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The University of Texas at Dallas
Center for Vital Longevity
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ACADEMIC APPOINTMENTS

2021- **Research Scientist** - *Wig Neuroimaging Lab*, The University of Texas at Dallas

2016 - 2021 **Research Associate**, Center for Vital Longevity, The University of Texas at Dallas

EDUCATION

2016-2021 **Postdoctoral Fellowship**, Center for Vital Longevity, The University of Texas at Dallas
Adviser: *Dr. Gagan Wig*

2010-2016 **Ph.D. in Cognition and Neuroscience**, The University of Texas at Dallas
Advisers: *Dr. Denise C. Park; Dr. Gagan Wig*

2010-2012 **M.S. in Applied Cognition and Neuroscience**, The University of Texas at Dallas

2005-2008 **B.S. in Psychology**, University of Illinois at Urbana-Champaign

RESEARCH INTERESTS

- Network analysis of the brain
 - Interaction between experience/environmental factors and the brain
 - Cognitive neuroscience of aging
 - Subjective well-being
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OTHER RESEARCH AND PROFESSIONAL EXPERIENCE

2013-2016 **Graduate Research Assistant** - *Cognitive Neuroimaging Lab*
School of Behavioral and Brain Sciences, The University of Texas at Dallas
Faculty supervisor: *Dr. Gagan Wig*

2010-2016 **Graduate Research Assistant** - *Park Aging Mind Lab*
School of Behavioral and Brain Sciences, The University of Texas at Dallas
Faculty supervisor: *Dr. Denise Park*

2009-2010 **Research Coordinator** – *Culture and Group Processes Laboratory*
University of Illinois at Urbana-Champaign, & Nanyang Technological University, Singapore
Faculty Supervisor: *Dr. Ying-Yi Hong*

2009-2010 **Editorial Assistant** – *Perspectives on Psychological Science, Association for Psychological Science*
Supervisor: *Dr. Ed Diener, Chief Editor*

2009-2010 **Research and Personal Assistant**
University of Illinois at Urbana-Champaign, Department of Psychology
Supervisor: *Dr. Ed Diener*

TEACHING EXPERIENCE

2021 Guest lecturer in Practical Research Computing, The University of Texas at Dallas

Git/GitHub Workshop

2020 Office of Information and Technology, The University of Texas at Dallas

2019 Brainhack Dallas 2019 (Brainhack Global 2019)

2019 **FreeSurfer Training – FreeSurfer Overview and Editing using Freeview**

Center for Vital Longevity, The University of Texas at Dallas

2008 **Teaching Assistant and Student Supervisor – Girls Advocacy Project**

University of Illinois at Urbana-Champaign, Department of Psychology

Faculty Supervisor: *Dr. Nicole E Allen* | Supervisor: *Shabnam Javdani*, doctoral candidate

AWARDS & SCHOLARSHIPS

2017 Best Dissertation Award in the School of Behavioral and Brain Sciences at The University of Texas at Dallas

2015 Travel award from the BBS at The University of Texas at Dallas for presenting at Society for Personality and Social Psychology 2015

2013 Travel award from the BBS at The University of Texas at Dallas for presenting at Society for Neuroscience

2012 Travel award from the BBS at The University of Texas at Dallas for presenting at Society for Neuroscience

RESEARCH FUNDING

2017-2019 National Science Foundation (NSF)

Early-concept Grants for Exploratory Research [EAGER]

Title: Modifying human cognition using targeted non-invasive stimulation of large-scale brain networks

Role: Co-Investigator (PI: G. Wig, Ph.D.)

Amount awarded: \$149,940

PEER-REVIEWED PUBLICATIONS

1. **Chan, M. Y.**, Han, L., Carreno, C. A., Zhang, Z., Rodriguez, R. M., LaRose, M., Hassenstab, J., & Wig, G. S. (2021). Long-term prognosis and educational determinants of brain network decline in older adult individuals. *Nature Aging*. doi: 10.1038/s43587-021-00125-4
2. Gau, R. ...**Chan, M. Y.**, ...Marinazzo, D. (2021). Brainhack: Developing a culture of open, inclusive, community-driven neuroscience. *Neuron*, 109(11), 1769-1775. doi: 10.1016/j.neuron.2021.04.001
3. Chen, X., Farrell, M. E., Rundle, M. M., **Chan, M. Y.**, Moore, W., Wig, G. S., Park, D. C. (2021). The relationship of functional hippocampal activity, amyloid deposition, and longitudinal memory decline to memory complaints in cognitively healthy older adults. *Neurobiology of Aging*, 105, 318-326. doi: 10.1016/j.neurobiolaging.2021.04.020
4. Joseph, D. L., **Chan, M. Y.**, Heintzelman, S. J., Tay, L., Diener, E., & Scotney, V. S. (2020). The manipulation of affect: A meta-analysis of affect induction procedures. *Psychological Bulletin*. doi: 10.1037/bul0000224

5. Hou, X., Liu, P., Gu, H., **Chan, M. Y.**, Li, Y., Peng, S.L., Wig, G.S., Yang, Y., Park, D. C., & Lu, H. (2019). Estimation of brain functional connectivity from hypercapnia BOLD MRI data: Validation in a lifespan cohort of 170 subjects. *NeuroImage*, *186*, 455-463. doi: 10.1016/j.neuroimage.2018.11.028
6. **Chan, M. Y.**, Na, J., Agres, P. A., Savalia, N. K., Park, D. C., & Wig, G. S. (2018). Socioeconomic status moderates age-related differences in brain anatomy and functional network organization across the adult lifespan. *Proceedings of the National Academy of Sciences USA*, *115*(22) E5144-E5153. doi: 10.1073/pnas.1714021115
7. Han, L., Savalia, N. K., **Chan, M. Y.**, Agres, P. A., Nair, A. S., & Wig G. S. (2018). Functional parcellation of the cerebral cortex across the adult lifespan. *Cerebral Cortex*, *28*, 4403-4423. doi: 10.1093/cercor/bhy218.
8. Farrell, M. E., Chen, X., Rundle, M. M., **Chan, M. Y.**, Wig, G. S., & Park, D. C. (2018). Regional amyloid accumulation and cognitive decline in initially amyloid-negative adults. *Neurology*, *91*(19), e1809-e182. doi: 10.1212/WNL.00000000000006469
9. **Chan, M. Y.**, Alhazmi, F. H., Park, D. C., Savalia, N. K., & Wig, G. S. (2017). Resting-state network topology differentiates task signals across the adult life span. *Journal of Neuroscience*, *37*(10), 2734-2745. doi: 10.1523/JNEUROSCI.2406-16.2017
10. Savalia, N. K., Agres, P. F., **Chan, M. Y.**, Feczko, E. J., Kennedy, K. M., & Wig, G. S. (2017). Motion-related artifacts in structural brain images revealed with independent estimates of in-scanner head motion. *Human Brain Mapping*, *38*(1), 472-492. doi: 10.1002/hbm.23397
11. Na, J., McDonough, I. M., **Chan, M. Y.**, & Park, D. C. (2016). Social-class differences in consumer choices: Working-class individuals are more sensitive to choices of others than middle-class individuals. *Personality and Social Psychology Bulletin*, *42*(4), 430-443. doi: 10.1177/0146167216634043
12. Na, J., **Chan, M. Y.**, Lodi-Smith, J., & Park, D. C. (2016). Social-class differences in self-concept clarity and their implications for well-being. *Journal of Health Psychology*, *23*(7), 951-960. doi: 10.1177/1359105316643597
13. Na, J., **Chan, M. Y.** (2016). Subjective perception of lower social-class enhances response inhibition. *Personality and Individual Differences*, *90*, 242-246. doi:10.1016/j.paid.2015.11.027
14. **Chan, M. Y.**, Park, D. C., Savalia, N. K., Petersen, S. E., & Wig, G. S. (2014). Decreased segregation of brain systems across the healthy adult lifespan. *Proceedings of the National Academy of Sciences USA*, *111*(46), E4997-E5006. doi: 10.1073/pnas.1415122111
15. **Chan, M. Y.**, Haber, S., Drew, L. D., & Park, D. C. (2014). Training older adults to use tablet computers: Does it enhance cognitive function? *The Gerontologist*, *56*(3), 475-484. doi: 10.1093/geront/gnu057
16. Diener, E., & **Chan, M. Y.** (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being*, *3*(1), 1-43. doi: 10.1111/j.1758-0854.2010.01045.x

BOOK CHAPTERS

1. Na, J., & **Chan, M. Y.** (2015). Culture, cognition, and intercultural relations. In J.E. Warnick, & D. Landis (Eds.), *Neuroscience in Intercultural Contexts, International and Cultural Psychology*. doi: 10.1007/978-1-4939-2260-4_3
2. Doole, R., **Chan, M. Y.**, & Huang CM. (2015). Intercultural relations and the perceptual brain: A cognitive neuroscience perspective. In J.E. Warnick, & D. Landis (Eds.), *Neuroscience in Intercultural Contexts, International and Cultural Psychology*. doi: 10.1007/978-1-4939-2260-4_8

SCIENTIFIC TALKS

1. Invited talk at Betzel & Sporns Joint Lab NetNeuro Lecture Series (Jul, 2021). The aging functional brain network: environmental moderators & individual variability.
 2. Dallas & Austin Area Memory Meeting, Waco, TX. (Aug, 2020). Educational attainment relates to longitudinal brain network decline.
 3. Dallas & Austin Area Memory Meeting, Waco, TX. (Sep, 2018). Age-related brain differences are moderated by socioeconomic status: thinking beyond individual-level indicators.
 4. Center for Vital Longevity Science Luncheon, University of Texas at Dallas, Dallas, TX. (Apr, 2018). Socioeconomic status moderates age-related differences in brain anatomy and functional network organization across the adult lifespan.
 5. Dallas & Austin Area Memory Meeting, Austin, TX. (Sep, 2017). Socioeconomic status moderates age-related differences in brain anatomy and functional network organization across the adult lifespan.
 6. Dallas & Austin Area Memory Meeting, Dallas, TX. (Aug, 2016). Age associated differences in resting-state network topology predict differences in task-evoked activity.
 7. Society of Personality and Social Psychology Annual Meeting, Long Beach, CA. (Feb, 2015). The power of social contexts: Social-class, age, self-concept clarity, and well-being across adulthood.
 8. Behavioral and Brain Science Brownbag, Richardson, TX. (April, 2012). Well-being and age-related cognitive decline.
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POSTER PRESENTATIONS

1. **Chan, M. Y.**, Carreno, C. A., Zhang, Z., Rodriguez, R. M., LaRose, M., Hassenstab, J., & Wig, G. S. (Jun, 2020). Lower education is accompanied by greater longitudinal brain network decline in older adults. Organization for Human Brain Mapping, [Virtual].
2. Yu, J.C., **Chan, M. Y.**, Liang, H., Agres, P., & Abdi, H. (Jun, 2020). A multivariate approach to analyze connectivity matrices with individual-specific parcellation. Organization for Human Brain Mapping, [Virtual].
3. Yu, J.C., **Chan, M. Y.**, Liang, H., & Abdi, H. (Aug, 2019). A multivariate resting-state fMRI technique for subject-specific parcels and sub-networks. Semantic processing and semantic knowledge (Co-sponsored by the Center for Cognitive Neuroscience and the Neukom Institute for Computational Science), Hanover, NH.
4. Liang, H., **Chan, M. Y.**, Agres, P. F., & Wig, G. S. (Jan, 2019). Assessment of resting-state brain network reliability over multiple measurements: implications for longitudinal observations. Dallas Aging & Cognition Conference, Dallas, TX.
5. **Chan, M. Y.**, Na, J., Agres, P. A., Savalia, N. K., Park, D. C., & Wig, G. S. (Mar, 2018). Socioeconomic status moderates age-related differences in brain anatomy and functional network organization across the adult lifespan. Cognitive Neuroscience Society Annual Meeting, Boston, MA.
6. Agres, P.F., **Chan, M.Y.**, Han, L., Savalia, N.K., Wig, G.S. (Mar, 2018). Organized patterns of cortical thinning observed across the healthy adult lifespan. Cognitive Neuroscience Society Annual Meeting, Boston, MA.
7. **Chan, M. Y.**, Savalia, N. K., Filbey, F., & Wig, G. S. (Nov, 2017). Differences in age-related desegregation of sensory systems between long-term marijuana users and controls. Society for Neuroscience Annual Meeting, Washington, DC.

8. Cooper, C, Savlia, N. K., Agres, P. A., **Chan, M. Y.**, Han, L.,... Trivedi, M. (Dec, 2016). Identifying Clinically Relevant Subgroups in Major Depressive Disorder Using Resting-State Functional Connectivity: Results From the EMBARC Study. The American College of Neuropsychopharmacology Meeting, Hollywood, FL.
9. **Chan, M. Y.**, Alhazmi, F., Savalia, N. K., Park, D. C., Agres, P. F., Wig, G. S. (Nov, 2016). Age associated differences in resting-state network topology predict differences in task-evoked activity. Society for Neuroscience Annual Meeting, San Diego, CA.
10. Wig, G. S., Alhazmi, F., **Chan, M. Y.**, Savalia, N. K. (Nov, 2016). Age-related differences in the organization of large-scale functional brain networks during successful memory formation. Society for Neuroscience Annual Meeting, San Diego, CA.
11. Savalia, N. K., Cooper, C. M., Agres, P. F., **Chan, M. Y.**, Han, L.,...Wig, G. S. (Nov, 2016) Resting-state functional connectivity classifies patients with major depressive disorder into clinically distinct sub-groups. Society for Neuroscience Annual Meeting, San Diego, CA.
12. Han, L., Savalia, N. K., **Chan, M. Y.**, Agres, P. F., Wig, G. S. (Nov, 2016). Functional parcellation of the cerebral cortex across the healthy adult lifespan using resting-state functional connectivity. Society for Neuroscience Annual Meeting, San Diego, CA.
13. **Chan, M. Y.**, Alhazmi, F., Savalia, N. K., Park, D. C., Wig, G. S. (Oct, 2015). Evidence that decreased system segregation observed across the healthy adult lifespan does not result in differences in resting-state defined system topology. Society for Neuroscience Annual Meeting, Chicago, IL.
14. Dewitt, S. J., **Chan, M. Y.**, & Filbey, F. M. (Mar, 2015). Increased global efficiency and resting state functional connectivity in default mode, fronto-parietal and salience networks associated with increased harm avoidance in risk-taking adolescents. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
15. **Chan, M. Y.**, Park, D. C., Savalia, N. K., Petersen, S. E., & Wig, G. S. (Nov, 2014). Decreased segregation of brain systems across the healthy adult lifespan. Society for Neuroscience Annual Meeting, Washington, DC.
16. **Chan, M. Y.**, McDonough, I. M., & Park, D. C. (Nov, 2013). A lifespan study of connectivity differences in four large-scale brain networks. Society for Neuroscience Annual Meeting, San Diego, CA.
17. Haber, S., McDonough, I. M., **Chan, M. Y.**, & Park, D. C. (Apr, 2013). Sustained mental challenge can lead to long-term enhancements in cognitive and brain function. Cognitive Aging Conference. Atlanta, GA.
18. **Chan, M.Y.**, Haber, S., Drew, L. D., & Park, D. C. (Nov, 2012). Active engagement through iPad: Effects of technology adaptation as an intervention on cognitive aging. Gerontology Society of America, San Diego, CA.
19. **Chan, M. Y.**, McDonough, I. M., & Park, D. C. (Oct, 2012). Functional Connectivity in the executive function network is associated with personality traits from the NEO PI-R. Neuroscience 2012; Society for Neuroscience, New Orleans, LA.
20. **Chan, M. Y.**, Na, J., Lodi-Smith, J., & Park, D. C. (Apr, 2012). Well-being and age-related differences in cognitive functions: Psychological well-being can shape cognitive aging. Cognitive Aging Conference, Atlanta, GA.

PROFESSIONAL MEMBERSHIP

2010-	Society for Neuroscience	2012-2013	Gerontology Society of America
2015-	Cognitive Neuroscience Society		

AD-HOC REVIEWING

Aging & Mental Health

Applied Psychology: Health and Well-Being

Behavioral Neuroscience
Biological Psychiatry
Brain and Language
Brain Connectivity
Cerebral Cortex
Cortex
Developmental Cognitive Neuroscience
Human Brain Mapping
Journal of Neuroscience
Journal of the International Neuropsychological Society
Neurobiology of Aging

NeuroImage
Neurology
Neuropsychologia
PLOS Biology
PLOS One
Proc. of the Nat. Acad. of Sci., USA
Psychological Well-being
Psychological Science
Psychosomatic Medicine
Scientific Reports
Sociological Inquiry

ADDITIONAL SKILLS

- **Programming/Scripting Languages:** R, MATLAB, Bash, Python, MySQL, HTML
- **Neuroimaging software:** FreeSurfer, SPM, FSL, Nipype, Connectome Workbench
- **General Software:** REDCap, Git, SPSS, Microsoft Office (Word, Excel, Powerpoint)
- **Operating Systems:** Windows, Mac OS, Linux
- **Languages:** English, Cantonese, Mandarin

REFERENCES

Dr. Gagan S. Wig
Associate Professor
Center for Vital Longevity,
School of Behavioral and Brain
Science, The University of Texas at
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Dr. Denise C. Park
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University Distinguished Chair and
UT Regents Research Scholar,
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Dr. Hervé Abdi
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