# Gagan S. Wig, Ph.D.

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# ACADEMIC APPOINTMENTS

2019-	Associate Professor Center for Vital Longevity, School of Behavioral & Brain Sciences University of Texas at Dallas, Dallas, TX
	Department of Psychiatry (adjunct) University of Texas Southwestern Medical Center, Dallas, TX
2013-2019	Assistant Professor Center for Vital Longevity, School of Behavioral & Brain Sciences University of Texas at Dallas, Dallas, TX
	Department of Psychiatry (adjunct) University of Texas Southwestern Medical Center, Dallas, TX
2009-2012	Human Connectome Project Postdoctoral Fellow Washington University School of Medicine, St. Louis, MO Advisor: Steven E. Petersen, Ph.D.
2006-2009	Postdoctoral Fellow Harvard University, Cambridge, MA Massachusetts General Hospital, Charlestown, MA Advisor: Daniel L. Schacter, Ph.D.

# **EDUCATION**

2001-2006	Ph.D. Cognitive Neuroscience Dartmouth College, Hanover, NH Doctoral Dissertation: Memory and the Resting Brain
1996-2001	B.Sc. Major in Biopsychology, Minor in Commerce University of British Columbia, Vancouver, BC

# **RESEARCH FUNDING**

Active 2023-2024	NIH Animal models for social dimensions of health and aging research network Independent pilot program award Title: Establishing cross-species homologies in aging-accompanied brain network decline Role: Principal Investigator Total costs: \$20,000
2019-2024	National Institutes of Health (NIH), National Institutes of Aging (NIA) R01 AG063930 Title: Socioeconomic mediators of adult brain network resilience & vulnerability to cognitive decline Role: Principal Investigator Total costs: \$2,933,097
2017-2022	National Institutes of Health (NIH), National Institutes of Aging (NIA) RF1 AG006265 Title: Dallas Lifespan Brain Study—Wave 3: Neurodegeneration & resilience in cognition Role: Co-Investigator (PI: D. Park, Ph.D.) Total costs: \$5,900,000
2016-2024	James S. McDonnell Foundation Understanding Human Cognition Scholar Award Title: A complex networks approach for understanding age-related cognitive decline Role: Principal Investigator Award amount: \$600,000
Completed 2018-2020	National Institutes of Health (NIH), National Institutes of Aging (NIA) R56 AG058253 Title: Impact of challenging engagement on cognition in older adults: A clinical trial Role: Co-Investigator (PI: D. Park, Ph.D.) Total costs: \$1,266,382
2017-2019	National Science Foundation (NSF) Early-concept Grants for Exploratory Research Title: Modifying human cognition using targeted non-invasive stimulation of large-scale brain networks Role: Principal Investigator Total costs: \$149,940
2015-2016	Defense Advanced Research Projects Agency (DARPA) Title: Data Stethoscope for the Brain Connectome Role: Principal Investigator (Co-PI: Roger Malina, Ph.D.) Total costs: \$270,148

Under Review

2023-2024	The Dallas Foundation – AWARE Fund Title: Evaluating a novel brain network-based biomarker of Alzheimer's Disease Role: Principal Investigator
2023-2028	National Institutes of Health (NIH), National Institutes of Aging (NIA) Title: Systems biology approaches towards a causal understanding of resilience to Alzheimer's disease for development of novel biomarkers and intervention strategies (U19)
	Role: Co-Investigator (PIs: C. Kaczorowski, Ph.D., V. Menon, Ph.D., K. O'Connell, Ph.D.)

# **RESEARCH FELLOWSHIPS**

2007-2010	Canadian Institute of Health Research (CIHR),
	Institute of Aging Postdoctoral Fellowship
2005-2006	Dartmouth College Graduate Fellowship
2003-2005	Natural Sciences and Engineering Research Council of Canada (NSERC),
	Postgraduate Fellowship (PGS B)
2001-2003	Natural Sciences and Engineering Research Council of Canada (NSERC),
	Postgraduate Fellowship (PGS A)
2000-2001	Natural Sciences and Engineering Research Council of Canada (NSERC),
	Undergraduate Student Research Fellowship

# AWARDS, SCHOLARSHIPS, & HONORS

2016	James S. McDonnell Foundation Understanding Human Cognition Scholar Award
2015	Canada's 100 Year Journey: Navigator Award
2014	Elected to the Memory Disorders Research Society
2006	Hannah Croasdale Award for Academic Excellence*, Dartmouth College
	*University-wide: "Awarded annually to the graduating PhD recipient who best exemplifies
	the qualities of a scholar."
2006	William M. Smith Promise in the Brain Sciences Award, Dartmouth College
2003	Summer Institute in Cognitive Neuroscience Scholarship, Lake Tahoe, CA
2002	Summer Institute in Cognitive Neuroscience Scholarship, Hanover, NH
1996-1998	University of British Columbia Outstanding Student Initiative Scholarship
1996	Province of British Columbia Provincial Scholarship
1996	Province of British Columbia Passport to Education Scholarship
1996	Westminister Savings Credit Union Post-Secondary Scholarship

### SCIENTIFIC ARTICLES UNDER REVIEW OR CURRENTLY COMMISSIONED

- 1. **Wig, G.S.** (invited chapter, in preparation). Socioeconomic status and brain development across the lifespan (working title). <u>Encyclopedia of the Human Brain, 2<sup>nd</sup> Edition</u>. (J. Grafman, Editor). Elsevier.
- 2. Wig, G.S., Han, L., Chan, M.Y., Park, D.C., Hassenstab, J., Agres, P.F., Zhang, Z., Winter-Nelson, E. Cognitive and functional impacts of brain network vulnerability in aging adults. (under review).
- 3. Han, L., Chan, M.Y., Agres, P.F., Winter-Nelson, E., Zhang, Z., **Wig, G.S.** Measures of resting-state brain network segregation and integration vary in relation to data quantity: Implications for within and between subject comparisons of functional brain network organization (under review).
- 4. Smith, E.T., Hennessee, J.P., Frank, S., Gonzalez, H., Bacci, J., **Wig, G.S.**, Chan, M., Carreno, C.A., Park, D.C. The relationship of longitudinal change in gray matter volume to changes in cognition differs across the lifespan. (under review).

# SCIENTIFIC PUBLICATIONS

# PDFs and weblinks to articles available at: <u>https://www.wigneurolab.org/publications</u>

- 1. Hennessee, J.P., Webb, C.E., Chen, X., Kennedy, K.M., **Wig, G.S.**, Park, D.C. (2022). The relationship of lateralization of brain activity to optimal cognitive function differs with age. <u>Neuroimage</u>. 264: 119736.
- 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. <u>Nature Aging</u>. 1: 1053-1067.\*

\*Featured as issue cover story (<u>https://www.nature.com/nataging/volumes/1/issues/11</u>) \*Commentary by: Sepulcre, J. (2021). College education as a modulator of the aging brain. <u>Nature Aging.</u> 1: 980-981.

- Zheng, A., Montez, D.F., Marek, M., Gilmore, A.W., Newbold, D.J., Laumann, T.O., Kay, B.P., Seider, N.A., Van, A.N., Hampton, J.M., Gordon, E.M., Alexopoulos, D., Schlaggar, B.L., Sylvester, C.M., Greene, D.J., Shimony, J.S., Nelson, S.M., **Wig, G.S.**, Gratton, C., McDermott, K.B., Raichle, M.E., Gordon, E.M., Dosenbach, N.U.F. (2021). Parallel hippocampal-parietal circuits for self- and goal-oriented processing. <u>Proceedings of the National Academy of Sciences USA</u>. 118(34): e2101743118.
- 4. 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. <u>Neurobiology of Aging</u>. 105: 318-326.
- Gratton, C., Coalson, R.C., Dworetsky, A., Adeyemo, B., Lauman, T.O., Wig, G.S., Kong, T.S., Gratton, G., Fabiani, M., Barch, D.M., Tranel, D., Miranda-Dominguez, O., Fair, D.A., Dosenbach, N.U.F, Snyder, A.Z., Perlmutter, J.S., Petersen, S.E., Campbell, M.C. (2020). Removal of high frequency contamination from motion estimates in single-band fMRI saves data without biasing functional connectivity. <u>Neuroimage</u>. 217: 116866.
- Wig, G.S. (2019). Alzheimer's Dilemmas. <u>Issues in Science and Technology</u>. 35(2): 5-8.\*
   \*Invited commentary on: Fitzpatrick, S.M. (2018). Asking the right questions in Alzheimer's research. <u>Issues in Science and Technology</u>. 35(1): 77-79.

- 7. Hou, X., Liu, P., Gu, H., Chan, M.Y., Li, Y., Peng, S., **Wig, G.S.**, Yang, Y., Park, D.C., Lu, H. (2019). Estimation of brain functional connectivity from hypercapnia BOLD MRI data. <u>Neuroimage</u>. 186: 455-463.
- Chan, M.Y., Na, J., Agres, P.F., Savalia, N.K., Park, D.C., Wig, G.S. (2018). Socioeconomic status moderates age-related differences in the brain's functional network organization and anatomy across the adult lifespan. <u>Proceedings of the National Academy of Sciences USA</u>. 115(22): E5144-E5153.
- 9. Han, L., Savalia, N.K., Chan, M.Y Agres, P.F., Nair, A.S., **Wig, G.S.** (2018). Functional parcellation of the cerebral cortex across the human adult lifespan. <u>Cerebral Cortex</u>. 28(12): 4403-4423.
- Farrell, M.E., Chen, X., Rundle, M.M., Chan, M.Y., Wig, G.S., Park, D.C. (2018). Early detection of longitudinal amyloid-related cognitive decline in initially amyloid-negative adults. <u>Neurology</u>. 91(19): e1809e1821.
- 11. Wig, G.S. (2017). Segregated systems of human brain networks. <u>Trends in Cognitive Sciences</u>. 21(12): 981-996.\*
   \*Trends in Cognitive Sciences—Editor's selected review for 2017 (<u>http://crosstalk.cell.com/blog/best-reviews-we-published-in-2017-part-4</u>)
- 12. Chan, M.Y., Alhazmi, F., Park, D.C., Savalia, N.K., **Wig, G.S.** (2017). Resting-state network topology differentiates task signals across the adult lifespan. <u>The Journal of Neuroscience</u>. 37(10): 2734-2745.
- 13. Miller, K.J., Hermes, D., Pestilli, F., **Wig, G.S.**, Ojemann, JG. (2017). Face percept formation in human ventral temporal cortex. Journal of Neurophysiology. 118(5): 2614-2627.
- Farrell, M.E., Kennedy, K.M., Rodrigue, K.M., Wig, G.S., Bischof, G.N., Rieck, J.R., Chen, X., Festini, S.B., Devous, M.D., Park, D.C. (2017). Association of longitudinal cognitive decline with amyloid burden in middleaged and older adults: Evidence for a dose-response relationship. <u>IAMA Neurology</u>. 74(7): 830-838.
- 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. <u>Human Brain</u> <u>Mapping</u>. 38(1): 472-492.
- 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. <u>Proceedings of the National Academy of Sciences USA</u>. 111(46): E4997-E5006.\*

\*Faculty of 1000 article of interest

- 17. Wig, G.S.<sup>1</sup>, Laumann, T.O.<sup>1</sup>, Petersen, S.E. (2014). An approach for parcellating human cortical areas using resting-state correlations. <u>Neuroimage</u>. 93: 276-291.\*
   <sup>1</sup>Equal contribution
   \*Commentary by: Buckner, R.L. & Yeo, B.T. (2014). Borders, map clusters, and supra-areal organization in visual cortex. Neuroimage. 93: 292-297.
- Wig, G.S., Laumann, T.O., Cohen, A., Power, J.D., Nelson, S.M., Glasser, M.F., Miezin, F.S., Snyder, A.Z., Schlaggar, B.L., Petersen, S.E. (2014). Parcellating an individual subject's cortical and subcortical brain structures using snowball sampling of resting-state correlations. <u>Cerebral Cortex</u>, 24(8): 2036-2054.
- Van Essen, D.C., Smith, S.M., Barch, D.M., Behrens, T.E.J., Yacoub, E., Ugurbil, K., WU-Minn HCP Consortium. (2013). The WU-Minn Human Connectome Project: an overview. <u>Neuroimage</u>. 80: 62-79.

- Nelson, S.M., McDermott, K., Wig, G.S., Schlaggar, B.L., Petersen. S.E. (2013). The critical roles of localization and physiology for understanding parietal contributions to memory retrieval. <u>The Neuroscientist</u>. 19(6): 578-591.
- Szpuner, K.K., St. Jacques, P.L., Robbins, C.A., Wig, G.S., Schacter, D.L. (2013). Repetition-related reductions in neural activity reveal component processes of mental simulation. <u>Social Cognitive and Affective</u> <u>Neuroscience</u>. 9(5): 712-722.
- 22. Somerville, L.H., Wagner, D.D., **Wig, G.S.**, Moran, J.M., Whalen, P.J., Kelley, W.M. (2013). Interactions between tonic and phasic neural signals support the generation and regulation of anxious emotion. <u>Cerebral</u> <u>Cortex</u>. 23(1): 49-60.
- 23. Wig, G.S. (2012). Repetition suppression and repetition priming are processing outcomes. <u>Cognitive Neuroscience</u>. 3(3-4): 247-248. \*
   \*Invited commentary on: Gotts, S., Carson, C., & Martin, A. (2012). Repetition priming and repetition suppression: A case for enhanced efficiency through neural synchronization. <u>Cognitive Neuroscience</u>. 3: 227-259.
- Stevens, W.D., Kahn, I., Wig, G.S., Schacter, D.L. (2012). Hemispheric asymmetry of form-abstract visual scene processing in the human brain: Evidence from repetition priming and intrinsic activity. <u>Cerebral Cortex</u>. 22(8): 1935-1949.
- Power, J.D., Cohen, A.L., Nelson, S.M., Wig, G.S., Barnes, K.A., Church, J., Vogel, A., Laumann, T.O., Miezin, F.M., Schlaggar, B.L., Petersen, S.E. (2011). Functional network organization of the human brain. <u>Neuron</u>. 72(4): 665-678.
- 26. Wig, G.S., Schlaggar, B.L., Petersen, S.E. (2011). Concepts and principles in the analysis of brain networks. <u>Annals of the New York Academy of Sciences</u>. 1224(1): 126-146.
- Dosenbach, N.U.F., Nardos, B., Cohen, A.L., Fair, D.A., Power, J.D., Church, J.A., Nelson, S.M., Wig, G.S., Vogel, A.C., Lesov-Schlaggar, C.N., Banes, K.A., Dubis, J.W., Feczko, E., Coalson, R.S., Pruett, J.R., Barch, D.M., Petersen, S.E., Schlaggar, B.L. (2010). Prediction of individual brain maturity using fMRI. <u>Science</u>. 329(5997): 1359-1361.
- Nelson, S.M., Cohen, A.L., Power, J.D., Wig, G.S., Miezin, F.M., Wheeler, M.E., Velanova, K., Donaldson, D.I., Phillips, J.S., Schlaggar, B.L., Petersen, S.E. (2010). A parcellation scheme for human left lateral parietal cortex. <u>Neuron</u>. 67(1): 156-170.
- 29. Wig, G.S., Buckner, R.L., Schacter, D.L. (2009). Repetition priming influences distinct brain systems: Evidence from task-evoked data and resting-state correlations. Journal of Neurophysiology. 101(5): 2632-2648.
- Wig, G.S., Grafton, S.T., Demos, K.E., Wolford, G., Petersen, S.E., Kelley, W.M. (2008). Medial temporal lobe BOLD activity at rest predicts individual differences in memory ability in healthy young adults. <u>Proceedings of</u> <u>the National Academy of Sciences USA</u>. 105(47): 18555-18560.
- Stevens, W.D., Wig, G.S., Schacter, D.L. (2008). Implicit memory and priming. <u>Concise Learning and Memory:</u> <u>The Editor's Selection</u>. (J.Byrne Editor). Oxford: 2008, Elsevier.

- Stevens, W.D., Wig, G.S., Schacter, D.L. (2008). Implicit memory and priming. In H.L. Roediger, III (Ed.), <u>Cognitive Psychology of Memory</u>. Vol. [2] of <u>Learning and Memory: A Comprehensive Reference</u>, 4 vols. (J.Byrne Editor). Pp. 623-644. Oxford: 2008, Elsevier.
- 33. Colvin, M, **Wig, G.S.**, Kelley, W.M., Grafton, S.T., Gazzaniga, M.S. (2008). Structural organization of the corpus callosum predicts the extent and impact of cortical activity in the nondominant hemisphere. <u>The Journal of Neuroscience</u>. 28(11): 2912-2918.
- Holmes, M.D., Brown, M., Tucker, D.M., Saneto, R.P., Miller, K.J., Wig, G.S., Ojemann, J.G. (2008). Confirmation of dense array EEG localization of neocortical seizure onset and propagation. <u>Pediatric</u> <u>Neurosurgery</u>. 44(6): 474-479.
- 35. Schacter, D.L., **Wig, G.S.**, Stevens, W.D. (2007). Reductions in cortical activity during priming. <u>Current</u> <u>Opinion in Neurobiology</u>. 17: 171-176.
- Somerville, L.H., Wig, G.S., Whalen, P.J., Kelley, W.M. (2006). Dissociable roles for the hippocampus and amygdala in the representation of socially relevant contextual knowledge. <u>Journal of Cognitive Neuroscience</u>. 18(8): 1253-1265.
- 37. Wig, G.S., Grafton, S.T., Demos, K.E., Kelley, W.M. (2005). A causal role for neural activity reductions during repetition priming. <u>Nature Neuroscience</u>. 8(9): 1228-1233. \*
  \*Commentary by: Martin, A. & Gotts, S.J. (2005). Making the causal link: frontal cortex activity and repetition priming. Nature Neuroscience, 8(9): 1134-1135.
  \*Faculty of 1000 article of interest
- 38. Barnes, S.J., Hua, J.M., Pinel, J.P.J, Takahashi, A, **Wig, G.S.** (2005). Conditioned effects of kindling three different sites in the hippocampal complex of the rat. <u>Behavioral Neuroscience</u>. 119(6): 1572-1579.
- Wig, G.S., Miller, M.B., Kingstone, A., Kelley, W.M. (2004). Separable routes to human memory formation: Dissociating task and material contributions in the frontal cortex. <u>Journal of Cognitive Neuroscience</u>. 16(1): 139-48.
- 40. Moran, J.M., **Wig, G.S.**, Adams, R., Janata, P., Kelley, W.M. (2004). The neural funny bone: Dissociating humor comprehension from mirth. <u>Neuroimage</u>. 21(3): 1055-60.
- 41. Wolford, G.L., Newman, S.E., Miller, M.B., **Wig, G.S.** (2004). Searching for patterns in random sequences. <u>Canadian Journal of Experimental Psychology</u>. 58(4): 221-8.
- Barnes, S.J., Pinel, J.P.J., Wig, G.S., Stuettgen, M.C., Hölzel, C.H. (2003) Stimulation site determines the conditioned effects of kindling in rats: anterior neocortex versus amygdala. <u>European Journal of Neuroscience</u>. 17(8): 1671-1679.
- 43. Wig, G. S., Barnes, S.J., Pinel, J.P.J. (2002). Conditioning of a flavor aversion by amygdala kindling in rats. <u>Behavioral Neuroscience.</u> 116(2): 347-50.
- 44. Barnes, S.J., Pinel, J.P.J., Francis, L.H., **Wig, G.S.** (2001). Conditioning of ictal and interictal behaviors in rats by amygdala kindling: Context as the conditional stimulus. <u>Behavioral Neuroscience</u>. 115(5): 1065-72.

# VIDEOS AND OTHER SCIENTIFC WORK

- Gresham-Lancaster, S., Perkis, T., Blanton, A., Malina, R., Wig, G.S. (2016). Data Stethoscope for the Connectome, Art-Science Performance. <u>9 Evenings 2 (9e2)</u>. Seattle, WA. Web link to performance: <u>https://vimeo.com/21608536</u>
- Wig, G.S. (2015). Using patterns of resting-state correlations to parcellate the brain into areas. <u>Essentials of Cognitive Neuroscience</u>. (B. Postle Author). Hoboken: 2015, Wiley-Blackwell. Web Video. <u>https://www.youtube.com/watch?v=3R6Gyh9WPjE</u>
- 3. Wig, G.S. (2006). Memory and the Resting Brain. <u>Ph.D. Thesis Dartmouth College</u>. Department of Psychological and Brain Sciences. Hanover, NH.

# INVITED SCIENTIFIC TALKS

2023

Organization for Human Brain Mapping Annual Conference: Lifespan network neuroscience pre-symposium; Montreal, QC

University of Pennsylvania: Institute on Aging Visiting Scholars Series; Philadelphia, PA

University of Iowa: Neuroscience Graduate Program Seminar Series; Iowa City, IA

Indiana University Bloomington: Indiana Clinical and Translational Sciences Institute Retreat; Bloomington, IN Dallas Aging and Cognition Conference; Dallas, TX

University of Washington School of Medicine: Alzheimer's Disease Research Center (ADRC) seminar; Virtual

2022

The Ohio State Univ. Wexner Medical Center, Dept. of Neurology Grand Rounds; Columbus, OH

Academy of Behavioral Medicine Research: Annual Meeting; Woodstock, VT

UT Southwestern Medical School: Advanced Imaging Research Center Seminar; Virtual

UT Dallas: Featured guest speaker on UTD Research 411 talk show; Virtual

UT Austin: Cognition, Brain, & Behavior Seminar Series; Virtual

2021

University of Michigan, Cognition and Cognitive Neuroscience Brown Bag; Virtual Memory Disorders Research Society Annual Meeting; Virtual Harvard University, D. Schacter Lab Meeting; Virtual Nathan Kline Institute, Center for Biomedical Imaging and Neuromodulation Science Series; Virtual Montreal Neurological Institute, Feindel Brain and Mind Lecture Series; Virtual

2020

Ludwig Maximilian University of Munich, Institute for Stroke and Dementia Research Seminar Series; Virtual Rice University, Department of Psychology Cognitive Seminar; Virtual

Washington University School of Medicine: Knight Alzheimer Research Imaging Group Seminar; Virtual University of Texas Rio Grande Valley School of Medicine: Neuroscience Research Seminar Series; Virtual Resting-State Brain Connectivity Biennial Conference (cancelled due to COVID-19 pandemic)

Washington University School of Medicine: Festschrift for Dr. Steven E. Petersen (cancelled due to COVID-19 pandemic)

University of Texas at Dallas: Center for Vital Longevity Science Symposium; Dallas, TX

# 2019

Sapien Labs: Virtual Symposium—Inter- and intra-person variability in the human brain; Virtual The National Academies of Sciences, Engineering, and Medicine: Workshop on Brain Health

Throughout the Lifespan; Washington, DC Karolinska Institute: Aging Research Center International Forum; Stockholm, Sweden Indiana University: How systems learn, change and self-organize: Insights from network science workshop;

Bloomington, IN

# 2018

Univ. of Texas at Dallas: Center for Vital Longevity Colloquium; Dallas, TX Memory Disorders Research Society Annual Meeting; Toronto, ON Santa Fe Institute: Complex Time: Adaptation, Aging, & Arrow of Time Meeting; Santa Fe, NM James S. McDonnell Foundation Scholars Meeting; Oxford, UK Center for Brain Health: Reprogramming the Brain to Health Symposium; Dallas, TX Wayne State University: Institute of Gerontology Seminar Series; Detroit, MI UT Southwestern/UT Dallas Symposium on Neuroimaging; Dallas, TX

# 2017

American College of Neuropsychopharmacology Annual Meeting: Symposium on Biomarkers of Major Depressive Disorder; Palm Springs, CA
Washington University School of Medicine: NIAC seminar series; St. Louis, MO
University of Texas Southwestern Medical School: Brain Circuits Lecture; Dallas, TX
Dallas Aging and Cognition Conference; Dallas, TX

## 2016

University of Texas Southwestern Medical School: Neurotechnology Seminar; Dallas, TX University of British Columbia: Department of Psychology; Vancouver, BC 9e2 (9 evenings 2); Seattle, WA Memory Disorders Research Society Annual Meeting; Princeton, NJ Ericsson, North American Headquarters – Neuroscience@Work Seminar; Plano, TX Dallas-Austin Area Memory Meeting; Dallas, TX DARPA Rhythms of the Brain Meeting; New York, NY

2015

University of Texas at Austin: Neuroscience Colloquium; Austin, TX University of Texas at Dallas: BBS Brain Matters Public Talk; Dallas, TX Memory Disorders Research Society Annual Meeting; Cambridge, UK ATX Laser; Austin, TX Next generation network neuroscience conference; Toronto, ON Highland Park Presbyterian Church; Dallas, TX Dallas Aging and Cognition Conference; Dallas, TX

2014

University of Texas at Dallas: Callier Center for Communication Disorders; Dallas, TX University of Texas at Dallas: Neuroscience Brown Bag; Dallas, TX University of Texas at Dallas: CVL Directors Research Circle Symposium; Dallas, TX University of Texas at Dallas: Center for Brain Health Science Colloquium; Dallas, TX

#### 2013

University of Texas Southwestern Medical School: Department of Psychiatry Brown-bag; Dallas, TX Dallas Aging and Cognition Conference; Dallas, TX

# 2012

Dartmouth College: fMRI Brownbag; Hanover, NH

# 2011

Washington University School of Medicine: Knight ADRC Seminar Series; St. Louis, MO University of Washington Medical School: IBIC Colloquium; Seattle, WA University of Texas at Dallas: Center for Vital Longevity Colloquium; Dallas, TX Oregon Health Sciences University: Neuroscience seminar; Portland, OR Human Connectome Project: HCP Science Meetings; St. Louis, MO Rutgers University: Department of Psychology seminar; Newark, NJ University of Texas at Dallas: School of Behav. & Brain Sciences seminar; Dallas, TX

#### 2010

Rotman Research Institute: Research seminar; Toronto, ON Washington University: Behavior, Brain & Cognition Colloquium; St. Louis, MO

#### 2008

Dartmouth College: Cognitive Brown-Bag Talk Series; Hanover, NH Harvard University: Cognition, Brain, & Behavior Talk Series; Cambridge, MA

2006

Massachusetts General Hospital: Martinoscan Talk Series; Charlestown, MA

2005

University of British Columbia: Cognitive-group meeting; Vancouver, BC

2004

Harvard University: Social Affective Neuroscience Brown-Bag; Cambridge, MA

2003

Kings College: 5th Annual fMRI Experience Conference; London, UK

# **CONFERENCE ABSTRACTS & PRESENTATIONS**

- Winter-Nelson, E., Bergmann, E., Chan, M.Y., Han, L., Klausner, S., Kavushansky, A., Asleh, J., Li, Y., Murdy, T., Zhang, S., Harris, J.A., Febo, M., Kaczorowski, C., Kahn, I, Wig, G.S. (2023). Cross-species homologies in patterns of large-scale functional brain network decline across aging mice and humans. Dallas Aging & Cognition Conference, Dallas, TX.
- 2. Zhang, Z., Chan, M.Y., Han, L., Carreno, C.A., Winter-Nelson, E., Alzheimer's Disease Neuroimaging Initiative (ADNI), Wig, G.S. (2023). Independent effects of Alzheimer's disease dementia severity and aging on functional brain network organization at rest. Dallas Aging & Cognition Conference, Dallas, TX.

- Klausner, S., Seale, M.A., Sullins. C., Rayanki, A., Nguyen, L.T., Winter-Nelson, E., Zhang, Z. Chan, M., Carreno, C.A., Munson, M., Lakhanpal, S., Jaiswal, S., Reingle-Gonzalez, J.M., Park, D.C., Brown, E.S., Wig, G.S. (2023). The Midlife Brain and Environment Study (MBES): A longitudinal brain imaging study investigating the health, environment, and lifestyle factors that moderate brain and cognitive aging. Dallas Aging & Cognition Conference, Dallas, TX.
- Winter-Nelson, E., Bergmann, E., Chan, M.Y., Han, L., Kavushansky, A., Asleh, J., Li, Y., Murdy, T., Zhang, S., Harris, J.A., Febo, M., Kaczorowski, C., Kahn, I, Wig, G.S. (2022). Cross-species homologies in patterns of large-scale functional brain network decline across aging mice and humans. Society for Neuroscience Annual Meeting, San Diego, CA.
- 5. Agres, P.F., Chan, M.Y., Han, L., Nair, A.S., Carreno, C.A., Wig, G.S. (2022). Individualized targeting and noninvasive stimulation of functional brain networks reveals stimulation-specific impacts on resting-state correlations. Society for Neuroscience Annual Meeting, San Diego, CA.
- 6. Zhang, Z., Chan, M.Y., Han, L., Carreno, C.A., Winter-Nelson, E., Alzheimer's Disease Neuroimaging Initiative (ADNI), Wig, G.S. (2022). Independent effects of Alzheimer's disease dementia severity and aging on functional brain network organization at rest. Society for Neuroscience Annual Meeting, San Diego, CA.
- Winter-Nelson, E., Bergmann, E., Chan, M.Y., Han, L., Kavushansky, A., Asleh, J., Li, Y., Murdy, T., Zhang, S., Febo, M., Kaczorowski, C., Kahn, I, Wig, G.S. (2022). Cross-species homologies in patterns of large-scale functional brain network decline across aging mice and humans. Cognitive Neuroscience of Aging Conference, Dallas, TX.
- Nguyen, L.T., Carreno, C.A., Munson, M. Barua, A., Sullins, C., Lakhanpal, S., Jaiswal, S., Brown, E.S., Reingle-Gonzalez, J.M., Park, D.C., Chan, M.Y., Wig, G.S. (2022). The Midlife Brain and Environment Study (MBES): A longitudinal brain imaging study investigating the health, environment, and lifestyle factors that moderate brain and cognitive aging. Cognitive Neuroscience of Aging Conference, Dallas, TX.
- 9. Zhang, Z., Chan, M.Y., Han, L., Carreno, C.A., Winter-Nelson, E., Alzheimer's Disease Neuroimaging Initiative (ADNI), Wig, G.S.. (2022). Independent effects of Alzheimer's disease and aging on functional brain network organization at rest. Cognitive Neuroscience of Aging Conference, Dallas, TX.
- 10. Winter-Nelson, E., Han, L., Chan, M.Y., Agres, P.A., Wig, G.S. (2021). The locus coeruleus as a heterogenous modulator of brain network dynamics. Dallas Austin Area Memory Meeting, Virtual.
- Chan, M.Y., Carreno, C.A., Zhang, Z., Rodriguez, R.M., LaRose, M., Hassenstab, J., Wig, G.S. (2020). Educational attainment relates to longitudinal brain network decline. Dallas Austin Area Memory Meeting, Virtual.
- 12. Chan, M.Y , Carreno, C.A., Zhang, Z., Rodriguez, R.M., LaRose, M., Hassenstab, J., Wig, G.S. (2020). Lower education is accompanied by greater longitudinal brain network decline in older adults. Organization for Human Brain Mapping Annual Conference, Montreal, QC. (Cancelled due to Covid-19 pandemic).
- 13. Zheng, A., Marek, M., Laumann, T.O., Gordon, E.M., Gilmore, A., Nelson, S.M., Wig, G.S., Shimony, J., Alexopoulos, D., Ortega, M., Greene, D.J., Dosenbach, N.U.F. (2019). Functional subdivisions of the hippocampus defined in individuals. Annual Flux Congress, New York, NY.

- 14. Zheng, A., Marek, M., Laumann, T.O., Gordon, E.M., Gilmore, A., Nelson, S.M., Wig, G.S., Shimony, J., Alexopoulos, D., Ortega, M., Greene, D.J., Dosenbach, N.U.F. (2019). Novel functional subdivisions of the human hippocampus at a subject-specific level. Organization for Human Brain Mapping Annual Conference, Rome, Italy.
- Han, L., Chan, M.Y, Agres, P.F., Wig, G.S. (2019). Assessment of resting-state brain network reliability over multiple measurements: Implications for longitudinal observations. Dallas aging and cognition conference, Dallas, TX.
- 16. Agres, P.F., Chan, M.Y., Han, L., Savalia, N.K., Wig, G.S. (2018). Organized patterns of cortical thinning observed across the healthy adult lifespan. Cognitive Neuroscience Society Annual Meeting, Boston, MA.
- 17. Chan, M.Y., Na, J., Agres, P.F., 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. Cognitive Neuroscience Society Annual Meeting, Boston, MA.
- Farrell, M.E., Chen, X., Rundle, M.M., Chan, M.Y., Wig, G.S., Park, D.C. (2018). Early Detection of Longitudinal Amyloid-Related Cognitive Decline in Middle-Aged and Initially Amyloid-Negative Adults. Human Amyloid Imaging. Miami Beach, FL.
- Chan, M.Y., Savalia, N.K., Filbey, F., Wig, G.S. (2017). Differences in age-related desegregation of sensory systems between long-term marijuana users and controls. Society for Neuroscience 47<sup>th</sup> Annual Meeting, Washington, DC: Society for Neuroscience. Online.
- 20. Han, L., Savalia, N.K., Chan, M.Y Agres, P.F., Wig, G.S. (2017). Functional parcellation of the cerebral cortex across the healthy adult lifespan using resting-state functional connectivity. Dallas aging and cognition conference, Dallas, TX
- Alhazmi, F., Chan, M.Y., Savalia, N.K., Wig, G.S. (2017). Age-related differences in the organization of largescale functional brain networks during successful memory formation. Dallas aging and cognition conference, Dallas, TX.
- 22. Chan, M.Y., Alhazmi, F., Savalia, N.K., Park, D.C., Agres, P.F., Wig, G.S. (2017). Age associated differences in resting-state network topology predict differences in task-evoked activity. Dallas aging and cognition conference, Dallas, TX.
- 23. Farrell, M.E., Kennedy, K.M., Rodrigue, K.M., Wig, G.S., Bischof, G.N., Rieck, J.R., Chen, X., Festini, S.B., Park, D.C. (2017). Baseline amyloid burden predicts cognitive decline four years later in healthy adults: The value of a dose-response analysis. Human Amyloid Imaging. Miami Beach, FL.
- 24. Cooper, C.M., Savalia, N.K., Agres, P.F., Chan, M.Y., Han, L., Fava, M., Kurian, B., McGrath, P., Parsey, R., Weissman, M., Wig, G.S. Trivedi, M.H. (2016). Identifying clinically relevant subgroups in major depressive disorder using resting-state functional connectivity: results from the EMBARC study. American college of neuropsychopharmacology annual conference. Hollywood, FL.
- 25. Savalia, N.K., Cooper, C.M., Agres, P.F., Chan, M.Y., Han, L., Fava, M., Kurian, B., McGrath, P., Parsey, R., Weissman, M., Trivedi, M.H., Wig, G.S. (2016). Resting-state functional connectivity classifies patients with Major Depressive Disorder into clinically distinct sub-groups. Society for Neuroscience 46<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.

- 26. Han, L., Savalia, N.K., Chan, M.Y Agres, P.F., Wig, G.S. (2016). Functional parcellation of the cerebral cortex across the healthy adult lifespan using resting-state functional connectivity. Society for Neuroscience 46<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.
- 27. Wig, G.S., Alhazmi, F., Chan, M.Y., Savalia, N.K. (2016). Age-related differences in the organization of large-scale functional brain networks during successful memory formation. Society for Neuroscience 46<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.
- Chan, M.Y., Alhazmi, F., Savalia, N.K., Park, D.C., Agres, P.F., Wig, G.S. (2016). Age associated differences in resting-state network topology predict differences in task-evoked activity. Society for Neuroscience 46<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.
- 29. Farrell, M.E., Kennedy, K.M., Rodrigue, K.M., Wig, G.S., Bischof, G.N., Rieck, J.R., Chen, X., Festini, S.B., Park, D.C. (2016). Differentiating preclinical Alzheimer's disease from normal aging: The effects of age and amyloid on cognitive decline over 3.5 years. Alzheimer's Association International Conference, Toronto, ON.
- Blanton, A., Ayloo, S., Chan, M.Y., Gresham-Lancaster, S.D., Malina, R., Perkis, T., Savalia, N., Schich, M., Srivastav, A., Wig, G.S. (2015). Connectome data dramatization: The human brain as visual music. Understanding Visual Music, Brazil.
- 31. Savalia, N.K., Agres, P.F., Chan, M.Y., Kennedy, K.M., Park, D.C., Wig, G.S. (2015). Motion related noise in structural brain images may be revealed with independent estimates of in-scanner head motion. Society for Neuroscience 45<sup>th</sup> annual Meeting, Chicago, IL: Society for Neuroscience. Online.
- 32. Chan, M.Y., Alhazmi, F., Savalia, N.K., Park, D.C., Wig, G.S. (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 45<sup>th</sup> annual Meeting, Chicago, IL: Society for Neuroscience. Online.
- 33. Chan, M.Y., Park, D.C., Savalia, N.K., Petersen, S.E., Wig, G.S. (2015). Decreased segregation of brain systems across the healthy adult lifespan. Dallas Aging & Cognition Conference, Dallas, TX.
- 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. Society for Neuroscience 44<sup>th</sup> annual Meeting, Washington, DC: Society for Neuroscience. Online.
- 35. Laumann, T.O., Wig, G.S., Cohen, A.L, Petersen, S.E. (2013). Parcellation of human cortical areas using restingstate correlations. Organization for Human Brain Mapping, Seattle, WA.
- 36. Wig, G.S., Snyder, A.Z., Miezin, F.S., Hebrank, A.C., Kennedy, K.M., Rodrigue, K.M., Park, D.C., Petersen, S.E. (2012). Brain parcellation using fc-Snowballing across the healthy adult lifespan reveals a subtle difference in area localization in advanced age. Society for Neuroscience 42<sup>nd</sup> annual Meeting, New Orleans, LA: Society for Neuroscience. Online.
- Wig, G.S., Laumann, T.O., Power, J.D., Cohen, A., Nelson, S.M., Miezin, F.S., Schlaggar, B.L., Petersen, S.E. (2012). Parcellating the brain with resting-state fMRI. Dartmouth Computational Neuroscience Workshop. Hanover, NH.

- 38. Wig, G.S., Laumann, T.O., Power, J.D., Cohen, A., Nelson, S.M., Miezin, F.S., Schlaggar, B.L., Petersen, S.E. (2011). Building a brain network using snowball sampling of resting-state fMRI. Society for Neuroscience 41<sup>st</sup> annual Meeting, Washington, DC: Society for Neuroscience. Online.
- Laumann, T.O., Power, J.D., Wig, G.S., Schlaggar, B.L., Petersen, S.E. (2011). Temporal dynamics of resting state functional connectivity MRI respect sub-network structure. Society for Neuroscience 41<sup>st</sup> annual Meeting, Washington, DC: Society for Neuroscience. Online.
- 40. Spzunar, K., Wig, G.S., St. Jacques, P., Robbins, C., & Schacter, D.L. (2011). Identifying the component processes of mental simulation: Evidence from repetition-related decreases in the BOLD response. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- 41. Wig, G.S., Miezin, F.M., Power, J.D., Cohen, A.L., Gilmore, A.W., Nelson, S.M., Stevens, W.D., Snyder, A.Z., Petersen. S.E, & Schacter, D.L. (2011). Graph theory reveals changes in network structure associated with healthy aging. Dallas aging and cognition conference, Dallas, TX.
- 42. Power, J.D., Cohen, A.L., Nelson, S.M., Wig, G.S., Miezin, F.M., Vogel, A., Church, J., Barnes, K.A., Schlaggar, B.L., Petersen, S.E. (2010). The network architecture of functionally defined regions spanning the brain reorganizes from a predominantly local architecture in children to a distributed, functional architecture in adults. Society for Neuroscience 40<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.
- 43. Pruett JR, Jr., Feczko E, Hoertel S, McVey K, Power J, Wig GS, Miezin FM, Constantino JN, Schlaggar BL, and Petersen S. (2010) A network-based approach to brain functional connectivity in simplex autism. American Academy of Child and Adolescent Psychiatry 57th Annual Meeting, New York, NY.
- 44. Wig, G.S., Gilmore, A.W., Schacter, D.L. (2010). Repeated performance of a simulation task results in BOLD reductions within default network regions. Organization for Human Brain Mapping, Barcelona, Spain.
- 45. Gerlach, K.D., Wig, G.S., Spreng, R.N., Gilmore, A.W., Schacter, D.L. (2010). Neural activity associated with goal-directed simulation of future events. Organization for Human Brain Mapping, Barcelona, Spain.
- 46. Power, J.D., Cohen, A.L., Nelson, S.M., Wig, G.S., Miezin, F.M., Vogel, A., Church, J., Barnes, K.A., Schlaggar, B.L., Petersen, S.E. (2010). The network architecture of functionally defined regions spanning the brain reorganizes from a predominantly local architecture in children to a distributed, functional architecture in adults. Cognitive Neuroscience Society Annual Meeting, Montreal, QC.
- 47. Wig, G.S., Power, J.D., Cohen, A.L., Gilmore, A.W., Nelson, S.M., Stevens, W.D., Miezin, F.M., Snyder, A.Z., Schacter, D.L., & Petersen. S.E. (2009). Advanced aging is associated with a reorganization of functional brain networks. Society for Neuroscience 39<sup>th</sup> annual Meeting, Chicago, IL: Society for Neuroscience. Online.
- Petersen, S.E., Power, J.D., Cohen, A.L., Nelson, S.M., Wig, G.S., Miezin, F.M., Church, J., Vogel, A., Schlaggar, B.L. (2009). Functionally defined regions across the brain are organized into distinct community structures. Society for Neuroscience 39<sup>th</sup> annual Meeting, Chicago, IL: Society for Neuroscience. Online.
- 49. Nelson, S.M., Cohen, A.L., Power, J.D., Wig, G.S., Miezin, F.M., Wheeler, M.E., Velanova, K., Donaldson, D.I., Schlaggar, B.L., Petersen, S.E. (2009). Dissociating memory-retrieval related processes in networks defined from separable putative areas in human left lateral parietal cortex. Society for Neuroscience 39<sup>th</sup> annual Meeting, Chicago, IL: Society for Neuroscience. Online.

- 50. Wig, G.S., Buckner, R.L., & Schacter, D.L. (2008). Sustained components of task performance are sensitive to practice and healthy aging. Society for Neuroscience 38<sup>th</sup> annual Meeting, Washington, DC: Society for Neuroscience. Online.
- Wig, G.S., Schacter, D.L., & Buckner, R.L. (2008). Spontaneous correlations reveal distinct networks mediating perceptual and conceptual processing. Cognitive Neuroscience of Visual Knowledge Conference. Medford, MA.
- 52. Wig, G.S., Schacter, D.L., & Buckner, R.L. (2008). Evidence for distinct networks related to perceptual and semantic processing revealed by spontaneous fMRI correlation patterns. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- 53. Wig, G.S., Buckner, R.L., & Schacter, D.L. (2007). Multiple components subserve priming in healthy young adults. Society for Neuroscience 37<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.
- 54. Stevens, W.D., Schacter, D.L., Kahn, I., Wig, G.S., Buckner, R.L. (2007). Specificity of repetition priming: an investigation of category- and item-specificity for morphed faces and similar scenes using high-resolution fMRI. Society for Neuroscience 37<sup>th</sup> annual Meeting, San Diego, CA: Society for Neuroscience. Online.
- 55. Wig, G.S., Grafton, S.T., Demos, K.E., Kelley, W.M. (2006). Resting-state medial temporal lobe activity predicts individual differences in memory. Society for Neuroscience 36<sup>th</sup> annual Meeting, Atlanta, GA: Society for Neuroscience. Online.
- 56. Wig, G.S., Cohen, N.J., Kelley, W.M. (2006). Binding items in memory: Dissociable regions subserve relational and non-relational aspects of memory formation. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- 57. Wig, G.S., Grafton, S.T., Kelley, W.M. (2005). Medial-temporal lobe activity at rest predicts individual differences in memory. Program No. 814.5. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. Online.
- 58. Colvin, M.K., Wig, G.S., Kelley, W.M., Grafton, S.T., Gazzaniga, M.S. (2005). Callosal organization predicts the level and effect of right frontal activity during verbal encoding on subsequent memory in healthy young adults. Cognitive Neuroscience Society Annual Meeting, New York, NY.
- 59. Kelley, W.M., Moran, J.M., Wig, G.S., Demos, K.E., Summerville, L.H. (2005). Me, myself, and I: A domain general role for medial prefrontal cortex in self mentalizing. Cognitive Neuroscience Society Annual Meeting, New York, NY.
- 60. Demos, K.E., Wig, G.S., Kelley, W.M. (2005). Dude looks like a lady? A domain general role for left inferior frontal cortex in ambiguity resolution. Cognitive Neuroscience Society Annual Meeting, New York, NY.
- 61. Wig, G.S., Grafton, S.T., Demos, K.E., Kelley, W.M. (2004). Transient disruption of left inferior frontal activity eliminates conceptual priming and repetition suppression effects: A combined fMRI-rTMS study. Neurons and Memory Satellite Meeting. San Diego, CA.
- 62. Wig, G.S., Grafton, S.T., Demos, K.E., Kelley, W.M. (2004). Transient disruption of left inferior frontal activity eliminates conceptual priming and repetition suppression effects: A combined fMRI-rTMS study. Program No. 369.2. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. CD-ROM.

- 63. Somerville, L.H., Wig, G.S., Macrae, C.N., Whalen, P.J., Kelley, W.M. (2004). Dissociable roles for the hippocampus and amygdala in the representation of socially relevant contextual knowledge. Program No. 201.5. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. CD-ROM.
- 64. Demos, K.E., Wig, G.S., Moran, J.M, Kelley, W.M. (2004). A role for ambiguity resolution in the left inferior prefrontal cortex. Program No. 432.21. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. CD-ROM.
- 65. Colvin, M.K., Wig, G.S., Kelley, W.M., & Gazzaniga, M.S. (2004). Recruitment of the right frontal cortex during verbal encoding impairs subsequent memory performance in healthy young adults. Cognitive Neuroscience Society Annual Meeting, San Fransisco, CA.
- 66. Wig, G.S., Miller, M.B., Kingstone, A., & Kelley, W.M. (2003). Separable routes to human memory formation: Dissociating task and material contributions in the frontal cortex. The 5<sup>th</sup> Annual fMRI Experience Conference, Kings College, London, UK.
- 67. Wig, G.S., Cohen, N.J., Kelley, W.M. (2003). Binding items in memory: Medial temporal lobe regions are sensitive to the relationship between stimuli. Program No. 514.11. 2003 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. CD-ROM.
- 68. Barnes, S.J., Pinel, J.P.J., Wig, G.S., Stuettgen, M.C., & Hölzel, C.H. (2003). Stimulation site determines the conditioned effects of kindling in rats. Canadian Society for Brain, Behaviour, and Cognitive Science 13th Annual Meeting, Hamilton, ON.
- 69. Wig, G.S., Moran, J.M., & Kelley, W.M. (2003). Putting a name to a face: Dissociating semantic and phonologic components of memory. Cognitive Neuroscience Society Annual Meeting, New York, NY.
- 70. Wig, G.S., Miller, M.B., Kingstone, A., & Kelley, W.M. (2003). Neural correlates of depth of processing for famous and nonfamous faces. 17<sup>th</sup> Annual Neuroscience Day at Dartmouth College, Hanover, NH.
- Wig, G.S., Miller, M.B., & Kelley, W.M. (2002). Neural correlates of depth of processing for famous and nonfamous faces. Program No. 179.2. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. CD-ROM.
- 72. Kelley, W.M., Moran, J.M., Wig, G.S., Adams, R.B., Duval, M.G., & Magge, R.S. (2002). The neural funny bone: dissociating cognitive and affective components of humor. Program No. 517.6. 2002 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. CD-ROM.
- 73. Wig, G. S., Barnes, S. J., & Pinel, J. P. J. (2001). Conditioning of a flavor aversion by amygdala kindling. International Behavioral Neuroscience Society Annual Meeting, Cancun, Mexico.
- 74. Barnes, S. J., Pinel, J. P. J., Francis, L. H., & Wig, G. S. (2000). Conditioning of interictal behaviors by amygdala kindling. Joint Meeting of the Canadian Society for Brain, Behavior, and Cognitive Science and the British Experimental Psychology Association, Cambridge, UK.
- 75. Barnes, S. J., Pinel, J. P. J., Francis, L. H., & Wig, G. S. (2000). Conditioning of ictal and interictal behaviors in rats by amygdala kindling: Context as the conditional stimulus. Society for Neuroscience 30<sup>th</sup> Annual Meeting, New Orleans, LA.

# TEACHING

University of Texas at Dallas

Cognitive Psychology (Undergraduate): f2013, f2014, f2015, f2016, f2017, f2018, s2021, s2022, s2023 Cognitive Psychology (Graduate): s2017, s2018, s2019, f2019, s2020, f2020, f2021, f2022 Seminar in Cognition & Neuroscience—Brain Connectivity (Graduate): s2014, s2015, s2016, s2017 School of Behavioral and Brain Sciences Independent Study (Undergraduate): s2015, f2021, s2022

Invited Guest Teaching

2021: Indiana University - The Connected Brain (for Dr. Olaf Sporns)

- 2018: University of Texas at Dallas Functional Neuroimaging (for Dr. Bart Rypma)
- 2012: Washington University in St. Louis Advanced Cognitive, Computational & Systems Neuroscience—Section on Brain Connectivity (co-instructor w/ Drs. Steve Petersen & Marcus Raichle; for Dr. Todd Braver;)
- 2011: Washington University in St. Louis Advanced Cognitive, Computational & Systems Neuroscience—Section on Brain Connectivity (co-instructor w/ Drs. S. Petersen, Brad Schlaggar, & Marcus Raichle; for Dr. Todd Braver;)

#### **MENTORSHIP - PRESENT**

Research Scientist 2021- Micaela Chan, Ph.D., UT Dallas

Doctoral

2021-	Linh Nguyen, UT Dallas
2019-	Ezra Winter-Nelson, UT Dallas
2018-	Ziwei Zhang, UT Dallas

#### Undergraduate

2022-	Maya Seale, UT Dallas
2022-	Anirudh Rayanki, UT Dallas

Research Assistantship

2022-	Sarah Klausner, UT Dallas
2022-	Cameron Sullins, UT Dallas

# **MENTORSHIP – PAST**

Current position noted in parentheses:

2016-2022	Phillin Agres: Doctoral student UT Dallas
2010 2022	PhD dissertation: "Effects of transcranial magnetic stimulation on individual functional brain networks"
	(Current position: Post-doctoral associate, University of Chicago)
2015-2022	Liang Han: Doctoral student, UT Dallas
	PhD dissertation: "Time varying sources and vascular contributions to age-accompanied functional brain network recomprised for the second seco
	(Current position: Data scientist, JP Morgan Chase & Co.)
2020-2022	Madison Munson, Research assistant, UT Dallas (Data coordinator—Medpace, Inc.)
2017-2022	Claudia Carreno, Research assistant, UT Dallas (PhD student—Virginia Tech)
2016-2021	Micaela Chan, Ph.D., Post-doctoral associate, UT Dallas (Research scientist-UT Dallas)
2018-2020	Rebekah Rodriguez, Undergraduate honors student, UT Dallas* (PhD student—UNC Greensboro) *Awarded UT Dallas Duane and Linda Buhrmester Undergraduate Research Award
2017-2019	Anupama Nair, Research assistant, UT Dallas (PhD student—Univ. of Delaware)
2016-2017	Claudia Carreno, M.Sc. student, UT Dallas (PhD student—Virginia Tech)
2013-2017	Neil Savalia: Research assistant, UT Dallas (MD/PhD student—Yale University)
2013-2016	Micaela Chan: Doctoral student, UT Dallas
	PhD dissertation: "Age-related desegregation of functional systems in healthy adults: The underlying patterns of connections and protective life-course factors"*
	*Awarded UT Dallas, School of Behavioral & Brain Sciences –Best PhD Dissertation Award
	(Current position: Research scientist, UT Dallas)
2014-2016	Phillip Agres: M.Sc. student, UT Dallas (PhD student—UT Dallas)
2014-2016	Fahd Alhazmi: M.Sc. student, UT Dallas (PhD student—CUNY)
2002-2003	Rajiv Magge: B.A. student, Dartmouth College (Neurologist—Weil Cornell Medicine)

# PARTICIPATION ON STUDENT COMMITTEES

University of Texas at Dallas

2022-	Syed Rahman, Doctoral dissertation committee (Biomedical Engineering; UTD/UTSW joint)
2022-	Linlin Fan, Doctoral dissertation committee (Psychology)
2020-2022	Phillip Agres, Doctoral dissertation committee (Chair; Cognition & Neuroscience)
2020-2022	Liang Han, Doctoral dissertation committee (Chair; Cognition & Neuroscience)
2020	Mehmet Gunal, Doctoral dissertation committee (Cognition & Neuroscience)
2017-2020	Dorcas Ofori-Boateng, Doctoral dissertation committee (Statistics; Dep. of Mathematics)
2014-2016	Micaela Chan, Doctoral dissertation committee (Co-Chair; Cognition & Neuroscience)
	Sam DeWitt, Doctoral dissertation committee (Cognition & Neuroscience)
	Jenny Wong, Doctoral dissertation committee (Cognition & Neuroscience)
2013	David Martinez, Doctoral thesis qualifying committee (Cognition & Neuroscience)
	Erin Horne, Doctoral thesis qualifying committee (Cognition & Neuroscience)

External	
2019	Barbara Avelar Pereira, External opponent for Ph.D. defense
	Aging research center; Karolinska Institute; Stockholm, Sweden

# **PROFESSIONAL SERVICE**

University of T	Texas Southwestern Medical Center
2019-	UTSW Advanced Imaging Research Center: Protocol review committee
University of T	Texas at Dallas
2022-2024	UTD BrainHealth Imaging Center: Operations, safety, and feasibility committee (Chair)
2022-2023	Department of Psychology: Faculty search committee
	University international oversight committee
	Center for Vital Longevity: Science colloquium series organizer
	School of Behavioral & Brain Sciences: Ad Hoc committee for mid-tenure review (Chair)
2021-2022	UTD BrainHealth Imaging Center: Operations, safety, and feasibility committee (Chair)
	School of Behavioral & Brain Sciences: Ad Hoc committee for mid-tenure review (Chair)
	Callier Center for Communication Disorders: Faculty search committee
	School of Behavioral & Brain Sciences: Undergraduate research committee
2020-2021	UTD BrainHealth Imaging Center: Operations, safety, and feasibility committee (Chair)
	Center for Vital Longevity: Science colloquium series organizer
2019-2020	UTD BrainHealth Imaging Center: Operations, safety, and feasibility committee
	Department of Physics: Ad Hoc committee for tenure review
2017-2018	School of Behavioral & Brain Sciences, Cog. & Neuro. Program: Graduate student recruitment committee
	Center for Vital Longevity: Science colloquium series organizer
2016-2017	School of Behavioral & Brain Sciences, Cog. & Neuro. Program: Graduate student recruitment committee
2015-2016	UTD Founder's distinguished graduate fellowship evaluation committee
	School of Behavioral & Brain Sciences, Cog. & Neuro. Program: Graduate student recruitment committee
2014-2015	Center for Vital Longevity: Science colloquium series organizer
	School of Behavioral & Brain Sciences: Website design committee
	School of Behavioral & Brain Sciences: Graduate training quantitative sequence evaluation
	committee

# CONFERENCE, MEETING, AND SYMPOSIUM ORGANIZATION

2023	Local organizing committee: Resting-State Brain Connectivity Biennial Conference, Dallas, TX
	Conference co-organizer: Dallas Aging and Cognition Conference, Dallas, TX
2022	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Austin, TX
	Meeting co-organizer: Cognitive Neuroscience of Aging Conference, Dallas, TX
2021	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Virtual
2020	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Virtual
2019	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Dallas, TX
	Conference co-organizer: Dallas Aging and Cognition Conference, Dallas, TX
2018	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Waco, TX
2017	Conference co-organizer: Dallas Aging and Cognition Conference, Dallas, TX
	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Austin, TX
2016	Meeting co-organizer: Dallas-Austin Area Memory Meeting, Dallas, TX
2015	Symposium organizer & Chair: Memory Disorders Research Society Meeting, Cambridge, UK

# **PROFESSIONAL MEMBERSHIP**

2018	Santa Fe Institute: Cognitive Regime Shift – When the Brain Breaks working group (invited)
2014-	Memory Disorders Research Society (elected membership)
2009-	Organization for Human Brain Mapping
2002-	Society for Neuroscience
2001-	Cognitive Neuroscience Society

#### JOURNAL EDITORIAL SERVICE

2011-2017 Neuroimage, Editorial Board

# AD HOC REVIEWING: JOURNALS

Ageing Research Reviews Alzheimer's and Dementia American Journal of Psychiatry Annals of the NY Academy of Sciences Behavioral Neuroscience **Biological Psychiatry** Biomedical Signal Processing & Control Brain and Language Brain Connectivity Brain Imaging and Behavior Cognitive & Affective Brain Science Cerebral Cortex Cortex Current Biology Developmental Cognitive Neuroscience ELife ENeuro European Journal of Neuroscience Human Brain Mapping

Journal of Cognitive Neuroscience Journal of Experimental Social Psychology Journal of Intensive Care Medicine Journal of the Int. Neuropsych. Soc. Journal of Neuroimaging Journal of Neurophysiology Journal of Neuroscience Nature Aging Nature Communications Nature Medicine Nature Neuroscience Nature Reviews Neuroscience Nature Scientific Reports Network Neuroscience Neurobiology of Learning and Memory Neuroimage Neuron Neuropsychologia Neuroscience

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