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Akira Miyake

A. Biographical Information

Contact Information

Department of Psychology and Neuroscience
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Education

1984–1989 Osaka University of Foreign Studies (Osaka, Japan) B.A. in English Linguistics
1987–1988 University of Wisconsin, Madison (Madison, WI) Major in Psychology
1989–1994 Carnegie Mellon University (Pittsburgh, PA)
M.S. in Cognitive Psychology, 1991
Ph.D. in Cognitive Psychology, 1994
1994–1995 Department of Psychology, Carnegie Mellon University, Postdoctoral Research Associate

Employment History

1995–2002 Assistant Professor, Department of Psychology, University of Colorado Boulder
2002–2004 Associate Professor, Department of Psychology, University of Colorado Boulder
2004–2005 Associate Professor, Department of Psychology, University of Toronto Boulder
2005–2010 Associate Professor, Department of Psychology and Neuroscience, University of Colorado Boulder
2010– Professor, Department of Psychology and Neuroscience, University of Colorado Boulder

Research Interests

My research examines the roles of basic cognitive and motivational processes—especially attention, working memory, executive functions, and self-control—in various complex psychological phenomena that are important in our everyday lives. My current research focuses on laboratory and classroom studies of student learning. Specific research projects that I am currently undertaking include:

- Laboratory and classroom studies of the effects of mind-wandering in the learning and retention of math and science lectures
- Laboratory and classroom studies of self-regulatory behaviors (e.g., procrastination)
- Individual differences and experimental analyses of self-control processes
- Individual differences analyses of mind-wandering and repetitive negative thinking (e.g., worry, rumination)

Professional Affiliations

American Psychological Association

- Society for the Teaching of Psychology (Division 2 Member)
- Society for the Teaching of Psychology (Division 3 Fellow)

Association for Psychological Science (Fellow)

Psychonomic Society (Fellow)

Society for Applied Research in Memory and Cognition (Member)

B. Honors and Research Awards/Funding

Honors

- 1997 American Psychological Association Division of Experimental Psychology (Division 3) Young Investigator Award in Experimental Psychology: General
- 1997–1998 The University of Colorado Council on Research and Creative Work (CRCW) Junior Faculty Development Award
- 2003 Guest Professorship at the Institute of Cognitive Science, the University of Potsdam, Germany
- 2004–2005 Canada Research Chair in Human Memory and Attention (Tier 1)
- 2008 Benjamin Meaker Visiting Professorship at the University of Bristol, UK
- 2008 Marinus Smith Faculty/Staff Recognition Award from the University of Colorado Parents Association
- 2011–2011 The Japan Society for the Promotion of Science (JSPS) Invitation Fellowship for Research in Japan (Kyoto University)

Research Funding

Submitted/Pending

- 2023-2026 NSF, EHR Core Program (\$1,499,967, total costs; CU Portion: \$1,091,954, total costs)
Title: *Collaborative Research: A Holistic Approach to Reducing Academic Procrastination via Small-Teaching Classroom Interventions*
Lead PI: **Akira Miyake**; co-PIs: Michael J. Kane (University of North Carolina at Greensboro) & Priti Shah (University of Michigan, Ann Arbor)
- 2023-2025 NIH (NIMH) R21 (\$275,000, total costs)
Title: *Mind-Wandering and Repetitive Negative Thinking: A Systematic Multipronged Analysis*
PI: **Akira Miyake**; co-Is: Albert E. Kim & Roselinde Kaiser (CU Boulder) & Michael J. Kane (University of North Carolina at Greensboro)

Funded

- 1997 Office of Naval Research Conference Support (\$10,000, total costs)
Title: *Models of Working Memory*
Principal Investigator (PI): **Akira Miyake**; Co-I: Priti Shah
- 1998–2000 James S. McDonnell Foundation, Cognitive Rehabilitation Program (\$59,952, total costs)
Title: *Executive Function and Communication Success in Aphasia: Implications for Rehabilitation*
PI: Gail Ramsberger; Co-PI: **Akira Miyake**

- 1998–2001 National Science Foundation (NSF) (\$800,000, total costs)
 Title: *Discrete Representations in Working Memory: Developmental, Neuropsychological, and Computational Investigations*
 PI: Michael Mozer; Co-PIs: **Akira Miyake**, Yuko Munakata, & Randall O'Reilly
- 1999–2000 National Institute of Deafness and Other Communication Disorders: High Impact Research (\$100,000, total direct costs)
 Title: *Executive Function + Conversation Aphasia Paradigm Shift*
 PI: Gail Ramsberger; Co-PI: **Akira Miyake**
- 2001–2006 National Institute of Mental Health (NIMH) R01 (\$775,000, total costs)
 Title: *Behavior Genetic Analysis of Executive Functions*
 PI: John Hewitt; Co-Is: **Akira Miyake**, John DeFries, & Susan Young
- 2007–2008 NIMH R56 (\$323,389, total costs)
 Title: *Executive Functions and Self-Regulation: A Twin Study*
 PI: John Hewitt; Co-Is: Naomi Friedman, **Akira Miyake**, Susan Young, Erik Willcutt, & John DeFries
- 2008–2012 NIMH R01 (\$2,473,307, total costs)
 Title: *Executive Functions and Self-Regulation: A Twin Study*
 PI: John Hewitt; Co-Is: John DeFries, Naomi Friedman, **Akira Miyake**, Susan Young, & Erik Willcutt
- 2008–2013 NIMH, IBSC Center (\$8,827,148, total costs)
 Center title: *Determinants of Executive Function and Dysfunctions* (PI: Marie Banich)
 Project title: *Project 4: Genetics of Executive Functions*
 PI: Naomi Friedman; Co-Is: John Hewitt, **Akira Miyake**, Susan Young, Erik Willcutt, John DeFries, Andy Smolen, & Randy O'Reilly
 Project title: *Project 5: Development of Executive Functions*
 PI: Yuko Munakata; Co-Is: Eliana Colunga, Tim Curran, **Akira Miyake**, & Randy O'Reilly
- 2009–2014 National Institute on Drug Abuse (NIDA) R01 (\$2,830,783, total costs)
 Title: *Multilevel Analysis of Self-Regulation in Substance Abuse*
 PI: Tiffany Ito; Co-Is: Angela Bryan, Kent Hutchison, Erik Willcutt, **Akira Miyake** & David Allen
- 2009–2012 NSF, Social Psychology Program (\$789,339, total costs)
 Title: *Collaborative Research: Individual Differences in Executive Functions and Expressions of Racial Biases: Behavioral and ERP Investigations*
 PI: **Akira Miyake**; Co-PIs: Naomi Friedman, Tiffany Ito, Bruce Bartholow, & Joshua Correll
- 2009–2012 NSF, REESE Program (\$999,865, total costs)
 Title: *Understanding and Reducing the Gender Gap in Math and Science: Cognitive, Social, and Neural Mechanisms in Identity Threat*
 PI: **Akira Miyake**; Co-PIs: Geoffrey Cohen, Tiffany Ito, & Noah Finklestein
- 2009–2014 National Institute on Alcohol Abuse and Alcoholism (NIAAA), MARC Center (\$9,312,847, total costs)
 Title: *Project 8: Alcohol Effects on Executive Cognitive Function: Specifying Component Processes* (\$129,673, total costs for the Colorado portion)
 PI: Bruce D. Bartholow; Co-Is: Kenneth Sher, **Akira Miyake**, Nelson Cowan, & Scott Saults

- 2011-2016 National Institute of Child Health and Child Development (NICHD), Learning Disabilities Center: Differential Diagnosis in Learning Disabilities
PI: Dick Olson; co-I: **Akira Miyake** (along with other members)
- 2012-2017 National Institute on Deafness and Other Communication Disorders (NIDCD)
Title: *Characterizing variability in hearing aid outcomes among older adults*
PI: Pamela Souza; co-PI: Kathryn Arehart; co-Is: **Akira Miyake** (2012-2015) & Jim Kates
- 2013-2017 NSF, REAL Program (\$1,489,382, total costs across two sites)
Title: *Collaborative Research: The Effects of Mind-Wandering on the Learning and Retention of STEM Content: Experimental and Individual Differences Investigations*
PI: **Akira Miyake** (in collaboration with Michael Kane, University of North Carolina Greensboro)
- 2014-2017 NSF, Cognitive Neuroscience Program (\$549,958, total costs)
Title: *Syntax-semantics interaction during sentence comprehension: An individual Differences approach*
PI: Albert Kim; co-PI: **Akira Miyake**

C. Scholarly and Professional Work

Google Scholar Citation Counts (as of 02/01/2023): <https://tinyurl.com/3nmytthm>

- **Total citations:** 50,799
- **h-index:** 53

Publications (citation counts greater than 100 are indicated)

Books and Edited Volumes

- Miyake, A.**, & Shah, P. (Eds.). (1999). *Models of working memory: Mechanisms of active maintenance and executive control*. New York: Cambridge University Press. **(2,808 citations)**
- Shah, P., & **Miyake, A.** (Eds.). (2005). *The Cambridge handbook of visuospatial thinking*. New York: Cambridge University Press. **(221 citations)**
- Conway, A. R. A., Jarrold, C., Kane, M. J., **Miyake, A.**, & Towse, J. N. (Eds.). (2007). *Variation in working memory*. New York: Oxford University Press. **(492 citations)**

Refereed Journal Articles

- Miyake, A.** (1994). Toward a unified theory of capacity constraints: The role of working memory in complex cognition. *Cognitive Studies: Bulletin of the Japanese Cognitive Science Society*, 1, 43–62.
- Miyake, A.**, Carpenter, P. A., & Just, M. A. (1994). A capacity approach to syntactic comprehension disorders: Making normal adults perform like aphasic patients. *Cognitive Neuropsychology*, 11, 671–717. **(517 citations)**
- Miyake, A.**, Just, M. A., & Carpenter, P. A. (1994). Working memory constraints on the resolution of lexical ambiguity: Maintaining multiple interpretations in neutral contexts. *Journal of Memory and Language*, 33, 175–202. **(396 citations)**
- Miyake, A.**, Carpenter, P. A., & Just, M. A. (1995). Reduced resources and specific impairments in normal and aphasic sentence comprehension. *Cognitive Neuropsychology*, 12, 651–679. **(104 citations)**
- Carpenter, P. A., **Miyake, A.**, & Just, M. A. (1995). Language comprehension: Sentence and discourse processing. *Annual Review of Psychology*, 46, 91–120. **(263 citations)**

- Shah, P., & **Miyake, A.** (1996). The separability of working memory resources for spatial thinking and language processing: An individual differences approach. *Journal of Experimental Psychology: General*, *125*, 4–27. **(1,470 citations)**
- Emerson, M. J., **Miyake, A.**, & Rettinger, D. A. (1999). Individual differences in integrating and coordinating multiple sources of information. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *25*, 1300–1321.
- Ramsberger, G., **Miyake, A.**, Menn, L., Reilly, K., & Filley, C. (1999). Selective preservation of geographic and numeric information in a patient with severe anomia. *Aphasiology*, *13*, 625–645.
- Miyake, A.**, Emerson, M. J., & Friedman, N. P. (1999). Good interactions are hard to find. *Brain and Behavioral Sciences*, *22*, 108–109. (Invited commentary on Caplan and Waters’s target article entitled “Verbal working memory and sentence comprehension.”)
- Friedman, N. P. & **Miyake, A.** (2000). Differential roles for spatial and verbal working memory in situation model construction. *Journal of Experimental Psychology: General*, *129*, 61–83. **(232 citations)**
- Hegarty, M., Shah, P., & **Miyake, A.** (2000). Constraints on using the dual-task methodology to specify the degree of central executive involvement in cognitive tasks. *Memory & Cognition*, *28*, 376–385. **(155 citations)**
- Miyake, A.**, Friedman, N. P., Emerson, M. J., Witzki, A. H., Howerter, A., & Wager, T. D. (2000). The unity and diversity of executive functions and their contributions to complex “frontal lobe” tasks: A latent variable analysis. *Cognitive Psychology*, *41*, 49–100. **(17,795 citations)**
- Miyake, A.**, Emerson, M. J., & Friedman, N. P. (2000). Assessment of executive functions in clinical settings: Problems and recommendations. *Seminars in Speech and Language*, *21*, 169–183. **(359 citations)**
- Saito, S., & **Miyake, A.** (2000). A systematic evaluation of six hypotheses regarding the reading span test. *Japanese Psychological Review*, *43*, 387–410. (in Japanese)
- Wright, M., De Geus, E., Ando, J., Luciano, M., Posthuma, D., Ono, Y., Hansell, N., Van Baal, C., Hiraishi, K., Hasegawa, T., Smith, G., Geffen, G., Geffen, L., Kanba, S., **Miyake, A.**, Martin, N., & Boomsma, D. (2001). Genetics of cognition: Outline of a collaborative twin study. *Twin Research*, *4*, 48–56. **(222 citations)**
- Miyake, A.** (2001). Individual differences in working memory: Introduction to the special section. *Journal of Experimental Psychology: General*, *130*, 163–168. **(216 citations)**
- Miyake, A.**, Witzki, A. H., & Emerson, M. J. (2001). Field-dependence–independence from a working memory perspective: A dual-task investigation of the Hidden Figures Test. *Memory*, *9*, 445–457. **(127 citations)**
- Miyake, A.**, Friedman, N. P., Rettinger, D. A., Shah, P., & Hegarty, M. (2001). How are visuospatial working memory, executive functioning, and spatial abilities related: A latent-variable analysis. *Journal of Experimental Psychology: General*, *130*, 621–640. **(1,482 citations)**
- Miyake, A.**, & Saito, S. (2001). Current trends and future directions in working memory research. *Japanese Journal of Psychology*, *72*, 336–350. (invited review, in Japanese).
- Rende, B., Ramsberger, G., & **Miyake, A.** (2002). Commonalities and differences in the working memory components underlying letter and category fluency tasks: A dual task investigation. *Neuropsychology*, *16*, 309–321. **(246 citations)**
- Rawson, K. A., & **Miyake, A.** (2002). Does relocating information in text depend upon verbal or visuospatial abilities? An individual differences analysis. *Psychonomic Bulletin & Review*, *9*, 801–806.
- Just, M. A., Carpenter, P. A., & **Miyake, A.** (2003). Neuroindices of cognitive workload: Neuroimaging, pupillometric, and event-related potential studies of brain work. *Theoretical Issues in Ergonomics Science*, *4*, 56–88 (Special issue on “Neuroergonomics”). **(297 citations)**

- Emerson, M. J., & **Miyake, A.** (2003). The role of inner speech in task switching: A dual-task investigation. *Journal of Memory and Language*, *48*, 148–168. **(445 citations)**
- Miyake, A.**, Emerson, M. J., Padilla, F., & Ahn, J. (2004). Inner speech as a retrieval aid for task goals: The effects of cue type and articulatory suppression. *Acta Psychologica*, *115*, 123–142. (Special issue on “Executive Functions”). **(412 citations)**
- Friedman, N. P., & **Miyake, A.** (2004). The relations among inhibition and interference control functions: A latent variable analysis. *Journal of Experimental Psychology: General*, *133*, 101–135. **(2,938 citations)**
- Saito, S., & **Miyake, A.** (2004). On the nature of forgetting and the processing-storage relationship in reading span performance. *Journal of Memory and Language*, *50*, 425–443 **(166 citations)**.
- Friedman, N. P., & **Miyake, A.** (2004). The reading span test and its predictive power for reading comprehension ability. *Journal of Memory and Language*, *51*, 136–158. **(390 citations)**
- Friedman, N. P., & **Miyake, A.** (2005). Comparison of four scoring methods for the reading span test. *Behavior Research Methods*, *37*, 581–590. **(256 citations)**
- Friedman, N. P., **Miyake, A.**, Corley, R. P., Young, S. E., DeFries, J. C., & Hewitt, J. K. (2006). Not all executive functions are related to intelligence. *Psychological Science*, *17*, 172–179. **(1,892 citations)**
- Slevc, L. R., & **Miyake, A.** (2006). Individual differences in second language proficiency: Does music ability matter? *Psychological Science*, *17*, 675–681. **(552 citations)**
- Friedman, N. P., Haberstic, B. C., Willcutt, E. G., **Miyake, A.**, Young, S. E., Corley, R. P., & Hewitt, J. K. (2007). Greater attention problems during childhood predict poorer executive functions in late adolescence. *Psychological Science*, *18*, 893–900. **(300 citations)**
- Friedman, N. P., **Miyake, A.**, Young, S. E., DeFries, J. C., Corley, R. P., & Hewitt, J. K. (2008). Individual differences in executive functions are almost entirely genetic in origin. *Journal of Experimental Psychology: General*, *137*, 201–225. **(1,925 citations)**
- Young, S. E., Friedman, N. P., **Miyake, A.**, Willcutt, E. G., Corley, R. P., Haberstic, B. C., & Hewitt, J. K. (2009). Behavioral disinhibition: Liability for externalizing spectrum disorders and its genetic and environmental relation to response inhibition across adolescence. *Journal of Abnormal Psychology*, *118*, 117–130. **(497 citations)**
- Healey, M. K., & **Miyake, A.** (2009). The role of attention during retrieval in working memory span: A dual-task study. *Quarterly Journal of Experimental Psychology*, *62*, 733–745.
- Altamirano, L. J., **Miyake, A.**, & Whitmer, A. J. (2010). When mental flexibility facilitates cognitive control: Beneficial side effects of ruminative tendencies on goal maintenance. *Psychological Science*, *21*, 1377–1382. **(187 citations)**
- Miyake, A.**, Kost-Smith, L. E., Finkelstein, N. D., Pollock, S. J., Cohen, G. L., & Ito, T. A. (2010, November 26). Reducing the gender achievement gap in college science: A classroom study of values affirmation. *Science*, *330*, 1234–1237. **(887 citations)**
- Friedman, N. P., **Miyake, A.**, Robinson, J. L., & Hewitt, J. K. (2011). Developmental trajectories in toddler's self-restraint predict individual differences in executive functions 14 years later: A behavioral genetic analysis. *Developmental Psychology*, *47*, 1410–1430. **(427 citations)**
- Chatham, C. H., Herd, S. A., Brant, M. A., Hazy, T. E., **Miyake, A.**, O'Reilly, R. C., Friedman, N. P. (2011). From an executive network to executive control: A computational model of the n-back task. *Journal of Cognitive Neuroscience*, *23*, 3598–3619. **(131 citations)**
- Miyake, A.**, & Friedman, N. P. (2012). The nature and organization of individual differences in executive functions: Four general conclusions. *Current Directions in Psychological Science*, *21*, 8–14. **(4,055 citations)**

- Godinez, D. A., Friedman, N. P., Rhee, S. H., **Miyake, A.**, & Hewitt, J. K. (2012). Phenotypic and genetic analyses of the Wisconsin Card Sort. *Behaviour Genetics*, *42*, 209–220.
- Christopher, M. E., **Miyake, A.**, Keenan, J. M., Pennington, B. F., DeFries, J. C., Wadsworth, S. J., Willcutt, E. G., & Olson, R. K. (2012). Predicting word reading and comprehension with executive function and speed measures across development: A latent variable analysis. *Journal of Experimental Psychology: General*, *141*, 470–488. **(431 citations)**
- 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. **(210 citations)**
- Ito, T. A., Friedman, N. P., Bartholow, B. D., Correll, J., Loersch, C., Altamirano, L. J., & **Miyake, A.** (2015). Toward a comprehensive understanding of executive cognitive function in implicit racial bias. *Journal of Personality and Social Psychology*, *108*, 187–218. **(176 citations)**
- Snyder, H. R., **Miyake, A.**, & Hankin, B. L. (2015). Advancing understanding of executive function impairments and psychopathology: Bridging the gap between clinical and cognitive approaches. *Frontiers in Psychology*, *6*:328. DOI:10.3389/psyg.2015.00328. **(860 citations)**
- 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*.
- 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*(2): e0147770. doi:10.1371/journal.pone.0147770 **(171 citations)**
- Friedman, N. P., **Miyake, A.**, Altamirano, L. J., Corley, R. P., Young, S. E., Rhea, S. A., & Hewitt, J. K. (2016). Stability and change in executive function abilities from late adolescence to early adulthood: A longitudinal twin study. *Developmental Psychology*, *52*, 326–340. **(284 citations)**
- Christopher, M. E., Keenan, J. M., Hulslander, J., DeFries, J. C., **Miyake, A.**, Wadsworth, S. J., Willcutt, E., Pennington, B. F., & Olson, R. K. (2016). The genetic and environmental etiologies of the relations between cognitive skills and components of reading ability. *Journal of Experimental Psychology: General*, *145*, 451–466.
- Towse, J. N., Towse, A., Satoru, S., Maehara, Y., & **Miyake, A.** (2016). Joint cognition: Thought contagion and the consequence of cooperation when sharing the task of random sequence generation. *PLoS ONE* *11*(3): e0151306. doi:10.1371/journal.pone.0151306
- Hagger, M. S., Chatzisarantis, N. L. D., Alberts, H., Anggono, C. O., Birt, A., Brand, R., ..., **Miyake, A.**, ..., Zweigenberg, M. (2016). A multi-lab pre-registered replication of the ego depletion effect. *Perspectives on Psychological Science*, *11*, 546–573. **(1,067 citations)**
- Gustavson, D. E., & **Miyake, A.** (2016). Trait worry is associated with difficulties in working memory updating. *Cognition and Emotion*, *30*, 1289–1303.
- Friedman, N. P., & **Miyake, A.** (2017). Unity and diversity of executive functions: Individual differences as a window on cognitive structure. *Cortex*, *86*, 186–204. **(1,472 citations)**
- Gustavson, D. E., Altamirano, L. J., Johnson, D. P., Whisman, M. A., & **Miyake, A.** (2017). Is set shifting really impaired in trait anxiety? Only when switching away from an effortfully established task set. *Emotion*, *17*, 88–101.
- Korucuoglu, O., Sher, K., Philip, W., Saults, J., Altamirano, L., **Miyake, A.**, & Bartholow, B. (2017). Acute alcohol effects on set-shifting on its moderation by baseline individual differences: A latent variable analysis. *Addiction*, *112*, 442–453.

- 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. (**106 citations**)
- 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.
- Lurquin, J. H., & **Miyake, A.** (2017). Challenges to ego-depletion research go beyond the replication crisis: A need for tackling the conceptual crisis. *Frontiers in Psychology, 8*:568. doi:10.3389/fpsyg.2017.00568 (**152 citations**)
- Kane, M. J., Smeekens, B. A., von Bastian, C. C., Lurquin, J. H., Carruth, N. P., & **Miyake, A.** (2017). A combined experimental and individual-differences investigation into mind wandering during a video lecture. *Journal of Experimental Psychology: General, 146*, 1649–1674.
- Lewis, K. L., Stout, J. G., Finkelstein, N. D., Pollock, S. J., **Miyake, A.**, Cohen, G. L., & Ito, T. A. (2017). Fitting in to move forward: Belonging, gender, and persistence in the physical sciences, technology, engineering, and mathematics (pSTEM). *Psychology of Women Quarterly, 41*, 420–436.
- Bartholow, B. D., Fleming, K. A., Wood, P. K., Cowan, N., Sauls, J. S., Altamirano, L., **Miyake, A.**, Martins, J., & Sher, K. J. (2018). Alcohol effects on response inhibition: Variability across tasks and individuals. *Experimental and Clinical Psychopharmacology, 26*, 251–267.
- Kim, A. E., Oines, L. D., & **Miyake, A.** (2018). Individual differences in verbal working memory underlie a tradeoff between semantic and structural processing difficulty during language comprehension: An ERP investigation. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 44*, 406–420.
- 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: Psychology, 4*(1), 13, pp.1–18. <https://doi.org/10.1525/Collabra.128>.
- Gustavson, D. E., Lurquin, J. H., Michaelson, L. E., Barker, J. E., Carruth, N. P., van 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*(4), 557–571.
- Cofresí, R. U., Watts, A. L., Martins, J. S., Wood, P. K., Sher, K. J., Cowan, N., **Miyake, A.**, & Bartholow, B. D. (2021). Acute effect of alcohol on working memory updating. *Addiction, 116*(11), 3029–3043.
- Kane, M. J., Carruth, N. P., Lurquin, J. H., Silvia, P. J., Smeekens, B. A., von Bastian, C. C., & **Miyake, A.** (2021). Individual differences in task-unrelated thought in university classrooms. *Memory & Cognition, 49*, 1247–1266.
- Vohs, K. D., Schmeichel, B. J., Lohmann, S., Gronau, Q. F., Finley, A. J., Ainsworth, S. E., ..., **Miyake, A.**, ..., Albarracín, D. (2021). A multisite preregistered paradigmatic test of the ego-depletion effect. *Psychological Science, 32*(10), 1566–1581.
- Miyake, A.**, & Kane, M. J. (2022). Toward a holistic approach to reducing academic procrastination with classroom interventions. *Current Directions in Psychological Science, 31*(4), 291–304. (**#10 in the journal's "most read in the last 6 months" ranking** among all the articles published in the journal, as of 02/01/2023)
- Welhaf, M., Phillips, N. E., Smeekens, B. A., **Miyake, A.**, & Kane, M. J. (2022). Interpolated testing and pretesting as interventions to reduce task-unrelated thoughts during a video lecture. *Cognitive Research: Principles & Implications, 7*: 26. <https://doi.org/10.1186/s41235-022-00372-y>

Refereed Published Conference Proceedings

- Kost, L. E., Pollock, S. J., Finkelstein, N. D., Cohen, G. L., Ito, T. A., & **Miyake, A.** (2010). Gender differences in physics 1: The impact of a self-affirmation intervention. *Proceedings of the 2010 Physics Education Research Conference.*
- Kost, L. E., Pollock, S. J., Finkelstein, N. D., Cohen, G. L., Ito, T. A., & **Miyake, A.** (2011). Replicating a self-affirmation intervention to address gender differences: Successes and challenges. *Proceedings of the 2011 Physics Education Research Conference.*

Book Chapters

- Carpenter, P. A., **Miyake, A.**, & Just, M. A. (1994). Working memory constraints in comprehension: Evidence from individual differences, aphasia, and aging. In M. A. Gernsbacher (Ed.), *Handbook of Psycholinguistics* (pp. 1075–1122). San Diego, CA: Academic Press. **(519 citations)**
- Miyake, A.** (1995). Short-term memory and working memory. In Y. Takano (Ed.), *Cognitive Psychology. Volume 2: Memory* (pp. 71–99). Tokyo: Tokyo University Press. (in Japanese).
- Miyake, A.**, & Friedman, N. P. (1998). Individual differences in second language proficiency: Working memory as language aptitude. In A. F. Healy & L. E. Bourne (Eds.), *Foreign language learning: Psycholinguistic studies on training and retention* (pp. 339–364). Mahwah, NJ: Erlbaum. **(743 citations)**
- Shah, P., & **Miyake, A.** (1999). Models of working memory: An introduction. In A. Miyake & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 1–27). New York: Cambridge University Press. **(366 citations)**
- Miyake, A.**, & Shah, P. (1999). Toward a unified theory of working memory: Emerging general consensus, unresolved theoretical issues, and future research directions. In A. Miyake & P. Shah (Eds.), *Models of working memory: Mechanisms of active maintenance and executive control* (pp. 442–481). New York: Cambridge University Press. **(470 citations)**
- Miyake, A.** (2000). Working memory: The past, the present, and the future. In N. Osaka (Ed.), *Brain and working memory* (pp. 311–329). Kyoto, Japan: Kyoto University Press. (in Japanese).
- Miyake, A.** (2001). Working memory. In W. E. Craighead & C. B. Nemeroff (Eds.), *The Corsini encyclopedia of psychology and behavioral science* (3rd ed., pp. 1773–1775). New York: Wiley.
- Miyake, A.** (2001). Entries for “memory span,” “articulatory loop,” and “central executive.” In P. Winn (Ed.), *Dictionary of biological psychology* (p. 67, pp. 141–142, & pp. 467–468). London: Routledge.
- Craighead, W. E., Ilardi, S. S., **Miyake, A.**, Craighead, L. W., Greenberg, M. D., & Garratt, G. (2003). Cognitive psychology: Basic theory and clinical implications. In A. Tasman, J. Kay, & J. A. Lieberman (Eds.), *Psychiatry* (2nd ed., Vol. 1, pp. 403–425). Chichester, UK: Wiley.
- Miyake, A.** (2004). Working memory. In W. E. Craighead & C. B. Nemeroff (Eds.), *Concise Corsini Encyclopedia of psychology and behavioral science* (pp. 1039–1040). New York: Wiley.
- Conway, A. R. A., Jarrold, C., Kane, M. J., **Miyake, A.**, & Towse, J. N. (2007). Variation in working memory: An introduction. In A. R. W. Conway, C. Jarrold, M. J. Kane, A. Miyake, & J. N. Towse (Eds.), *Variation in working memory* (pp. 3–17). New York: Oxford University Press.
- Saito, S., & **Miyake, A.** (2014a). Working memory: Recent theoretical development and its implications for education. In M. Yuzawa & M. Yuzawa (Eds.), *Working memory and education*. Tokyo: Kitaohji Shobo (in Japanese).
- Saito, S., & **Miyake, A.** (2014b). Executive functions: Concepts, empirical findings, and potential applications to education. In M. Yuzawa & M. Yuzawa (Eds.), *Working memory and education*. Tokyo: Kitaohji Shobo (in Japanese).

Conference Presentations and Invited Talks/Colloquia

Invited Keynote Addresses (since 2011)

- December 2011 Conference of the Japan Society for Working Memory (Kyoto, Japan)
 March 2017 North Carolina Cognition Conference (Greensboro, NC)
 October 2020 LEAD Retreat Workshop, hosted by the University of Tübingen (online)

Invited Stand-Alone Workshop Presentations (since 2011)

- May 2011 An invited talk at the Workshop on *Conflicts as Signals in Cognitive Systems* (Berlin, Germany)
 June 2013 An invited talk at the International Society for the Study of Behavioral Development (ISSBD) Moscow Workshop on Executive Function and Metacognition (Moscow, Russia)
 January 2016 White House Office of Science and Technology Policy (OSTP) Workshop on Neuroscience and Learning (White House Conference Center, Washington, D.C.)
 May 2017 An invited talk at a workshop on individual differences in language processing at the Max Planck Institute for Psycholinguistics (Nijmegen, the Netherland)
 August 2018 Workshop on Self-control at the Technical University of Dresden (Germany)

Invited Within-Conference Symposium/Workshop Presentations (since 2011)

- January 2012 Symposium entitled *On the complexity of control: Diverse manifestations—and implications—of executive function in social psychology*, the 13th annual meeting of the Society for Personality and Social Psychology (San Diego, CA)
 August 2013 APA Annual Convention, American Psychological Foundation (APF) Spielberger EMPathy Symposium (Honolulu, HI)
 August 2016 Symposium entitled *Current Directions of Working Memory Research Based on Individual Differences*. International Congress of Psychology (Yokohama, Japan)

Other Conference Presentations (last 5 years only; 2017–2022)

- Lurquin, J. H., Carruth, N. P., Smeekens, B. A., von Bastian, C. C., Kane, M. J., & **Miyake, A.** (2017). *A combined experimental and individual-differences investigation into mind-wandering during a video lecture*. Poster presented at the annual meeting of the Association for Psychological Science, Boston, MA.
- Miyake, A.**, Carruth, N. P., Gustavson, D. E., Lurquin, J. H., & Kane, M. J. (2017). *Assignment submission times as objective measures of academic procrastination: A classroom study*. Paper presented at the biannual Procrastination Research Conference held at DePaul University, Chicago, IL.
- Carruth, N. P., Gustavson, D. E., Lurquin, J. H., Kane, M. J., & **Miyake, A.** (2017). *Validating assignment submission times as an objective and reliable measure of academic procrastination*. Poster presented at the biannual Procrastination Research Conference held at DePaul University, Chicago, IL.
- von Bastian, C. C., Kane, M. J., & **Miyake, A.** (2017). *Does being bilingual entail advantages in working memory capacity? A meta-analysis*. Paper presented at the annual meeting of the Psychonomic Society, Vancouver, BC, Canada.
- McKnight, S., **Miyake, A.**, Bell-Souder, D. & Kim, A. E. (2018). *Individual differences in language knowledge and the syntactic processing P600 ERP*. Paper presented at the annual CUNY Sentence Processing conference, Davis, CA.

- McKnight, S., **Miyake, A.**, Bell-Souder, D. & Kim, A. E. (2018). *Systematic variability in language-related ERPs: Distribution, effect size, and latency*. Poster presented at the annual CUNY Sentence Processing conference, Davis, CA.
- Miyake, A.**, Carruth, N. P., Gustavson, D. E., Lurquin, J. H., & Kane, M. J. (2018). *A classroom study of individual differences in procrastination: Assignment submission times as an objective measure of academic procrastination*. Paper presented at the annual Psychonomic Society meeting in New Orleans, LA.
- McKnight, S., **Miyake, A.**, & Kim, A. (2019). *Individual differences in ERP profiles to agreement attraction anomalies*. Paper presented at the annual CUNY Sentence Processing conference, Boulder, CO.
- Bell-Souder, D., McKnight, S., Zhdanov, V., Mullen, S., **Miyake, A.**, Gilley, P., & Kim, A. (2021). *Language modeling using a neural network shows effects on N400 beyond just surprise*. Poster presented at the annual CUNY Sentence Processing conference (online).
- McKnight, S., Bell-Souder, D., Gilley, P., **Miyake, A.**, & Kim, A. (2021). *Oscillatory dynamics of complex dependency processing reveal unique roles for attention and working memory mechanisms*. Poster presented at the annual CUNY Sentence Processing conference (online).
- Miyake, A.** (2021). *We need more academic intervention studies: A case for a model-based holistic approach*. Paper presented at the International Procrastination Research Workshop (online).
- Zhang, H., **Miyake, A.**, Osbourne, J., Shah, P., & Jonides, J. (2021). *Uncovering the structure of individual differences in distractibility*. Paper presented at the annual Psychonomic Society meeting (online).
- Miyake, A.**, Benjamin-Pollak, R., Kindsci, H., Zhang, H., & Kane, M. J. (2022). *The effects of note-taking on mind-wandering: A comparison of four note-taking formats*. Paper presented at the annual Psychonomic Society meeting. Boston, MA.

D. Teaching

Honors

2021 UROP Outstanding Mentor Award for Honors Thesis Supervision

List of Courses Taught (since 2011)

Undergraduate Courses

Spring 2012 PSYC 2145 Introductory Cognitive Psychology (2 sections)
 Spring 2013 PSYC 2145 Introductory Cognitive Psychology (2 sections)
 Spring 2014 PSYC 4145 Advanced Cognitive Psychology (w/ lab sections)
 Spring 2015 PSYC 4145 Advanced Cognitive Psychology (w/ lab sections)
 Fall 2015 PSYC 2145 Introductory Cognitive Psychology
 Fall 2016 PSYC 2145 Introductory Cognitive Psychology
 Fall 2017 PSYC 2145 Introductory Cognitive Psychology (2 sections)
 Spring 2019 PSYC 2145 Introductory Cognitive Psychology
 Fall 2019 PSYC 2145 Introductory Cognitive Psychology
 Fall 2020 PSYC 2145 Introductory Cognitive Psychology (2 sections, Zoom sessions)
 Fall 2021 PSYC 2145 Introductory Cognitive Psychology (2 sections)
 Fall 2022 PSYC 2145 Introductory Cognitive Psychology
 Fall 2023 PSYC 2145 Introductory Cognitive Psychology

Graduate Courses

Spring 2011 PSYC 5685 Cognitive Proseminar: Memory
 Fall 2013 PSYC 7215 Graduate Seminar: Self-Regulation and Executive Functions
 Spring 2015 PSYC 7215 Graduate Seminar: Advanced Research Methods
 Spring 2016 PSYC 7215 Graduate Seminar: Goals, Motivation, & Success
 Fall 2018 PSYC 5685 Cognitive Proseminar: Research Methods
 Fall 2020 PSYC 7215 Seminar: Distracted Mind & Intrusive Thoughts (Zoom session)
 Spring 2021 PSYC 5825 Cognitive Proseminar: Executive Functions
 Spring 2023 PSYC 5685 Cognitive Proseminar: Memory

Student Supervision***Principal Dissertation Advisor***

Naomi Friedman (1996–2002; MA received 1998; Ph.D. received 2002)
 Michael Emerson (1996–2002; MA received 1997; Ph.D. received 2002)
 Leigh Alexander (2006–2014; MA received 2009; Ph.D. received 2014)
 Daniel Gustavson (2010–2016; MA received 2013; Ph.D. received 2016)
 John Lurquin (2010–2017; MA received 2013; Ph.D. received 2017)

Undergraduate Honors Thesis Advisor (since 2011)

Laura Shiley (defended 2012)	Parker Benson (defended 2018)
Leigh Wagenknecht (defended 2012)	Marjorie McIntyre (defended 2018)
Lauren Vale (defended 2012)	Hayden Kindschi (defended 2019)
Lucas Hampton (defended 2015)	Christopher Epp (defended 2020)
Joy Walters (defended 2016)	William Deselm (defended 2020)
Elizabeth Suhler (defended 2017)	Rebekah Benjamin-Pollack (defended 2021)
Emily Gavel (defended 2017)	Lisa Muschinski (defended 2021)

E. Service and Professional Activities**Service to the Department and the University** (since 2011)***Service to the Department of Psychology and Neuroscience***

Spring 2008–Spring 2013	Departmental salary committee, Member
Fall 2013	Primary Unit Evaluation Committee (PUEC) for promotion, Member
Fall 2013–Spring 2015	Colloquium committee, Co-chair
Fall 2014–Spring 2015	Committee for Undergraduate Education, Member
Fall 2016–Spring 2017	Human subjects committee, Member
Fall 2018–Spring 2019	Awards committee, Member
Fall 2018–Spring 2019	Honors thesis committee, Member
Fall 2019	Neuroimaging search committee, Member
Fall 2019–Spring 2020	“Cognitive resilience” search committee, Member
Spring 2020	Departmental salary committee, Member
Fall 2020–Spring 2021	Human subjects committee, Member
Fall 2021	PUEC for reappointment, Member
Fall 2021–Spring 2022	Departmental space committee, Member
Fall 2022	PUEC for promotion, Member

Fall 2021–Present Honors thesis committee, Member
Fall 2022–Present Program director for the cognitive program
Spring 2023–Present Faculty mentors for two new cognitive faculty members

Service to the University

Fall 2018–Spring 2019 Departmental representative for the Arts and Sciences Council (ASC)

Grant Proposal Reviews

Standing Panel Member (since 2011)

Institute for Educational Services (IES): Basic Processes review panel (2012–2015 & 2015–2018)

Ad-Hoc Grant Review or Site Visit Panel Member (since 2011)

National Institute of Health (NIH): Cognition & Perception Section (February 2017)

National Science Foundation (NSF): Site visit team member for a Science of Learning Center (June 2011)

Institute for Educational Services (IES): Panel member for the Basic Processes review section (February 2011; October 2011; March 2012; February 2019)

NIH Panel Phone Review (August 2012)

NIH National Cancer Institute (NCI) Special Emphasis Panel on Provocative Questions (October 2013)

NIH NCI Cancer Management and Behavior Review Panel (March 2014; June 2015; October 2015)

IES: Panel member for the Transformative Research review panel (June 2021)

University of Illinois Beckman Institute Intelligent Systems Theme External Committee Member (Fall 2020)

Journal Editing

Associate Editor

Journal of Experimental Psychology: General (2003–2007)

Psychological Research (2009)

Psychological Bulletin (2014–2016)

Editorial Board Member

Psychological Science (2007–present)

Journal of Experimental Psychology: General (1997–2003; 2007–2009; 2010–present)

Journal of Experimental Child Psychology (2011–present)

Journal of Memory and Language (2006–2008)

Journal of Educational Psychology (2002–2003)

Memory (2002–2003)

Guest Editor for Special Issues

Special section on individual differences in working memory, *Journal of Experimental Psychology: General* (the June 2001 issue)