Evan Cesanek

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Current appointment

2019 - **Research Scientist**, Zuckerman Institute, Columbia University, New York, NY
Advisor: Daniel M. Wolpert

Education

2013 - 19 **Ph.D. in Cognitive Science**, Brown University, Providence, RI
Conferred May 26, 2019
Advisor: Fulvio Domini

2009 - 13 **B.A. in Cognitive Science**, Vassar College, Poughkeepsie, NY
Conferred May 26, 2013
General and Departmental Honors

Certifications

2022 **Deep Learning**, Neuromatch Academy

Awards

2022 **Fellow**, The Italian Academy for Advanced Studies in America, Columbia University

2016 **Global Mobility Program: Graduate Research Fellowship**, Brown University
External fellowship at the Center for Mind/Brain Sciences, University of Trento, Italy

Service

2021 **Mentor**, Brain Research Apprenticeships in New York at Columbia

2015 - **Peer Reviewer**, Journal of Neurophysiology, Journal of Experimental Psychology: Human Perception and Performance, Journal of Cognitive Neuroscience, Experimental Brain Research, NeuroImage, Frontiers in Psychology, PLoS ONE

Software

2021 - **weblab**: Create, run, and analyze complex behavioral experiments on the web

Articles

2022 **Cesanek, E.**, Flanagan, J. R., & Wolpert, D. M. (2022). Memory, perceptual, and motor costs affect the strength of categorical encoding during motor learning of object properties. Under review at *Communications Psychology*.

Kemp, J. T., **Cesanek, E.,** & Domini, F. (2022). Perceiving Depth from Texture and Disparity Cues: Evidence for a Non-Probabilistic Account of Cue Integration. Under review at *Journal of Vision*.

Zhang, Z., **Cesanek, E.**, Ingram, J. N., Flanagan, J. R., & Wolpert, D. M. (2022). Object weight can be rapidly predicted, with low cognitive load, by exploiting learned associations between the weights and locations of objects. *Journal of Neurophysiology.* In press.

2021 **Cesanek, E.**, Zhang, Z., Ingram, J. N., Wolpert, D. M., & Flanagan, J. R. (2021). Motor memories of objects are categorically organized. *eLife*, *10*, e71627.

Deeb, A.*, **Cesanek, E.***, & Domini, F. (2021). Newtonian predictions are integrated with sensory information in 3D motion perception. *Psychological Science*, *32*(2), 280-291.

Cesanek, E., Taylor, J.A., & Domini, F. (2021). Persistent grasping errors produce depth cue reweighting in perception. *Vision Research*, *178*, 1-11.

2020 **Cesanek, E.**, Taylor, J.A., & Domini, F. (2020). Sensorimotor adaptation and cue reweighting compensate for distorted 3D shape information, accounting for paradoxical perception-action dissociations. *Journal of Neurophysiology*, *123*, 1407-1419.

2019 **Cesanek, E.** & Domini, F. (2019). Depth cue reweighting requires altered correlations with haptic feedback. *Journal of Vision*, *19*(14):3, 1-13.

2018 **Cesanek, E.** & Domini, F. (2018). Transfer of adaptation reveals shared mechanism in grasping and manual estimation. *Neuropsychologia*, *117*, 271-277.

Cesanek, E., Campagnoli, C., Taylor, J.A., & Domini, F. (2018). Does visuomotor adaptation contribute to illusion-resistant grasping? *Psychonomic Bulletin & Review*, *25*(2), 827-845.

2017 Kopiske, K., **Cesanek, E.**, Campagnoli, C., & Domini, F. (2017). Adaptation effects in grasping the Müller-Lyer illusion. *Vision Research*, *136*, 21-31.

Cesanek, E. & Domini, F. (2017). Error correction and spatial generalization in human grasp adaptation. *Neuropsychologia*, *106*, 112-122.

* equal contribution

Talks

2021 **Cesanek, E.**, Zhang, Z., Ingram, J.N., Wolpert, D.M., & Flanagan, J.R. (2021). The dynamics of manipulable objects are represented categorically, as families or individuals. Talk presented at the 30th Annual Meeting of the Society for the Neural Control of Movement.

2018 **Cesanek, E.** & Domini, F. (2018). When visuomotor adaptation fails, 3D perception changes. Talk presented at the 18th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/18.10.1229.

2016 **Cesanek, E.**, Campagnoli, C., & Domini, F. (2016). One-shot correction of sensory prediction errors produces illusion-resistant grasping without multiple object representations. Talk presented at the 16th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/16.12.20.

2015 **Cesanek, E.**, Campagnoli, E., Walker, C., & Domini, F. (2015). Online vision of the hand supports accurate grasp performance in illusory contexts. Talk presented at the 15th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/15.12.185.

Posters

2021 Zhang, Z., **Cesanek, E.**, Ingram, J.N., Flanagan, J.R., & Wolpert, D.M. (2021). Importance of location information in remembering the weight of multiple objects. Poster presented at the 30th Annual Meeting of the Society for the Neural Control of Movement.

2019 Kemp, J., **Cesanek, E.**, & Domini, F. (2019). The Intrinsic Constraint Model: A non-Euclidean approach to 3D shape perception from multiple image signals. Poster presented at the 19th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/19.10.16a.

Kemp, J., **Cesanek, E.** & Domini, F. (2019). Investigating biases in 3D perception and the effects of signal noise on depth discrimination. Poster presented at the 41st European Conference on Visual Perception.

Deng, A., **Cesanek, E.** & Domini, F. (2019). Sensory feedback reduces scalar variability effects in perception and action tasks. Poster presented at the 19th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/19.10.110.

Deng, A., **Cesanek, E.** & Domini, F. (2019). Sensory feedback reduces Weber's Law in perception and action tasks. Poster presented at the 41st European Conference on Visual Perception.

2017 **Cesanek, E.** & Domini, F. (2017). Features of grasp adaptation: Error correction, interference, and perceptual recalibration. Poster presented at the 17th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/17.10.468.

Kopiske, K., **Cesanek, E.**, Campagnoli, C., & Domini, F. (2017). Error correction and interference in grasping illusions. Poster presented at the 17th Annual Meeting of the Vision Sciences Society. https://doi.org/10.1167/17.10.469.

2011 Andrews, J., Livingston, K., Goldberg, A., **Cesanek, E.**, & Herts, J. (2011). Effects of category learning: An event-related potential study. Poster presented at the 33rd Annual Conference of the Cognitive Science Society. Boston, MA. https://escholarship.org/uc/item/85r8v8cd

Teaching

2018 S **Visualizing Vision**, Brown University

2017 S **Visualizing Vision**, Brown University

2016 F **Introduction to Cognitive Science**, Brown University

S **Human Cognition**, Brown University

2015 F **Introduction to Cognitive Science**, Brown University

S **Making Decisions**, Brown University

2014 F **Introduction to Cognitive Science**, Brown University

2013 S **Research Methods in Cognitive Science**, Vassar College

Internships

2012 - 13 **Computational Linguistics Lab**, Vassar College

2012 **Bio-image Informatics Lab**, Carnegie Mellon University

2011 - 12 **Bioinformatics Lab**, Vassar College

2011 - 13 **Interdisciplinary Robotics Lab**, Vassar College

2011 **Visual Perception Lab**, Johns Hopkins University

2010 - 13 **Category Learning Lab**, Vassar College