

Jordan A. Taylor

Curriculum Vitae

May 2026

Contact Information

Department of Psychology
Princeton University
429 Peretsman-Scully Hall
Princeton, New Jersey 08544

Email: jordanat@princeton.edu
Website: ipalab.princeton.edu
Phone: (609) 258-4648
Fax: (609) 258-1113

Professional Appointments

| | |
|--|-----------|
| Professor | 2024- |
| Department of Psychology, Princeton University | |
| Associate Professor | 2018-2024 |
| Department of Psychology, Princeton University | |
| Associate Editor, The Journal of Cognitive Neuroscience, MIT Press | 2017- |
| Associated Faculty | 2013- |
| Princeton Neuroscience Institute, Princeton University | |
| Assistant Professor | 2012-2018 |
| Department of Psychology, Princeton University | |
| Postdoctoral Fellow | 2008-2012 |
| Department of Psychology, University of California, Berkeley | |

Education

| | | |
|-------|---|------|
| Ph.D. | Washington University in St. Louis, Biomedical Engineering | 2007 |
| M.S. | Washington University in St. Louis, Biomedical Engineering | 2006 |
| B.S. | Purdue University, Aeronautical and Astronautical Engineering | 2003 |

Active Research Funding

| | |
|--|-----------|
| National Institutes of Health (1R01NS131520-01) | 2024-2029 |
| National Institute of Neurological Disorders and Stroke | |
| Title: Approaching sensorimotor learning from another angle: Exploring and leveraging different cognitive strategies for improving motor performance | |
| Role: PI | |
| National Institutes of Health (1R01NS134754-01) | 2024-2029 |
| National Institute of Neurological Disorders and Stroke | |
| Title: Fundamental predictive computations in upper-limb and speech adaptation | |
| Role: Multi-PI | |
| New Ideas in the Natural Sciences | 2023-2026 |
| Office of the Dean for Research, Princeton University | |

Title: Representational change in motor skills: New insights from music performance
Role: PI

Past Research Funding

- J. Insley Blair Pyne Fund 2021-2024
SEAS Innovation Research, Princeton University
Title: Making virtual reality meet perception: Harnessing the potential of VR applications for research and industry
Role: PI
- New Jersey Alliance for Clinical and Translational Science (TR003017) 2020-2022
Rutgers and Princeton University
Title: A dynamic functional splint to restore hand function in children with cerebral palsy
Role: Co-PI
- Department of Defense (N00014-18-1-2873) 2018-2023
Office of Naval Research, Science and Technology
Title: Structured deep learning for modeling and controlling high-dimensional dynamical systems
Role: Co-PI
- National Science Foundation (1827550) 2018-2022
Division of Behavioral and Cognitive Sciences
Perception, Action, and Cognition
Title: The intertwined roles of vision and sensorimotor adaptation on reach-to-grasp movements: redefining the functional differences between perception and action
Role: Co-PI
- National Science Foundation (1838462) 2018-2021
Division of Behavioral and Cognitive Sciences
Science of Learning
Title: An exploration of a psychological space for human motor generalization between perception and action
Role: PI
- National Institutes of Health (5R01NS092079) 2015-2021
National Institute of Neurological Disorders and Stroke
Title: Embodied decision making: the influence of action errors on reinforcement learning
Role: Co-I
- Princeton Neuroscience Innovation Fund 2014-2016
Princeton Neuroscience Institute, Princeton University
Title: Identification and modulation of neural regions associated with implicit and explicit learning
Role: PI
- National Institutes of Health (5R01NS084948) 2013-2019
National Institute of Neurological Disorders and Stroke

Title: A model system to study the interaction of multiple processes for motor learning
Role: PI

National Institute of Neurological Disorders and Stroke (F32NS064749) 2009-2012
Title: Neural correlates of strategic control and recalibration during motor learning
Role: PI

Publications

- Chen., & Taylor J.A. (2026). Revisiting the explicit-implicit additivity assumption in visuomotor adaptation. *Journal of Neurophysiology*, in press.
- Ding W., Niyogi A., Taylor J.A., & Tsay J.S. (2026). Hypothesis testing governs strategic motor learning. *Science of Learning*, in press.
- Chan R.W., Abrahamse E., Blischke K., Bongers R., Boutin A., Hummel F., Immink M., Kornysehva K., van Der Lubbe R., Maceira P., Panzer S., Ruitenbergh M.F.L., Sburlea A.I., Seidler R., Taylor J.A., Wright D.L., & Verwey W.B. (2026). Diversity, individualisation, and enhancement in motor learning: current challenges and future directions from the first theoretical and applied advances in motor learning conference. *Journal of Motor Learning and Development*, 14: 1-5.
- Velázquez-Vargas C.A., & Taylor J.A. (2025). Learning to move and plan like the Knight: sequential decision making with a novel motor mapping. *Computational Brain & Behavior*, <https://doi.org/10.1007/s42113-025-00245-9>.
- Velázquez-Vargas C.A., Daw N.D., & Taylor J.A. (2024). The role of training variability for model-based and model-free learning of an arbitrary visuomotor mapping. *PLoS Computational Biology*, 20(9):e1012471.
- Velázquez-Vargas C.A. & Taylor J.A. (2024). Working memory constraints for visuomotor retrieval strategies. *Journal of Neurophysiology*, 132(2): 347-361.
- Tsay J.S., Kim H.E., McDougle S.D., Taylor J.A., Haith A., Avraham G., Krakauer J.W., Collins A.G.E., & Ivry R.B. (2024). Strategy Processes in Sensorimotor Learning: Reasoning, Refinement, and Retrieval. *eLife*, 1:13:e91839.
- Al-Fawakhiri N., Ma A., Taylor J.A., & Kim O.A. (2023). Exploring the role of task success in implicit motor adaptation. *Journal of Neurophysiology*, 130(2):332-344.
- Annes C.K., Taylor J.A., & Hallock R.M. (2023). The effect of workspace tidiness on schoolwork performance of high school students. *Journal of Emerging Investigators*, 6:1-5.
- McDougle S.D., Tsay J., Pitt B., King M., Saban W., Taylor, J.A., & Ivry, R.B. (2022). Continuous manipulation of mental representations is compromised in cerebellar degeneration. *Brain*, 145(12):4246-4263.
- Avraham G., Taylor J.A., Breaks A., Ivry R.B., & McDougle, S.D. (2022). Contextual effects in sensorimotor adaptation adhere to associative learning rules. *eLife*, 11:e75801.

- Mushtaq F., McDougle, S.D., Craddock, M.P., Parvin, D.E., Brookes, J., Schaefer, A., Mon-Williams, M., Taylor, J.A., & Ivry, R.B. (2022). Distinct processing of selection and execution errors in neural signatures of outcome monitoring. *Journal of Cognitive Neuroscience*, 34(5):748-765.
- McDougle, S.D., Wilterson, S.A., Turk-Browne, N.B., & Taylor, J.A. (2022). Revisiting the role of the medial temporal lobe in motor learning. *Journal of Cognitive Neuroscience*, 34(3):532-549.
- Wang T., & Taylor J.A. (2021). Implicit adaptation to mirror reversal is in the correct coordinate system but the wrong direction. *Journal of Neurophysiology*, 126(4):1478-1489.
- Forano M., Schween R., Taylor J.A., Hegele M., & Frankin D.W. (2021). Direct and indirect cues can enable dual-adaptation, but through different learning processes. *Journal of Neurophysiology*, 126(5):1490-1506.
- Wilterson S.A., & Taylor J.A. (2021). Implicit visuomotor adaptation remains limited after several days of training. *eNeuro*, 8(4).
- Campagnoli C., Domini F., & Taylor J.A. (2021). Taking aim at the perceptual side of motor learning: exploring how explicit and implicit learning encode perceptual error information through depth vision. *Journal of Neurophysiology*, 126(2): 413-426.
- Cesaneck E., Taylor J.A., & Domini F. (2021). Persistent grasping errors produce depth cue re-weighting in perception. *Vision Research*, 178:1-11.
- Taylor J.A., & McDougle S.D. (2020). Visuomotor adaptation tasks as a window into the interplay between explicit and implicit cognitive processes. In Poeppel D., Mangun G.R., & Gazzaniga M.S. (Eds.), *The Cognitive Neurosciences 6th Edition* (pp. 549-557). MIT Press.
- Schween R., McDougle S.D., Hegele M., & Taylor J.A. (2020). Assessing explicit strategies in force field adaptation. *Journal of Neurophysiology*, 123(4):1552-1565.
- Cesaneck E., Taylor J.A., & Domini F. (2020). Sensorimotor adaptation and cue reweighing compensate for distorted 3D shape information, accounting for paradoxical perception-action dissociation. *Journal of Neurophysiology*, 123(4): 1407-1419.
- Schween R., Langsdorf L.M., Taylor J.A., & Hegele M. (2019). How different effectors and action effects modulate the formation of separate motor memories. *Scientific Reports*, 9(1):17040.
- Poh E., & Taylor J.A. (2019). Generalization via superposition: Combined effects of mixed reference frame representations for explicit and implicit learning in a visuomotor adaptation task. *Journal of Neurophysiology*, 121:1953-1966.
- McDougle S.D., Butcher P.A., Parvin D., Mustaq F., Niv Y., Ivry R.B., & Taylor J.A. (2019). Neural signatures of prediction errors in a decision-making task are modulated by action execution failures. *Current Biology*, 29:1-8.
- Wong A.L., Marvel C.L., Taylor J.A., & Krakauer J.W. (2019). Can patients with cerebellar disease switch learning mechanisms to reduce their adaptation deficits? *Brain*, 142:662-673.

- McDougle S.D., & Taylor, J.A. (2019). Dissociable cognitive strategies for sensorimotor learning. *Nature Communications*, 10(1):40.
- Hutter S.A., & Taylor J.A. (2018). Relative sensitivity of explicit re-aiming and implicit motor adaptation. *Journal of Neurophysiology*, 120:2640-2648.
- Schween R., Taylor J.A., & Hegele M. (2018). Plan-based generalization shapes local implicit adaptation to opposing visuomotor transformations. *Journal of Neurophysiology*, 120:2775-2787.
- Liew S.L., Thompson T., Ramirez J., Butcher P.A., Taylor J.A., & Celnik P.A. (2018). Variable neural contributions to explicit and implicit learning during visuomotor adaptation. *Frontiers in Neuroscience*, 12:610.
- Parvin D., McDougle S.D., Taylor J.A., & Ivry R.B. (2018). Credit assignment in a motor decision making task is influenced by agency and not sensorimotor prediction errors. *Journal of Neuroscience*, 38(19):4521-4530.
- Butcher P.A., & Taylor J.A. (2018). Decomposition of a sensory-prediction error signal for visuomotor adaptation. *Journal of Experimental Psychology: Human Perception and Performance*, 44(2):175-194.
- Cesane E., Campagnoli C., Taylor J.A., & Domini F. (2018). Does visuomotor adaptation contribute to illusion-resistant grasping. *Psychonomic Bulletin & Review*, 25(2):827-845.
- Bond K.M., & Taylor J.A. (2017). Structural learning in a visuomotor adaptation task is explicitly accessible. *eNeuro*, 4(4).
- Butcher P.A., Ivry R.B., Kuo S.H., Rydz D., Krakauer J.W., & Taylor J.A. (2017). The cerebellum does more than sensory-prediction error-based learning in sensorimotor adaptation tasks. *Journal of Neurophysiology*, 118(3):1622-1636.
- McDougle S.D., Bond K.M., & Taylor J.A. (2017). Implications of plan-based generalization in sensorimotor adaptation. *Journal of Neurophysiology*, 118(1): 383-393.
- Morehead J.R., Taylor J.A., Parvin D., & Ivry R.B. (2017). Characteristics of implicit sensorimotor adaptation revealed by task-irrelevant clamped feedback. *Journal of Cognitive Neuroscience*, 29(6):1061-1074.
- Stark-Inbar A., Mehr R., Taylor J.A., & Ivry R.B. (2017). Individual differences in implicit motor learning. *Journal of Neurophysiology*, 117(1):412-428.
- Poh E., Carroll T.J., & Taylor J.A. (2016). Effect of coordinate frame compatibility on the transfer of implicit and explicit learning across limbs. *Journal of Neurophysiology*, 116(3):1239-1249.
- McDougle S.D., Ivry R.B., & Taylor J.A. (2016). Taking aim at the cognitive side of learning in sensorimotor adaptation tasks. *Trends in Cognitive Sciences*, 20(7): 535-544.
- McDougle S.D., Boggess M.J., Crossley M.J., Parvin D., Ivry R.B., & Taylor J.A. (2016). Credit assignment in movement-dependent reinforcement learning. *Proceedings of the National Academy of Sciences*, 113(24):6797-6802.
- Day K.A., Roemmich R.T., Taylor J.A., & Bastian A.J. (2016). Motor learning generalizes around the intended movement. *eNeuro*, 3(2) e0005-16.2016, 1-12.

- Brudner S.N., Kethidi N., Graeupner D., Ivry R.B., & Taylor J.A. (2016). Delayed feedback during sensorimotor learning selectively disrupts adaptation, but not strategy use. *Journal of Neurophysiology*, 115(3):1499–1511.
- Fan J.E., Turk-Browne N.B., & Taylor J.A. (2016). Error driven learning in statistical summary perception. *Journal of Experimental Psychology: Human Perception and Performance*, 42(2):266–280.
- McDougle S.D., Bond K.M., & Taylor J.A. (2015). Explicit and implicit processes constitute the fast and slow processes of sensorimotor learning. *Journal of Neuroscience*, 35(26):9568-9579.
- Bond K.M., & Taylor J.A. (2015). Flexible explicit learning, but rigid implicit learning in sensorimotor learning tasks. *Journal of Neurophysiology*, 113(10):3836-3849.
- Taylor J.A., Krakauer J.W., & Ivry R.B. (2014). Explicit and implicit contributions to learning in a sensorimotor adaptation task. *Journal of Neuroscience*, 34(8):3023-3032.
- Taylor J.A., & Ivry R.B. (2014). Cerebellar and prefrontal cortex contributions to adaptation, strategies, and reinforcement learning. *Progress in Brain Research: Cerebellum and Memory Formation: Structure, Computation, and Function*, 210: 217-253.
- Taylor J.A., & Ivry R.B. (2013). Context-dependent Generalization. *Frontiers in Human Neuroscience*, 7:171.
- Taylor J.A., & Ivry R.B. (2013). Implicit and explicit processes in motor learning. In W. Prinz, M. Beisert, A. Herwig (Eds.). *Action Science: Foundations of an Emerging Discipline* (pp. 63-87). Cambridge, MA: MIT Press.
- Taylor J.A., Hieber L.L., & Ivry R.B. (2013). Feedback-dependent generalization. *Journal of Neurophysiology*, 109(1):202-215.
- Fan J.E., Turk-Browne N.B., & Taylor J.A. (2013). Feedback driven tuning of statistical summary representations. *Visual Cognition*, 21(6):685-689.
- Taylor J.A., & Ivry R.B. (2012). The role of strategies in motor learning. *Annals of the New York Academy of Sciences, The Year in Cognitive Neuroscience*, 1251:1-12.
- Taylor J.A., Wojaczynski G.J., & Ivry R.B. (2011). Trial-by-trial analysis of intermanual transfer of adaptation. *Journal of Neurophysiology*, 106(6):3157-3172.
- Prinzmetal W., Taylor J.A., Myers L.B., & Nguyen-Espino J. (2011). Contingent capture and inhibition of return: a comparison of mechanisms. *Experimental Brain Research*, 214(1):47–60.
- Norris S.A., Hathaway E., Taylor J.A., & Thach W.T. (2011). Cerebellar inactivation impairs memory of learned prism gaze-reach calibrations. *Journal of Neurophysiology*, 105,2248-2259.
- Morehead J.R., Butcher P.A., & Taylor J.A. (2011). Does fast learning depend on declarative mechanisms? *Journal of Neuroscience*, 31(14):5184-5185.

- Taylor J.A., & Ivry R.B. (2011). Flexible strategies during motor learning. *PLoS Computational Biology*, 7(3):e10001096.
- Stoloff R.H., Taylor J.A., Xu J, Ridderikhoff A., & Ivry R.B. (2011). Effect of reinforcement history on hand choice in an unconstrained reaching task. *Frontiers in Neuroscience*, 5:41.
- Taylor J.A., Klemfuss N.M., & Ivry R.B. (2010). An explicit strategy prevails when the cerebellum fails to compute movement errors. *Cerebellum*, 9(4):580-6.
- Reid E.K., Norris S.A., Taylor J.A., Hathaway E.N., Smith A.J., Yittri E.A., & Thach W.T. (2010). Is the parvocellular red nucleus involved in cerebellar motor learning? *Current Trends in Neurology*, 3:15-22.
- Wang X., Xu R., Abernathy G., Taylor J.A., Alzghoul M.G., Hannon K., Hockerman G.H., & Pond A.L. (2008). Kv11.1 channel subunit composition included MinK and varies developmentally in mouse cardiac muscle. *Developmental Dynamics*, 237(9):2430-7.
- Taylor J.A., & Thoroughman K.A. (2008). Motor adaptation scaled by the difficulty of secondary cognitive task. *PLoS ONE*, 3(6):e2485.
- Taylor J.A., & Thoroughman K.A. (2007). Divided attention impairs motor adaptation but not feedback control. *Journal of Neurophysiology*, 98(1):317-32.
- Thoroughman K.A., Fine M.S., & Taylor J.A. (2007). Trial-by-trial motor adaptation: window into elemental neural computation. *Progress in Brain Research*, 165: 373-382.
- Thoroughman K.A. & Taylor J.A. (2005). Rapid reshaping of human motor generalization. *Journal of Neuroscience*, 25(39):8948-895.
- Taylor J.A., Babbs C.F., Alzghoul M.B., Olsen A., Latour M., Pond A.L., & Hannon K (2004). Optimization of ectopic gene expression in skeletal muscle through DNA transfer by electroporation. *BMC Biotechnology*, 4:11.

Preprints

- Bejjanki V.R., & Taylor J.A. On the limit: Working memory capacity constrains learning of complex visuomotor mappings. *bioRxiv*.
- Evans M.H., Taylor J.A., & Landy M.S. Implicit adaptation's effect on sensorimotor and motor confidence. *bioRxiv*.
- Poh E., Al-Fawakhiri N., Tam R., McDougle S.D. & Taylor J.A. Top-down effects in motor generalization. *bioRxiv*.
- Wang T., Lam T., Taylor J.A., & Ivry R.B. Distinct implicit contributions to action selection and action execution in sensorimotor adaptation. *bioRxiv*.
- Wang Y., & Taylor J.A. Where you aim — not how you aim — affects implicit recalibration in visuomotor adaptation. *bioRxiv*.

Peer-reviewed Conference Proceedings

- Wang Y., & Taylor J.A. (2025). Algorithmic vs. retrieval: Can strategy choice shape implicit visuomotor recalibration? *Advances in Motor Control and Motor Learning*.
- Bejjanke V.R., Gaillard E., Taliaferro M., & Taylor J.A. (2025). Galliard influence of task complexity on visuomotor adaptation. *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.
- Chen Y., & Taylor J.A. (2025). Spatial dynamics shape the interaction between motor adaptation processes. *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.
- Evans M.H., Taylor J.A., & Landy M.S. (2025). Implicit adaptation's effect on motor awareness and confidence. *Journal of Vision*, 25(9): 2790.
- Wang Y., & Taylor J.A. (2025). How different cognitive strategies can influence implicit recalibration in visuomotor adaptation. *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.
- Kim O.A., Velázquez-Vargas C.A., & Taylor J.A. (2024). Cost of using an algorithmic strategy for visuomotor rotation. *Advances in Motor Control and Motor Learning*.
- Falcone S., & Taylor J.A. (2024). The impact of spatiotemporal calibration on sense of embodiment and task performance in teleoperation. *Proceedings of the 46th Annual Conference of the Cognitive Science Society*.
- Velázquez-Vargas C.A., Christian I.R., Taylor J.A., & Kumar S. (2024). Learning to abstract visuomotor mappings using meta-reinforcement learning. *Proceedings of the 46th Annual Conference of the Cognitive Science Society*.
- Velázquez-Vargas C.A., Vikranth R. Bejjanki, & Taylor J.A. (2023). Precision and capacity limitations of retrieval strategies for visuomotor adaptation. *Advances in Motor Control and Motor Learning*.
- Velázquez-Vargas C.A., & Taylor J.A. (2023). Exploring human learning and planning in grid navigation with arbitrary mappings. *Proceedings of the 45th Annual Conference of the Cognitive Science Society*.
- Campagnoli C., & Taylor J.A. (2019). Specific visual features of a novel tool specify different physics priors. *Perception*, 48:162.
- Campagnoli C., & Taylor J.A. (2019). Visuomotor adaptation is influenced by perceived depth. *Perception*, 48:117.
- Campagnoli C., & Taylor J.A. (2018). Visuomotor adaptation is sensitive to perceptual changes in depth information. *Journal of Vision*, 18(10): 61.
- McDougle S.D., & Taylor J.A. (2016). Mental rotation as a behavioral and neural model of explicit aiming during visuomotor learning. *Advances in Motor Control and Motor Learning*.
- Butcher P.A., Krakauer J.W., Kuo S.H., Rydz D., Ivry R.B., & Taylor J.A. (2014). Cerebellar degeneration disrupts adaptation and strategy use in sensorimotor learning. *Advances in Translational and Computational Motor Control*.

- Morehead J.R., Taylor J.A., Parvin D., Marrone E., & Ivry R.B. (2014). Implicit adaptation via visual error clamp. *Advances in Translational and Computational Motor Control*.
- Taylor J.A., Krakauer J.W., & Ivry R.B. (2012). Multiple learning processes operate continuously throughout learning. *Advances in Computational Motor Control*.
- Taylor J.A., & Ivry R.B. (2011). Feedback-dependent generalization of visuomotor adaptation. *Advances in Computational Motor Control X*.
- Taylor J.A., Ghorayshi A., & Ivry R.B. (2009). The Cost of Strategic Control: Attenuation of Adaptation. *Advances in Computational Motor Control*.
- Taylor J.A., & Thoroughman K.A. (2007). Divided attention during motor memory formation affects specifically fast adaptive processes and alters mid-movement feedback control. *Advances in Computational Motor Control*.
- Thoroughman K.A., & Taylor J.A. (2004). Experience-dependent adaptation of the spatial generalization of human motor adaptation. *Advances in Computational Motor*.

Conference Presentations (Last Five Years)

- Bejjanki V.R., Brown H.G.E., Katz S., & Taylor J.A. (2025). Influence of reward on visuomotor adaptation in complex tasks. *Proceedings of the 47th Annual Conference of the Cognitive Science Society*.
- Chen Y., & Taylor J.A. (2025). How plan-based generalization affects the apparent relationship between explicit strategies and implicit recalibration. *The Annual Meeting of the Neural Control of Movement Society*, Panama City, Panama.
- Gupta M., & Taylor J.A. (2025). Déjà Vu: Representational splits drive learning an identical sequence again. *Psychonomic Society Annual Meeting*, Denver, CO.
- Gupta M., & Taylor J.A. (2025). I need a break: Task similarity's effect on control allocation in motor skill learning. *The Annual Meeting of the Neural Control of Movement Society*, Panama City, Panama.
- Kan H., & Taylor J.A. (2025). Algorithmic planning in force adaptation. *The Society for Neuroscience Annual Meeting*, San Diego, CA.
- Wang Y., & Taylor J.A. (2025). Algorithmic and retrieval strategies have differential impacts on implicit recalibration in a visuomotor adaptation task. *The Annual Meeting of the Neural Control of Movement Society*, Panama City, Panama.
- Bejjanki V.R., Gaillard E., Taliferro M., & Taylor J.A. (2023). Explicit strategies for sensorimotor learning depend on task complexity. *Annual Meeting of the Cognitive Science Society*, Sydney, Australia
- Daniels J.S., & Taylor J.A. (2023). Experience-dependent representational change during motor skill learning. *Annual Meeting of the Cognitive Science Society*, Sydney, Australia
- Kim O.A., & Taylor J.A. (2023). Influence of distinct cognitive strategies on performance during a visuomotor reach adaptation task. *The Society for the Neural Control of Movement Annual Meeting*, Victoria, Canada.

- Kim O.A., Velazquez C., & Taylor J.A. (2022). Mental rotation incurs a cognitive cost during a visuomotor reaching task. *The Society for Neuroscience Annual Meeting*. San Diego, CA.
- Schween R., Franklin D.W., Taylor J.A., Schweighofer N., & Endres D. (2022). Context-dependent sensorimotor learning by variational inference. *Advances in Motor Learning Symposium*, Enschede, The Netherlands.
- Kim O.A., Velazquez-Vargas C., & Taylor J.A. (2022). The use of mental rotation strategies in a visuomotor adaptation task incurs a distinct cognitive effort cost. *The Society for the Neural Control of Movement Annual Meeting*, Dublin, Ireland.
- Velazquez C., & Taylor J.A. (2022). Effects of training variability on the use of flexible sensorimotor mappings.. *The Society for the Neural Control of Movement Annual Meeting*, Dublin, Ireland.
- Schween R., Franklin D.W., Taylor J.A., Schweighofer N., & Endres D. (2022) Context-dependent sensorimotor learning by variational inference. *The Society for the Neural Control Movement Annual Meeting*, Dublin, Ireland.
- Velazquez-Vargas C.A., & Taylor J.A. (2022). Learning novel sensorimotor mappings in a grid navigation task. *The Multi-disciplinary Conference on Reinforcement Learning and Decision Making*, Providence, RI.

Talks & Colloquia

- | | |
|---|------|
| Cosyne Workshop Learning Fast and Slow, Mt. Tremblant, Canada | 2025 |
| Neurobiology of Cognition Gordon Research Conference, Waterville Valley, NH | 2024 |
| Cognitive Control of Action Workshop Princeton University | 2024 |
| Plasticity Seminar MRC Cognition and Brain Sciences Unit, Cambridge University, UK | 2023 |
| Psychology Talk Hamilton College | 2023 |
| Interdisciplinary Neuroscience Program Seminar University of Delaware | 2023 |
| Advances in Motor Learning Symposium Enschede, The Netherlands | 2022 |
| Kinesiology and Sport Management Meeting Texas A&M University | 2022 |
| ITRG Brain in Action Seminar Series Toronto, Canada | 2021 |
| Progress in Motor Control XIII Auckland, New Zealand | 2021 |

| | |
|---|------|
| KAAP Seminar Series University of Delaware | 2020 |
| BIRS Optimal Neuroethology of Movement and Motor Control Banff International Research Station, Banff, Canada | 2019 |
| Psychology Seminar Series New York University, Abu Dhabi, United Arab Emirates | 2019 |
| Institute of Cognitive Neuroscience Seminar University College London, London, UK | 2019 |
| Perception, Cognition, and Action Seminar Series University of Birmingham, Birmingham, UK | 2019 |
| Neuromechanics and Motor Control Meeting Technical University of Munich and University of Giessen Raitenhaslach, Germany | 2018 |
| Mind, Machine, and Motor Nexus, National Science Foundation Point Reyes, CA | 2018 |
| Summer Institute in Cognitive Neuroscience Lake Tahoe, CA | 2018 |
| The Society for Neuroscience Annual Meeting Washington, D.C. | 2017 |
| Computational Cognitive Neuro-Psychiatry Seminar, Rutgers University, Piscataway, NJ | 2017 |
| Perception and Action Seminar Brown University, Providence, RI | 2016 |
| Neuromotor Control Laboratory Harvard University, Cambridge, MA | 2016 |
| The Annual Meeting of New Champions, World Economic Forum Tianjin, China | 2016 |
| Symposium on The Cognitive and Neural Architecture of Sensorimotor Behaviors, Society for the Neural Control of Movement Montego Bay, Jamaica | 2016 |
| Department of Rehabilitation & Movement Science Colloquia Rutgers University, Newark, NJ. | 2014 |
| Cognitive Computational and Systems Neuroscience Program Colloquia Washington University in St. Louis, St. Louis, MO | 2014 |
| Northwestern Sensory Motor Performance Program Colloquia Rehabilitation Institute of Chicago, Chicago, IL | 2014 |
| Movement Disorders Division Colloquia, Columbia Medical Center Columbia University, New York, NY | 2014 |
| Tenth Computational Motor Control Workshop Ben Gurion University, Israel | 2014 |
| Symposium on Human Learning: Feedback, Reinforcement, and Reward Society for Neuroscience Annual Meeting. San Diego, CA | 2013 |

| | |
|---|------|
| Brain, Learning, Animation, and Movement Lab, Dept. of Neurology Johns Hopkins University, Baltimore, MD | 2013 |
| Department of Biomedical Engineering Colloquia Washington University in St. Louis, St. Louis, MO | 2013 |
| Center for the Translational Neuroscience of Alcoholism Colloquia Yale University, New Haven, CT | 2012 |
| Moss Rehabilitation Research Institute, Elkins Park, PA | 2012 |
| OMNI, Veterans Administration Clinic, Martinez, CA | 2012 |
| International Computer Science Institute, Berkeley, CA | 2010 |

Mentoring

Postdoctoral Fellows

| | |
|--|-----------|
| Mohan Gupta | 2024- |
| Yiyu Wang | 2024- |
| Olivia Kim Assistant Professor, Bates College, ME | 2020-2023 |
| Carlo Campagnoli Lecturer, University of Leeds, Leeds, UK | 2017-2021 |
| Eugene Poh Lecturer, Macquarie University, Sydney, Australia | 2016-2018 |
| Peter Butcher Principal Data Scientist, Comcast Labs Silicon Valley, CA | 2013-2017 |

Graduate Students

| | |
|--|-----------|
| Yifei Chen, Primary Advisor | 2024- |
| Hoi Kan, Primary Advisor | 2024- |
| Jonathan Daniels, Primary Advisor | 2021- |
| Carlos Velázquez-Vargas, Primary Advisor Postdoctoral Fellow, Columbia University, New York, NY | 2019-2024 |
| Sarah Wilterson, Primary Advisor Data and Insights Consultant, Denver, CO | 2016-2021 |
| Andrew Wilterson, Secondary Advisor, Product Development Manager, Chadwick Martin Bailey, Denver, CO | 2016-2020 |
| Jonathan Berliner, Primary Advisor JSB Machine Learning Consulting, Brooklyn, NY | 2013-2017 |
| Samuel McDougle, Primary Advisor Assistant Professor at Yale University, New Haven, CT | 2013-2018 |
| Judith Fan, Secondary Advisor Assistant Professor at Stanford University, Palo Alto, CA | 2012-2016 |

Research Specialists

| | |
|--|-----------|
| Hoi Kan Princeton University | 2023-2024 |
| Chandra Greenberg Princeton University | 2017- |
| Kristy Colling Human Factors Scientist, Exponent, Phoenix, AZ | 2016-2017 |
| Alyssa Bangel Occupational Therapist, Rising Ground | 2014-2015 |
| Krista Bond Postdoctoral Fellow, Yale University | 2013-2017 |
| Jonathan Berliner JSB Machine Learning Consulting, Brooklyn, NY | 2013-2017 |
| Samuel Brudner Postdoctoral Fellow, Yale University | 2012-2014 |

Dissertation Committees

| | |
|---|------|
| Marissa Evans, Psychology, External Committee Member New York University, NY | 2025 |
| Thiago Tarraf Varella, Reading Committee | 2025 |
| Carlos Velázquez-Vargas, Psychology, Reading and Oral Committee | 2024 |
| Sara Falcone, External Reader University of Twente, Enschede, The Netherlands | 2023 |
| Xiaofang Yang, Psychology, Oral Committee | 2023 |
| Abdul-Rahim Deeb, External Committee Member Brown University, RI | 2023 |
| Abigail Novick Hoskin, Psychology, Oral Committee | 2022 |
| Sarah Wilterson, Psychology, Reading and Oral Committee | 2021 |
| Samatha Floyd, Psychology, Reading Committee | 2021 |
| Andrew Wilterson, Psychology, Reading Committee | 2020 |
| Brandy Briones, Psychology, Reading Committee | 2020 |
| Felicia Zhang, Psychology, Reading Committee | 2020 |
| Clare Choi, Psychology, Oral Committee | 2019 |
| Benjamin Deverett, Neuroscience, Reading Committee | 2019 |
| Nathan Parker, Neuroscience, Reading Committee | 2019 |
| Sherry Wu, Psychology, Reading Committee | 2019 |
| Thomas Pisano, Neuroscience, Oral Committee | 2019 |
| Evan Cesanek, Cognitive Linguistic & Psychological Sciences, Brown University, External Committee Member | 2019 |

| | |
|--|------|
| Joel Finkelstein, Psychology, Reading Committee | 2018 |
| Gary Kane, Psychology, Oral Committee | 2018 |
| Samuel McDougle, Psychology, Reading and Oral Committee | 2018 |
| Taylor Webb, Psychology, Reading Committee | 2018 |
| Natalia Cordova, Princeton Neuroscience Institute, Committee | 2017 |
| Mathew Yarrosi, Rehabilitation & Movement Sciences, Rutgers University, External Committee Member | 2017 |
| Jeremy Borjon, Psychology, Reading Committee | 2017 |
| Judith Fan, Psychology, Reading Committee | 2016 |
| Andra Geana, Psychology, Reading Committee | 2015 |
| Darshana Narayan, Psychology, Reading Committee | 2015 |
| Kathi Seidl-Rathopf, Psychology, Oral Committee | 2015 |
| Brooke MacNamara, Psychology Reading Committee | 2014 |
| Jeffery Meirer, Psychology, Oral Committee | 2014 |
| Anna Schapiro, Psychology, Oral Committee | 2014 |
| Alec Solway, 2014, Princeton Neuroscience Institute, Committee | 2014 |
| Deborah Holoien, Psychology, Oral Committee | 2013 |
| Matthew Johnson, Psychology, Oral Committee | 2013 |
| Jonathan White, Psychology, Reading Committee | 2013 |

Senior Theses

| | |
|----------------------------------|------|
| Kojo Afful, Neuroscience | 2025 |
| Kelsey Champaneau, Psychology | 2025 |
| Claudacia Clemmons, Neuroscience | 2025 |
| Jonathan Geraghty, Psychology | 2025 |
| Ethan Pearson, Psychology | 2025 |
| Nathaniel Tung | 2025 |
| Haley Hariri, Psychology | 2024 |
| Naser Al-Fawakhiri, Psychology | 2022 |
| Thea Diampeles, Psychology | 2021 |
| Kasey Bowyer, Neuroscience | 2021 |
| Patrick D'Arcy, Psychology | 2020 |
| Barbara Gruszka, Neuroscience | 2020 |
| Logan MacDonnell, Psychology | 2020 |
| Stephen Craig, Neuroscience | 2019 |
| Stephen Chen, Psychology | 2019 |
| Kyle Lang, Psychology | 2019 |

| | |
|-----------------------------|------|
| Erin Berl, Psychology | 2017 |
| Chris Chang, Psychology | 2017 |
| Elizabeth Maine, Psychology | 2016 |
| Rachel Newman, Psychology | 2016 |
| Sara Ronde, Psychology | 2016 |
| Andre Belarmino, Psychology | 2015 |
| Tyler Osborne, Psychology | 2015 |
| Trocon Davis, Psychology | 2014 |
| Caroline Franke, Psychology | 2014 |
| Jordan Metro, Psychology | 2014 |

Teaching

| | |
|---|---|
| Cognitive Psychology (PSY255) | S2015, F2015, S2018, F2018, F2019, F2022, S2024, S2025 |
| From Molecules to Systems to Behavior (NEU502) | S2015-S2020, S2025 |
| Cognitive Psychology Proseminar (PSY501) | F2013, F2015, F2017, F2019, S2024, F2025 |
| Research Seminar in Cognitive Psychology (PSY543) | F2013, S2014 |
| Motor Control and Learning (PSY412/NEU412) | S2013, S2014, S2026 |

University Service

| | |
|--|------------|
| Cognitive Neuroscience Faculty Search Committee | 2025-2026 |
| Chair of the Department Self Study Committee | 2024 |
| Department Princeton University Committee on Discipline | 2019-2024 |
| Princeton University Internal Review Board Member | 2019-2022 |
| George Miller Memorial Prize Committee | 2017, 2021 |
| Princeton Alumni Association, Montreal Chapter | 2017 |
| Princeton Ideas Lab, World Economic Forum, Tianjin China | 2016 |
| Psychology Department Colloquium Committee Chair | 2015-2020 |
| Robotic and Intelligent Systems Program Committee | 2015- |
| Academic-Athletic Fellow, Squash | 2015- |
| Edward E. Jones Memorial Prize Committee | 2015 |
| Academic Adviser, Whitman College | 2013- |
| Faculty Fellow, Whitman College | 2013- |
| Academic-Athletic Fellow, Football, Defensive Backs | 2013- |
| Research Mentor, Laboratory Learning Program | 2013- |

Faculty Adviser, Senior Thesis Writing Group 2013

Awards & Fellowships

Lawrence S. Brodie University Preceptorship in Psychology 2015-2018
Princeton University

National Research Service Award, National Institutes of Health 2014-2016

The Society for the Neural Control of Movement Scholarship 2007, 2011

Advances in Computational Motor Control Travel Award 2007, 2011

School of Dendrites Travel Award, Institute of Advanced Studies 2005
The Hebrew University of Jerusalem

Cognitive, Computational, Systems Neuroscience Fellowship 2004
McDonnell Higher Brain Center, Washington University

Orla K. Harlan Scholarship, Purdue University 2001