Chun Chieh Fan – Curriculum Vitae

Research Statement

My fundamental research interest is to critically and empirically examine complex systems at the intersection between population neuroscience and genetics. My training includes clinical medicine, epidemiology, and statistical inference. I have developed, implemented, and applied novel analytic algorithms for a diverse array of large-scale genetic and neuroimaging data to answer biological questions about the brain. With broad training in clinical psychiatry, epidemiology, and statistical inference, I have played a key role in developing methods for translational studies for brain development and brain related disorders, including Alzheimer's Disease. I was the core developer for the polygenic hazard score (PHS) and have been a co-author of a series of polygenic hazard score papers. As a core member of informatics team of the Adolescent Brain and Cognitive Development (ABCD) consortium, I am the co-chair of the genetic working group of ABCD. With my unique profile of expertise, I am an author of more than 70+ peer-reviewed publications, with h index in 35.

Education and Training:

09/28/2013 – 09/27/2017	PhD in Department of Cognitive Science, UCSD. (commenced at 12/16/2017) Dissertation: Genotype-Phenotype Mapping of the Human Brain in the Era of Large-Scale Genomics Databases
09/30/2009 – 06/30/2011.	M.S. in Epidemiology Graduate Institute of Epidemiology and Preventive Medicine, National Taiwan University, Taiwan.
09/01/1997 – 06/30/2004	M.D. School of Medicine, National Yang-Ming University

Professional Experience:

05/16/2022 – present	Principal Investigator, Laureate Institute for Brain Research, Tulsa, OK
07/01/2021 - present	Assistant Adjunct Professor, Department of Radiology, UCSD
08/01/2018 – 06/30/2021	Bioinformatic Programmer IV, Center for Human Development, UCSD
11/01/2017 – 11/01/2019	Chief Data Scientist, HealthLytix, La Jolla, CA, USA
09/27/2017 - 10/30/2017	Post-doctoral fellow Mental Health Centre Sct. Hans, Capital Region of Denmark
09/27/2017 – 10/30/2017	Post-doctoral fellow Center for Multimodal Imaging and Genetics, UCSD
07/01/2009 – 09/01/2013	Attending Psychiatrist Department of Adult Psychiatry, Tao-Yuang Ju Shan Hospital, Taiwan
04/01/2005 – 08/30/2009	Training Resident in psychiatry, Department of Adult Psychiatry, Taipei City Psychiatric Center

Publications:

Complete List of Published Work in the google scholar:

https://scholar.google.com/citations?hl=en&user=Po0VEiYAAAAJ&view_op=list_works&sortby=pubdate

Representative Works:

1. **Chun Chieh Fan** et al., (2022) "Multivariate genome-wide association study on tissue-sensitive diffusion metrics highlights pathways that shape the human brain". Nature Communications, 13, 1, 1-10.
2. **Chun Chieh Fan**, et al. (2020). " Sex-dependent autosomal effects on clinical progression of Alzheimer's Disease." BRAIN 143(7): 2272-2280.
3. Weiqi Zhao ... , **Chun Chieh Fan***. (2020) Individual differences in cognitive performance are better predicted by global rather than localized BOLD activity patterns across the cortex. Cerebral Cortex bhaa290. (*corresponding author)
4. **Chun Chieh Fan**, et al. (2018) Spatial gene-by-environment mapping for schizophrenia reveals locale of upbringing effects beyond urban-rural differences. Nature Communications 9 (1), 5296

Grants:

R01 MH128959 (MPI: Fan/Thompson/Baker)
Fan (contact PI)
03/01/2022 - 12/26/2026
Effects of pandemic-related disruption to social connectedness on the brain and emotional wellbeing in adolescents

R01 MH122688
Fan (PI)
04/01/2020 – 01/31/2025
Identifying and quantifying genetic effects on neurodevelopmental trajectories in adolescents

R01 MH120025 (MPI: Fan/Thompson)
Fan (Contact PI)
08/17/2020 – 07/31/2023
Data Exploration and Analysis Portal for Brain Research through Advanced Imaging Neuroscience

U24 DA041123
Dale (PI), Role: Co-Investigator
09/30/2015 – 03/31/2027
ABCD-USA Consortium: Data Analysis Center

R01 AG064955
Glatt (PI), Role: Co-Investigator
09/15/2019 – 05/31/2024
Genetic Predictors, Transcriptomic Biomarkers, and Neurobiological Signatures of Resilience to Alzheimer's Disease

R01 AG066088
Banks (PI), Role: Co-Investigator

09/15/2019 – 05/31/2024
Sex-specific cognitive expression and risk in preclinical Alzheimer's disease