

**Anna Kosovicheva**  
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## EDUCATION

- 2015 University of California, Berkeley, Ph.D., Psychology  
Cognition, Brain, and Behavior Program  
Advisor: Dr. David Whitney  
Dissertation: *The Effects of Motion on Position Representations for Perception and Action*
- 2009 University of California, Berkeley, B.A., Psychology, Highest Honors

## PROFESSIONAL APPOINTMENTS

- 2015 - Postdoctoral Researcher, Translational Vision Lab  
PI: Dr. Peter Bex  
Psychology Department, Northeastern University, Boston, MA

## RESEARCH INTERESTS

Visual perception: localization, eye movements, spatial and binocular vision, translational vision science, strabismus, amblyopia

## GRANTS AND FELLOWSHIPS

- 2018 - 2021 Ruth L. Kirschstein Postdoctoral Individual National Research Service Award (NRSA)  
“Oculomotor deficits and plasticity across gaze posture in strabismus”  
National Institutes of Health (F32 EY028814), \$120,812 to date
- 2011 - 2014 Graduate Research Fellowship  
National Science Foundation (NSF-GRFP), \$32,000 annually and tuition

## AWARDS AND HONORS

- 2017 Travel Award, ARVO Meeting, National Eye Institute  
2015 Travel Award, Norman Henry Anderson Fund, Psychology Department, UC Berkeley  
2013, 2014 Graduate Division Travel Grant, UC Berkeley  
2012 Abigail Reynolds Hodgen Publication Fund, Social Sciences Division, UC Berkeley  
2009 Highest Distinction in General Scholarship, UC Berkeley  
2009 Highest Honors in Psychology, UC Berkeley  
2008 Katherine Craig Swan Undergraduate Research Award, UC Berkeley

## PUBLICATIONS

### Manuscripts Submitted & In Revision

**Kosovicheva, A.** & Bex, P. J. (Under review). Perceptual effects of saccadic adaptation to a dichoptic step. *Journal of Vision*.

**Kosovicheva, A.**, Alaoui-Soce, A., & Wolfe, J. M. (Under review). Looking ahead: When do you find the next item in foraging visual search?. *Journal of Vision*

**Kosovicheva, A.**, & Bex, P. J. (Under review). What color was it?: A psychophysical paradigm for tracking subjective progress in continuous tasks. *Perception*

### Published & Forthcoming Papers (underlined names denote students mentored):

**Kosovicheva, A.**, Ferreira, A., Vera-Diaz, F. A., & Bex, P. J. (In press). Effects of temporal frequency on binocular deficits in amblyopia. *Vision Research*.

Wolfe, B., Sawyer, B. D., **Kosovicheva, A.**, Reimer, B., & Rosenholtz, R. (2019). Detection of brake lights while distracted: Separating peripheral vision from cognitive load. *Attention, Perception, & Psychophysics*.

Wolfe, B., Fridman, L., **Kosovicheva, A.**, Seppelt, B., Mehler, B., Reimer, B., & Rosenholtz, R. (2019). Predicting road scenes from brief views of driving video. *Journal of Vision*, 19(5):8, 1–14.

Vera-Diaz, F. A., Bex, P. J., Ferreira, A., & **Kosovicheva, A.** (2018). Binocular temporal visual processing in myopia. *Journal of Vision*, 18(11), 1-12.

Manassi, M., Liberman, A., **Kosovicheva, A.**, Zhang, K., & Whitney, D. (2018). Serial dependence in position occurs at the time of perception. *Psychonomic Bulletin & Review*, 1-9.

Chen, Z.\*, **Kosovicheva, A.\***, Wolfe, B. A., Cavanagh, P., Gorea, A., & Whitney, D. (2018). Unifying visual space across the left and right hemifields. *Psychological Science*, 29(3), 356 – 369. (\*co-first authors)

**Kosovicheva, A.**, & Whitney, D. (2017). Stable individual signatures in object localization. *Current Biology*, 27(14), R700-R701.

Wolfe, B., Fridman, L., **Kosovicheva, A.**, Seppelt, B., Mehler, B., Reimer, B. (2017). Perceiving the roadway in the blink of an eye – Rapid perception of the road environment and prediction of events. *Conference Proceedings, Driving Assessment 2017*.

Yamanashi Leib, A., **Kosovicheva, A.**, & Whitney, D. (2016). Fast ensemble representations for abstract visual impressions. *Nature Communications*, 7, 13186.

Wolfe, B., Dobres, J., **Kosovicheva, A.**, Rosenholtz, R., & Reimer, B. (2016). Age-related differences in the legibility of degraded text. *Cognitive Research: Principles and Implications*, 1(1), 22.

Wolfe, B. A., **Kosovicheva, A. A.**, Yamanashi Leib, A., Wood, K., & Whitney, D. (2015). Foveal input is not required for perception of crowd facial expression. *Journal of Vision*, 15(4), 1-13.

**Kosovicheva, A. A.**, Wolfe, B. A., & Whitney, D. (2014). Visual motion shifts saccade targets. *Attention, Perception, & Psychophysics*, 76(6), 1778-1788.

**Kosovicheva, A. A.**, Sheremata, S. L., Rokem, A., Landau, A. N. & Silver, M. A. (2012). Cholinergic enhancement reduces orientation-specific surround suppression but not visual crowding. *Frontiers in Behavioral Neuroscience*, 6(61), 1-11.

**Kosovicheva, A. A.**, Maus, G. W., Anstis, S. Cavanagh, P., Tse, P. U., & Whitney, D. (2012). The motion-induced shift in the perceived location of a grating also shifts its aftereffect. *Journal of Vision*, 12(8), 1-14.

**Kosovicheva, A. A.**, Fortenbaugh, F. C., & Robertson, L. C. (2010). Where does attention go when it moves?: Spatial properties and locus of the attentional repulsion effect. *Journal of Vision*, 10(12), 1–13.

### **Manuscripts in Preparation:**

**Kosovicheva, A.**, Wolfe, B. A., & Whitney, D. (In preparation). Position representations for action lead perception: Evidence from saccades to drifting Gabor targets.

Alberti, C. F., Bex, P. J., & **Kosovicheva, A.** (In preparation) Assessment of acuity and contrast sensitivity across the visual field with eye movement and manual responses.

### **SELECTED CONFERENCE PRESENTATIONS**

**Kosovicheva, A.**, & Wolfe, J. M. (2019). When do you find the next item?: Using occluders to uncover the time course of visual foraging. *Poster presented at the Vision Sciences Society (VSS) Annual Meeting.*

Alberti, C. F., **Kosovicheva, A.**, & Bex, P. J. (2019). Measuring the field of contrast sensitivity via saccadic foraging. *Poster presented at the VSS Annual Meeting.*

**Kosovicheva, A.**, Hawlder, O., Bex, P. J. (2018). Localization errors following saccadic adaptation to a dichoptic step. *Poster presented at the VSS Annual Meeting.*

Vera-Diaz, F. A., **Kosovicheva, A.**, Maiello, G. A., Ferreira, A., Walker, L., Bex, P. J. (2017). Binocularity in myopia. *Poster presented at the International Myopia Conference.*

Hawlder, O.\*, Bex., P. J., & **Kosovicheva, A.** (2017). Sensory effects of dichoptic saccadic adaptation. *Paper presented at the Newfoundland Electrical and Computer Engineering Conference (NECEC).* (\*Best Paper Award in Women in Engineering)

Rosenholtz, R., Wolfe, B., Sawyer, B., **Kosovicheva, A.**, Reimer, B. (2017). Detecting driving-relevant events with peripheral vision. *Talk presented at the VSS Annual Meeting.*

**Kosovicheva, A.**, Kazlas, M., Hunter, D. G., Bex, P. (2017). What can we learn about strabismus from a 90 second gaze recording?: Rapid evaluation of oculomotor deficits in strabismus. *Poster presented at the Association for Research in Vision and Ophthalmology (ARVO) Meeting.*

Ferreira, A., **Kosovicheva, A.**, Bex, P. J., Vera-Diaz, F. A. (2017). Temporal contrast sensitivity in myopia. *Poster presented at the ARVO Annual Meeting.*

Bex, P. J., **Kosovicheva, A.**, Ferreira, A., Vera-Diaz, F. A. (2017). Effects of temporal frequency on binocularity and contrast sensitivity in amblyopia. *Poster presented at the VSS Annual Meeting.*

**Kosovicheva, A.**, Feffer, J., Alaoui Soce, A., Cain, M. S., Wolfe, J. M. (2017). When does visual search move on?: Using the color wheel to measure the dynamics of foraging search. *Poster presented at the VSS Annual Meeting.*

- Vera-Diaz, F. A., **Kosovicheva, A.**, Ferreira, A., Bex, P. J. (2017). Effect of temporal vision on binocularity in ametropia. *Poster presented at the ARVO Annual Meeting.*
- Wolfe, B., Fridman, L., **Kosovicheva, A.**, Reimer, B., Rosenholtz, R. (2017). Seeing the road in the blink of an eye: Rapid perception of the driver's visual environment. *Poster presented at the VSS Annual Meeting.*
- Kosovicheva, A.**, & Bex, P. (2016). Reading rainbows: Measuring the dynamics of word processing. *Talk presented at the VSS Annual Meeting.*
- Wolfe, B., Dobres, J., **Kosovicheva, A.**, Rosenholtz, R., & Reimer, B. (2016). Reduction in legibility with degradation in older and younger observers. *Poster presented at the VSS Annual Meeting.*
- Kosovicheva, A. A.**, Wolfe, B. A., Cavanagh, P., Gorea, A., & Whitney, D. (2015). Dynamic recalibration of perceived space across the visual hemifields. *Poster presented at the VSS Annual Meeting.*
- Yamanashi Leib, A., **Kosovicheva, A. A.**, & Whitney, D. (2015). Perceiving the lifelikeness of crowds: summary statistical representations of abstract visual dimensions. *Poster presented at the VSS Annual Meeting.*
- Wood, K., Wolfe, B. A., **Kosovicheva, A. A.**, & Whitney, D. (2015). Speeded breakthrough of faces in interocular suppression requires configural information. *Poster presented at the VSS Annual Meeting.*
- Kosovicheva, A. A.** & Whitney, D. (2014). Stable individual distortions in the perceived locations of static stimuli. *Poster presented at the VSS Annual Meeting.*
- Yamanashi Leib, A., Bai, Y., **Kosovicheva, A. A.**, Chang, K., Puri, A., Robertson, L., & Whitney, D. (2014). Ensemble perception of multiple crowd characteristics. *Poster presented at the VSS Annual Meeting.*
- Liberman, A., **Kosovicheva, A. A.**, & Whitney, D. (2014). Serial dependence of position perception. *Poster presented at the VSS Annual Meeting.*
- Wood, K., Wolfe, B. A., **Kosovicheva, A. A.**, Yamanashi Leib, A., & Whitney, D. (2014). Foveal input is not required for ensemble coding of emotional faces. *Poster presented at the VSS Annual Meeting.*
- Kosovicheva, A. A.**, & Whitney, D. (2013). A meridional anisotropy of the flash-drag effect. *Poster presented at the VSS Annual Meeting.*
- Wolfe, B. A., **Kosovicheva, A. A.**, Yamanashi Leib, A., & Whitney, D. (2013). Beyond fixation: Ensemble coding and eye movements. *Poster presented at the VSS Annual Meeting.*
- Kosovicheva, A. A.**, Wolfe, B., & Whitney, D. (2012). Effects of motion-induced mislocalizations on saccade landing position. *Talk presented at the VSS Annual Meeting.*
- Kosovicheva, A. A.**, Maus, G. W., Anstis, S., Cavanagh, P., Tse, P. U., & Whitney, D. (2011). The motion-induced shift in the perceived location of a grating also shifts its aftereffect. *Poster presented at VSS and at the Bay Area Vision Research Day.*
- Silver, M.A., **Kosovicheva, A. A.**, & Landau, A. N. (2011). ERP correlates of orientation-specific surround suppression. *Poster presented at the VSS Annual Meeting.*
- Kosovicheva, A. A.**, Landau, A. N., & Silver, M. A. (2010). Interactions of sustained spatial attention and surround suppression: an EEG study. *Poster presented at the Society for Neuroscience Meeting.*

**Kosovicheva, A. A., Landau, A. N., & Silver, M. A. (2010).** Cholinergic modulation of EEG activity during sustained visual stimulation. *Poster presented at the UC Berkeley Annual Neuroscience Retreat.*

**Kosovicheva, A. A., Fortenbaugh, F. C., & Robertson, L. C. (2010).** Spatial properties of the attentional repulsion effect. *Poster presented at the VSS Annual Meeting.*

Landau, A. N., **Kosovicheva, A. A., & Silver, M. A. (2010).** Interactions of sustained spatial attention and surround suppression: an SSVEP study. *Poster presented at the VSS Annual Meeting.*

### **Other Academic Presentations:**

Vision Sciences Society (VSS) Demo Night:

2014 Kosovicheva, A., Wolfe, B., Chaney, W., Yamanashi Leib, A., Liberman, A. "Strobwheel"

2012 Kosovicheva, A., Wolfe, B. "An Aftereffect Based on Texture Element Ratios."

### **INVITED SEMINARS**

2019 (Forthcoming) "Visual space perception in normal and disordered vision"  
Research Lecture Series, New England College of Optometry, Boston, MA

2018 "Visual space perception in normal and disordered vision"  
Department of Psychology, Rochester Institute of Technology, Rochester, NY

2016 "Assessment of binocular function in amblyopia with psychophysics and eye tracking"  
Research Lecture Series, New England College of Optometry, Boston, MA

2016 "Temporal relationships between eye movements and visual processing"  
Perception and Action Seminar, Brown University, Providence, RI

### **OTHER RESEARCH EXPERIENCE & AFFILIATIONS**

2015 - Associated Research Personnel  
Department of Ophthalmology, Boston Children's Hospital

2009 - 2010 Staff Research Associate  
Silver Lab, Helen Wills Neuroscience Institute & School of Optometry, UC Berkeley  
PI: Dr. Michael Silver

2008 - 2009 Research Assistant  
Cognitive Neuropsychology Lab, Psychology Department, UC Berkeley  
PI: Dr. Lynn Robertson

### **TEACHING EXPERIENCE**

#### **Courses:**

2017 Part-Time Lecturer (Fall 2017 Semester)  
Course: Sensation & Perception, Psychology Department, Northeastern University  
Instructor of record for an undergraduate lecture-based course covering the fundamentals of sensation and perception.

2010, 2015 Graduate Student Instructor (GSI) (Spring 2010 & Spring 2015 Semesters)  
Course: Perception, Psychology Department, UC Berkeley  
Taught classroom discussion sections for an undergraduate course in perception.

#### **Guest Lectures:**

2016 Northeastern University, Boston, MA  
Lecture on binocular vision for Sensation & Perception undergraduate seminar  
Lectures on motion perception and on faces for Perception graduate seminar

2015 California State University, East Bay, Concord, CA  
Lecture on spatial vision for Sensation & Perception undergraduate course

#### **STUDENTS MENTORED**

2019 Koushik Sridhar  
High school student, Research Science Institute (RSI) summer enrichment program

2018 Kelly Choi  
Undergraduate student, Northeastern University, Directed Study

2016 - 2018 Jungyeon Park  
Undergraduate student, Harvard University, Directed Study

2017 Erin Smith  
High school student, RSI program

2017 Oishi Hawlader  
High school student, RSI program  
Best Paper Award in Women in Engineering, NECEC Conference

2016 Joseph Feffer  
High school student, RSI program

2015 Katja Kelleher  
Undergraduate student, Northeastern University, Directed Study  
Faculty Scholar Award, Psychology Department

2013 - 2015 Katherine Wood  
Undergraduate student, UC Berkeley, Directed Study  
Honors thesis completed in 2015; Warner Brown Memorial Prize, Psychology Department

2011 - 2013 Valentina Volk  
Undergraduate student, UC Berkeley Undergraduate Research Apprentice Program (URAP)  
Honors thesis completed in 2013

2011 Andrew Chang  
Undergraduate student, URAP

#### **AD-HOC REVIEWER**

*Attention, Perception, & Psychophysics*  
*Cognitive Science*  
*eLife*  
*IEEE Information Visualization Conference (InfoVis)*  
*Journal of Vision*  
*Optometry and Vision Science*

*Perception*  
*Vision*  
*Vision Research*

## **OUTREACH**

2010 - 2015 Whitney Lab Outreach Program  
Outreach visits to underserved K-12 schools in the San Francisco Bay Area twice a year, with presentations on topics in visual perception (color, motion, faces, depth). Developed visual illusion demonstrations for students.

## **MEMBERSHIPS HELD**

Association for Psychological Science (APS)  
Association for Research in Vision and Ophthalmology (ARVO)  
Psychonomic Society  
Society for Neuroscience (SfN)  
Vision Sciences Society (VSS)