Evan Cesanek

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EDUCATION & TRAINING

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

2013 - 2019 **Doctor of Philosophy, Cognitive Science**
Conferred May 26, 2019
Brown University, Providence, RI
Advisor: Fulvio Domini

2009 - 2013 **Bachelor of Arts, Cognitive Science**
Conferred May 26, 2013
Vassar College, Poughkeepsie, NY
General & Departmental Honors

PUBLICATIONS

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.

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.

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

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.

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

CONFERENCES

Talks

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.

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.

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.

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

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.

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.

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.

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

AWARDS & FELLOWSHIPS

Spring 2022   Fellow, The Italian Academy for Advanced Studies in America, Columbia University
               Project Title: "Motor memories of the mechanical properties of objects"

Summer 2016   Global Mobility Program: Graduate Research Fellowship, Brown University
               Project Title: "Exploring sensorimotor recalibration of reach-to-grasp"
               Funding: $9000 to support research at the Center for Neuroscience and Cognitive
               Systems (CNCS) of IIT@UniTn in Rovereto, IT

SERVICE

Summer 2021   Mentor for the Zuckerman Institute's Brain Research Apprenticeships in New York at
               Columbia (BRAINYAC) program for HS students from Upper Manhattan & the Bronx

Reviewer for *Journal of Experimental Psychology: Human Perception and Performance, Journal of Cognitive Neuroscience, Experimental Brain Research, NeuroImage, Frontiers in Psychology, PLOS ONE*.

TEACHING

Spring 2017   Teaching Assistant, **Visualizing Vision**, Brown University

Spring 2016   Teaching Assistant, **Visualizing Vision**, Brown University

Fall 2016   Teaching Assistant, **Introduction to Cognitive Science**, Brown University

Spring 2015   Teaching Assistant, **Human Cognition**, Brown University

Fall 2015   Teaching Assistant, **Introduction to Cognitive Science**, Brown University

Spring 2015	Teaching Assistant, **Making Decisions**, Brown University
Fall 2014	Teaching Assistant, **Introduction to Cognitive Science**, Brown University
Spring 2013	Teaching Assistant, **Research Methods in Cognitive Science**, Vassar College

TOPICS & TECHNIQUES

Reach-to-grasp, object lifting, sensorimotor adaptation, 3D perception, cue combination, multisensory integration, intuitive physics, object recognition/categorization

Virtual/augmented reality, 3D computer graphics, robotics, motion capture, psychophysics, crowdsourcing, computational modeling, signal processing, machine learning, statistics.

SOCIETIES

Society for the Neural Control of Movement

Vision Sciences Society

Psi Chi National Psychological Honor Society

Sigma Xi National Research Honor Society

Phi Beta Kappa National Honor Society

RESEARCH INTERNSHIPS

2012 - 2013	Research Assistant, **Computational Linguistics Lab**, Vassar College
Summer 2012	Research Intern, **Bio-image Informatics Lab**, Carnegie Mellon University
2011 - 2012	Research Assistant, **Bioinformatics Lab**, Vassar College
2011 - 2013	Research Assistant, **Interdisciplinary Robotics Lab**, Vassar College
Summer 2011	Research Intern, **Visual Perception Lab**, Johns Hopkins University
2010 - 2013	Research Assistant, **Category Learning Lab**, Vassar College