

**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

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

1. **Kosovicheva, A.**, Alaoui-Soce, A., & Wolfe, J. M. (In press). Looking ahead: When do you find the next item in foraging visual search?. *Journal of Vision*
2. **Kosovicheva, A.**, & Bex, P. J. (2019). What color was it?: A psychophysical paradigm for tracking subjective progress in continuous tasks. *Perception*
3. **Kosovicheva, A.**, Ferreira, A., Vera-Diaz, F. A., & Bex, P. J. (2019). Effects of temporal frequency on binocular deficits in amblyopia. *Vision Research*, 163, 52-62.
4. 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*.
5. 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.
6. 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.
7. Manassi, M., Liberman, A., **Kosovicheva, A.**, Zhang, K., & Whitney, D. (2018). Serial dependence in position occurs at the time of perception. *Psychonomic Bulletin & Review*, 25(6), 2245-2253.
8. 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)
9. **Kosovicheva, A.**, & Whitney, D. (2017). Stable individual signatures in object localization. *Current Biology*, 27(14), R700-R701.
10. 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*.
11. Yamanashi Leib, A., **Kosovicheva, A.**, & Whitney, D. (2016). Fast ensemble representations for abstract visual impressions. *Nature Communications*, 7, 13186.
12. 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.
13. 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.
14. **Kosovicheva, A. A.**, Wolfe, B. A., & Whitney, D. (2014). Visual motion shifts saccade targets. *Attention, Perception, & Psychophysics*, 76(6), 1778-1788.
15. **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.

16. **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.
17. **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 Submitted & In Revision:**

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

#### **Manuscripts in Preparation:**

1. 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.
2. **Kosovicheva, A.**, Wolfe, B. A., & Whitney, D. (In preparation). Position representations for action lead perception: Evidence from saccades to drifting Gabor targets.

#### **SELECTED CONFERENCE PRESENTATIONS** (underlined names denote students mentored):

1. **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*.
2. 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*.
3. **Kosovicheva, A.**, Hawlder, O., Bex, P. J. (2018). Localization errors following saccadic adaptation to a dichoptic step. *Poster presented at the VSS Annual Meeting*.
4. 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*.
5. 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)
6. 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*.
7. **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*.
8. Ferreira, A., **Kosovicheva, A.**, Bex, P. J., Vera-Diaz, F. A. (2017). Temporal contrast sensitivity in myopia. *Poster presented at the ARVO Annual Meeting*.
9. 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*.

10. **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.*
11. 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.*
12. 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.*
13. **Kosovicheva, A.**, & Bex, P. (2016). Reading rainbows: Measuring the dynamics of word processing. *Talk presented at the VSS Annual Meeting.*
14. 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.*
15. **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.*
16. 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.*
17. 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.*
18. **Kosovicheva, A. A.** & Whitney, D. (2014). Stable individual distortions in the perceived locations of static stimuli. *Poster presented at the VSS Annual Meeting.*
19. 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.*
20. Liberman, A., **Kosovicheva, A. A.**, & Whitney, D. (2014). Serial dependence of position perception. *Poster presented at the VSS Annual Meeting.*
21. 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.*
22. **Kosovicheva, A. A.**, & Whitney, D. (2013). A meridional anisotropy of the flash-drag effect. *Poster presented at the VSS Annual Meeting.*
23. 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.*
24. **Kosovicheva, A. A.**, Wolfe, B., & Whitney, D. (2012). Effects of motion-induced mislocalizations on saccade landing position. *Talk presented at the VSS Annual Meeting.*
25. **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.*

26. Silver, M.A., **Kosovicheva, A. A.**, & Landau, A. N. (2011). ERP correlates of orientation-specific surround suppression. *Poster presented at the VSS Annual Meeting.*
27. **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.*
28. **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.*
29. **Kosovicheva, A. A.**, Fortenbaugh, F. C., & Robertson, L. C. (2010). Spatial properties of the attentional repulsion effect. *Poster presented at the VSS Annual Meeting.*
30. 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      "Where is it?: The observer and the environment in visual localization"  
 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.  
Instructor effectiveness rating: 4.45 / 5
- 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.  
Instructor effectiveness rating: 6.33 / 7

## 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*

## **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)