

Daniel Gustavson

Curriculum vitae

March 2023

Institute for Behavior Genetics
1480 30th St
Boulder, CO 80303

Phone: 303-748-0627

Email: daniel.e.gustavson@vumc.org

EDUCATION

- 2016 Ph.D. in Cognitive Psychology, with Graduate Certificate in Behavioral Genetics & Graduate Certificate in Quantitative Methods for Behavioral Sciences, University of Colorado Boulder, Department of Psychology and Neuroscience
- 2013 M.A. in Cognitive Psychology, University of Colorado Boulder, Department of Psychology and Neuroscience
- 2011 B.A. in Psychology, University of Colorado Boulder, Department of Psychology and Neuroscience

Dissertation: Gustavson, D. E. (2016). *Investigating the cognitive underpinnings of procrastination: An intervention study and a longitudinal analysis* (Doctoral dissertation). https://scholar.colorado.edu/psyc_gradetds/100

EMPLOYMENT

- 2022 – present **Assistant Research Professor.** Institute for Behavioral Genetics, University of Colorado Boulder
- 2021 – 2022 **Research Assistant Professor.** Department of Medicine, Division of Genetic Medicine, Vanderbilt University Medical Center.
- 2020 – 2021 **Research Instructor.** Department of Medicine, Division of Genetic Medicine, Vanderbilt University Medical Center.
- 2019 **Staff Scientist.** Department of Otolaryngology, Vanderbilt University Medical Center.
- 2016 – 2019 **Postdoctoral Scholar.** Department of Psychiatry, University of California, San Diego. Advisor: William Kremen

- 2016 **Postdoctoral Research Associate.** Institute for Behavioral Genetics, University of Colorado Boulder. Advisors: Naomi Friedman, Scott Vrieze
- 2010 – 2016 **Graduate Research Assistant and Teaching Assistant.** Department of Psychology & Neuroscience and Institute for Behavioral Genetics, University of Colorado Boulder. Advisors: Akira Miyake, Naomi Friedman
- 2009 – 2010 **Undergraduate Research Assistant and Teaching Assistant.** Department of Psychology & Neuroscience, University of Colorado Boulder. Advisor: Akira Miyake

PUBLICATIONS

Peer-Refereed Journal Articles:

(Journal impact factors retrieved from Google search in August 2021 or when published)
Mean Journal Impact Factor: 5.3 // Median Journal Impact Factor: 4.5

61. **Gustavson, D. E.***, Coleman, P. L.* , Wang, Y., Nitin, R., Petty, L. E., Bush, C. T., Mosing, M. A., Wesseldijk, L. W., Ullén, F., Below, J. E., Cox, N. J., & Gordon, R. L. (2023). Exploring the genetics of rhythmic perception and musical engagement in the Vanderbilt Online Musicality Study, *Annals of the New York Academy of Sciences*. <https://doi.org/10.1111/nyas.14964> NIHMSID: 1865623.
* Authors Gustavson & Coleman made equal contributions to the manuscript.
Journal impact factor: 5.2
60. **Gustavson, D. E.**, Nayak, S., Coleman, P. L., Iversen, J. R., Lense, M. D., Gordon, R. L., & Maes, H. H. (2023). Heritability of childhood music engagement and associations with language and executive function: Insights from the Adolescent Brain Cognitive Development (ABCD) study. *Behavior Genetics*, <https://doi.org/10.1007/s10519-023-10135-0>. NIHMSID: 1873238
Journal impact factor: 2.04
59. **Gustavson, D. E.**, Archer, D. B., Elman, J. A., Fennema-Notestine, C., Hagler, D. J., Panizzon, M. S., Shashikumar, N., Hohman, T. J., Jefferson, A. L., Lyons, M. J., Franz, C. E., & Kremen, W. S. (2023). Associations among executive function abilities, free water, and white matter microstructure in early old age, *NeuroImage: Clinical*, 37, 103279. <https://doi.org/10.1016/j.nicl.2022.103279>
Journal impact factor: 4.4
58. **Gustavson, D. E.**, Reynolds, C. A., Hohman, T. J., Jefferson, A. L., Elman, J. A., Panizzon, M. S., Neale, M. C., Logue, M. W., Lyons, M. J. Franz, C. E., & Kremen, W. S. (2023). Alzheimer’s disease polygenic scores predict changes in episodic memory and executive function across 12 years in late middle age. *Journal of the International Neuropsychological Association*, 29, 136-147.
<https://dx.doi.org/10.1017/S1355617722000108> PMID: PMC9392810.

Journal impact factor: 3.1

57. Bell, T. R., Elman, J. A., Beck, A., Fennema-Notestine, C., Franz, C. E., **Gustavson, D. E.**, Hagler, D., Jak, A. J., Lyons, M. J., Puckett, O. K., Toomey, R., & Kremen, W. S. (*in press*). Rostral-middle locus coeruleus integrity and subjective cognitive decline in early old age. *Journal of the International Neuropsychological Association*.

Journal impact factor: 3.1

56. Nitin, R., **Gustavson, D. E.**, Aaron, A., Boorom, O., Bush, C. T., Wiens, N., Vaughan, C., Persici, V., Blain, S. D., Soman, U., Hambrick, D.Z., Camarata, S.M., McAuley, J.D., Gordon, R.L. (2023). Exploring individual differences in musical rhythm and grammar skills in typically developing school-aged children. *Scientific Reports* 13, 2201.

<https://doi.org/10.1038/s41598-022-21902-0>

Journal impact factor: 5.0

55. **Gustavson, D. E.**, Reynolds, C. A., Corley, R. A., Wadsworth, S. J., Hewitt, J. K., & Friedman, N. P. (2022). Genetic associations between executive functions and intelligence: A combined twin and adoption study. *Journal of Experimental Psychology: General*, 151, 1745-1761. <http://doi.org/10.1037/xge0001168>. PMID: PMC9256856.

Journal impact factor: 4.9

54. Friedman, N. P. & **Gustavson D. E.** (2022). Do rating and task measures of control abilities assess the same thing? *Current Directions in Psychological Science*, 31, 262-271.

<https://doi.org/10.1177/09637214221091824>. PMID: PMC9347699

Journal impact factor: 4.7

53. Niarchou, M., **Gustavson, D. E.**, Sathirapongsasuti, J., F., Anglada-Tort, M., Eising, E., Bell, E., McArthur, E., Straub, P., the 23andMe Research Team, McAuley, J. D., Capra, J. A., Ullén, F., Creanza, N., Mosing, M. A., Hinds, D., Davis, L., K., Jacoby, N., & Gordon, R. L. (2022). Genome-wide association study of musical beat synchronization demonstrates high polygenicity. *Nature Human Behavior* <https://doi.org/10.1038/s41562-022-01359-x> PMID: 35710621

Journal impact factor: 13.7

52. Nayak, S., Coleman, P., Nitin, R., Ladanyi, E., **Gustavson, D. E.**, Magne, C., & Gordon, R. L. (2022). The musical abilities, pleiotropy, language, and environment (MAPLE) framework for understanding musicality-language links across the lifespan, *Neurobiology of Language*, 3, 615-664. https://doi.org/10.1162/nol_a_00079

Journal impact factor: 2.5

51. Ladányi, E., Novakovic, M., Boorom, O., Aaron, A., Scartozzi, A. C., **Gustavson, D. E.**, Nitin, R., Bamikole, P., Vaughan, C., Fromboluti, E. K., Schuele, C. M., Camarata, S. M., McAuley, J. D., & Gordon, R. L. (2022). Using motor tempi to understand rhythm and grammatical skills in developmental language disorder and typical language development. *Neurobiology of Language*, 1-60. https://doi.org/10.1162/nol_a_00082

Journal impact factor: 2.5

50. Mallard, T. T., Savage, J. E., Johnson, E. C., Huang, Y., Edwards, A. C., Hottenga, J. J., Grotzinger, A. D., **Gustavson, D. E.**, Jennings, M. V., Anokhin, A., Dick, D. M., Edenberg, H. J., Kramer, J. R., Lai, D., Meyers, J. L., Pandey, A. K., Harden, K. P., Nivard, M. G., de Geus, E. J. C., Boomsma, D. I., Agrawal, A., Davis, L. K., Clarke, T., Palmer, A. A., & Sanchez-Roige, S. (2022). Item-level genome-wide association study of the Alcohol Use Disorder Identification Test in three population-based cohorts. *American Journal of Psychiatry*, *179*, 58-70. <https://doi.org/10.1176/appi.ajp.2020.20091390>. PMID: 33985350.
Journal impact factor: 18.11
49. Nayak, S., **Gustavson, D. E.**, Wang, Y., Below, J. E., Gordon, R. L., & Magne, C. L. (2022). Test of Prosody via Syllable Emphasis (“TOPsy”): Psychometric validation of a brief scalable test of lexical stress perception. *Frontiers in Neuroscience*, *16*, 10. <https://doi.org/10.3389/fnins.2022.765945>. PMCID: PMC8864136.
Journal impact factor: 3.57
48. Sanderson-Cimino, M., Elman, J. A., Tu, X., Gross, A. L., Panizzon, M. S., **Gustavson, D. E.**, Bondi, M. W., Edmonds, E. C., Eppig, J. S., Franz, C. E., Jack, A. J., Lyons, M. J., Thomas, K. R., Williams, M. E., & Kremen, W. S. (2022). Practice effects in mild cognitive impairment increase reversion rates and delay detection of new impairments. *Frontiers in Aging Neuroscience*, *25*. <https://doi.org/10.3389/fnagi.2022.847315>
Journal Impact Factor: 4.50
47. Eglit, G., Elman, J. A., Panizzon, M. S., Sanderson-Cimino, M., Williams, M. E., Dale, A. M., Eyler, L. T., Fennema-Notestine, C., Gillespie, N. A., **Gustavson, D. E.**, Hatton, S. N., Hagler, D. J., Hauger, R. L., Jak, A. J., Logue, M. W., McEvoy, L. K., McKenzie, R. E., Neale, M. C., Puckett, O., Reynolds, C. A., Toomey, R., Tu, X., M., Whitsel, N., Xian, H., Lyons, M. L., Franz, C. E., Kremen, W. S. (2022). Paradoxical cognitive trajectories in men from earlier to later adulthood. *Neurobiology of Aging*, *109*, 229-238. <https://doi.org/10.1016/j.neurobiolaging.2021.10.002>. PMCID: PMC8715388.
Journal impact factor: 4.40
46. Sanderson-Cimino, M., Elman, J. A., Tu, X., Gross, A. L., Panizzon, M. S., **Gustavson, D. E.**, Bondi, M., Edmonds, E., Eglit, G., Eppig, J. S., Franz, C. E., Jak, A. J., Lyons, M. J., Thomas, K. R., Williams, M. E., & Kremen, W. S. (2022). Cognitive practice effects delay diagnosis of MCI: Implications for clinical trials. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, *8*, e12228. <https://doi.org/10.1002/trc2.12228>. PMCID: PMC7654904.
Journal impact factor: NA
45. Whitsel, N., Reynolds, C. A., Buchholz, E., Pahlen, S., Pierce, R. C., Hatton, S., Elman, J. A., Gillespie, N. A., **Gustavson, D. E.**, Puckett, O. K., Dale, A. M., Eyler, L. T., Fennema-Notestine, C., Hagler, D. J., Hauger, R. L., McEvoy, L., McKenzie, R., Neale, M. C., Panizzon, M. S., Sanderson-Cimino, M., Toomey, R., Tu, X. M., Williams, M., Bell, T., Xian, H., Lyons, M. J., Kremen, W. S., & Franz, C. E.. (2022). Long-term associations of

- cigarette smoking in early midlife with predicted brain aging from midlife to late life. *Addiction*, 117, 1049-1059. <https://doi.org/10.1111/add.15710>. PMID: PMC8904283.
Journal impact factor: 6.34
44. **Gustavson, D. E.**, Jak, A. J., Elman, J. A., Panizzon, M. S., Franz, C. E., Gifford, K. A., Reynolds, C. A., Toomey, R., Lyons, M. J., & Kremen, W. S. (2021). How well does subjective cognitive decline correspond to objectively measured cognitive decline? Assessment of 10-12 year change. *Journal of Alzheimer's Disease*, 83, 291-304. <https://doi.org/10.3233/JAD-210123>. PMID: PMC8482061.
Journal impact factor: 4.47
43. **Gustavson, D. E.**, Friedman, N. P., Stallings, M. C., Reynolds, C. A., Coon, H., Hewitt, J. K., Wadsworth, S., & Gordon, R. G. (2021). Musical instrument engagement in adolescence predicts verbal ability 4 years later: A twin and adoption study. *Developmental Psychology*, 57, 1943-1957. <https://doi.org/10.1037/dev0001245>. PMID: PMC8842509.
Journal impact factor: 2.93
42. **Gustavson, D. E.**, Coleman, P. L., Iversen, J. R., Maes, H. H., Gordon, R. L., & Lense, M. (2021). Mental health and music engagement: Review, framework, and guidelines for future studies. *Translational Psychiatry*, 11, 370. <https://doi.org/10.1038/s41398-021-01483-8>. PMID: PMC8257764.
Journal impact factor: 5.18
41. **Gustavson, D. E.**, Panizzon, M. S., Kremen, W. S., Reynolds, C. A., Nygaard, M., Wod, M., Catts, V. S., Lee, T., Gatz, M., & Franz, C. E. (2021). Genetic and environmental influences on semantic verbal fluency across midlife and later life. *Behavior Genetics*, 51, 99-109. <https://doi.org/10.1007/s10519-021-10048-w>. PMID: PMC7933104.
Journal impact factor: 2.04
40. Sanderson-Cimino, M., Panizzon, M. S., Elman, J. A., Tu, X., **Gustavson, D. E.**, Puckett, O., Cross, K., Notestine, R., Hatton, S. N., Eyler, L. T., McEvoy, L. K., Hagler, D. J., Neale, M. C., Gillespie, N. A., Lyons, M. J., Franz, C. E., Fennema-Notestine, C., & Kremen, W. S. (2021). Periventricular and deep abnormal white matter differ in associations with cognitive performance at midlife. *Neuropsychology*, 35, 252-264. <https://doi.org/10.1037/neu0000718>. PMID: PMC8500190.
Journal impact factor: 2.48
39. Elman, J. A., Puckett, O. K., Beck, A., Fennema-Notestine, C., Cross, L. K., Dale, A. M., Eglit, G. M. L., Eyler, L. T., Gillespie, N. A., Granholm, E. L., **Gustavson, D. E.**, Hagler, D. J., Hatton, S. N., Hauger, R., Jak, A. J., Logue, M. W., McEvoy, L. K., McKenzie, R. E., Neale, M. C., Panizzon, M. S., Reynolds, C. A., Sanderson-Cimino, M., Toomey, R., Tu, X., Nathan, W., McKenna, E. W., Xian, H., Lyons, M. J., Franz, C. E., & Kremen, W. S. (2021). MRI-Assessed locus coeruleus integrity is heritable and associated with multiple cognitive domains, mild cognitive impairment, and daytime dysfunction,

Alzheimer's & Dementia, 17, 1017-2025. <https://doi.org/10.1002/alz.12261>. PMID: PMC8248066.

Journal impact factor: 21.57

38. Ditmars, H. L., Logue, M. W., Toomey, R., McKenzie, R. E., Franz, C. E., Panizzon, M. S., Reynolds, C. A., Cuthbert, K. N., Vandiver, R., **Gustavson, D. E.**, Eglit, G. M. L., Elman, J. A., Sanderson-Cimino, M., Williams, M. E., Andreassen, O. A., Dale, A. M., Eyler, L. T., Fennema-Notestine, C., Gillespie, N. A., Hauger, R. L., Jak, A. J., Neale, M. C., Tu, X., Whitsel, N. Xian, H., Kremen, W. S., Lyons, M. J. (2021). Associations between depression and cardiometabolic health: A 27-Year Longitudinal Study.

Psychological Medicine, 1-11. <https://doi.org/10.1017/S003329172000505X>. PMID: PMC8547283.

Journal impact factor: 5.81

37. **Gustavson, D. E.**, Friedman, N. P., Fontanillas, P., Elson, S. L., 23andMe Research Team, Palmer, A., & Sanchez-Roige, S. (2020). The latent genetic structure of impulsivity and its relation to internalizing psychopathology. *Psychological Science*, 31, 1025-1035.

<https://doi.org/10.1177/0956797620938160>. PMID: PMC7427138.

Journal impact factor: 4.90

36. **Gustavson, D. E.**, Elman, J. A., Panizzon, M. S., Franz, C. E., Zuber, J., Reynolds, C. A., Jacobson, K. C., Xian, H., Toomey, R., Lyons, M. J., & Kremen, W. S. (2020). Association of baseline semantic fluency and progression to mild cognitive impairment. *Neurology*, 95, e973-e983. <https://doi.org/10.1212/WNL.000000000010130>. PMID: PMC7668546.

Journal impact factor: 8.06

35. **Gustavson, D. E.**, Elman, J. A., Sanderson-Cimino, M., Franz, C. E., Panizzon, M. S., Jak, A. J., Reynolds, C. A., Neale, M. C., Lyons, M. J., & Kremen, W. S. (2020). Extensive memory testing improves prediction of progression to MCI in late middle age.

Alzheimer's & Dementia: Diagnosis, Assessment, & Disease Monitoring, 12, e12004.

<https://doi.org/10.1002/dad2.12004>. PMID: PMC7148418.

Journal impact factor: 4.79

34. **Gustavson, D. E.**, Lurquin, J. H., Michaelson, L. E., Barker, J. E., Carruth, N. P., von Bastian, C. C., & Miyake, A. (2020). Lower general executive function is primarily associated with trait worry: A latent variable analysis of negative thought/affect measures. *Emotion*, 20, 557-571. <https://doi.org/10.1037/emo0000584>. PMID: PMC6713624.

Journal impact factor: 3.04

33. Stevens, S. M., **Gustavson, D. E.**, Fang, B., Tu, X., Logue, M., Lyons, M. J., Reynolds, C. A., Kremen, W. S., & Franz, C. E. (2020). Predicting health-related quality of life in trauma-exposed men in late midlife: A 20-year longitudinal study. *International Journal of Environmental Research and Public Health*, 17, 4554.

<https://doi.org/10.3390/ijerph17124554>. PMID: PMC7345107.

Journal impact factor: 2.85

32. Walters, C. E., Nitin, R., Margulis, K., Boorom, O., **Gustavson, D. E.**, Bush, C. T., Davis, L. K., Below, J. E., Cox, N. J., Camarata, S. M., & Gordon, R. L. (2020). APT-DLD: A new phenotyping algorithm for identifying cases of developmental language disorder in large-scale electronic health record systems. *Journal of Speech, Language and Hearing Research, 63*, 3019-3035. https://doi.org/10.1044/2020_JSLHR-19-00397. PMID: PMC7890229.

Journal impact factor: 1.91

31. Xian, H., Boutwell, B., Reynolds, C. A., Lew, D., Logue, M., **Gustavson, D. E.**, Kavish, N., Panizzon, M. S., Tu, X., Toomey, R., Puckett, O., Elman, J. A., Jacobson, K. C., Lyons, M. J., Kremen, W. S., & Franz, C. E. (2020). Genetic underpinnings of increased BMI and its association with late midlife cognitive abilities. *Journal of Gerontology and Geriatric Medicine, 6*, 1-11. <https://doi.org/10.1177/2333721420925267>. PMID: PMC7268925.

Journal impact factor: NA

30. Slayday, R., **Gustavson, D. E.**, Elman, J. A., Beck, A., McEvoy, L., Tu, X., Fang, B., Hauger, R., Lyons, M., McKenzie, R., Sanderson-Cimino, M., Xian, H., Kremen, W. S., & Franz, C. E. (2020). Interaction between alcohol consumption and apolipoprotein E (ApoE) genotype with cognition in middle-age men. *Journal of the International Neuropsychological Society*. <https://doi.org/10.1017/S1355617720000570>. PMID: PMC7856052.

Journal impact factor: 3.10

29. Elman, J. A., Panizzon, M. S., **Gustavson, D. E.**, Franz, C. E., Sanderson-Cimino, M. E., Lyons, M. J., & Kremen, W. S. (2020). A β -positivity predicts cognitive decline but cognition predicts progression to A β -positivity. *Biological Psychiatry, 87*, 819-828. <https://doi.org/10.1016/j.biopsych.2019.12.021> PMID: PMC7166153.

Journal impact factor: 12.10

28. Friedman, N. P., Hatoum, A. S., **Gustavson, D. E.**, Corley, R. P., Hewitt, J. K., & Young, S. E. (2020). Executive functions and impulsivity are genetically distinct and independently predict psychopathology: Results from two adult twin studies. *Clinical Psychological Science, 8*, 519-538. <http://doi.org/10.1177/2167702619898814>. PMID: PMC7983400.

Journal impact factor: 4.58

27. **Gustavson, D. E.**, Franz, C. E., Panizzon, M. S., Lyons, M. J., & Kremen, W. S. (2019). Internalizing and externalizing psychopathology in middle age: Genetic and environmental architecture and stability of symptoms over 15 to 20 years. *Psychological Medicine, 1-9*. <http://doi.org/10.1017/S0033291719001533> PMID: PMC6938573.

Journal impact factor: 5.81

26. **Gustavson, D. E.**, Panizzon, M. S., Franz, C. E., Reynolds, C. A., Corley, R. P., Hewitt, J. K., Lyons, M. J., Kremen, W. S., & Friedman, N. P. (2019). Integrating verbal fluency

with executive functions: Evidence from twin studies in adolescence and middle age. *Journal of Experimental Psychology: General*, 148, 2104-2119. <http://dx.doi.org/10.1037/xge0000589> PMID: PMC6754807. *Journal impact factor: 4.91*

25. **Gustavson, D. E.**, Franz, C. E., Kremen, W. S., Carver, C. S., Corley, R. P., Hewitt, J. K. & Friedman, N. P. (2019). Common genetic influences on impulsivity facets are related to goal management, psychopathology, and personality. *Journal of Research in Personality*, 79, 161-175. <https://doi.org/10.1016/j.jrp.2019.03.009> PMID: PMC6857631. *Journal impact factor: 2.57*
24. **Gustavson, D. E.**, Franz, C. E., Panizzon, M. S., Reynolds, C. A., Xian, H., Toomey, R., Lyons, M. J., & Kremen, W. S. (2019). Genetic and environmental associations between executive functions, trait anxiety, and depression symptoms in middle age. *Clinical Psychological Science*, 7, 127-142. <https://doi.org/10.1177/2167702618805075>. PMID: PMC6433407. *Journal impact factor: 4.58*
23. **Gustavson, D. E.**, Hatton, S. N., Elman, J. A., Panizzon, M. S., Franz, C. E., Hagler, D. J., Fennema-Notestine, C., Eyler, L., McEvoy, L., Neale, M. C., Gillespie, N., Dale, A. M., Lyons, M. J., & Kremen, W. S. (2019). Predominantly global genetic influences on individual white matter tract microstructure. *Neuroimage*, 184, 871-880. <http://doi.org/10.1016/j.neuroimage.2018.10.016>. PMID: PMC6289256. *Journal impact factor: 5.90*
22. Kremen, W. S., Panizzon, M. S., Elman, J. A., Granholm, E. L., Andreassen, O. A., Dale, A. M., Gillespie, N. A., **Gustavson, D. E.**, Logue, M. W., Lyons, M. J., Neale, M. C., Reynolds, C. A., Whitsel, N., & Franz, C. E. (2019). Pupillary dilation responses as a midlife indicator of risk for Alzheimer's disease: Association with Alzheimer's disease polygenic risk. *Neurobiology of Aging*, 83, 114-121. <https://doi.org/10.1016/j.neurobiolaging.2019.09.001>. PMID: PMC6931134. *Journal impact factor: 4.40*
21. Elman, J. A., Panizzon, M. S., Logue, M. W., Gillespie, N. A., Neale, M. C., Reynolds, C. A., **Gustavson, D. E.**, Rana, B. K., Andreassen, O. A., Dale, A. M., Franz, C. E., Lyons, M. J., & Kremen, W. S. (2019). Genetic risk for coronary heart disease alters the influence of Alzheimer's genetic risk on mild cognitive impairment, *Neurobiology of Aging*, 237.e5-237.e12. <https://doi.org/10.1016/j.neurobiolaging.2019.06.001>. PMID: PMC6899214. *Journal impact factor: 4.40*
20. Eyler, T. L., Elman, J. A., Hatton, S. N., Gough, S., Mischel, A. K., Hagler, D., J., Franz, C. E., Docherty, A., Fennema-Notestine, C., Gillespie, N., **Gustavson, D. E.**, Lyons, M. J., Neale, M. C., Panizzon, M. S., Dale, A. M., Kremen, W. S. (2019). Resting state abnormalities of the default mode network in mild cognitive impairment: A systematic

review and meta-analysis. *Journal of Alzheimer's Disease*, 70, 107-120
<https://doi.org/10.3233/JAD-180847>. PMID: PMC6697380.
Journal impact factor: 4.47

19. Kremen, W. S., Beck, A., Elman, J. A., **Gustavson, D. E.**, Tu, X. M., Sanderson-Cimino, M. E., Panizzon, M. S., Vuoksima, E., Toomey, R., Fennema-Notestine, C., Hagler, D. J., Dale, A. M., Lyons, M. J., & Franz, C. E. (2019). Influence of young adult cognitive ability and additional education on later life cognition. *Proceeding of the National Academy of Sciences*, 116, 2021-2026. <https://doi.org/10.1073/pnas.1811537116>. PMID: PMC6369818.
Journal impact factor: 9.41
18. Logue, M. W., Panizzon, M. S., Elman, J. A., Gillespie, N. A., Hatton, S., **Gustavson, D. E.**, Andreassen, O. A., Dale, A. M., Franz, C. E., Lyons, M. J., Neale, M. C., Reynolds, C. A., Tu, X., & Kremen, W. S. (2019). Use of an Alzheimer's disease polygenic risk score to identify mild cognitive impairment in adults in their 50s. *Molecular Psychiatry*, 24, 421-430. <https://doi.org/10.1038/s41380-018-0030-8>. PMID: PMC6110977.
Journal impact factor: 12.38
17. Sanderson-Cimino, M., Panizzon, M. S., Elman, J. A., **Gustavson, D. E.**, Franz, C. E., Reynolds, C. A., Toomey, R., Lyons, M. J., & Kremen, W. S. (2019). Genetic and environmental architecture of processing speed across midlife. *Neuropsychology*, 33, 862-871. <http://doi.org/10.1037/neu0000551>. PMID: PMC6710143.
Journal impact factor: 2.48
16. Franz, C. E., Hatton, S. N., Hauger, R. L., Kredlow, M. A., Eyler, L., McEvoy, L. K., Fennema-Notestine, C., Hagler, D. J., Jacobson, K. C., McKenzie, R. E., Panizzon, M. S., **Gustavson, D. E.**, Xian, H., Toomey, R., Beck, A., Stevens, S., Tu, X., Lyons, M. L., & Kremen, W. S. (2019). Posttraumatic stress symptom persistence across 24 years: Association with brain structures. *Brain Imaging and Behavior*, 1-13. <https://doi.org/10.1007/s11682-019-00059-x>. PMID: PMC6722032.
Journal impact factor: 3.39
15. **Gustavson, D. E.**, Panizzon, M. S., Elman, J. A., Franz, C. E., Beck, A., Reynolds, C. A., Jacobson, K. C., Xian, H., Toomey, R., Lyons, M. J., & Kremen, W. S. (2018). Genetic and environmental influences on verbal fluency in middle age: A longitudinal twin study. *Behavior Genetics*, 48, 361-373. <https://doi.org/10.1007/s10519-018-9910-6>. PMID: PMC29922985.
Journal impact factor: 2.04
14. **Gustavson, D. E.**, du Pont, A., Whisman, M. A., & Miyake, A. (2018). Evidence for transdiagnostic repetitive negative thinking and its association with rumination, worry, and depression and anxiety symptoms: A commonality analysis. *Collabra*, 4, 1-18 <https://doi.org/10.1525/collabra.128>. PMID: PMC6370308.
Journal impact factor: 3.65

13. **Gustavson, D. E.**, Panizzon, M. S., Elman, J. A., Franz, C. E., Reynolds, C. A., Jacobson, K. C., Friedman, N. P., Xian, H., Lyons, M. J., & Kremen, W. S. (2018). Stability of genetic and environmental influences on executive functions in midlife. *Psychology and Aging*, *33*, 219-231. <https://doi.org/10.1037/pag0000230>. PMID: PMC5905725.
Journal impact factor: 2.36
12. **Gustavson, D. E.**, Panizzon, M. S., Franz, C. E., Friedman, N. P., Reynolds, C. A., Jacobson, K. C., Xian, H., Lyons, M. J., & Kremen, W. S. (2018). Genetic and environmental architecture of executive functions in midlife, *Neuropsychology*, *32*, 18-30.
<https://doi.org/10.1037/neu0000389>. PMID: PMC5814340.
Journal impact factor: 2.48
11. Davies, G., Lam, M., Harris, S. E., ... **Gustavson, D. E.**, ... Lencz, T., & Deary, I. J. (2018). Study of 300,486 individuals identified 148 independent genetic loci influencing general cognitive function. *Nature Communications*, *9*, 1-16. <https://doi.org/10.1038/s41467-018-04362-x>. PMID: PMC5974083.
Journal impact factor: 12.12
10. Reineberg, A. D., **Gustavson, D. E.**, Benca, C., Banich, M. T., & Friedman, N. P. (2018). The relationship between resting state network connectivity and individual differences in executive functions. *Frontiers in Psychology*, *9*, 1600.
<https://doi.org/10.3389/fpsyg.2018.01600>. PMID: PMC6134071.
Journal impact factor: 2.07
9. Elman, J. A., Jak, A. J., Panizzon, M. S., Tu, X., Chen, T., Reynolds, C. A., **Gustavson, D. E.**, Franz, C. E., Hatton, S. N., Jacobson, K. C., Toomey, R., McKenzie, R., Xian, H., Lyons, M. J., & Kremen, W. S. (2018). Underdiagnosis of mild cognitive impairment: A consequence of ignoring practice effects. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, *10*, 372-381.
<https://doi.org/10.1016/j.dadm.2018.04.003>. PMID: PMC6039708.
Journal impact factor: 4.79
8. **Gustavson, D. E.**, du Pont, A., Hatoum, A. S., Rhee, S. H., Kremen, W. S., Hewitt, J. K., & Friedman, N. P. (2017). Genetic and environmental associations between procrastination and internalizing/externalizing psychopathology, *Clinical Psychological Science*, *5*, 798-815. <https://doi.org/10.1177/2167702617706084>. PMID: PMC5831260.
Journal impact factor: 4.58
7. **Gustavson, D. E.**, Stallings, M. C., Corley, R. P., Miyake, A., Hewitt, J. K., & Friedman, N. P. (2017). Executive functions and substance use: Relations in late adolescence and early adulthood. *Journal of Abnormal Psychology*, *126*, 257-270.
<https://doi.org/10.1037/abn0000250>. PMID: PMC5305429.
Journal impact factor: 6.48
6. **Gustavson, D. E.**, & Miyake, A. (2017). Academic procrastination and goal accomplishment: A combined experimental and individual differences investigation. *Learning and*

Individual Differences, 54, 160-172. <https://doi.org/10.1016/j.lindif.2017.01.010>.
PMCID: PMC5608091.
Journal impact factor: 1.42

5. **Gustavson, D. E.**, Altamirano, L., Johnson, D., Miyake, A., & Whisman, M. A. (2017) Is set shifting really impaired in trait anxiety? Only when switching away from an effortfully established task set. *Emotion*, 17, 88-101. <https://doi.org/10.1037/emo0000212>. PMCID: PMC5243939.
Journal impact factor: 3.04
4. **Gustavson, D. E.**, & Miyake, A. (2016). Trait worry is associated with difficulties in working memory updating. *Cognition and Emotion*, 30, 1289-1303.
<https://doi.org/10.1080/02699931.2015.1060194>. PMCID: PMC6118341.
Journal impact factor: 2.56
3. Lurquin, J. H., Michaelson, L. E., Barker, J. E., **Gustavson, D. E.**, von Bastian, C. C., Carruth, N. P., & Miyake, A. (2016). No evidence of the ego-depletion effect across task characteristics and individual differences: A pre-registered study. *PloS one*, 11, e0147770. <https://doi.org/10.1371/journal.pone.0147770>. PMCID: PMC4749338.
Journal impact factor: 2.74
2. **Gustavson, D. E.**, Miyake, A., Hewitt, J. K., & Friedman, N. P. (2015). Understanding the cognitive and genetic underpinnings of procrastination: Evidence for shared genetic influences with goal management and executive function abilities. *Journal of Experimental Psychology: General*, 144, 1063-1079.
<https://doi.org/10.1037/xge0000110>. PMCID: PMC4658242.
Journal impact factor: 4.91
1. **Gustavson, D. E.**, Miyake, A., Hewitt, J. K., & Friedman, N. P. (2014). Genetic relations among procrastination, impulsivity, and goal-management ability: Implications for the evolutionary origin of procrastination. *Psychological Science*, 25, 1178-1188.
<https://doi.org/10.1177/0956797614526260>. PMCID: PMC4185275.
Journal impact factor: 4.90

Publications Under Review:

Gustavson, D. E., Morrison, C., Mallard, T., T., Fontanillas, P., Elson, S. L., Friedman, N. P., Palmer, A. A., & Sanchez-Roige, S. (*submitted*). Executive function and impulsivity predict distinct genetic variance in externalizing, internalizing, thought disorders, and cognition: A genomic structure equation modeling investigation

Bell, T. R., Beck, A., Gillespie, N., Reynolds, C., Williams, M. E., **Gustavson, D. E.**, Lyons, M. J., Kremen, W. S., & Franz, C. E. (*revise and resubmit*). Implications of a trait-related dimension of subjective memory concern: A 30-Year behavioral genetic study. *JAMA Psychiatry*.

Franz, C. E., **Gustavson, D. E.**, Elman, J. A., Fennema-Notestine, C., Hagler, D. J., Baraff, A., Tu, X., Wu, T., DeAnda, J., Beck, A., Kaufmann, J., Whitsel, N., Finch, C. E., Chen, J., & Kremen, W. S. (*revise and resubmit*). Associations between ambient air pollution and cognitive abilities from midlife to early old age: Modification by APOE genotype. *Journal of Alzheimer's Disease*.

Tang, R., Elman, J. A., Dale, A. M., Dorros, S. M., Eyler, L. T., Fennema-Notestine, C., **Gustavson, D. E.**, Hagler, D. J., Lyons, M. J., Panizzon, M. S., Puckett, O. K., Reynolds, C. A., Franz, C. E., & Kremen, W. S. (*revise and resubmit*). Childhood disadvantage moderates late midlife default mode network cortical microstructure and visuo-spatial memory association.

Morey, R. A., Zheng, Y., Sun, D., Garrett, M. E., Gasperi, M., Maihofer, A. X., Baird, L., Grasby, K. L., Huggins, A., Haswell, C. C., Thompson, C. P. M., Medland, S., **Gustavson, D. E.**, Panizzon, M. S., Kremen, W. S., Nievergelt, C. M., Ashley-Koch, A. E., & Logue, M. W. (*revise and resubmit*). Genomic structural equation modeling reveals latent phenotypes in the human cortex with distinct genetic architecture. Preprint: <https://www.biorxiv.org/content/10.1101/2022.11.04.515213v1>

Selected Publications in Preparation:

Gustavson, D. E., Stern, E. F., Reynolds, C. A., Corley, R. P., Wadsworth, S. J., Rhee, S. H., & Friedman, N. P. (*in preparation*). Examining relations among diagnosis versus self-reported ratings of internalizing traits using both genomic and twin/adoptive approaches.

Gustavson, D. E., Bell, T., Buchholz, E., Luczak, S. E., Reynolds, C. A., McGue, M., Nygaard, M., Kremen, W. S., & Franz, C. E. for the IGEMS Consortium (*in preparation*). Genetic and environmental influences on alcohol consumption in middle to late life.

Gustavson, D. E., Elman, J. A., Reynolds, C. A., Eyler, L. T., Fennema-Notestine, C., Gillespie, N. A., Neale, M. C., Panizzon, M. S., Lyons, M. J., Franz, C. E., & Kremen, W. S. (*in preparation*). Predicted brain age difference scores at age 56 are associated with executive function changes across 12 years.

von Bastian, C. C., Blais, C., Brewer, G. A., Gyurkovics, M., Hedge, C., Kalamala, P., Meier, M. E., Oberauer, K., Rey-Mermet, A., Roudier, J. N., Souza, A. S., Bartsch, L. M., Conway, A. R. A., Draheim, C., Engle, R. W., Friedman, N. P., **Gustavson, D. E.**, Koch, I., Redick, T. S., Smeekens, B. A., Whitehead, P. S., Wiemers, E. A. (*in preparation*). Advancing the understanding of individual differences in attentional control: Theoretical, methodological, and analytical considerations.

AWARDS AND HONORS

- 2016 Dosier/Muenzinger Award for Basic Research: Department of Psychology & Neuroscience, University of Colorado Boulder
- 2014 The Lindon Eaves Award for Best Student Poster (Presented at the International Workshop on Statistical Genetic Methods for Human Complex Traits)
- 2010 Summa Cum Laude Honors, B.A. in Psychology, University of Colorado Boulder

GRANTS AND FELLOWSHIPS

- 2020-present *The Role of Executive Functions in Cognitive Aging and Risk for Mild Cognitive Impairment* (R03 AG065643). Vanderbilt University Medical Center. Role: Principal Investigator
- 2018-2019 *SES Health Gradients in Late Life: Testing Models of Gene-Environment Interplay in an International Twin Consortium* (R01 AG059329). University of California, San Diego. Role: Co-investigator
- 2016 Behavioral Genetics Association International Travel Award. \$500
- 2015 Behavioral Genetics Association Travel Award. \$100 + Conference Registration.
- 2015 Department of Psychology and Neuroscience Graduate Student Travel/Conference Grant (University of Colorado Boulder). \$400
- 2013 Department of Psychology and Neuroscience Graduate Student Travel/Conference Grant (University of Colorado Boulder). \$400
- 2012 Department of Psychology and Neuroscience Graduate Student Travel/Conference Grant (University of Colorado Boulder). \$400
- 2010 Undergraduate Research Opportunity Fund, University of Colorado Boulder. \$2400

PRESENTATIONS

Session chair

- 2022 *Substance Use* (June 2022). Behavior Genetics Association, Los Angeles, CA.
- 2019 *Neuropsychology: Novel Methods for Detecting Cognitive Change* (July 2019). Alzheimer's Association International Conference, Los Angeles, CA.

Papers presented at conferences

- 2023 **Gustavson, D. E.**, Elman, J. A., Reynolds, C. A., Eyler, L. T., Fennema-Notestine, C., Gillespie, N. A., Neale, M. C., Panizzon, M. S., Lyons, M. J., Franz, C. E., and Kremen, W. S. (*submitted*). Predicted brain age difference scores at age 56 are associated with executive function changes across 12 years. Presentation submitted for the Alzheimer's Association International Conference 2023
- 2023 **Gustavson, D. E.**, Stern, E. F., Reynolds, C. A., Corley, R. P., Wadsworth, S. J., Rhee, S. H., & Friedman, N. P. (*submitted*). Examining relations among diagnosis versus self-reported ratings of internalizing traits using both genomic and twin/adoptive approaches. Presentation submitted to Behavior Genetics Association Annual Conference 2023
- 2023 **Gustavson, D. E.**, Bell, T., Buchholz, E., Luczak, S. E., Reynolds, C. A., McGue, M., Nygaard, M., Kremen, W. S., & Franz, C. E. for the IGEMS Consortium (*submitted*). Genetic and environmental influences on alcohol consumption in middle to late life. Presentation submitted to Behavior Genetics Association Annual Conference 2023
- 2023 Liu, J.Z., Nayak, S., Wang, Y., **Gustavson, D.E.**, Lui, K.F.H., McBride, C., Below, J.E., Gordon, R.L., Magne, C.L. (May 2023) "Got Rhythm? Individual Differences in Musical Rhythm Discrimination Predict Variation in Silent Reading Fluency" Poster Presentation at the annual meeting for the Association for Psychological Science, *Washington, DC*.
- 2022 **Gustavson, D. E.**, Archer, D. B., Elman, J. A., Fennema-Notestine, C., Hagler, D. J., Panizzon, M. S., Shashikumar, N., Hohman, T. J., Jefferson, A. L., Lyons, M. J., Franz, C. E., & Kremen, W. S. (August 2022). Executive functions and episodic memory are associated with extracellular white matter microstructure in early old age. Poster presented at the Alzheimer's Association International Conference 2022.
- 2022 **Gustavson, D. E.**, Morrison, C., Mallard, T., T., Fontanillas, P., Elson, S. L., the 23andMe Research Team, Friedman, N. P., Palmer, A. A., & Sanchez-Roige, S. (June 2022). Executive function and impulsivity predict distinct genetic variance in externalizing, internalizing, thought disorders, and cognition: A genomic structure equation modeling investigation. Talk presented at the Behavior Genetics Association annual meeting 2022.
- 2022 **Gustavson, D. E.**,* Coleman, P. L.,* Wang, Y., Nitin, R., Petty, L. E., Bush, C. T., Mosing, M. A., Wesseldijk, L. W., Ullén, F., 23andMe Research Team, Below, J. E., Cox, N. J., & Gordon, R. L. (June 2022). Exploring the genetics of individual differences in rhythmic perception and musical engagement in the Vanderbilt Online Musicality Study. Talk presented by Peyton Coleman at the

Behavior Genetics Association annual meeting 2022. * indicates the authors contributed equally

- 2022 Coleman, P. L.*, Scartozzi, A. C.*, **Gustavson, D. E.**, Wang, Y., Nitin, R., Bush, C. T., Nayak, S., Below, J. E., Gordon, R. L. (August 2022). Multi-tissue transcriptome-wide association study identifies novel gene expression patterns for rhythmic perception and music engagement: Analysis and implications for cross-trait language and health associations. Talk presented by Peyton Coleman and Alyssa Scartozzi (co-first authors) at Society of Music Perception and Cognition 2022 Conference, Portland, Oregon.
- 2022 Nayak, S., **Gustavson, D. E.**, Anglada-Tort, M., Wang, Y., Bush, C., Liu, J.Z., Ladanyi, E., Bryan, K.M., Nitin, R., Ullen, F., Mosing, M., Magne C.L., Lui, K.F.H., McBride, C., Jacoby, N., & Gordon, R.L. (Aug 2022). Covariation between musical rhythm and speech-language and reading traits in the general population: converging evidence from five large adult cohorts. Talk presented by Srishti Nayak at the biennial meeting of the Society for Music Perception and Cognition. Portland, Oregon
- 2022 Nitin, R., **Gustavson, D. E.**, A. Aaron., Boorum, O. A., Bush, C. T., Wiens, N., Vaughan, C., Persici, V., Blain, S. D., Soman, U., Hambrick, D. Z., Camarata, S. M., McAuley, J. D., Gordon, R. L. (Aug 2022). Individual differences in rhythm and grammar in typically developing children. Talk presented by Rachana Nitin at the biennial meeting of the Society for Music Perception and Cognition. Portland, Oregon.
- 2022 Reynolds, C. A., Elman, J. A., **Gustavson, D. E.**, Panizzon, M. S., Lyons, M. J., Franz, C. E., & Kremen, W. S. (April 2022). Polygenic scores for educational attainment and Alzheimer's disease risk differentially predict visual spatial reasoning and visual memory across midlife. Poster presented at the Cognitive Aging Conference.
- 2021 **Gustavson, D. E.**, Reynolds, C. A., Corley, R. P., Wadsworth, S. J., Hewitt, J. K., & Friedman, N. P. (Nov 2021). Genetic associations between executive functions and intelligence: A combined twin and adoption study. Poster presented at the Psychonomic Society's 62nd Annual Meeting, 2021
- 2021 Nayak, S., **Gustavson, D. E.**, Wang, Y., Below, J. E., Gordon, R. L. & Magne, C. (June 2021). Validation of a novel speech rhythm perception test: Convergence with musical rhythm and language and reading difficulties. Poster presentation at the Rhythm Production and Perception Workshop, 2021
- 2021 **Gustavson, D. E.**, Hewitt, J. K., Friedman, N. P., & Gordon, R. L. (June 2021). Distinct genetic influences on engagement with musical instruments, singing, and dancing in early adolescence and their associations with vocabulary and executive

functions 5 years later. Talk presentation at Neurosciences and Music VII, Aarhus, Denmark, June 2021.

- 2021 **Gustavson, D. E.**, Reynolds, C. A., Hohman, T. J., Jefferson, A. L., Elman, J. A., Panizzon, M. S., Lyons, M. J., Franz, C. E., & Kremen, W. S (July 2021). Alzheimer's disease polygenic scores predict changes in executive function across 12 years in late middle age. Poster presented at the Alzheimer's Association International Conference.
- 2020 **Gustavson, D. E.**, Friedman, N. P., Reynolds, C. A., & Gordon, R. (October 2020). Distinct genetic influences on musical instrument, singing, and dance engagement in early adolescence and their associations with substance use behaviors. Poster presentation at the World Congress for Psychiatric Genetics, October, 2020.
- 2020 Mallard, T. T., Savage, J. E., Johnson, E. C., Huang, Y., **Gustavson, D. E.**, Jennings, M. V., Clarke, T., Palmer, A. A., & Sanchez-Roige, S. (October 2020). Multivariate GWAS elucidates the genetic architecture of alcohol consumption and misuse, corrects biases, and reveals novel associations with disease. Poster presentation at the World Congress for Psychiatric Genetics, October, 2020
- 2020 **Gustavson, D. E.**, Panizzon, M. S., Kremen, W. S., Reynolds, C. A., Pahlen, S., Nygaard, M., Wod, M., Catts, V. S., Lee, T., Gatz, M., & Franz, C. E. (July 2020). Genetic and environmental influences on semantic verbal fluency across midlife, *Alzheimer's & Dementia*, 16, e037410. Virtual poster presentation at the Alzheimer's Association International Conference.
<https://doi.org/10.1002/alz.037410>
- 2020 **Gustavson, D. E.**, Wang, Y., Below, J., Cox, N., Magne, C., Gordon, R.L. (June 2020). Investigating the biological basis of speech rhythm sensitivity with internet-based, scalable approaches. Poster presentation at Sixth Annual BRAIN Initiative Investigators Meeting, virtual conference, June 1-2, 2020.
- 2019 **Gustavson, D. E.**, Panizzon, M. S., Elman, J., Franz, C. E., Jak, A. J., Sanderson-Cimino, M., Toomey, R., Lyons, M. J., & Kremen, W. S. (July 2019) Multiple memory tests substantially improve longitudinal prediction of progression to mild cognitive impairment, *Alzheimer's & Dementia*, 15, P896-P897. Oral presentation at the Alzheimer's Association International Conference, Los Angeles, CA.
<https://doi.org/10.1016/j.jalz.2019.06.4658>
- 2019 **Gustavson, D. E.**, Franz, C. E., Panizzon, M. S., Elman, J., Jak, A. J., Sanderson-Cimino, M., Toomey, R., Lyons, M. J., & Kremen, W. S. (July 2019) Executive functions and impulsivity predict perception of cognitive decline six years later, *Alzheimer's & Dementia*, 15, P451. Poster presentation at the Alzheimer's Association International Conference, Los Angeles, CA.
<https://doi.org/10.1016/j.jalz.2019.06.1081>

- 2019 **Gustavson, D. E.**, Franz, C. E., Panizzon, M. S., Lyons, M. J., & Kremen, W. S. (June 2019) Internalizing and Externalizing Psychopathology in Middle Age: Genetic and Environmental Architecture and Stability of Symptoms Over 15 to 20 Years. Oral presentation at the 49th annual meeting of the Behavior Genetics Association, Stockholm, Sweden.
- 2019 **Gustavson, D. E.**, Elman, J., Panizzon, M. S., Franz, C. E., Reynolds, C. A., Jacobson, K., Zuber, J., Sanderson-Cimino, M., Xian, H., Toomey, R., Lyons, M. J., & Kremen, W. S. (February 2019) Episodic memory and semantic fluency predict 6-year progression to MCI in cognitively normal middle-aged adults. Oral presentation at the International Neuropsychological Association, New York, NY.
- 2018 **Gustavson, D. E.**, Franz, C. E., Kremen, W. S., Corley, R. P., Hewitt, J. K., & Friedman, N. P. (October 2018). Common genetic influences on impulsivity facets are related to goal management, psychopathology, and personality. Oral and poster presentation at the Integrating Genetics and the Social Sciences Conference, Boulder, CO.
- 2018 **Gustavson, D. E.**, Panizzon, M. S., Elman, J. A., Franz, C. E., Reynolds, C. A., Jacobson, K. P., Xian, H., Toomey, R., Lyons, M. J., and Kremen, W. S. (June 2018). Genetic and environmental influences on verbal fluency: A new framework. Oral presentation at the 48th annual meeting of the Behavior Genetics Association, Boston, MA.
- 2018 **Gustavson, D. E.**, Panizzon, M. S., Elman, J. A., Franz, C. E., Reynolds, C. A., Jacobson, K. P., Xian, H., Toomey, R., Lyons, M. J., and Kremen, W. S. (May 2018). Genetic and environmental influences on verbal fluency: A new framework. Poster presentation at the Cognitive Aging Conference, Atlanta, GA and at the 13th Annual Lewis L. Judd Young Investigators Symposium at the University of California, San Diego (April 2018).
- 2017 **Gustavson, D. E.**, & Miyake, A. (July 2017). Genetic influences on procrastination underlie its correlations with personality, cognition, and psychopathology. Oral presentation at the 10th Biennial Procrastination Research Conference, Chicago, IL.
- 2017 Miyake, A., Carruth, N. P., Lurquin, J. H., **Gustavson, D. E.**, & Kane, M. J. (July 2017) Assignment submission times as objective measures of individual differences in academic procrastination: A classroom study (July 2017). Oral presentation by A. Miyake at the 10th Biennial Procrastination Research Conference, Chicago, IL.
- 2017 Carruth, N. P., **Gustavson, D. E.**, Lurquin, J. H., Kane, M. J., & Miyake, A. (July 2017). Identifying the key malleable predictors of academic procrastination

through a semester-long, classroom-based study. Poster presentation by N. Carruth at the 10th Biennial Procrastination Research Conference, Chicago, IL.

- 2017 **Gustavson, D. E.**, Panizzon, M. S., Franz, C. E., Friedman, N. P., Reynolds, C. A., Jacobson, K. J., Xian, H., Lyons, M. J., & Kremen, W. S. (June 2017). Genetic/environmental architecture and stability of executive functions in midlife. Oral presentation at the 47th annual meeting of the Behavior Genetics Association, Oslo, Norway.
- 2017 Kremen, W., Logue, M., Panizzon, M., Elman, J., Gillespie, N., Hatton, S., **Gustavson, D.**, Andreassen, O., Dale, A., Lyons, M., Neale, M., Reynolds, C., & Franz, C (June 2017). Alzheimer's disease polygenic risk score identified mild cognitive impairment in adults in their 50s. Oral presentation by W. Kremen at the 47th annual meeting of the Behavior Genetics Association, Oslo, Norway.
- 2016 **Gustavson, D. E.**, du Pont, A., Rhee, S. H., Corley, R. P., Hewitt, J. K., & Friedman, N. P. (June 2016). Genetic and environmental associations between procrastination and internalizing/externalizing problems. *Behavior Genetics*, 46, 785-785. Oral presentation at the 46th annual meeting of the Behavior Genetics Association, Brisbane, Australia.
- 2016 Hatoum, A., **Gustavson, D. E.**, Rhee, S. H., Corley, R. P., Hewitt, J. K., & Friedman, N. P. (June 2016). Do executive functioning and impulsivity predict overlapping variation in problem behaviors? *Behavior Genetics*, 46, 787-787. Oral presentation by A. Hatoum at the 46th annual meeting of the Behavior Genetics Association, Brisbane, Australia.
- 2016 **Gustavson, D. E.** Executive dysfunction in trait anxiety (April, 2016). Oral presentation at the 86th annual meeting of the Rocky Mountain Psychological Association, Denver, CO.
- 2016 Hampton, L. E., Lurquin, J. H., **Gustavson, D. E.**, & Carruth, N. C. (April, 2016). Forgiving the self and others: Exploring component level differences and the effects of personality. Oral presentation by L. E. Hampton at the 86th annual meeting of the Rocky Mountain Psychological Association, Denver, CO. *Winner of RMPA Student Research Award.*
- 2015 **Gustavson, D. E.**, Lurquin, J. H., Michaelson, L. E., Barker, J. E., Carruth, N. P., von Bastian, C., & Miyake, A. (November, 2015). Executive dysfunction in trait anxiety. Poster presentation at the Psychonomic Society Annual Scientific Meeting, Chicago, IL.
- 2015 **Gustavson, D. E.**, Miyake, A., Hewitt, J. K., & Friedman, N. P. (June, 2015). Understanding the cognitive and genetic underpinnings of procrastination: Evidence for shared genetic influences with goal management and executive

function abilities. *Behavior Genetics*, 45, 659-660. Oral presentation at the 45th annual meeting of the Behavior Genetics Association, San Diego, CA.

- 2015 Friedman, N. P., **Gustavson**, D. E., Corley, R. P., Stallings, M. C., & Hewitt, J. K. (June, 2015). Stability and change in the relations among executive functions and substance use and dependence from late adolescence to early adulthood. *Behavior Genetics*, 45, 656. Oral presentation by N. P. Friedman at the 45th annual meeting of the Behavior Genetics Association, San Diego, CA.
- 2014 **Gustavson**, D. E., Miyake, A., Hewitt, J. K., & Friedman, N. P. (June, 2014). Genetic relations among procrastination, impulsivity, and goal-management ability. *Behavior Genetics*, 44, 661. Oral presentation at the 44th annual meeting of the Behavior Genetics Association, Charlottesville, VA.
- 2014 **Gustavson**, D. E., Miyake, A., Hewitt, J. K., & Friedman, N. P. (March, 2014). Genetic relations among procrastination, impulsivity, and goal-management ability: Implication for the evolutionary origin of procrastination. Poster presentation at the 2014 International Workshop on Statistical Genetic Methods for Human Complex Traits, Boulder, CO. *Winner of Lindon Eaves Award for Best Poster*.
- 2013 **Gustavson**, D. E., Wagenknecht, L. E., Miyake, A. (January, 2013). The effects of religious fundamentalist values and self-affirmation on the expression of implicit gender bias. Poster presentation at the Society for Personality and Social Psychology Annual Conference, New Orleans, LA.
- 2012 **Gustavson**, D. E., & Miyake, A. (November, 2012). Trait worry is associated with deletion difficulty but not storage capacity. Poster presentation at the Psychonomic Society Annual Scientific Meeting, Minneapolis, MN.
- 2012 **Gustavson**, D. E., Miyake, A., Altamirano, L. J., Haynes, N. S., & Ito, T. (January, 2012). The contribution of executive-control to the manifestation of implicit racial bias: A dual-task investigation. Poster presentation at the Society for Personality and Social Psychology Annual Meeting, San Diego, CA.
- 2012 **Gustavson**, D. E., & Miyake, A. (January, 2012). Anxiety and updating: Trait worry is related to selection difficulty during deletion. Poster presentation at the Determinants of Executive Function and Dysfunction Annual Meeting, Boulder, CO.
- 2011 **Gustavson**, D. E. & Miyake, A. (November, 2011). Anxiety and updating: Trait worry is related to selection difficulty during deletion. Poster presentation at the Psychonomic Society Annual Scientific Meeting, Seattle, WA.

Other Presentations

- 2022 **Gustavson, D. E.**, Reynolds, C. A., Hohman, T. J., Jefferson, A. L., Elman, J. A., Panizzon, M. S., Lyons, M. J., Franz, C. E., & Kremen, W. S (March 2022). Alzheimer's disease polygenic scores predict changes in executive function across 12 years in late middle age. Poster presented at the Vanderbilt Memory and Alzheimer's Center's Alzheimer's Research Day, Nashville, TN.
- 2020 **Gustavson, D. E.** (November, 2020). Associations between music engagement, cognition, and substance use in adolescence: Using twin and family studies to explore music genetics. Oral presentation at the Cognitive Science of Learning and Development series, Department of Psychology and Human Development, Vanderbilt University, Nashville, TN.
- 2019 **Gustavson, D. E.** (October, 2019). Studying music genetics using twins: Preliminary findings on the genetic overlap between music and cognition in early adolescence. Oral presentation at the Vanderbilt Music Cognition Lab Music Research Forum Series, Nashville, TN.

WORKSHOPS

- 2019 International Workshop on Statistical Genetic Methods for Human Complex Traits (Advanced Workshop), Boulder, CO. March 2019
- 2018 Statistical Horizons Longitudinal Analyses using Structural Equation Modeling Workshop, Los Angeles, CA. May 2018
- 2017 International Workshop on Statistical Genetic Methods for Human Complex Traits (Advanced Workshop), Boulder, CO. March 2017.
- 2015 International Workshop on Statistical Genetic Methods for Human Complex Traits (Advanced Workshop), Boulder, CO. March 2015
- 2014 International Workshop on Statistical Genetic Methods for Human Complex Traits (Introductory Workshop), Boulder, CO. March 2014

TEACHING EXPERIENCE

- 2023 Faculty Member: 2023 International Statistical Genetics Workshop – Statistical Genetic Methods for Human Complex Traits. Boulder, CO
- 2022 Tutor for 2022 International Statistical Genetics Workshop – Statistical Genetic Methods for Human Complex Traits. Virtual Meeting hosted by Institute for Behavior Genetics, Boulder, CO
- 2022 – 2023 Advised Honors Thesis student at Vanderbilt University Medical Center

- 2020 - 2022 Initiated and lead twice-monthly “Data Analysis” call for the Vietnam Era Twin Study of Aging, where about 12 trainees, postdocs, and professors work through advanced statistical modeling topics.
- 2020 Mentored a high school student in the Music Cognition Lab as part of the School for Science and Math at Vanderbilt
- 2020-present Lectures: Vanderbilt University Medical Center.
- July 2020 – guest lecture on genetic association studies and Vanderbilt’s BioVU resource (Resident Research Bootcamp).
 - February 2021 & January 2022 – guest lecture on heritability for Human Genetics II course.
- 2017-2018 Lectures: University of California, San Diego. September 2017, July 2018, August 2018, October 2018. Various undergraduate and graduate-level courses.
- 2016-2019 Mentored 2 minority undergraduate students on research projects as part of the Advancing Diversity in Aging Research program through the University of California, San Diego and San Diego State University.
- 2010-2016 Led weekly educational lab meetings (10-20 students per semester) through cognitive psychology lab of Dr. Akira Miyake. Course: Independent Study (PSYC 2841/4841). Department of Psychology & Neuroscience, University of Colorado Boulder.
- 2010-2016 Co-supervised 6 Honors Thesis Projects in the Department of Psychology & Neuroscience, University of Colorado Boulder
- 2010-2014 Teaching Assistant: Department of Psychology & Neuroscience, University of Colorado Boulder.
- 2009 Undergraduate teaching Assistant: Department of Psychology & Neuroscience, University of Colorado Boulder.

Courses/Lectures Taught:

Introduction to Psychology
 Introduction to Social Psychology
 Statistics and Research Methods
 Advanced Cognitive Psychology
 Genetics
 Executive Functions

RESEARCH EXPERIENCE

Research Support – Extramural Proposals Under Review

Principal Investigator: *Establishing if Music Engagement is a Protective Factor in Adolescent Substance Use Using Existing Longitudinal, Genetic, and Environmental Datasets*, National Institutes of Health (R01). Total Direct Costs: \$2,387,468. Pending IRG Review

Research Support as Key Personnel

- 2020-present Principal Investigator. *The Role of Executive Functions in Cognitive Aging and Risk for Mild Cognitive Impairment* (R03 AG065643). Vanderbilt University Medical Center (transferred to CU Boulder in March 2023). Total: \$170,000. 40% effort. September 2020 – May 2023
- 2022-present Principal Investigator of subaward to CU Boulder. *The VETSA Longitudinal Twin Study of Cognition and Aging (VETSA 4)* (R01AG050595). Total: \$77,817 (subaward to CU Boulder). October 2022 – March 2025
- 2022-present Co-investigator. *Understanding the links between parental and adolescent substance use; complementary natural experiments using the children of twins design* (R01 DA054087). Total: \$4,620,951. October 2022 – February 2027
- 2018-2019 Co-investigator. *SES Health Gradients in Late Life: Testing Models of Gene-Environment Interplay in an International Twin Consortium* (R01 AG059329). National Institute on Aging (University of California, San Diego subaward). 25% effort.

Other Research Support as Graduate Student, Postdoctoral Researcher, Research Faculty

- 2019-2022 **Research Assistant Professor/Research Instructor/Staff Scientist:** *Biomarkers of Rhythmic Communication: Integrating Foundational and Translational Approaches* (DP2 HD098859), *Neurobiological Markers of Rhythm: Risk and Resilience for Language Acquisition* (R01 DC016977), *Collaborative Research: NCS-FO Biology and Function of Prosody: Integrative Approach to Individual Differences* (National Science Foundation 1926794)
- 2018-2019 **Co-investigator:** *SES Health Gradients in Late Life: Testing Models of Gene-Environment Interplay in an International Twin Consortium* (R01 AG059329). University of California, San Diego.
- 2017-2018 **Postdoctoral Researcher:** *Gene-Environment Interplay of Social Contexts and Aging-Related Outcomes* (R01 AG050595). University of California, San Diego subaward
- 2016-2019 **Postdoctoral Researcher:** *The VETSA Longitudinal Twin Study of Cognition and Aging* (R01 AG050595). University of California, San Diego.

- 2016 **Postdoctoral Researcher:** *Neural substrates of executive function: An fMRI twin study* (R01 MH062307). University of Colorado Boulder.
- 2014-2016 **Graduate Research Assistant:** National Institute for Mental Health Pre-Doctoral Training Grant: *Research Training: Mental Health Behavior Genetics* (T32 MH016880). University of Colorado Boulder.
- 2010-2013 **Graduate Research Assistant:** *Individual Differences in Executive Functions and Expressions of Racial Biases*, National Science Foundation (BCS 0847872).

SERVICE TO PROFESSION

Served as Peer Reviewer for the Following Journals

Aging, Neuropsychology, and Cognition
Behavior Genetics
Behavior Research Methods
Biological Psychiatry
Contemporary Educational Psychology
Developmental Psychology
Developmental Science
Early Childhood Development and Care
Emotion
Eurasian Journal of Educational Research
European Journal of Personality
Evolutionary Psychology
Frontiers in Psychology
Health Psychology Research
Intelligence
International Journal of Geriatric Psychiatry
Journal of Alzheimer's Disease
Journal of American College Health
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
Journal of Learning and Instruction
Journal of Psychopathology and Clinical Science
Journal of Speech, Language, and Hearing Research
Language Learning and Development
Learning and Individual Differences
McGill Undergraduate Research Journal
Motivation and Emotion
NeuroImage: Clinical
Neuroscience
Open Journal of Medical Psychology
PeerJ – The Journal of Life and Environmental Sciences
Personality and Social Psychology Bulletin

PLOS One
Psychiatry Research
Psychogeriatrics
Psychopharmacology
Psychophysiology
Scientific Reports

Served as Editor for Journal Articles

PLOS One (guest editor)

Served as External Peer Reviewer for Grant Review

National Science Center, Poland
National Science Foundation, USA

Transparency in Science

Pre-Registered Projects on Open Science Foundation

- Exploring beat synchronization phenotypes and their correlations with health phenotypes
- Do musical parents have children with better grammar? (*currently private*)
- Music and self-reported emotional regulation in children (*currently private*)
- Exploring beat synchronization phenotypes and their correlations with health phenotypes <https://osf.io/exr2t> (full project at <https://osf.io/rp7bg/>)

Other Projects on Open Science Foundation (open data and methods)

- Executive Function and Impulsivity Predict Distinct Genetic Variance in Externalizing, Internalizing, and Thought Disorders: A Genomic Structural Equation Modeling Study (*currently private*)
- Exploring the genetics of rhythmic perception and musical engagement in the Vanderbilt Online Musicality Study <https://osf.io/fdbez/>
- Anorexia Nervosa is Genetically Associated With Delay Discounting But Not Other Facets Of Impulsivity: A Genomic Structural Equation Investigation (*currently private*)
- Genetic associations between executive functions and intelligence: A combined twin and adoption study <https://osf.io/rk6yv/>
- Advancing the understanding of individual differences in attentional control: Theoretical, methodological, and analytical considerations <https://osf.io/kw2a9/>
- The latent genetic structure of impulsivity and its relation to internalizing psychopathology <https://osf.io/5x3ft/>
- Lower general executive function is primarily associated with trait worry: A latent variable analysis of negative thought/affect measures <https://osf.io/cs8k3/>
- Evidence for transdiagnostic repetitive negative thinking and its association with rumination, worry, and depression and anxiety symptoms <https://osf.io/9gmnj/>

Press

- 2022 Various press for “Genome-wide association study of musical beat synchronization demonstrates high polygenicity” (Niarchou et al., 2022).
ABC New South Wales (Mornings show with Kia Handley, 6/28/2022)
ABC Melbourne (radio interview with Raf Epstein, 6/16/2022)
3AW Breakfast (radio interview with Ross Stevenson & Russel Howcroft, 6/16/2022)
- 2014-2015 Various interviews for “Genetic relations among procrastination, impulsivity, and goal-management ability: Implications for the evolutionary origin of procrastination” (Gustavson et al., 2014). Including:
Women’s Health (Magazine)
Science et Vie (Magazine)
Open Forum (Website)
Colorado Public Radio (Radio interview)

DEPARTMENTAL/UNIVERSITY SERVICE

- 2021-2023 Mentored 1 Honors Thesis project in the Music Cognition Lab at Vanderbilt University Medical center.
- 2020-2022 Service to Vanderbilt Memory and Alzheimer’s Center (VMAC): Evaluated trainee presentations for poster prizes at 2nd and 3rd Alzheimer’s Disease Research Day (November 2020, March 2022). Evaluated grant applications for VMAC inaugural Pilot and Feasibility Grant Program (December 2020).
- 2016-2018 Mentored 2 minority undergraduate students on research projects as part of the Advancing Diversity in Aging Research program through the University of California, San Diego and San Diego State University.
- 2014-2015 United Government of Graduate Students (CU Boulder): Vice President of Finance & Communications Chair.
- 2010-2016 Co-supervised 6 Honors Thesis projects in the Department of Psychology & Neuroscience, University of Colorado Boulder.

PROFESSIONAL MEMBERSHIPS

- 2016-Present Behavior Genetics Association
- 2018-2019 International Neuropsychological Association
- 2019-Present Alzheimer’s Association International Society to Advance Alzheimer’s Research and Treatment
- 2020-Present Psychonomic Society

REFERENCES

Dr. William Kremen

Email: wkremen@health.ucsd.edu
Phone: 858-822-2393
Address: University of California, San Diego
Department of Psychiatry
9500 Gilman Drive #0738
La Jolla, CA 92093

Dr. Carol Franz

Email: cfranz@health.ucsd.edu
Phone: 858-822-1793
Address: University of California, San Diego
Department of Psychiatry
9500 Gilman Drive #0738
La Jolla, CA 92093

Dr. Naomi Friedman

Email: Naomi.Friedman@colorado.edu
Phone: 303-735-4457
Address: University of Colorado Boulder
Institute for Behavioral Genetics
447 UCB
Boulder, CO 80309

Dr. Chandra Reynolds

Email: chandra.reynolds@ucr.edu
Phone: 951-827-2430
Address: University of California Riverside
Department of Psychology
Psychology Building /3302
Riverside, CA 92507

Dr. Reyna Gordon

Email: reyna.gordon@Vanderbilt.Edu
Phone: 951-827-2430
Address: Vanderbilt University Medical Center
Department of Otolaryngology
MCE 10267
Nashville, TN 37232

Dr. Nancy Cox

Email: nancy.j.cox@vanderbilt.edu
Phone: 615-343-1689

Address: Vanderbilt University Medical Center
Department of Medicine
2525 West End Ave., Suite 700
Nashville, TN 37232