Ruiyang Ge, PhD

Curriculum Vitae

1. CONTACT

Office	Djavad Mowafaghian Centre for Brain Health 2215 Wesbrook Mall, Room 3451 Vancouver, BC, Canada V6T 1Z3
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2. EDUCATION

Degrees

2010 – 2015 **Doctorate**, **Computer Science**, School of Artificial Intelligence & State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, P.R. China.
Advisors: Drs. Li Yao and Zhiying Long.

2006 – 2010 **Bachelor**, **Biomedical Engineering**, School of Computer and Information Technology, Beijing Jiaotong University, Beijing, P.R. China

Postgraduate, Research and Specialty Training

2016 – 2020 **Post-doctoral Fellow**, **Neuroimaging and Computational Psychiatry**, Department of Psychiatry, The University of British Columbia, Vancouver, BC, Canada.
Supervisor: Dr. Fidel Vila-Rodrigue.

3. EMPLOYMENT

Current Appointment

2021 – present **Research Associate**, Department of Psychiatry, The University of British Columbia, Vancouver, BC, Canada.
Supervisor: Dr. Sophia Frangou.

4. HONOURS AND CAREER AWARDS

Distinctions and Awards

INTERNATIONAL

2022 **Travel Fellowship Award – Early Career Investigator Program**, The Society for Biological Psychiatry, New York, NY, USA
Awarded to competitively selected young investigators in the field of neuropsychiatry. Total Amount: 2,000 USD

2019 **Outstanding Poster Award**, The 3rd International Brain Stimulation Conference, Vancouver, BC, Canada
Selected to award the most outstanding posters among over 600 posters. Total Amount: 500 USD

NATIONAL (P.R. China)

2014 **National Scholarship for Distinguished Graduates**, P.R. China
Awarded to graduate students selected through a nationwide competitive process. Total Amount: 30,000 CNY

REGIONAL/LOCAL

2020 **Institute of Mental Health Marshall Fellowship**, The University of British Columbia, Vancouver, BC, Canada
Merit-based fellowship, awarded to competitively selected research trainees in translational research of psychiatry. Total Amount: 75,000 CAD

2019 **Innovative Fund Trainee Award,** Djavad Mowafaghian Centre for Brain Health, The University of British Columbia, Vancouver, BC, Canada
Merit-based award to competitively selected research trainees at the UBC Centre for Brain Health. Total Amount: 10,000 CAD

2013 **First Prize Academic Scholarship**, Beijing Normal University, Beijing, P.R. China
Merit-based scholarship, awarded to top graduate students through competitive selection at Beijing Normal University. Total Amount: 15,000 CNY

2012 **Academic Award**, State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, P.R. China
Merit-based award to competitively selected graduate students at the State Key Laboratory of Cognitive Neuroscience and Learning. Total Amount: 10,000 CNY

2012 **Excellence Contribution Award to Public Interest**, Beijing Normal University, Beijing, P.R. China
Merit-based award to individuals significantly contributed to the organization of the student union. Total Amount: 500 CNY

2007 – 2010 **Academic Excellence Scholarship**, Beijing Jiaotong University, Beijing, P.R. China
Merit-based scholarship to undergraduate students in the top 5% in their undergraduate year. Total Amount: 4,800 CNY.

5. RESEARCH FUNDING

Peer-reviewed Grants

INTERNATIONAL - FUNDED

2024 **Principal Investigator**. Translational Neuroimaging Educational Program Special Project Funding, The Society for Biological Psychiatry (SOBP), New York, NY, USA
Total Amount: $2,000 USD
The proposal aligns with the SOBP's mission to advance scientific knowledge for the benefit of those suffering from psychiatric disorders, as it enhances the educational offerings at the annual meeting, promotes interdisciplinary collaboration, and builds an inclusive and sustainable community dedicated to driving innovation in neuroimaging. The SOBP has adopted our Translational Neuroimaging Educational Program as one of its educational initiatives.

2024 – 2029 **Co-Investigator**. CentileBrain: A Normative Modeling Framework for Brain Health and Disease
Research Project (R01) Grant, R01MH134962, National Institute of Mental Health.
Principal Investigators: Sophia Frangou, Paul Thompson
Total Amount: ~$3,000,000 USD
The study will to (1) create normative lifespan charts for measures of resting-state functional connectivity networks and index of cortical myelination; (2) demonstrate the generalizability of these measures to diverse ethnoracial groups; and (3) illustrate the usefulness of the normative models developed for the major psychiatric disorders.

NATIONAL - FUNDED

2024 – 2028 **Co-Investigator**. Network-Brain Age: Enhancing Spatial Precision of Accelerated Aging
Project Grant 202403-519112, Canadian Institutes of Health Research.
Principal Investigator: Sophia Frangou
Total Amount: $504,901 CAD
The study aims to (1) improve the precision of brain-age measurement by developing normative models for major brain networks; (2) demonstrate the added value of network-based brain-age measurements compared to the global brain-age model in predicting cognition and psychopathology across the human lifespan; and (3) provide a clinical example of how newly developed network-based brain-age models can improve our understanding of psychiatric disorders.

REGIONAL/LOCAL - FUNDED

2023 – 2025 **Principal Investigator.** Individual-Level Deviations from Normative Neuroanatomical Models in Youth with Mood Disorders
Stimulus-Child and Youth Mental Health Grant, UBC Department of Psychiatry, in partnership with the UBC Institute of Mental Health and BC Children's Hospital
Co-applicants/Collaborators: Roberto Sassi, Sophia Frangou
Total Amount: $18,000 CAD
In this study, we address the gap in understanding the neurobiology of mood disorders in youth by examining the relationship between symptom severity in youth with mood disorders and deviations in their brain morphometric measures from normative values.

6. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Professional Associations

2021 – present **Member**, Society of Biological Psychiatry (SOBP)

2017 – present **Member**, Organization for Human Brain Mapping (OHBM)

Administrative Activities

2023 – present **Co-director**, The Translational Neuroimaging Educational Program (*https://www.translational-neuro.org*)

2021 – present **Member**, Enhancing NeuroImaging Genetics through Meta-Analysis (ENIGMA) Consortium – Lifespan Working Group

Committee and Service Contributions

04/2022 **Judge**, PATHS to a Cure: Neuroscience Research Conference, Parkinson's and Alzheimer's Targeted Hope and Support (PATHS), University of British Columbia

04/2018 **Honor Thesis Examining Committee** for Farhad Ghaseminejad. Student's Current Position: Medical Student. Student's Current Institution: Faculty of Medicine, University of British Columbia. Student's Previous Institution: Biology Program, University of British Columbia.

Peer Review Activities

EDITORIAL BOARDS

2024 – present **Associate Editor**, Mental Health Science

2023 – present **Guest Editor**, BMC Neurology

2023 – present **Editorial Board Member**, npj Mental Health Research

2022 – present **Editorial Board Member**, BMC Psychiatry

2019 – present **Review Editor**, Frontiers in Neuroimaging; Frontiers in Neuroscience; Frontiers in Psychiatry

In launching **Editorial Board Member**, MedLife

MANUSCRIPT REVIEWS

2024 – present	*American Journal of Psychiatry*, Number of Reviews: 1
2024 – present	*Cerebral Cortex*, Number of Reviews: 1
2024 – present	*Imaging Neuroscience,* Number of Reviews: 2
2024 – present	*Molecular Psychiatry*, Number of Reviews: 3
2024 – present	*npj Digital Medicine*, Number of Reviews: 1
2023 – present	*Biological Psychiatry*, Number of Reviews: 1
2023 – present	*BJPsych Open*, Number of Reviews: 1
2023 – present	*BMJ Open*, Number of Reviews: 1
2023 – present	*Brain Structure and Function*, Number of Reviews: 1
2023 – present	*Journal of Affective Disorders Reports,* Number of Reviews: 1
2023 – present	*Nature Mental Health,* Number of Reviews: 2
2023 – present	*Neuroscience and Biobehavioral Reviews,* Number of Reviews: 1
2023 – present	*Neuropsychologia,* Number of Reviews: 1
2023 – present	*Psychiatry and Clinical Neurosciences,* Number of Reviews: 1
2023 – present	*Psychiatry Research*, Number of Reviews: 2
2023 – present	*Scientific Reports,* Number of Reviews: 1
2022 – present	*Frontiers in Human Neuroscience*, Number of Reviews: 1
2022 – present	*European Psychiatry*, Number of Reviews: 3
2022 – present	*Schizophrenia Bulletin,* Number of Reviews: 1
2021 – present	*Frontiers in Aging Neuroscience*, Number of Reviews: 1
2021 – present	*Frontiers in Neuroscience*, Number of Reviews: 1
2021 – present	*Neuropsychopharmacology,* Number of Reviews: 2
2020 – present	*Human Brain Mapping*, Number of Reviews: 5
2020 – present	*Journal of Affective Disorders,* Number of Reviews: 13
2019 – present	*Frontiers in Psychiatry*, Number of Reviews: 2
2019 – present	*Psychological Medicine*, Number of Reviews: 3
2018 – present	*Metabolic Brain Disease,* Number of Reviews: 1
2018 – present	*Quantitative Imaging in Medicine and Surgery,* Number of Reviews: 2
2017 – present	*Brain Imaging and Behavior,* Number of Reviews: 2
2017 – present	*IEEE Journal of Biomedical and Health Informatics,* Number of Reviews: 2
2017 – present	*Journal of Medical Imaging and Health Informatics,* Number of Reviews: 1
2017 – present	*NeuroImage,* Number of Reviews: 7
2016 – present	*Journal of Neuroscience Methods,* Number of Reviews: 9
2015 – present	*Computational and Mathematical Methods in Medicine*, Number of Reviews: 1

PRESENTATION REVIEWS

2018 – present *Annual Meeting of the Organization of Human Brain Mapping*, Number of Reviews: >100

7. RESEARCH STATEMENT

I am a data scientist and biomedical engineer with specialized training and expertise in computational psychiatry and neuroimaging. My research is to integrate data science, artificial intelligence, and neuroimaging, to facilitate new discoveries in the pathophysiology of mental illness and inform clinical decision making. Below, I highlight my key contributions to the field.

2021 – present **Precision Neuroimaging**

My focus on the translational implications of neuroimaging has led me to develop and implement computational models that support precision neuroimaging. Precision neuroimaging involves the person-specific methods when analyzing neuroimaging data in order to identify and interpret unique and reliable patterns of brain organization at the individual level. To achieve this, I have used complementary approaches focused (1) on developing normative reference charts mapping the typical age-related changes across the lifespan, and (2) on the application of advanced computation models to parse individuals with psychiatric disorders and individuals with genetic syndromes.

(1) CentileBrain – An open access resource for precision neuroimaging: The CentileBrain Initiative aims to provide an open access resource for precision neuroimaging across the lifespan. I have a leading role in this initiative that provides population-based growth charts for most common neuroimaging measures. At this time in its development the CentileBrain Initiative has built a fully functional platform (*https://centilebrain.org*) for sex-specific normative models of regional measures of brain morphometry and brain-age.

Unlike normative growth charts for head circumference employed in pediatric medicine, there are currently no population-level normative models for neuroimaging metrics. Such models would quantify the extent to which an individual-level morphometric measure diverges from the pattern observed in healthy reference samples. Working closely with a large international research group, I developed sex-specific normative models for regional cortical thickness, cortical surface area, and subcortical volume using data from 37,407 healthy individuals (53% female; aged 3–90 years) pooled from diverse recruitment sites. These models were developed following extensive benchmarking to optimize algorithm and covariates selection. Details have been published in *Lancet Digital Health* [*PMID: 38395541*]. Since its launch in late 2023, the CentileBrain platform has had over 5,000 users from all over the world and is employed in multiple ongoing studies.

The CentileBrain platform is also fully optimized to yield brain-age-gap-estimates (brainAGE) from neuroanatomical data. BrainAGE is an individual-level measure of the pace of biological aging of an individual's brain. I led a group of UBC graduate and undergraduate students and over 50 international collaborators to develop sex-specific brainAGE models

that cover most of the human lifespan. The unique advantage of these models is that they are extensively empirically validated and are based on a large and diverse sample of 35,683 healthy individuals (53% female; aged 5–90 years) [*PMID: 38949537*].

(2) Neuroimaging-driven stratification of youth with mood and anxiety disorders: It is accepted that the conventional diagnostic labels in psychiatry are not fully aligned with the underlying neurobiology. To address this challenge computational methodologies can be applied to discern nuanced patterns and variations in neuroimaging data, thereby providing a more precise stratification of patients with psychiatric disorders based on the heterogeneous neural signatures. This line of research is exemplified in my recent publication in *Molecular Psychiatry* [*PMID: 36577839*] where I applied Heterogeneity Through Discriminative Analysis (HYDRA), a robust machine learning approach to neuroimaging measures of regional brain morphometry, neurite density, and intracortical myelination to identify subtypes among youths with mood and anxiety disorders. I identified three transdiagnostic subtypes that evidenced greater exposure to parental psychopathology, family conflict, and adverse experiences including bullying, compared to the typically developing group. Beyond these similarities, the three subtypes had distinct neuroimaging profiles potentially implicating different developmental mechanisms.

(3) *Identification of abnormal structural brain patterns in youth with genetic syndromes*: Genetic syndromes offer a unique opportunity to identify major causative pathways to psychopathology. The 22q11.2 deletion syndrome (22q11DS) is the most commonly occurring microdeletion in humans. To provide definitive answers to the neuroanatomical signature of this syndrome, I collaborated with the ENIGMA 22q11.2 Deletion Syndrome Working Group who have access to the largest international sample of youth affected by 22q11DS. As the sample was collected across multiple sites, I applied the SS-Detect (Scanner-Specific Detection) approach [*PMID: 33270962*] and found that structural anomalies in 22q11DS manifest within distinct, rather than diffuse, anatomical patterns. These structural abnormalities suggest disturbances of early neurodevelopment as a likely underlying mechanism. This work has been published in *Human Brain Mapping* [*PMID: 38224541*].

2016 – 2020 **Translational Application of Neuroimaging for Response Prediction to Neuromodulation**

As a post-doctoral research fellow at the University of British Columbia (UBC), I focused on improving the integration of neuroimaging techniques into psychiatry research with special emphasis on neuroimaging predictors of transcranial magnetic stimulation (TMS) in major depressive disorder (MDD). My contribution to this field is two-fold. At the institutional level, I had a pivotal role in establishing the infrastructure, acquisition, and analysis protocols for an integrated neuroimaging-neuromodulation platform, known as concurrent TMS-fMRI. This concurrent TMS-fMRI platform was the first to be established at UBC and continues to be the sole facility of its kind on the Canadian west coast. Notably, it has facilitated

clinical trials supported by grants from the Canadian Institutes of Health Research for research in neuromodulation and neuroimaging.

At the scientific level, I used data from these trials to successfully identify brain connectivity patterns in MDD patients that can serve as predictors of treatment outcomes for TMS interventions [*PMID: 31668646, 28460314, 30685322*]. The most novel and important finding was that brain plasticity in MDD patients, as inferred from acute functional connectivity changes to a single rTMS session, was an important determinant of antidepressant response to a subsequent 4-week course of therapeutic rTMS. This work was published in the *American Journal of Psychiatry* [*PMID: 35582784*] and featured on its cover. I used advanced computational modeling to address the uncertainty surrounding the mechanism of action of rTMS for depression by demonstrating that one of the contributing factors if not all to its efficacy in depression reflects the brain's capacity to respond to rTMS. These findings garnered significant attention from the broader neuroscience community including the prestigious Brain & Behavior Research Foundation (BBRF) as well as from national and international media due to its novel insights for understanding the role of brain plasticity in treatment response.

Continuous Work on Advancing Brain Data Modeling
In the meanwhile, I have continued to develop new computational tools throughout my career. I highlight the *Scanner-Specific Detection (SS-Detect)* [*PMID: 33270962*] approach which enables for the first time the identification of scanner-specific structural brain patterns in a multi-site study thus addressing issues of data harmonization which remains a challenge for large pooled neuroimaging datasets.

The human brain is an organ that benefits from examination and study from various perspectives and at different resolutions. In my research, I used sparse representation and blind source-separation approaches to dissect the insular cortices [*PMID: 28739164, 33296696*], hippocampus [*PMID: 31115118*], and the entire cerebral cortex [*PMID: 33711482*] into more refined subregions or networks among healthy individuals and individuals with major depressive disorder. These efforts have led to the development of reliable neuroimaging-based brain atlases for the research community.

2010 – 2015

Computational Modeling of Brain Networks
As a graduate student, my first contribution to computational modeling of neuroimaging data involved developing two algorithms for the analyses of brain networks with functional magnetic resonance imaging (fMRI) data. These algorithms employed blind source separation techniques, taking advantage of the super-Gaussian distribution characteristics of brain networks. This approach enhanced the reliability and validity of both the spatial distribution and temporal dynamics of brain networks, allowing for more accurate modeling and interpretation of neural activity [*PMID: 26057592, 26880161*]. In this work, I took a lead role in conceptualizing and designing the computational algorithms, validating their performances, applying them to relevant datasets, and writing manuscripts.

In another chapter of my graduate work, I conducted an experiment to investigate the neural correlates of elderly adults' "positivity effect" on their autobiographical memories. Using functional MRI and brain network approaches, we demonstrated an age-related reversal at the ventromedial prefrontal/anterior cingulate cortex and the amygdala within the brain networks engaged in the retrieval of autobiographical events with different emotional valence [*PMID: 25177285*]. I have also conducted an fMRI study to demonstrate the alteration of the brain default network after motor skill learning with mental imagery practice [*PMID: 25014958*]. During this time, I took a lead role in the neuroimaging components of these projects, including collecting and analyzing neuroimaging data, and drafting manuscripts.

8. PEER-REVIEWED PUBLICATIONS

Most Significant Publications *(¶ mentored trainee)*

1. **Ge R.**, Yu Y.¶, Qi Y. X.¶, Fan Y.¶, Chen S.¶, Gao C.¶, The ENIGMA Lifespan Working Group, Thompson P.M., Frangou S. (2024). Normative modeling of brain morphometry across the lifespan using CentileBrain: algorithm benchmarking and model optimization. *Lancet Digital Health*. 60(3): E211-E221. PMID: 38395541. 5-Year Impact Factor: 27.7. **Lead Author**.
This paper details the CentileBrain, which is the most comprehensive initiative to establish normative reference values for measures of brain morphometry and function based on brain scans from healthy individuals of diverse populations (N>37,000). These reference models are freely available to researchers and clinicians to assist in evaluating individuals with measurements outside the normal range, potentially identifying those vulnerable to neurological and psychiatric conditions. The broad applicability of the CentileBrain models was demonstrated by the successful generalization of these normative brain morphometry models across diverse ethnoracial groups (Ge, et al., manuscript in preparation).
CentileBrain has been recognized by the Brain & Behavior Research Foundation (BBRF) as a promising tool for the advancement of mental health diagnosis and prevention. It has attracted attention from international researchers, particularly those from Africa [PMID: 39239019], who have especially encouraged us.

2. **Ge R.**, Sassi R., Yatham L.N., Frangou S. (2023). Neuroimaging profiling identifies distinct brain maturational subtypes of youth with mood and anxiety disorders. *Molecular Psychiatry*. 28: 1072–1078. PMID: 36577839. 5-Year Impact Factor: 11.1. **Lead Author**
This paper addresses the heterogeneity in mental health of adolescents using data driven biological subtype analysis approaches on a large sample of young adolescent individuals. It is amongst the first to empirically address longstanding theories in the literature suggesting that conventional psychiatric diagnostic labels do not align well with underlying neurobiology, using state-of-the-art neuroimaging and machine learning techniques.

3. **Ge R.**, Humaira A., Gregory E., Alamian G., MacMillan E.L., Barlow L., Todd R., Nestor S., Frangou S., Vila-Rodriguez F. (2022). Predictive value of acute neuroplastic response to rTMS in treatment outcome in depression: A concurrent TMS-fMRI trial. *American Journal of Psychiatry*. 179(7): 500-508. PMID: 35582784. 5-Year Impact

Factor: 17.7. **Lead Author**
In this paper, we used advanced computational modeling to address the uncertainty surrounding the mechanism of action of repetitive TMS (rTMS) for depression by demonstrating that one of the contributing factors if not all to its efficacy in depression reflects the brain's capacity to respond to rTMS.
This paper garnered significant attention from the broader neuroscience community including the prestigious Brain & Behavior Research Foundation (BBRF) and from national and international media due to its novel insights for understanding the role of brain plasticity in treatment response.

4. **Ge R.**, Ding S.¶, Keeling T.¶, Honer W.G., Frangou S., Vila-Rodriguez F. (2021). SS-Detect: Development and validation of a new strategy for source-based morphometry in multiscanner studies. *Journal of Neuroimaging*. 31(2): 261-271. PMID: 33270962. 5-Year Impact Factor: 2.3. **Lead Author**
We introduced a novel method, Scanner-Specific Detection (SS-Detect), which enables for the first time the identification of scanner-specific structural brain patterns in a multi-site study thus addressing issues of data harmonization which remains a challenge for large pooled neuroimaging datasets. We further demonstrated the effectiveness of this novel method in a recent collaborative mega study [PMID: 38224541].

5. Yu Y.¶, Cui H.¶, the ENIGMA Lifespan Working Group, Thompson P.M., Frangou S., **Ge R.** (2024). Brain-age prediction: systematic evaluation of site effects, and sample age range and size. *Human Brain Mapping*. 45(10): e26768. PMID: 38949537. 5-Year Impact Factor: 4.7. **Senior Author**
In this paper, we developed, empirically validated, and disseminated pre-trained brain-age predictive models to cover most of the human lifespan. These models were optimal. Specifically, we selected the best-performing model after systematically examining the impact of seven site harmonization strategies, age range, and sample size on brain-age prediction in a discovery sample of brain morphometric measures from > 35,000 healthy individuals. These optimal models were tested for cross-dataset generalizability in an independent sample comprising >2,000 healthy individuals and for longitudinal consistency in a further sample comprising >300 healthy individuals.

Full Publication List – Journal Articles *(¶ mentored trainee)*

1. **Ge R.**, Yu Y.¶, Qi Y. X.¶, Fan Y.¶, Chen S.¶, Gao C.¶, the ENIGMA Lifespan Working Group, Thompson P.M., Frangou S. (2024). Normative modeling of brain morphometry across the lifespan using CentileBrain: algorithm benchmarking and model optimization. *Lancet Digital Health*. 60(3): E211-E221. PMID: 38395541. 5-Year Impact Factor: 27.7. **Lead Author**

2. **Ge R.**, Ching C.R.K, Bassett A.S., the ENIGMA 22q11 Working Group, Thompson P.M., Vila-Rodriguez F., Bearden C. (2024). Source-based Morphometry Reveals Structural Brain Pattern Abnormalities in 22q11.2 Deletion Syndrome. *Human Brain Mapping*. PMID: 38224541. 5-Year Impact Factor: 4.7. **Lead Author**

3. Yu Y.¶, Cui H.¶, the ENIGMA Lifespan Working Group, Thompson P.M., Frangou S., **Ge R.** (2024). Brain-age prediction: systematic evaluation of site effects, and sample age range and size. *Human Brain Mapping*. 45(10): e26768. PMID: 38949537. 5-Year Impact Factor: 4.7. **Senior Author**

4. Kapogiannis D., Manolopoulos A., Mullins R., Avgerinos K., Delgado-Peraza F., Mustapic M., Nogueras-Ortiz C., Yao P.J., Pucha P.A., Brooks J., Chen Q., Haas S., Cookson M.R., **Ge R.**, Frangou S., Egan J., Mattson M.P. (2024). Brain responses to intermittent fasting and the healthy living diet in older adults. *Cell Metabolism.* 36(8): 1668-1678. PMID: 38901423. 5-Year Impact Factor: 31.2. **Co-Author**

5. Jiang T., Song S., Zhao S., Tian X., Zhang M., Feng J., **Ge R.** (2024). Neurophysiological effects of cognitive behavioral therapy in social anxiety: An ERP study using a dot-probe task. *Journal of Behavior Therapy and Experimental Psychiatry*. 85: 101988. PMID: 39142095. 5-Year Impact Factor: 2.0. **Senior-Author**

6. Haas S., **Ge R.**, Agartz I., the ENIGMA Clinical High Risk for Psychosis Working Group, Kahn R.S., Corcoran C.M., Frangou S. (2024). Normative modeling of brain morphometry in Clinical High-Risk for Psychosis. *JAMA Psychiatry*. 81(1): 77-88. PMID: 37819650. 5-Year Impact Factor: 22.3. **Co-Author**

7. Song S., Liu A., Gao Z., Tian X., Zhu L., Shang H., Gao S., Zhang M., Zhao S., Xiao G., Zheng Y., **Ge R.** (2024). Event-related alpha power response in early stage of facial expression processing in social anxiety: influence of language context. *Psychophysiology*. 61(2): e14455. PMID: 37817450. 5-Year Impact Factor: 3.8. **Senior Author**

8. **Ge R.**, Sassi R., Yatham L.N., Frangou S. (2023). Neuroimaging profiling identifies distinct brain maturational subtypes of youth with mood and anxiety disorders. *Molecular Psychiatry*. 28: 1072–1078. PMID: 36577839. 5-Year Impact Factor: 11.1. **Lead Author**

9. Tan V., Jeyachandra J., **Ge R**, Dickie E.W., Gregory E., Vanderwal T., Vila-Rodriguez F., Hawco C. (2023). Subgenual cingulate connectivity as a treatment predictor during low-frequency right dorsolateral prefrontal rTMS: A concurrent TMS-fMRI study. *Brain Stimulation*. 16(4): 1165-1172. PMID: 37543171. 5-Year Impact Factor: 8.2. **Co-Author**

10 Torres I.J., **Ge R.**, McGirr A., Vila-Rodriguez F., Ahn S., Basivireddy J., Walji N., Frangou S., Lam R.W., Yatham L.N. (2023). Effects of intermittent theta burst transcranial magnetic stimulation on cognition and hippocampal volumes in bipolar depression. *Dialogues in Clinical Neuroscience*. 25(1): 24-32. PMID: 36924413. 5-Year Impact Factor: 11.4. **Co-Author**

11. Chakrabarty T., Frangou S., Torres I.J., **Ge R.**, Yatham L.N. (2023). Brain age and cognitive functioning in first-episode bipolar disorder. *Psychological Medicine*. 53(11): 5127-5135. PMID: 35875930. 5-Year Impact Factor: 6.5. **Co-Author**

12. **Ge R.**, Humaira A., Gregory E., Alamian G., MacMillan E.L., Barlow L., Todd R., Nestor S., Frangou S., Vila-Rodriguez F. (2022). Predictive value of acute neuroplastic response to rTMS in treatment outcome in depression: A concurrent TMS-fMRI trial. *American Journal of Psychiatry*. 179(7): 500-508. PMID: 35582784. 5-Year Impact Factor: 17.7. **Lead Author**

13. Song S., Zhao S., Jiang T., Li S., Zhang M., Ren W., Zheng Y., **Ge R.** (2022). Positive attention bias in high socially anxious individuals: Evidence from an ERP study. *Journal of Affect Disorders*. 319(15): 300-308. PMID: 36162660. 5-Year Impact Factor: 5.4. **Senior Author**

14. Shen Y.¶, Gao X., Huang C., Luo X., **Ge R.** (2022). Decreased gray matter volume is associated with theory of mind deficit in adolescents with schizophrenia. *Brain Imaging and Behavior*. 16: 1441-1450. PMID: 35060009. 5-Year Impact Factor: 2.9. **Senior Author**

15. Haas S., **Ge R.**, Sanford N., Modabbernia A., Reichenberg A., Whalley H.C., Kahn R.S., Frangou S. (2022). Accelerated global and local brain aging differentiate cognitively impaired from cognitively spared patients with schizophrenia. *Frontiers in Psychiatry*. 13: 913470. PMID: 35815015. 5-Year Impact Factor: 3.9. **Co-Author**

16. Sanford N., **Ge R**, Antoniades M., Modabbernia A., Haas S., Whalley H.C., Galea L., Popescu S.G., Cole J.H., Frangou S. (2022). Sex differences in predictors and regional patterns of brain age gap estimates. *Human Brain Mapping*. 43(15): 4689-4698. PMID: 35790053. 5-Year Impact Factor: 4.7. **Co-Author**

17. **Ge R.**, Hassel S., Arnott S.R, Davis A.D., Harris J.K., Zamyadi M., Milev R., Frey B.N., Strother S.C., Müller D.J., Rotzinger S., MacQueen G.M., Kennedy S.H., Lam R.W., Vila-Rodriguez F. (2021). Structural covariance pattern abnormalities of the insula in major depressive disorder: A CAN-BIND study report. *Progress in Neuropsychopharmacology and Biological Psychiatry*. 111(20): 110194. PMID: 33296696. 5-Year Impact Factor:4.9. **Lead Author**

18. **Ge R.**, Liu X.¶, Long D., Frangou S., Vila-Rodriguez F. (2021). Sex effects on cortical morphological networks in healthy young adults. *NeuroImage*. 233: 117945. PMID: 33711482. 5-Year Impact Factor: 6.1. **Lead Author**

19. **Ge R.**, Gregory E., Wang J., Ainsworth N., Jian W., Yang C., Wang G., Vila-Rodriguez F. (2021). Magnetic seizure therapy is associated with functional and structural brain changes in MDD: Therapeutic versus side effect correlates. *Journal of Affective Disorders*. 286(1): 40-48. PMID: 33676262. 5-Year Impact Factor: 5.4. **Lead Author**

20. **Ge R.**, Ding S.¶, Keeling T.¶, Honer W.G., Frangou S., Vila-Rodriguez F. (2021). SS-Detect: Development and validation of a new strategy for source-based morphometry in multiscanner studies. *Journal of Neuroimaging*. 31(2): 261-271. PMID: 33270962. 5-Year Impact Factor: 2.3. **Lead Author**

21. Danilewitz M., Gao S., Salehinejad M.A., **Ge R.**, Nitsche M.A., Vila-Rodriguez F. (2021). Effect of combined yoga and transcranial direct current stimulation intervention on working memory and mindfulness. *Journal of Integrative Neuroscience*. 20(2): 367-374. PMID: 34258935. 5-Year Impact Factor: 2.2. **Co-Author**

22. **Ge R.**, Downar J., Blumberger D.M., Daskalakis Z.J., Vila-Rodriguez F. (2020). Functional connectivity of the anterior cingulate cortex predicts treatment outcome for rTMS in treatment-resistant depression at 3-month follow-up. *Brain Stimulation*. PMID: 31668646. 13(1): 206-214. 5-Year Impact Factor: 8.2. **Lead Author**

23. Gregory E., Torres I.J., **Ge R.**, Blumberger D.M., Downar J., Daskalakis Z.J., Lam R.W., Vila-Rodriguez F. (2020). Predictors of cognitive impairment in treatment-resistant depression. *Journal of Affective Disorders*. 274(1): 593-601. PMID: 32663992. 5-Year Impact Factor: 5.4. **Co-Author**

24. Wang J., Vila-Rodriguez F., **Ge R.**, Gao S., Gregory E., Jiang W., Yang C., Wang G. (2020). Accelerated magnetic seizure therapy (aMST) for treatment of major depressive disorder: A pilot study. *Journal of Affective Disorders*. 264(1): 215-220. PMID: 32056753. 5-Year Impact Factor: 5.4. **Co-Author**

25. **Ge R.**, Kot P.¶, Liu X.¶, Lang D., Wang J.Z., Honer W.G., Vila-Rodriguez F. (2019). Parcellation of the human hippocampus based on gray matter volume covariance: Replicable results on healthy young adults. *Human Brain Mapping*. 40(13): 3738-3752. PMID: 31115118. 5-Year Impact Factor: 4.7. **Lead Author**

26. **Ge R.**, Torres I.J., Brown J.J., Gregory E., McLellan E., Downar J., Blumberger D.M., Daskalakis Z.J., Lam R.W., Vila-Rodriguez F. (2019). Functional disconnectivity of the hippocampal network and neural correlates of memory impairment in treatment-resistant depression. *Journal of Affective Disorders*. 253(15): 248-256. PMID: 31060011. 5-Year Impact Factor: 5.4. **Lead Author**

27. **Ge R.**, Downar J., Blumberger D.M., Daskalakis Z.J., Lam R.W., Vila-Rodriguez F. (2019). Structural network integrity of the central executive network is associated with the therapeutic effect of rTMS in treatment resistant depression. *Progress in Neuropsychopharmacology and Biological Psychiatry*. 92(8): 217-225. PMID: 30685322. 5-Year Impact Factor: 4.9. **Lead Author**

28. Vila-Rodriguez F., **Ge R.**, Long D. (2019). Interleaved transcranial magnetic stimulation and functional magnetic resonance imaging: A Translational Tool. *Clinical Pharmacology & Therapeutics*. 106(4): 714. PMID: 31412135. 5-Year Impact Factor: 6.2. **Co-Author**

29. Sporn L., MacMillan E.L., **Ge R.**, Greenway K., Vila-Rodriguez F., Laule C. (2019). Longer repetition time proton MR spectroscopy shows increasing hippocampal and parahippocampal metabolite concentrations with aging. *Journal of Neuroimaging*. 29(5): 592-597. PMID: 31273871. 5-Year Impact Factor: 2.3. **Co-Author**

30. **Ge R.**, Blumberger D.M., Downar J., Daskalakis Z.J., Tham J.C.W., Lam R.W., Vila-Rodriguez F. (2017). A sparse representation-based method for parcellation of the resting brain and its application to treatment-resistant major depressive disorder. *Journal of Neuroscience Methods*. 290(1): 57-68. PMID: 28739164. 5-Year Impact Factor: 2.7. **Lead Author**

31. **Ge R.**, Blumberger D.M., Downar J., Daskalakis Z.J., Dipinto A., Tham J.C.W., Lam R.W., Vila-Rodriguez F. (2017). Abnormal functional connectivity within resting-state networks is related to rTMS-based therapy effects of treatment resistant depression: A pilot study. *Journal of Affective Disorders*. 218(15): 75-81. PMID: 28460314. 5-Year Impact Factor: 5.4. **Lead Author**

32. **Ge R.**, Wang Y.¶, Zhang J.¶, Yao L., Zhang H., Long Z. (2016). Improved FastICA algorithm in fMRI data analysis using the sparsity property of the sources. *Journal of Neuroscience Methods*. 263(1): 103-114. PMID: 26880161. 5-Year Impact Factor: 2.7. **Lead Author**

33. **Ge R.**, Yao L., Zhang H., Long Z. (2015). A two-step super-Gaussian independent component analysis approach for fMRI data. *NeuroImage*. 118: 344-358. PMID: 26057592. 5-Year Impact Factor: 6.1. **Lead Author**

34. **Ge R.**, Zhang H., Yao L., Long Z. (2014). Motor imagery learning induced changes in functional connectivity of the default mode network. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. 23(1): 138-148. PMID: 25014958. 5-Year Impact Factor: 5.4. **Lead Author**

35. **Ge R.**, Fu Y., Wang D., Yao L., Long Z. (2014). Age-related alterations of brain network underlying the retrieval of emotional autobiographical memories: an fMRI study using independent component analysis. *Frontiers in Human Neuroscience*. 8: 629. PMID: 25177285. 5-Year Impact Factor: 3.0. **Lead Author**

36. Hui M., Zhang H., **Ge R.**, Yao L., Long Z. (2014). Modulation of functional network with real-time fMRI feedback training of right premotor cortex activity. *Neuropsychologia*. 62: 111-123. PMID: 25058055. 5-Year Impact Factor: 2.7. **Co-Author**

37. Zhang H., Long Z., **Ge R.**, Xu L., Jin Z., Yao L., Liu Y. (2014). Motor imagery learning modulates functional connectivity of multiple brain systems in resting state. *PLoS One*. 9(1): e85489. PMID: 2446557. 5-Year Impact Factor: 3.3. **Co-Author**

Full Publication List – Conference Articles

1. Wang N., Yan H., Yang Y., **Ge R.** A novel spatial-spectra dynamics-based ranking model for sorting time-varying functional networks from single subject fMRI data. *The 3rd International Conference on Intelligence Science*, Beijing, China, November 2-5, 2018. **Senior-Author**

2. **Ge R.**, Zhang H., Yao L., Wu X., Long Z. Over-complete analysis for resting-state fMRI Data. *The 5th International Conference on Cognitive Neurodynamics*, Sanya, China, June 2-7, 2015. **Lead Author**

9. NON-PEER-REVIEWED PUBLICATIONS

1. **Ge R.***, Alamian G.*, Humaira A., Gregory E., MacMillan E.L., Barlow L., Vila-Rodriguez F. (2021). Implementation of a TMS-fMRI system: a primer. *bioRxiv*. **Co-Lead Author**

10. MANUSCRIPTS IN REVISION/UNDER REVIEW/IN PREPARATION

Journal Articles

1. **Ge R.**, Yu Y., New F., Haas S., Sanford N., Yu K., Becerra Leon J., Yang G., Gao J., Nemoto K., Fukunaga M., Matsumoto J., Hashimoto R., Jahanshad N., Thompson P.M., Frangou S. Generalizability of normative models of brain morphometry across distinct ethnoracial groups. **Lead Author**

2. **Ge R.***, Gregory E.*, Samara A., Bharti K., Humaira A., MacMillan E., Barlow L., Vanderwal T., Vila-Rodriguez F. Network-based functional connectivity changes induced by acute 1Hz TMS: An interleaved TMS-fMRI study. **Co-Lead Author**

3.

4. Liu X*, **Ge R***, Liu L., Wan B., Peng J., Liu Z., Cui R., Wang S., Gao Y. Shared neural phenotypes in bipolar spectrum episodes revealed by normative modeling of structural MRI. **Co-Lead Author**

5. Yu K., **Ge R.**, Yu Y., Sanford N., Torres I., Yatham L.N., Frangou S., Chakrabarty T. Individual-level brain phenotypes in first episode mania: Normative modelling of brain morphometry and brainAGE. **Co-Author**

6. Hopkins William D., **Ge R.**, Frangou S. Brain age gap is associated with early rearing experiences and cognitive abilities in captive chimpanzees. **Co-Author**

7. Haas S., **Ge R.**, Yu Y., New F., Haas S., Sanford N., Yu K., Becerra Leon J., Frangou S. A new metric to assess network-based brain aging. **Co-Author**

8. Liu X., Wan B., **Ge R.**, Xiao J., Long S., Liu Z., Xie K., Yan J., Liu G., Zhang X., Liu L., Yao M., Cui R., Gao Y. Two cortical functional reorganization modes across episode states in bipolar disorder. **Co-Author**

9. Bernardoni F., Arold D., Bahnsen K., **Ge R.**, the ENIGMA-Eating Disorders Working Group, Ehrlich S. Brain morphology in Anorexia Nervosa and its subtypes: a mega, normative modelling, and machine learning analysis. **Co-Author**

10. Yu Y., **Ge R.**, Tam R., Rauscher A., Hacihaliloglu I., Frangou S. Neuroimaging-based disease clustering and staging in psychiatry: benchmarking, optimization, and clinical application. **Co-Author**

11. PRESENTATIONS AND SPECIAL LECTURES

Symposia

04/2025 **Speaker**. The Link Between Brain Development and Trajectories of Youth Mental Health: Initial Insights from Longitudinal Community and Clinical Cohorts. *The 80th Society of Biological Psychiatry Annual Meeting,* Toronto, Ontario, Canada. Chairs: Erin Dickie and Stephanie Ameis. Presenters: **Ge R.**, Jacobs G., Karcher N., Dickie E. (*Planned*)

04/2025 **Speaker**. Normative Brain Modelling in Different Ethnoracial Groups, Depression, and Schizophrenia Spectrum Disorders. *The 80th Society of Biological Psychiatry Annual Meeting,* Toronto, Ontario, Canada. Chairs: Sophia Frangou and Mahavir Agarwal. Presenters: **Ge R.**, Dunlop K., Neufeld N., Agarwal M. (*Planned*)

12/2024 **Moderator and Speaker**. Normative Modeling and Statistics Session. *ENIGMA Developmental Working Group Leadership Summit,* Amsterdam, The Netherlands.

05/2024 **Speaker**. Personalizing Neuroimaging: Methodological Advances and Scientific Insights on Normative Modeling. *The 79th Society of Biological Psychiatry Annual Meeting,* Austin, Texas, USA. Chair: Sophia Frangou. Presenters: **Ge R.**, Haas S., E. Villalon Reina J., Segal A.

07/2023 **Co-Organizer**. Annual OHBM Chinese Young Scholars Event, *Annual Meeting of the Organization for Human Brain Mapping*, Montreal, Québec, Canada. Co-organizer: Yan C.G., **Ge R.**, Xie K. Guest speakers: Thompson P.M., Qiu A.Q., Satterthwaite T.D.

Abstracts and Other Papers (Posters)

05/2024 **Ge R.**, Yu Y., Haas S., Thompson P.M., Frangou S. Normative Modeling of Brain Morphometry Across the Lifespan Using CentileBrain. *The 79th Society of Biological Psychiatry Annual Meeting*, Austin, USA. **Presenter**

05/2024 Haas S., **Ge R.**, Cui H., Yu Y., Frangou S. Network-BrainAGE: A New Metric to Assess Network-Based Brain Aging. *The 79th Society of Biological Psychiatry Annual Meeting*, Austin, USA. **Co-Author**

05/2024 Yu Y., Cui H., Haas S., New F., Sanford N., Yu K., Zhan D., Yang G., Gao J., Wei D., Qiu J., Bernhardt B., Thompson P.M., Frangou S., **Ge R**. Brain-Age Prediction: Systematic Evaluation of Site Effects, and Sample Age Range and Size. *The 79th Society of Biological Psychiatry Annual Meeting*, Austin, USA. **Presenter/Senior-Author**

07/2023 Haas S., **Ge R.**, Jalbrzikowski M., Hernaus D., Kahn R.S., Corcoran C., Frangou S. Normative modeling of brain morphometry in clinical high-risk for psychosis. *The 78th Society of Biological Psychiatry Annual Meeting*, San Diego, USA. **Co-Author**

12/2022 Haas S., **Ge R.**, Kahn R.S., Jalbrzikowski M., Hernaus D., Corcoran C., Frangou S. Normative modelling of brain morphometry in individuals at clinical high-risk for psychosis from the ENIGMA CHR Working Group. *The 62nd American College of Neuropsychopharmacology Annual Meeting*, Phoenix, USA. **Co-Author**

06/2022 **Ge R.**, Yu Y., Qi Y., Fan Y., New F., Thompson P.M., Frangou S. Optimizing normative models for regional subcortical volumes. *Annual Meeting of the Organization for Human Brain Mapping*, Glasgow, UK. **Presenter**

06/2022 **Ge R.**, Modabbernia A., Frangou S. Neuroanatomical Subgroups in Juvenile Mood and Anxiety Disorders. *Annual Meeting of the Organization for Human Brain Mapping*, Glasgow, UK. **Presenter**

06/2022 Haas S., **Ge R.**, Modabbernia A., Reichenberg A., Whalley H., Kahn R., Frangou S. Multimodal Neuroimaging Characteristics of Cognitive Subgroups of Early Psychosis. *Annual Meeting of the Organization for Human Brain Mapping*, Glasgow, UK. **Co-Author**

06/2022 Sanford N., **Ge R.**, Frangou S. Localized sex differences in anatomical brain-age estimates. *Annual Meeting of the Organization for Human Brain Mapping*, Glasgow, UK. **Co-Author**

04/2022 **Ge R.**, Modabbernia A., Frangou S. Neuroanatomical subgroups in juvenile mood and anxiety disorders. *The 77th Society of Biological Psychiatry Annual Meeting*, New Orleans, USA. **Presenter**

04/2022 Haas S., **Ge R.**, Sanford N., Modabbernia A., Reichenberg A., Whalley H.C., Kahn R.S., Frangou S. Local and global brain ageing in cognitive subgroups of early psychosis. *The 77th Society of Biological Psychiatry Annual Meeting*, New Orleans, USA. **Co-Author**

04/2022 Sanford N., **Ge R.**, Frangou S. Sex differences in regional patterns of brain-age-gap estimates. *The 77th Society of Biological Psychiatry Annual Meeting*, New Orleans, USA. **Co-Author**

06/2021 **Ge R.**, Gregory E., Humaira A., Todd R., Nestor S., Frangou S., Vila-Rodriguez F. Perturbation of whole brain functional connectivity allows individual prediction of rTMS therapeutic effect in treatment-resistant depression. *Annual Meeting of the Organization for Human Brain Mapping*, virtual. **Presenter**

05/2021 Torres I.J., McGirr A., Vila-Rodriguez F., **Ge R.**, Frangou S., Yatham L.N. Effects of intermittent theta burst stimulation on cognitive functioning and hippocampal volumes in bipolar depression. *The 23rd Annual Conference of the International Society for Bipolar Disorders*, virtual. **Co-Author**

06/2020 **Ge R.**, Downar J., Blumberger D.M., Daskalakis Z.J., Vila-Rodriguez F. rTMS treatment alters the dynamics between functional networks in treatment-resistant depression. *Annual Meeting of the Organization for Human Brain Mapping*, virtual. **Presenter**

06/2019 **Ge R.**, Downar J., Blumberger D.M., Daskalakis Z.J., Lam R.W., Vila-Rodriguez F. Long-term effects of rTMS on the functional brain networks in treatment-resistant depression. *Annual Meeting of the Organization for Human Brain Mapping*, Rome, Italy. **Presenter**

02/2019 **Ge R.**, Downar J., Blumberger D.M., Daskalakis Z.J., Lam R.W., Vila-Rodriguez F. Long-term effects of rTMS on the functional brain networks in treatment-resistant depression. *The 3rd International Brain Stimulation Conference*, Vancouver, Canada. **Presenter**

05/2019 Sporn L., MacMillan E., **Ge R.**, Humaira A., Barlow L., Laule C., Vila-Rodriguez F. Initial observations of position-dependent B0 distortions in a concurrent TMS/MRS phantom experiment. *Annual Meeting of the International Society for Magnetic Resonance in Medicine*, Montreal, Canada. **Co-Author**

06/2018 **Ge R.**, Torres I.J., Brown J., MacMillan E., Gregory E., Downar J., Blumberger D.M., Daskalakis Z.J., Lam R.W., Vila-Rodriguez F. Functional disconnection of the hippocampal networks in major depressive disorder. *Annual Meeting of the Organization for Human Brain Mapping*, Singapore. **Presenter**

06/2018 **Ge R.**, Kot P., Liu X., Honer W.G., Lang D., Vila-Rodriguez F. Parcellation of the human hippocampus based on gray matter volume covariance: a replication study. *Annual Meeting of the Organization for Human Brain Mapping*, Singapore.

Presenter

05/2018 Vila-Rodriguez F., Downar J., Blumberger D.M., **Ge R**. Anterior cingulate cortex connectivity and treatment response prediction to rTMS in depression. *The 73rd Society of Biological Psychiatry Annual Meeting*, New York, USA. **Co-Author**

06/2017 **Ge R.**, Downar J., Blumberger D.M., Daskalakis Z.J., Tham J., Lam R.W., Vila-Rodriguez F. Altered hippocampal functional networks in treatment-resistant depression. *Annual Meeting of the Organization for Human Brain Mapping*, Vancouver, Canada. **Presenter**

06/2017 **Ge R.**, Honer W.G., Lang D., Barr A., Northcott C., Vila-Rodriguez F. Parcellation of the human hippocampus based on gray matter volume covariance. *Annual Meeting of the Organization for Human Brain Mapping*, Vancouver, Canada. **Presenter**

05/2017 **Ge R.**, Dipinto A., Barlow L., Macmillan E., Mackay A., Alfonso M., Vila-Rodriguez F. A primer on developing interleaved transcranial magnetic stimulation with functional MRI capability: the UBC experience. *The 2nd International Brain Stimulation Conference*, Barcelona, Spain. **Presenter**

05/2017 Danilewitz M., Pang C., Aur D., Shalbaf R., **Ge R.**, Brown J., MacMillan E., Vila-Rodriguez F. The acute effects of a combined yoga and transcranial direct current stimulation on neurophysiological markers: preliminary data. *The 2nd International Brain Stimulation Conference*, Barcelona, Spain. **Co-Author**

11/2016 **Ge R.**, Dipinto A., Barlow L., MacMillan E., MacKay A., Alfonso M., Vila-Rodriguez F. The methodology of developing interleaved TMS with fMRI at UBC. *The Society for Neuroscience Annual Meeting*, San Diego, USA. **Presenter**

06/2015 **Ge R.**, Yao L., Zhang H., Wu X., Long Z. Over-Complete Analysis for Resting-State fMRI Data. *The 5th International Conference on Cognitive Neurodynamics*, Sanya, P.R. China. **Presenter**

Lectures

INTERNATIONAL (*invited)

12/2023 "CentileBrain models: An introduction" at *the Translational Neuroimaging Educational Program (https://www.translational-neuro.org)*. **Presenter**

06/2023 "Mapping Changes of Human Brain Structures Across the Human Lifespan" at *the 4th OHBM Multilingual Kids Live Review – Mandarin Section (virtual)*. **Presenter**

03/2023 "Normative modeling of brain morphometry across the lifespan using CentileBrain" at *University Medical Center Groningen, Groningen, Netherlands (virtual)*. **Presenter***

02/2023 "Predictive value of the MRI techniques for treatment outcomes of depression with rTMS" at *the National Clinical Research Center for Mental Disorders and Department of Psychiatry, The Second Xiangya Hospital of Central South University, Changsha, P.R. China (virtual).* **Presenter***

01/2023 "Neuroimaging profiling identifies distinct brain maturational subtypes of youth with mood and anxiety disorders" at *the State Key Lab of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, P.R. China (virtual).* **Presenter***

12/2022 "Normative modeling of brain morphometry across the lifespan based on big neuroimaging data" at *the Institute of Psychology, Chinese Academy of Science, Beijing, P.R. China (virtual).* **Presenter***

01/2021 "Brain functional changes induced by repetitive transcranial magnetic stimulation" at *the Chinesisch-Deutsche Gesellschaft für Translationale Medizin, Germany (virtual*). **Presenter***

01/2021 "Structural brain networks based on source-based morphometry" at *the Institute of Psychological Sciences, Hangzhou Normal University, Hangzhou, P.R. China. (virtual).* **Presenter***

06/2018 "Structural and functional neural correlates of transcranial magnetic stimulation in major depression" at *the Department of Psychiatry, Sir Run-Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, P.R. China*. **Presenter***

LOCAL (*invited)

06/2024 "Normative Brain Modeling and Mood Disorders" at *the Department of Psychiatry Research Day, The University of British Columbia, Vancouver, BC, Canada*. **Presenter***

03/2024 "Brain-age prediction with brain morphometry" at *MR Seminar Series, Department of Radiology, The University of British Columbia, Vancouver, BC, Canada.* **Presenter***

06/2023 "Normative modeling with CentileBrain: Algorithm benchmarking and model optimization" at *the Department of Psychiatry Research Day, University of British Columbia, Vancouver, BC, Canada*. **Presenter**

06/2021 "Acute functional connectivity changes induced by repetitive transcranial magnetic stimulation predict therapeutic response in treatment-resistant depression" at *the Department of Psychiatry Research Day, The University of British Columbia, Vancouver, BC, Canada*. **Presenter**

12/2017 "Functional disconnection of the hippocampal sub-regions and its correlates to cognitive outcomes in treatment-resistant major depressive disorder" at *Neuro-Seminar at The Djavad Mowafaghian Centre for Brain Health, The University of*

British Columbia, Vancouver, BC, Canada. **Presenter**

05/2016 "Baseline functional brain activity/circuits are related to improvements following TMS-based treatment for major depressive disorder" at *the Department of Psychiatry Research Day, The University of British Columbia, Vancouver, BC, Canada.* **Presenter**

12. TEACHING AND DESIGN

Spring Term, 2014 **Lecturer**, Undergraduate Course: Fundamentals of Digital Electronics, School of Artificial Intelligence, Beijing Normal University, Beijing, P.R. China

Fall Term, 2013 **Lecturer**, Undergraduate Course: Fundamentals of Digital Electronics, School of Artificial Intelligence, Beijing Normal University, Beijing, P.R. China

10/2013 **Instructor**, The First Real-time Functional MRI Symposium, International Symposium on Frontiers in Functional Brain Imaging, Beijing Normal University, Beijing, P.R. China

06/2012 **Instructor**, Functional Connectivity and Networks Analysis Methods Workshop, IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, P.R. China

Fall Term, 2011 **Teaching Assistant**, Undergraduate Course: Fundamentals of Digital Electronics, School of Artificial Intelligence, Beijing Normal University, Beijing, P.R. China

13. RESEARCH SUPERVISION

UNDERGRADUATE STUDENTS

01/2023 – present **Primary Supervisor**, Hao-Qi Cui, Student's Current Position: Undergraduate Student. Student's Current Institution: Department of Computer Science, University of British Columbia.

02/2023– 05/2024 **Primary Supervisor**, Sandy Zhang, Student's Current Position: MSc Student. Student's Current Institution: University of California, San Diego. Student's Previous Institution: Department of Computer Science, University of British Columbia.

11/2022 – 05/2023 **Primary Supervisor**, Shiyu Chen, Student's Current Position: Industry. Student's Previous Institution: Department of Computer Science, University of British Columbia.

09/2021 – 05/2022 **Primary Supervisor**, Yi Xuan Qi, Student's Current Position: Industry.

Student's Previous Institution: Department of Computer Science, University of British Columbia.

09/2021 – 05/2022 **Primary Supervisor**, Yuetong Yu, Student's Current Position: PhD Candidate. Student's Current Institution: Department of Psychiatry, University of British Columbia. Student's Previous Institution: Department of Mathematics, University of British Columbia.

01/2021 – 05/2021 **Primary Supervisor**, Chuntong Gao, Student's Current Position: Industry. Student's Previous Institution: Department of Computer Science, University of British Columbia.

01/2021 – 05/2021 **Primary Supervisor**, Yunan (Vera) Fan, Student's Current Position: MSc Student. Student's Current Institution: Imperial College London. Student's Previous Institution: Department of Computer Science, University of British Columbia.

12/2019 – 05/2020 **Primary Supervisor**, Tyler Keeling, Student's Current Position: Industry. Student's Previous Institution: Department of Computer Science, University of British Columbia.

12/2019 – 05/2020 **Primary Supervisor**, Shiqing Ding, Student's Current Position: Industry. Student's Previous Institution: Department of Mathematics, University of British Columbia.

09/2019 – 01/2020 **Research Mentor**, Yanmei Shen, Student's Current Position: Physician. Student's Current Position: The Second Xiangya Hospital, Central South University in China. Student's Previous Institution: Department of Psychiatry, The Second Xiangya Hospital of Central South University. Primary Supervisor: Xuerong Luo.

09/2017 – 05/2018 **Primary Supervisor**, Xiang Liu, Student's Current Position: Industry. Student's Previous Institution: Department of Computer Science, University of British Columbia.

09/2017 – 05/2018 **Research Mentor**, Paul Kot, Student's Current Position: Industry. Student's Previous Institution: Department of Physics, University of British Columbia. Primary Supervisor: Fidel Vila-Rodriguez.

09/2014 – 05/2014 **Research Mentor**, Yubao Wang, Student's Current Position: Industry. Student's Previous Institution: State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University. Primary Supervisor: Zhiying Long.

09/2014 – 05/2015 **Research Mentor**, Jipeng Zhang, Student's Current Position: Industry. Student's Previous Institution: School of Artificial Intelligence, Beijing

Normal University. Primary Supervisor: Li Yao.

GRADUATE STUDENTS

09/2022 – present **Research Mentor**, Yuetong Yu, Student's Current Position: PhD Candidate. Student's Current Institution: Department of Psychiatry, University of British Columbia. Primary Supervisor: Sophia Frangou.

09/2023 – present **Research Mentor**, Julian Camillo Becerra Leon, Student's Current Position: MSc Student. Student's Current Institution: Department of Psychiatry, University of British Columbia. Primary Supervisor: Sophia Frangou.

09/2018 – 05/2020 **Research Mentor**, Xiang Liu, Student's Current Position: Industry. Student's Previous Institution: Department of Psychiatry, University of British Columbia. Primary Supervisor: Fidel Vila-Rodriguez.