

Curriculum Vitae

Hoki Fung

Cognitive Scientist

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SUMMARY

Experienced cognitive neuroscience researcher with a keen interest in combining **neuropsychological experiments**, **functional neuroimaging**, and **computational modeling** to understand the neural mechanisms underlying **higher-order executive functions** such as decision-making in healthy adults and investigate how these brain mechanisms might be compromised in clinical populations.

CURRENT POSITIONS

Cognitive Scientist <i>Neurolee Therapeutics, Singapore</i>	Jun 2021 - present <i>Full time</i>
Graduate Student, Master of Computing (AI) <i>School of Computing, National University of Singapore, Singapore</i>	Aug 2020 - present <i>Part time</i>
Graduate Research Intern - Psychiatry and Neuroscience <i>CDASR, McLean Hospital and Harvard Medical School, USA</i>	Jun 2021 - present <i>Visiting</i>
Neuroscience Newsletter Editor and Webguru <i>Society for Neuroscience Singapore Chapter, Singapore</i>	Apr 2021 - present <i>Academic Service</i>

EDUCATION

Master of Computing in Artificial Intelligence	National University of Singapore	2020 - 2022
Master of Research in Cognitive Neuroscience	University College London	2015 - 2016
Bachelor of Arts in Psychology <i>Departmental Honors & Minor in Education</i>	University of California, Berkeley	2013 - 2015

ADDITIONAL TRAINING

Neuroimaging & Data Science Summer Course	Neurohackademy	Summer 2020
Computational Neuroscience Summer Course	Neuromatch Academy	Summer 2020
Human Brain Mapping Education Courses	Organization for HBM	Summer 2020
Professional Certificate in Data Science	Harvard University (HarvardX)	2018 - 2020

RESEARCH EXPERIENCES

Research Associate - Cognitive Neuroscience <i>Sleep and Cognition Laboratory - CBL</i> <i>YLL School of Medicine, National University of Singapore</i>	Advisors: Prof. Michael Chee, Asst. Prof. Ju Lynn Ong	Jan 2020 - May 2021 <i>Full time</i>
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Data Scientist - Clinical MR Data MR Team, Clinical Imaging Research Centre - CIRC YLL School of Medicine, National University of Singapore	Advisors: A/Prof. Thomas Yeo, Dr. Mary Stephenson	Jan 2019 - Jan 2020 Full time
Research Associate - Neuropsychology Clinical Brain Lab - CBL Nanyang Technological University, Singapore	Advisors: Prof. Annabel Chen, Dr. Shu-Hui Lee	Dec 2016 - Dec 2018 Full time
Student Research Assistant - Cognitive Neuroscience Metacognition & Executive Functions Group, ICN University College London, UK	Advisor: A/Prof. Sam J. Gilbert	Oct 2015 - Aug 2016 Assistantship
Undergraduate Honors Scholar - Psychology Department of Psychology, University of California, Berkeley, USA	Advisor: Prof. Alison Gopnik	Sep 2014 - May 2015 Independent Study
Research Assistant - Cognitive Psychology Gopnik Cognitive Developmental Lab, University of California, Berkeley, USA	Advisor: Dr. Adrienne O. Wente	Sep 2013 - May 2015 Assistantship

PEER-REVIEWED PUBLICATIONS

- Gilbert, S. J. & Fung, H. (2018). Decoding intentions of self and others from fMRI. *NeuroImage*, 172, 278-290. doi:10.1016/j.neuroimage.2017.12.090
- Gopnik, A., O'Grady, S., Lucas, C., Griffiths, T., Wente, A., Bridger, S., Aboody, R., Fung, H., and Dahl, R. (2017). Changes in cognitive flexibility and hypothesis search from childhood to adolescence to adulthood. *Proceedings of the National Academy of Sciences*, 114(30), 7892-7899. doi:10.1073/pnas.170081114

HONORS AND AWARDS

Sector Winner, SLINGSHOT - Asia Deep Tech Competition	Team: Datature Analytics	2019
Grand Prize, Rolls-Royce Data Innovation Challenge - Asia	Team: SEER Analytics	2019
Departmental Honors, Department of Psychology, UC Berkeley	Individual	2015
Trustee's Prize for General Excellence, Dean College	Individual	2013
President's List, Dean College	Individual	2011-2013
Harry L. Kreshpane Prize, Dean College	Individual	2012

INTERNATIONAL CONFERENCE PRESENTATIONS

- Fung H.**, Ong J.L., Yeo B.T.T., & Chee W.L.M. (2021, June). *Associations of Sleep Duration with Global Cognition and Gray Matter Volume in Children aged 9 to 11*. Poster presented at the Annual Meeting of OHBM, Virtual.
- Lin H.Y., **Fung H.**, Gan S.R., Gupta B., Ho R.C., & Chen S.H.A. (2019, Oct). *Cortical thickness in prefrontal cortex associating with sensitivity to reward and punishment in ADHD and healthy adults*. Poster presented at the Annual Meeting of BrainConnects, Taguig City, Philippines.
- Fung H.**, Gan S.R., Gupta, B., Ho R.C., & Chen S.H.A. (2019, June). *An fMRI investigation of hot and cool executive functions in adults with ADHD*. Poster presented at the Annual Meeting of OHBM, Rome, Italy.

Fung H., Gan S.R., Lee S.H., Ho R.C., & Chen S.H.A. (2018, June). *An fMRI investigation of hot and cool executive functions in healthy adults*. Poster presented at the Annual Meeting of OHBM, Singapore.

Fung H. & Gilbert S. (2018, June). *Decoding intentions of self and others from fMRI activity patterns*. Poster presented at the Annual Meeting of OHBM, Singapore.

ACADEMIC SERVICE

Committee Member	Society for Neuroscience, Singapore Chapter	Since 2021
Centre Representative	Society for Neuroscience, Singapore Chapter	2020-2021
Student Organizer	Organization of Human Brain Mapping Annual Meeting	June 2018
Student Organizer	The ICN 20th Anniversary Conference	June 2016

PROFESSIONAL MEMBERSHIPS

Society for Neuroscience, Singapore Chapter	Since 2019
Psi Chi, Berkeley Undergraduate Chapter	Since 2014
Phi Theta Kappa, Upsilon Zeta Chapter	Since 2012

SKILLS

Project Management	Grant application, IRB application, Scientific writing for annual reports, journal articles, and conference posters, Subject recruitment (online and offline)
Implementation	Experimental design (full pipeline including MR scanning protocol), Computerized and MR scanner compatible neuropsychological task programming, Data collection (including scanner operation)
Data Types	Neuropsychological, Behavioral, Survey, sMRI, task-fMRI, rs-fMRI, DWI/DTI
Methods	Conventional statistics (hypothesis testing), Bayesian approach, Machine Learning, Deep Learning. Mass-univariate, multivariate (e.g. ICA, MVPA), functional connectivity, surface-based, and tract-based analyses
Research Stack	Python, R, Matlab, Bash, Git, SQL, PsychoPy, E-prime, Qualtrics, MTurk, SPM, FreeSurfer, FSL, REST, CONN, SPSS, JASP, Scikit-learn, Caret, TensorFlow, PyTorch, Matplotlib, Seaborn, ggplot, Remote Servers, HPC Clusters
Science Communication	Newsletter editing (Mailchimp), Web development (Digital Ocean, Wordpress, HTML, CSS), Writing (Markdown, LaTeX), Video editing, Graphic Design
Languages	Fluent in English, Cantonese, Mandarin