Curriculum Vitae

Martin Wiener, PhD
Associate Professor

George Mason University
Department of Psychology
Fairfax, VA

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Employment:

08/2024 – Present George Mason University
Associate Professor

08/2016 – 07/2024 George Mason University
Assistant Professor

Education:

1999 – 2003 Rutgers University
B.A. Psychology

2004 – 2006 Villanova University
M.S. Experimental/Theoretical Psychology

2008 – 2011 University of Pennsylvania
Ph.D. Psychology

Research Interests:

Temporal perception and action
Spatial Navigation
Magnitude Processing
Individual differences in cognition and decision making
Musical and rhythmic processing

Technical Expertise:

Functional Magnetic Resonance Imaging
Transcranial Magnetic Stimulation
Electroencephalography
Psychophysics
Computational Modeling
Activation Likelihood Estimation meta-analysis

Fellowships:

Postdoctoral:

Postdoctoral Fellowship, Office of Naval Research Research Award (N00014-10-1-0198; PI: Thompson), (Mentors: James Thompson, Raja Parasuraman) Department of Psychology, George Mason University. 01/2013 – 08/2014.

Postdoctoral Fellowship, NIH Training Program in Neuroscience Neuroimaging (T32 NS054575; PI: Detre), Center for Functional Neuroimaging (Mentors: John Detre, H. Branch Coslett), University of Pennsylvania. 01/2012 – 12/2012.

Predoctoral:

Benjamin Franklin Fellowship, University of Pennsylvania, 2008 – 2011

Academic and Professional Honors:

UC Davis ERP Boot Camp, 2011.
American Psychological Association Dissertation Research Award, 2010.
Norman Anderson Graduate Student Fund Award, 2009
Sigma Xi Scientific Honor Society

Memberships in professional societies:

Society for Neuroscience
Cognitive Neuroscience Society
Vision Sciences Society
Organization for Human Brain Mapping
Sigma Xi Scientific Honor Society

Other Professional Activities:

Executive Director – Timing Research Forum (www.timingforum.org).

Ad Hoc Reviewer:
Nature Human Behavior ● eLife ● Psychological Review ● Brain ● PLOS Biology ● Journal of Neuroscience ● Cerebral Cortex ● Human Brain Mapping ● NeuroImage ● PLOS Computational Biology ● eNeuro ● Philosophical Transactions of the Royal Society of London: B ● Proceedings of the Royal Society B ● Journal of Experimental Psychology: General ● Journal of Cognitive Neuroscience ● Journal of Neurophysiology ● Neuroscience & Biobehavioral Reviews ● Neuropsychologia ● Frontiers in Integrative Neuroscience ● Frontiers in Cognition ● Frontiers in Perception ● European Journal of Neurology ● British Journal of Psychology ● Neuropsychology ● Journal of Cognitive Psychology ● Brain Imaging and Behavior ● Cortex ● Cognitive Computation ● JOVE ● International Journal of Comparative Psychology ● Experimental Brain Research ● Timing & Time Perception.

Grant Reviewer:
National Science Foundation; Army Research Labs; US-Israel Binational Science Foundation

Co-Organizer: Timing Research Forum 3rd meeting (TRF3) Lisbon, Portugal. Champalimaud Centre for the Unknown (with Joseph Paton and Argiro Vatakis). October, 2023.

Organizer and Chair: Time and Temporal Processing, Society for Neuroscience Annual Meeting, Nanosymposium, San Diego, November 11-15, 2022.

Organizer and Chair: Time and Action in Spatial Contexts, 2nd Timing Research Forum, Queretaro, Mexico, October 15rd-17th, 2019.

Organizer and Chair: Neural Oscillations for Time Estimation, Timing Research Forum, Strasbourg, France, October 23rd-25th, 2017.

Organizer and Chair: Timing and Temporal Processing, Society for Neuroscience Annual Meeting,

Nanosymposium, New Orleans, October 13th-17th, 2012.

Organizer and Chair: Neural Coding of the 4th Dimension: Circuits for Time and Timing, Society for Neuroscience Annual Meeting, Nanosymposium, New Orleans, October 13th-17th, 2012.

Ad Hoc Reviewing Editor:
eLIFE

Policy Experience:

09-14 – 08-16
AAAS Science & Technology Policy Fellow
National Science Foundation; Computing, Information Science, and Engineering (CISE) Directorate; Division of Information and Intelligent Systems (IIS). Specialty: Big Data & Analytics
Mentor: Dr. Kenneth Whang

Teaching Experience:
Psyc 300 – Statistics in Psychology
Psyc 592 – Music and the Brain
Psyc 531 – Mammalian Neurobiology
Psyc 592 – Matlab for Psychologists
Psyc 768 – Perceptual, Motor, and Cognitive Neuroscience
Psyc 892 – Human Brain Stimulation

Funding:

National Science Foundation # 2318242. Learning and Metacognitive inferences for the Perception of Time. $721,141. 2024 – 2027.

National Science Foundation #1849067. The Role of the Motor System in the Perception of Time. Co-PI: Wilsaan Joiner. Funds: $264,090. 2019 – 2022.

National Science Foundation #1941078 US Trainee Travel Awards to attend the 2nd Timing Research Forum: Queretaro, Mexico - October 2019. Co-PI: Jon Iversen. Funds: $20,000. 2019.

Pending: National Science Foundation # 2308832. CRCNS US-Israel Research Proposal: NSF-BSF: Interval Timing across the Visual Hierarchy. $729,800.

Manuscripts in Preparation:

Mondok, C., & **Wiener, M.** (under review). Evidence of entrainment in a tempo matching task.

Teghil, A., **Wiener, M.,** & Boccia, M. (under review). Cortical gradients support mental time travel into the past and future: evidence from Activation Likelihood Estimation meta-analysis.

Desai, C., Bader, F., & **Wiener, M.** (in preparation). Awareness of both Global Uncertainty and Feedback in Human Time Estimation.

Asad, F., & **Wiener, M.** (in preparation). Effects of Transcranial Random Noise Stimulation (tRNS) on Time Perception Deficits in ADHD.

Stanfield-Wiswall, C., & **Wiener, M.** (in preparation). Beware Bisection: The Direction of Time-Numerosity Interactions Depends on Task Context.

Published Manuscripts:
Total Number of publications: **50**
Number of first-author publications: **20**
Number of Citations: 3604 (H-Index: 29), source: Google Scholar.

Gladhill, K.A., De Kock, R., Zhou, W., Joiner, W.M., & **Wiener, M.** (accepted). Mechanically induced tremor affects time perception of auditory and visual stimuli. *eNeuro*

Ma, A., Cameron, A., & **Wiener, M.** (2024). Memorability Shapes Perceived Time (and vice versa). *Nature Human Behaviour.* 8, 1296-1308.

Wiener, M. (2024). Coordinate-Based Meta-Analyses of the Time Perception Network. *Neurobiology of Interval Timing*, 215-226.

Wiener, M., & Vatakis, A. (2024). TRF3: All in Good Time. *Timing and Time Perception,* 12, 243-463.

Bader, F., & **Wiener, M**. (2024). Neuroimaging Signatures of Metacognitive Improvement in Sensorimotor Timing. *Journal of Neuroscience, 44(9).*

Gladhill, K. A., Robinson, E. M., Stanfield-Wiswall, C., Bader, F., & **Wiener, M.** (2024). Separable Representations for Duration and Distance in Virtual Movements. *Journal of Cognitive Neuroscience, 36(3), 447-459.*

Cona, G., **Wiener, M**., Allegrini, F., & Scarpazza, C. (2023). Gradient Organization of Space, Time, and Numbers in the Brain: A Meta-analysis of Neuroimaging Studies. *Neuropsychology Review*, 1-17.

Capizzi, M., Visalli, A., **Wiener, M**., & Mioni, G. (2023). The contribution of the supplementary motor area to explicit and implicit timing: A high-definition transcranial Random Noise Stimulation (HD-tRNS) study. *Behavioural Brain Research*, *445*, 114383.

De Kock, R., Zhou, W., Datta, P., Mychal Joiner, W., & **Wiener, M**. (2023). The role of consciously timed movements in shaping and improving auditory timing. *Proceedings of the Royal Society B*, *290*(1992), 20222060.

Mondok, C., & **Wiener, M**. (2022). Selectivity of timing: A meta-analysis of temporal processing in neuroimaging studies using activation likelihood estimation and reverse inference. *Frontiers in Human Neuroscience*, *16*.

Gladhill, K. A., Mioni, G., & **Wiener, M**. (2022). Dissociable effects of emotional stimuli on electrophysiological indices of time and decision-making. *Plos one*, *17*(11), e0276200.

De Kock, R., Gladhill, K. A., Ali, M. N., Joiner, W. M., & **Wiener, M**. (2021). How movements shape the perception of time. *Trends in Cognitive Sciences*, *25*(11), 950-963.

Bader, F., & **Wiener**, M. (2021). Awareness of errors and feedback in human time estimation. *Learning & Memory*, *28*(5), 171-177.

De Kock, R., Zhou, W., Joiner, W. M., & **Wiener**, M. (2021). Slowing the body slows down time perception. *Elife*, *10*, e63607.

Robinson, E. M., & **Wiener**, M. (2021). Dissociable neural indices for time and space estimates during virtual distance reproduction. *NeuroImage*, *226*, 117607.

Cona, G., **Wiener**, M., & Scarpazza, C. (2021). From ATOM to GradiATOM: Cortical gradients support time and space processing as revealed by a meta-analysis of neuroimaging studies. *NeuroImage*, *224*, 117407.

Mioni, G., Shelp, A., Stanfield-Wiswell, C. T., Gladhill, K. A., Bader, F., & **Wiener**, M. (2020). Modulation of individual alpha frequency with tacs shifts time perception. *Cerebral Cortex Communications*, *1*(1), tgaa064.

Wiener, M., Zhou, W. W., & Joiner, W. (2019). Movement Improves the Quality of Temporal Perception and Decision Making. *eNeuro*

Robinson, E. M., Michaelis, K., Thompson, J. C., & **Wiener, M**. (2019). Temporal and Spatial Discounting are Distinct in Humans. *Cognition*.

Bader, F., Kochen, W. R., Kraus, M., & **Wiener, M**. (2019). The Dissociation of Temporal Processing Behavior in Concussion Patients: Stable Motor and Dynamic Perceptual Timing. *Cortex*.

Wiener, M., Parikh, A., Krakow, A., & Coslett, H. B. (2018). An Intrinsic Role of Beta Oscillations in Memory for Time Estimation. *Scientific Reports*, *8*(1), 7992.

Basil, R. A., Westwater, M. L., **Wiener, M**., & Thompson, J. C. (2017). A causal role of the right superior temporal sulcus in emotion recognition from biological motion. *Open Mind*, *1*(3), 148-158.

Martin, B., **Wiener, M**., & van Wassenhove, V. (2017). A Bayesian Perspective on Accumulation in the Magnitude System. *Scientific Reports*, *7*(1): 630.

Kiar, G., Gorgolewski, K. J., Kleissas, D., Roncal, W. G., Litt, B., Wandell, B., Poldrack, R.A., **Wiener, M**., Vogelstein, R.J., Burns, R., & Vogelstein, J. T. (2017). Science In the Cloud (SIC): A use case in MRI Connectomics. *Gigascience*. doi: 10.1093/gigascience/gix013

Wiener, M., Sommer, F. T., Ives, Z. G., Poldrack, R. A., & Litt, B. (2016). Enabling an Open Data Ecosystem for the Neurosciences. *Neuron*, *92*(3), 617-621.

Wiener, M., Michaelis, K., & Thompson J. (2016) Distance Reproduction is Influenced by Prior Stimulus History via the hippocampus and retrosplenial cortex. *Human Brain Mapping*, 37(9), 3172-3187.

Wiener, M., & Thompson, J. The Effect of Background Context on the Size-Time Illusion (2016). *Timing and Time Perception,* 4(2), 167-186.

Wiener, M., & Kanai, R. (2016). Frequency Tuning for Temporal Perception and Prediction. *Current Opinion in Behavioral Science,* 8, 1-6.

Wiener, M., & Thompson, J. (2015). Repetition Enhancement and Memory Effects for Duration. *NeuroImage,* 113, 268-278.

Wiener, M. Transcranial Magnetic Stimulation studies of Human Time Perception: A Primer (2015). *Timing and Time Perception,* 2(3), 233-260.

Wiener, M., Thompson, J., & Coslett, H.B. (2014) Continuous Carryover of Temporal Context dissociates Response Bias from Perceptual Influence for Duration. *PLoS One*, 9(6), e100803.

Michaelis, K., **Wiener, M**., & Thompson, J. (2014) Passive listening to preferred motor tempo modulates corticospinal excitability. *Frontiers in Human Neuroscience*, 8, 252.

Wiener, M., Lee, Y-S., Lohoff, F., & Coslett, H.B. (2014). Individual differences in the morphometry and activation of time perception networks are influenced by genotype. *NeuroImage,* 89, 10-22.

Hamilton, R., **Wiener, M**., & Coslett, H.B. (2013). Gone in a flash: manipulation of audiovisual temporal integration using transcranial magnetic stimulation. *Frontiers in Perception Science.*

Berryhill, M., **Wiener, M**., Jansen, J.A., Lohoff, F.W., & Coslett, H.B. (2013) COMT and ANKK1-Taq-Ia genetic polymorphisms influence visual working memory. *PLoS ONE,* e55862.

Balci, F., **Wiener, M**., Cavdaroglu B. & Coslett, H.B. (2013) Epistasis effects of dopamine genes on interval timing and reward magnitude in humans. *Neuropsychologia,* 51(2), 293-308.

Wiener, M., Kliot, D., Turkeltaub, P.E., Hamilton, R.H., Wolk, D., & Coslett, H.B. (2012). Parietal influence on temporal encoding indexed by simultaneous transcranial magnetic stimulation and electroencephalography. *Journal of Neuroscience,* 32(35), 12258-12267

Turkeltaub, P.E., Eickhoff, S.B., Laird, A.R., Fox, M., **Wiener, M**., Fox, P. (2012). Minimizing within-experiment and within-group effects in activation likelihood estimation meta-analyses. *Human Brain Mapping,* 33 (1), 1-13.

Gooch, C.M., **Wiener, M**., Hamilton, C.A., & Coslett, H.B. (2011) Temporal discrimination of sub- and supra-second time intervals: a voxel-based lesion mapping analysis. *Frontiers in Integrative Neuroscience*, 5: 59. doi: 10.3389/fnint.2011.00059.

Wiener, M., Lohoff, F.W., & Coslett, H.B. (2011). Double dissociation of dopamine genes and timing in humans. *Journal of Cognitive Neuroscience*, 23(10), 2811-2821.

Wiener, M, Matell, M.S., & Coslett, H.B. (2011). Multiple mechanisms for temporal processing. *Frontiers in Integrative Neuroscience.* **5:**31. doi: 10.3389/fnint.2011.00031

Wiener, M., Turkeltaub, P.E., & Coslett, H.B. (2010) Implicit timing tasks activate the left inferior parietal cortex. *Neuropsychologia*, 48(13), 3967-3971

Coslett, H.B., **Wiener, M**., & Chaterjee, A (2010). Multiple procedures for timing: evidence from basal ganglia lesions in humans. *PLoS One* 5(4), e10324.

Gooch, C.M., **Wiener, M**., & Coslett, H.B. (2010). Interval timing disruptions in subjects with cerebellar lesions. *Neuropsychologia*, 48(4), 1022-1031.

Wiener, M., Turkeltaub, P., & Coslett, H.B. (2010). The image of time: a voxel-wise meta-analysis. *NeuroImage*, 49(2), 1728-1740.

Wiener, M., Hamilton, R., Turkeltaub, P., Matell, M.S., & Coslett, H.B. (2010). Fast forward: supramarginal gyrus stimulation alters time measurement. *Journal of Cognitive Neuroscience*, 22(1), 23-31.

Coslett, H.B., Shenton J., Dyer T., & **Wiener, M**. (2009). Cognitive timing: neuropsychology and anatomic basis. *Brain Research*, 1254, 38-48.

Wiener M., Magaro, C.M., & Matell, M.S. (2008). Accurate timing but increased impulsivity following

excitotoxic lesions of the subthalamic nucleus. *Neuroscience Letters*, 440(2), 176-180.

Wiener M., & Coslett, H.B. (2008). Disruption of temporal processing in a subject with frontotemporal dementia. *Neuropsychologia,* 46(7), 1927-1939.

Gooch, C.M., **Wiener, M**., Portugal, G.S., & Matell, M.S. (2007). Evidence for separate neural mechanisms for the timing of discrete and sustained responses. *Brain Research*, 1156, 139-151.

Masters Thesis (Villanova):

Wiener, M. (2006) Capturing time: How the thalamus checks time and switches behavior. Villanova University, Villanova, PA

Doctoral Thesis (University of Pennsylvania):

Wiener, M (2011) Context dependent and independent mechanisms of time perception in the human brain. University of Pennsylvania, Philadelphia, PA **(Defense Date: 12/15/2011)**

Invited Presentations:

"Memorability Shapes Perceived Time (and Vice Versa)". Timing Research Forum Virtual Journal Club, 10/25,2023.
"How Movements Shape the Perception of Time". University of Bologna, Italy. 6/24/2022
"How Movements Shape the Perception of Time". University of Marseilles, France, 6/2/2022
"How Movements Shape the Perception of Time". University of California, Irvine, 4/27/2022
"How Movements Shape the Perception of Time". University of Arizona, 4/22/2022
"How Movements Shape the Perception of Time". University of Lille, France. 3/31/2022.
"How Movements Shape the Perception of Time". Brown University Psychology Colloquium series. 4/14/2022

"Neural Mediators of Temporal and Spatial Perception". Invited talk given at University of California, Merced. Colloquium series. November, 2019.

"Dissociable and overlapping mechanisms for time and space perception", Capital area Cognition, Attention, Perception Conference. January 25th, 2019. George Washington University.

"Oscillation frequencies for temporal perception and action", Psychology Department Colloquium Series, Villanova University, Villanova, PA, September 29th, 2017.

"Neural mechanisms of timing in action", Cognitive Neuroscience Seminar Series, University of Burgundy, Dijon, France, November 6th, 2014.

"Functional neural mechanisms of timing and rhythm", Cognitive Neuroscience Seminar Series, Aix-Marseille University, Marseille, France, November 3rd, 2014.

"Perceptual carryover effects in climbing neural activity", International Conference on Timing and Time Perception, Corfu, Greece, April 2nd, 2014.

"Multiple, overlapping networks involved in temporal task demands", 47th Annual Winter Conference on Brain Research, Steamboat Springs, CO, January 28th, 2014.

"Dissociating neural networks for timing and action", Cognitive Neuroscience Seminar, University of Trento, Trento, Italy, September 30th, 2013.

"Optimal neural networks for time perception", Imaging Time training school, Otto von Guericke University, Magdeburg, Germany, September 25th, 2013.

"All about timing: The psychological and neural correlates of temporal perception and action", Rehabilitation Medicine Grand Rounds, National Rehabilitation Hospital, Washington, DC, April 24th, 2013.

"Continuous Carryover Effects in Temporal Bisection", New England Sequence and Timing, University of Massachusetts, Amherst, March 9th, 2013.

Participant: Play, Attention, and Learning (PAL): How Does Play and Timing Shape the Development of Attention and Facilitate Classroom Learning? New York Academy of Sciences workshop, June 15, 2012.

"Functional and molecular mechanisms of human time perception", Neuropsychology Brown Bag Seminar, Department of Psychiatry, University of Pennsylvania, March 23, 2012.

"Functional mechanisms of human time perception", Center for Cognitive Neuroscience Talk Series. University of Pennsylvania, October 17, 2011.

"Components of the Clock: Dissociating the Neural Mechanisms of Time Perception", University of Pennsylvania 20th Annual Behavioral and Cognitive Neuroscience Student Retreat Day, December 11, 2009.

Popular Press and Outreach

Ma, Cameron, & Wiener (2024) was featured in numerous news outlets including Nature News, Scientific American, The Economist, Axios, The Guardian, The Telegraph, BBC Science Focus, IFL Science Focus, and more. See https://nature.altmetric.com/details/162766212 for more details.

"What day is it? This is your brain on Quarantine" – WebMD, May 7th, 2020.

"CCC BRAIN Workshop – A Neuroscientist's Perspective" – CCC Blog, December 1st, 2014.

"Your Brain On: Music" – Shape Magazine, August 13, 2014.

"Get Your Groove On: Beats Tap into Brain" – George Mason News, November 21st, 2014.