. Z., Yong, M. H., Arokiaaraj, A. S., Shee, D., Chia, Y. C., & Schaefer, A. (Under review). Online cognitive testing with Asian older adults during the COVID-19 pandemic: A proof-of-feasibility study. Preprint: <https://doi.org/10.31234/osf.io/t8exs>. *Behavior Research Methods*.

## CONFERENCE POSTERS, INVITED TALK & MEDIA

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Marzuki, A. A., Thanaraju, A., **Ong, J. Z.**, Yip, W. Z., Yap, Z. J., ... Schaefer, A. (2022). AGEWELL: Investigating the predictors of healthy neurocognitive aging in a socioeconomically and ethnically diverse Malaysian cohort. Poster awarded People's Choice Award at the Annual Meeting of the Society for Neuroscience 2022, Singapore Chapter. <http://doi.org/10.13140/RG.2.2.18928.74241>

**Ong, J. Z.** & Goh, P. H. (2020). It's a guy thing: Sex as a moderator of the relationship between social anxiety and perception of interpersonal warmth in initial heterosexual interactions. Poster awarded 3rd Place for Best Poster Presentation at the Jeffrey Cheah School of Medicine and Health Sciences Research Symposium (2020). <http://doi.org/10.13140/RG.2.2.12484.85121>

Leong, V., Campolo, D., & **Ong, J. Z.** (2024). Understanding infants' mental skills: New AI and sensor tools to measure development. *Nanyang Technological University Magazine: Pushing Frontiers*, (23), 22–23. [PDF]

Invited Speaker, Ethics First – Treating Your Participants Right, Research Integrity and Ethics Office, Nanyang Technological University, 27 May 2025.

## TEACHING & MENTORING

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**Nanyang Technological University**

Singapore

- Teaching Assistant and Grader for Introductory Psychology (Fall 2023, Spring 2025).
- Co-mentor to 9 thesis students and 9 undergraduate RAs, providing training in research methodology, ethics, data management, data collection, and analysis.

**Monash University**

Malaysia

- Grader for Biological Psychology, Developmental Psychology, Contemporary Social Psychology, and Research Theory and Methods (2022).
- Peer Tutor for Introductory Psychology (Spring 2022), Research Methods and Theory (Fall 2021, 2022).
- Volunteer English Teacher for a class of 15 Chin refugee children (Fall 2017).

**SK & SMK Bandar Tun Hussein Onn 2**

Malaysia

- Part-Time Teacher for elementary (Jun–Dec 2016) and high school (Feb–May 2017) students, with class sizes of about 30.

## SKILLS

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### Experimental Methods

EEG and ECG Hyperscanning, Naturalistic Behavioral Recordings, Parent-Infant Interactions, Task Design and Development for Human and Rodent Models.

### Computational Skills

Proficient in R, MATLAB, Python, SPSS, JASP, and Statistica, with experience in Generalized Linear Modeling, Structural Equation Modeling, Dynamical Systems Modeling, Time Series Analysis, Data Wrangling, Data Visualization, Analytical Pipeline Development, and Matrix Operations.

### Typesetting and Web Development

Experienced in L<sup>A</sup>T<sub>E</sub>X for document typesetting, and HTML, CSS, and Ruby for website development.

### Wet Lab Skills

Mouse Husbandry, Genotyping, Brain Harvest, Immunohistochemistry, Optogenetics.