Curriculum Vitae

Hoki Fung

Neuroscience PhD Student

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SUMMARY

I am an aspiring neuroscientist with a keen interest in the neural basis of executive function in health and disease, currently working toward discovering novel biomarkers that correspond to cognitive impairment and treatment responses in clinical populations. My research goal is to develop tools for risk prediction, precision diagnostics and personalized treatment strategies for neuropsychiatric disorders through cognitive neuroscience approaches and artificial intelligence (AI). I have 8 years of interdisciplinary academic training and research experience in psychology, neuroscience, medical imaging, data science, computing, and AI from institutions and research laboratories across the globe.

CURRENT POSITIONS

PhD Student - Neuroscience — Sep 2022 - present
Neuroscience Interdepartmental Program (NSIDP)
UCLA David Geffen School of Medicine, USA — *Full time*

Graduate Research Intern - Psychiatry and Neuroscience — Jun 2021 - present
Massachusetts General Hospital and Harvard Medical School, USA — *Visiting*

EDUCATION

Doctor of Philosophy in Neuroscience	University of California, Los Angeles	Expected 2027
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 *Departmental Honors & Minor in Education*	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

PAST EXPERIENCES

Neuroscience Newsletter Editor and Webguru — **Advisor:** A/Prof. Ajay Mathuru — Apr 2021 - May 2022
Society for Neuroscience Singapore Chapter, Singapore — *Academic Service*

Cognitive Scientist — **Advisor:** Dr. Michael D. Patterson — Jun 2021 - Apr 2022
Neuroglee Therapeutics, Singapore — *Full time*

Research Associate - Cognitive Neuroscience *Sleep and Cognition Laboratory - CBL* *YLL School of Medicine, National University of Singapore*	**Advisors:** Prof. Michael Chee, Asst. Prof. Ju Lynn Ong	Jan 2020 - May 2021 *Full time*
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 - Neurospsychology *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

Fung, H., Yeo, B.T.T., Chen, C., Lo, J.C., Chee, M.W.L., and Ong, J.L. (accepted). Adherence to 24h movement recommendations and health indicators in early adolescence: Cross-sectional and longitudinal associations in the ABCD study. *Journal of Adolescent Health*.

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.1700811114

HONORS AND AWARDS

Graduate Dean's Scholar Award - UCLA Graduate Division	Awardee	2022
EnterpriseSG - SLINGSHOT Top Consumer AI Product	Winner	2019
Rolls-Royce Data Innovation Challenge	Winner	2019
Departmental Honors, Department of Psychology, UC Berkeley	Awardee	2015
Trustee's Prize for General Excellence, Dean College	Awardee	2013
President's List, Dean College	Awardee	2011-2013
Harry L. Kreshpane Prize, Dean College	Awardee	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

Social Media Manager	Knowing Neurons	2022 - Present
Committee Member	Society for Neuroscience, Singapore Chapter	2021-2022
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