

Michael Dylan Melnick

Curriculum Vitae

Contact:

Dept. of Brain and Cognitive Sciences, Center for Visual Science
Meliora Hall 262
University of Rochester, Rochester, NY 14627
(207) 370-5452, (585) 275-0682
mmelnick@cvs.rochester.edu

Education:

2015 (Expected)	University of Rochester	Masters (in progress) in Brain and Cognitive Science
2006-2010	University of Rochester Cum Laude GPA: 3.60	BS, Neuroscience
2002-2006	North Yarmouth Academy	High School

Research Experience:

2013-present	Graduate student (advisors Krystel Huxlin and Duje Tadin) University of Rochester
2012-2013	Lab Programmer / Technician (Supervisor Dr. Krystel Huxlin) Huxlin Lab, Dept. of Ophthalmology, Univ. of Rochester
2010-2013	Lab Manager / Programmer (Supervisor Dr. Duje Tadin) Tadin Lab, Center for Visual Science, Univ. of Rochester
2009-2010	Research Assistant (Supervisor Dr. Duje Tadin) Tadin Lab, Center for Visual Science, Univ. of Rochester
2008-2009	Research Assistant (Supervisor Dr. Loisa Bennetto) Bennetto Lab, Dept. of Clinical and Social Psychology, Univ. of Rochester

Related Work Experience:

2006-2010	Student Lead (Supervisor Berthenia Coltrane) University IT, University of Rochester, Rochester, NY
2007-2010	Teaching Assistant (Supervisor Dr. Douglas Brooks) Department of Religion, University of Rochester, Rochester, NY
2007-2010	Residential Advisor (Supervisor Daniel Watts) Residential Life, University of Rochester, Rochester, NY

Awards and Honors:

2006-2010	Renaissance Scholarship, University of Rochester
2006-2010	Dean's List, University of Rochester
2008-2009	Reach Scholarship, University of Rochester
2010	Bishop Scholarship

Publications

- ❖ **Melnick, M.D.**, Harrison, B.R., Park, S., Bennetto, L. & Tadin, D. (2013) A strong interactive link between sensory discriminations and intelligence: the importance of suppressive neural mechanisms. *Current Biology*, 23, 1013-1017.

Publications (in preparation)

- ❖ **Melnick, M.D.**, Brascamp, J., Blake, R., Tadin, D. (in preparation) The strength of contextual modulation does not correlate across visual sub-modalities
- ❖ **Melnick, M.D.**, Dieter, K.C., Tadin, D. (in preparation) Highly abnormal visual context processing in older adults.
- ❖ Cavanaugh, M.R., **Melnick, M.D.** (co-first-author), Zhang, R., Roberts, M., Das, A., Tadin, D., Carrasco, M., Huxlin K.R. (in preparation) Residual inefficiencies of recovered vision in cortically blind fields – insights from the equivalent noise analysis.
- ❖ Dieter, K.C., **Melnick, M.D.**, Tadin, D. (in preparation) What determines when attention influences binocular rivalry?
- ❖ Lee, S., **Melnick, M.D.**, Bennetto, L. (in preparation) Audiovisual integration and gesture processing in children with autism: an fMRI study.
- ❖ Dieter, K.C., **Melnick, M.D.** & Tadin, D. (in prep) Profound selective control of binocular rivalry after perceptual training.

Invited talks

- ❖ 12/12/2012: **Suppressive mechanisms: from perception to intelligence**. Italian Institute of Technology, Rovereto, Italy.

Conference Talks

- ❖ **Melnick, M.D.**, Dieter, K.C., Tadin, D. (2014) Highly abnormal visual context processing in older adults , 14(10): 215 (VSS Abstracts)

Conference Posters

- ❖ Dieter, K.C., **Melnick, M.D.** & Tadin, D. (2014) What determines the influence of attention on binocular rivalry? *Journal of Vision*, 14(10): 1254 (VSS Abstracts).
- ❖ Cavanaugh, M.R., **Melnick, M.D.**, Zhang, R., Roberts, M., Das, A., Tadin, D., Carrasco, M., Huxlin K.R. (2014) Residual inefficiencies of recovered vision in cortically blind fields – insights from the equivalent noise analysis. *Journal of Vision*, 14(10): 659 (VSS Abstracts).
- ❖ Lee, S., **Melnick, M.D.**, Bennetto, L. (2012) “I see what you’re saying” An fMRI study of speech-gesture integration in autism and typical development (IMFAR 2012 poster)
- ❖ **Melnick, M.D.** & Tadin, D. (2012) The strength of contextual modulation does not correlate across visual sub-modalities. *Journal of Vision*, 12(9): 1300 (VSS Abstracts).
- ❖ **Melnick, M.D.** & Tadin, D. (2011) A strong interactive link between sensory discriminations and intelligence. *Journal of Vision*, 11(11): 810 (VSS Abstracts).
- ❖ Dieter, K.C., **Melnick, M.D.** & Tadin, D. (2010) Prolonged internal control of awareness yields changes in the underlying mechanisms. *Association for the Scientific Study of Consciousness meeting*.

- ❖ Dieter, K.C., **Melnick, M.D.** & Tadin, D. (2010) Eye-specific plasticity induced by binocular rivalry training. *Journal of Vision*, 10(15): 19. (FVM Abstracts).

Teaching

University of Rochester

- ❖ Main lecturer:
 - Laboratory in Perception and Cognition (BCS 208, undergraduate)
- ❖ Teaching assistant
 - Perception & Action (BCS 151, undergraduate)

Research

Ongoing Projects

Eye-specific plasticity induced by binocular rivalry training
Interaction of age and spatial suppression strength
Causal links between figure-ground segregation and spatial suppression
Common mechanisms underlying intelligence and perception
Retinotopic properties of visual recovery in hemianopic stroke patients via fMRI and population receptive field mapping
Characteristics of neural orientation and motion tuning in hemianopic stroke patients
Gesture processing deficits in children with autism

Experimental Techniques

Visual psychophysics
Eye tracking (Eyelink 1000 desk-mounted eye tracker)
Transcranial Direct Current Stimulation (tDCS)
Functional Magnetic Resonance Imaging (fMRI)

Software

MATLAB, Psychophysics Toolbox, mgl, R
fMRI Analysis: BrainVoyager, FSL, mri3dx, mrTools