

Date Prepared: October 22, 2018
Name: Philip Matthew Bronstad, Ph.D.

Education

1997 BA (special honors in psychology)	Psychology minor: Zoology	The University of Texas at Austin
2004 Ph.D.	Cognitive Psychology Quantitative methods (Judith Langlois)	The University of Texas at Austin

Postdoctoral Training

2004- Postdoctoral researcher 2007	Social Neuroscience (Leslie Zebrowitz)	Brandeis University
2007- Postdoctoral fellow 2011	Low Vision, Human factors (Eli Peli)	Schepens Eye Research Institute

Faculty Academic Appointments

2007- Adjunct Professor 2011	Communication Science and Disorders	Emerson College
2010- Instructor	Department of Ophthalmology	Harvard Medical School
2014- Investigator		Schepens Eye Research Institute

Honorary Appointments

2012- Visiting Scientist	Department of Ophthalmology	Children's Hospital Boston
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Other Professional Positions

2004- Statistical Consultant 2005	IBM	
2010 Statistical Consultant	Social Expeditions, LLC	

Committee Service

Local

2010-2013 Computer Committee		Schepens Eye Research Institute
2013- Mobility and Rehabilitation Center of Excellence		Schepens Eye Research Institute
2015-2016 Laboratory Computer Applications Module Head		Schepens Eye Research Institute
2015- Vision and Visual Optics (VIVO) Focus Group Co-Organizer		Schepens Eye Research Institute

Professional Societies

2002- Association for Psychological Science		
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2005- Vision Sciences Society
 2011- American Academy of Optometry
 2015- Association for Research in Vision and Ophthalmology

Editorial Activities

ACM Transactions on Applied Perception, Basic and Applied Social Psychology, Clinical Ophthalmology, Cognitive Science, Displays, IEEE-Transactions on Information Forensics and Security, Journal of Personality and Social Psychology, Journal of Negative Results in BioMedicine, Perception, Perception and Psychophysics, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society of London, Series B, Psychonomic Bulletin & Review, Social Cognition, TESS (NSF Time-sharing Experiments for the Social Sciences).

Other Editorial Roles

2010- Review Editor Frontiers in Perception Science

Honors and Prizes

1997	Special honors in Psychology	University of Texas at Austin
1997	Phi Kappa Phi	University of Texas at Austin
1998	Sigma Xi	University of Texas at Austin
1997-2003	Professional Development Awards	University of Texas at Austin
2009	Group Leadership Award Nomination	Schepens Eye Research Institute
2010	Best trainee paper of the year	Schepens Eye Research Institute
2014	Best trainee paper of the year	Schepens Eye Research Institute

Report of Funded and Unfunded Projects

Past

2009-2010	Can a dynamic attention test effectively predict medically at-risk older drivers? NIH UL1 RR 025758 Co-PI (\$49,995) Harvard Catalyst pilot grant to predict driving performance using multiple object tracking. Driving simulator for vision research
2010	NEI S10 RR028122 Co-PI (\$332,840) Shared equipment grant.
2006-2011	Engineering Approaches to Low Vision Rehabilitation R01 EY12890 Postdoctoral researcher Develop and test optical and electronic devices that implement visual multiplexing and restore, in part, the interplay of central and peripheral vision.
2007-2012	Mid-Level Vision Systems for Low Vision R01 EY016093 Postdoctoral researcher Use techniques of computer vision and computational neuroscience to develop devices to aid people with low vision.
2013-2014	Development of an innovative test/treatment of strabismus in children with hemianopia. Children's Hospital Boston Innovation program Co-Investigator (\$12,500).
2013-2015	Is ARC compensatory to hemianopia and can it be reinstated after strabismus surgery? Knights Templar Eye Foundation PI (\$120,000).

Current

2015-2018 Strabismus in Hemianopia
R01 EY024084-01A1
PI (\$1,500,000).

Unfunded

“Development of a prototype HUD for low vision drivers and image enhancement evaluation.” Submitted to Shore Foundation 4/15/2011 (\$25,000).
“Development of a Head-Up Display for Drivers with AMD.” Submitted to Thome memorial funding for AMD research 6/15/2011 (\$750,000).
“Strabismus in Children with Hemianopia.” Submitted to Knights Templar 02/15/2012 (\$60,000)
“Nature and extent of visual suppression in children with homonymous hemianopia and strabismus.” Submitted to Harvard Catalyst 2/21/2012 (\$50,000).
“Prism glasses as a treatment for children with hemianopia after strabismus surgery.” Submitted to MEEI Curing Kids 3/9/2012 (\$50,000).
“Nature and extent of visual suppression in children with homonymous hemianopia and strabismus.” Submitted to Charles H. Hood Foundation 3/22/2012 (\$150,000).
“A novel method to measure the benefits of image enhancement for people with visual impairment.” Submitted to Shore Foundation 4/13/2012 (\$25,000).
“Test and treatment for comorbid strabismus and hemianopia.” Submitted to Harvard Catalyst KL2 Medical Research Investigator Training program 6/22/2012 (\$108,000).
“Children with Hemianopia and Strabismus.” Submitted to MEEI Curing Kids 1/15/2013 (\$50,000)
“Is strabismus adaptive in pediatric homonymous hemianopia?” Submitted to Shore Fellowship 3/1/2013 (\$30,000).

Report of Local Teaching and Training

Teaching of Students in Courses

2009	MATLAB Club	Schepens Eye Research Institute
	All levels: undergraduates to faculty	2 hrs./mo for 10 months
2015, 2017	<i>Visual Function Measurement</i>	HMS Vision Course
2018	<i>Repeated Measures Analyses</i>	MEEI Statistics Course

Local Invited Presentations

2006 *Understanding facial beauty: A computational model of attractiveness judgments.*
Harvard Cognitive Colloquium, Department of Psychology, Harvard
October 21, 2015 *AMD and driving*(and hands-on driving simulator demos), to “Explorations” a program of the HMS Office of Diversity Inclusion and Community Partnership for minority middle school students interested in science careers.

Report of Regional, National and International Invited Teaching and Presentations

Regional and National Teaching of Students in Courses

1997-2000	Psychology of Motivation Undergraduate students	The University of Texas at Austin Teaching Assistant (TA) 3hr/wk
1998	Industrial Psychology Undergraduates	The University of Texas at Austin TA 3hr/wk
1998	Psychology of Sex Undergraduates	The University of Texas at Austin TA 3hr/wk

1999	Evolution of Human Behavior Undergraduates	The University of Texas at Austin TA 3hr/wk
1999	Advanced Statistics 1 st year graduate students	The University of Texas at Austin TA 3hr/wk
1999-2000	Introduction to Statistics & Research Design Undergraduates	The University of Texas at Austin Lecture 2hr/wk
2007, 2010	Social Psychology Undergraduates	Emerson College Lecture 3hr/wk
2011	Introduction to Psychology Undergraduates	Emerson College Lecture 3hr/wk

Regional and National Invited Presentations

2010	Age-related Macular Degeneration and its Effects on Driving, New England College of Optometry, Boston, MA, November 2.
2005	Social Impressions Made to Faces: Technological and Cognitive Aspects, MIT Cognitive Psychology Student Seminar, Cambridge, MA, October 4.
2004	Attractiveness of Faces, University of Texas Science Club, Austin, TX, August 21.

Report of Technological Innovation

Bronstad, P.M., King, M.C., Thatcher, J.. Method of measuring a large population of web pages for compliance to content standards that require human judgement to evaluate. US Patents 7,725,407 (May 25, 2010) and 8,140,444 (March 20, 2012).

Report of Scholarship

Peer-Reviewed Publications in Print or other Media

1. Singh, D., Bronstad, P.M. (1997). The anatomical locations of human body scarification and tattooing as a function of pathogen prevalence. *Evolution and Human Behavior*, 18, 403-416.
2. Singh, D., Bronstad, P.M. (2001). Body odour is a potential cue to ovulation. *Proceedings of the Royal Society of London, Series B*, 268, 797-801.
3. King, M., Thatcher, J.W., Bronstad, P.M., Easton, R. (2005). Managing usability for people with disabilities in a large web presence. *IBM Systems Journal*, 44, 519-535.
4. Bronstad, P.M., Russell, R. (2007). Beauty is in the "we" of the beholder: Greater agreement on facial attractiveness among close relations. *Perception*, 36, 1674-1681.
5. Zebrowitz, L.A., Bronstad, P. M., Hoon, H.K.. (2007). The contribution of face familiarity to ingroup favoritism and stereotyping. *Social Cognition*, 25 303-335.
6. Rennels, J.L., Bronstad, P.M., Langlois, J.H. (2008). Are attractive men's faces masculine or feminine? The importance of type of facial stimuli. *Journal of Experimental Psychology: Human Perception and Performance*, 34, 884-893.
7. Bronstad, P.M., Langlois, J.H., Russell, R. (2008). Computational models of facial attractiveness judgments. *Perception*, 37, 126-142.
8. Zebrowitz, L.A., Luevano, V.X., Bronstad, P.M., Aharon, I. (2009). Neural activation to babyfaced men matches activation to babies. *Social Neuroscience*, 4, 1-10.

9. Bronstad, P.M., Bowers, A.R., Goldstein, R.B., Albu, A., Peli, E. (2009). The impact of macular disease on pedestrian detection: A driving simulator evaluation. *Proceedings of the 5th Driving Assessment Conference (DAC) North America*. ***Schepens trainee paper of the year 2010**
10. Woods, R.L., Satgunam, P., Bronstad, P.M., Peli, E. (2010). Statistical analysis of subjective preferences for video enhancement. *Human Vision and Electronic Imaging XV, Proc. of SPIE-IS&T Electronic Imaging*. Ed. Rogowitz BE, Pappas TN, SPIE, 7527, 75270E1-10.
11. Satgunam P., Woods R.L., Bronstad P.M., Peli E. (2010). Factors affecting image quality preferences. The Society for Information Display International Symposium, Seattle, WA 2010. SID 10 Digest 8.2
12. Bronstad, P.M., Bowers, A.R., Albu, A., Goldstein, R.B., Peli, E. (2011). Driving with para-central visual field loss. *Proceedings of the 6th Driving Assessment Conference (DAC) North America*.
13. Bowers, A.R., Anastasio, J., Howe, P., O'Connor, M., Hollis, A., Kapust, L., Bronstad, P.M., Horowitz, T. (2011). Dynamic Attention as a Predictor of Driving Performance in Clinical Populations: Preliminary Results. *Proceedings of the 6th Driving Assessment Conference (DAC) North America*.
14. Bronstad, P.M., Bowers, A.R., Albu, A., Goldstein, R.B., Peli, E. (2011). Hazard detection by drivers with paracentral homonymous field loss: A small case series. *Journal of Clinical and Experimental Ophthalmology*.
15. Zebrowitz, L.A., Wang, R., Bronstad, P.M., Eisenberg, D.T.A., Undurraga, E., (2012). First Impressions from Faces Among U.S. and Culturally Isolated Tsimane' People in the Bolivian Rainforest. *Journal of Cross-Cultural Psychology*, 43, 119-134.
16. Strom, M.A., Zebrowitz, L.A., Zhang, S., Bronstad, P.M., Lee, H.K. (2012). Skin and bones: The contribution of skin tone and facial structure to racial prototypicality ratings. *PLoS ONE*, 7, :e41193. doi:10.1371/journal.pone.0041193.
17. Satgunam P., Woods R.L., Luo G., Bronstad P.M., Reynolds Z., Ramachandra C., Mel B.W., Peli E. (2012) Effects of contour enhancement on low-vision preference and visual search. *Optometry and Vision Science*, 89, pp E1364-E1373.
18. Bronstad, P.M., Bowers, A.R., Albu, A., Goldstein, R.B., Peli, E. (2013) Simulator driving with central visual field loss 1: Impact of laterality of loss on reaction time to hazards. *JAMA Ophthalmology*, 131(3), 303-309. ***Schepens trainee paper of the year 2014**
19. Bronstad, P.M., Bowers, A.R., Albu, A., Goldstein, R.B., Peli, E. (2013). In reply (Central visual field loss (CFL) and driving), *JAMA Ophthalmology*, 131(6), 819-821. ***invited submission**
20. Satgunam, P., Woods, R.L., Bronstad, P.M., Peli, E. Factors affecting video quality preferences. (2013). *IEEE Transactions on Image Processing*, 22 (12), 5146-5157.
21. Alberti, C.A., Horowitz, T., Bronstad, P.M., Bowers, A.R. (2014). Visual attention measures predict pedestrian detection in central field loss: a pilot study. *PLoS ONE*. DOI: 10.1371/journal.pone.0089381
22. Bronstad, P.M., Albu, A., Bowers, A.R., Goldstein, R.B., Peli, E., (2015). Driving with Central Visual Field Loss II: How Scotomas Above or Below the Preferred Retinal Locus (PRL) Affect Hazard Detection in a Driving Simulator. *PLOS One*. DOI: 10.1371/journal.pone.0136517.
23. Germine, L., Russell, R., Bronstad, P.M., Blokland, G.A.M., Smoller, J.W., Kwok, H., Anthony, S.E., Nakayama, K., Rhodes, G., Wilmer, J.B. (2015). Individual aesthetic preferences for faces are shaped mostly by environments not genes. *Current Biology*, 25(20), 2684-2689.
24. Bronstad, P.M., Albu, A., Goldstein, R.G., Peli, E., Bowers, A.B. (2016). Driving with central field loss III: Vehicle handling. *Clinical and Experimental Optometry* 99:435-40.
25. Houston, K.E., Paschalis, E.I., Angueira, D.C., Bronstad, P.M., Barrett, A.M., Iaccarino, M.A. (2017). Restoration of Vision after Brain Injury Using Magnet Glasses: A Case Report *American Journal of Physical Medicine and Rehabilitation*, 96 (4), e70-e74.
26. Bowers A.R., Bronstad P.M., Spano L., Huq B., Tang, X., Doherty A., Peli E., Luo G. (2018). Evaluation of a Paradigm to Investigate Detection of Road Hazards when Using a Bioptic Telescope, in press, *Optometry and Vision Science*, 95 (9), 785-794.

1. Bronstad, P.M., Peli, E., Liu, R., Doherty, A., Fulton, A.. High prevalence of strabismic field expansion in pediatric homonymous hemianopia.(in revision, PLOS ONE)

In Preparation

1. Bronstad, P.M., Fulton, A. Peli, E.. Usefulness of strabismic visual field expansion in hemianopia.

Non-peer reviewed scientific publications in print

Chapters

1. Zebrowitz, L.A., Bronstad, P.M., Montepare, J. (2010). *An Ethological Theory of Face Perception*. in *The Science of Social Vision* (Eds. Adams, Ambady, Nakayama and Shimojo). Oxford University Press.
2. Bronstad, P.M. Hemmesch, A.R.. SPSS. In Neil J. Salkind (Ed.) *Encyclopedia of Research Design*. Thousand Oaks (CA): Sage. (2010)

Thesis

Bronstad, P.M. (2004). *Theoretical and methodological congruence with face perception research: An alternate paradigm for facial attractiveness*. Doctoral dissertation, The University of Texas at Austin.

Recent Abstracts and Poster Presentations Presented at Professional Meetings

1. Bronstad, P.M., Zebrowitz, L., Aharon, I. (2007). Classifying spatial patterns of brain activity associated with human face categories *Neural Systems of Social Behavior*, Austin, TX.
2. Satgunam, P., Woods, R.L., Bronstad, P.M. Peli, E. (2009). Two different patterns of preference for video enhancement. *Optometry & Vision Science (Supplement)*, 86, E-abstract 95530.
3. Bronstad, P.M. Satgunam, P., Woods, R.L., Peli, E. (2010). Video content modulates preferences for video enhancement. *Journal of Vision*, 10, 1228.
4. Albu, A., Bowers, A.R., Bronstad, P.M., Goldstein, R.B., Peli, E. (2010). Driving with central field loss: pedestrian detection in a simulator. *Investigative Ophthalmology and Visual Sciences*, 51, E-Abstract, 3625.
5. Satgunam, P., Woods, R.L., Bronstad, P.M., Peli, E. (2010). Factors Affecting Image Quality Preferences. In: *SID International Symposium. Digest of Technical Papers*, 8.2, 94-97.
6. Albu, A., Bronstad, P.M., Bowers, A.R., Goldstein, R.B., Peli, E. (2011). The effect of “vertical” central scotomas on hazard detection in a driving simulator. *American Academy of Optometry*.
7. Alberti, C.F., Bronstad, P.M., Albu, A., Hwang, A.D., Goldstein, R.B., Peli, E. (2011). Simulator driving with hemianopia: Detection of static and moving pedestrians. *American Academy of Optometry*.
8. Bowers A.R., Bronstad P.M., Albu A., Goldstein R.B., Peli E. (2011) Effects of Age and Central Field Loss on Detection Failures at Intersections. *Investigative Ophthalmology Vision Science*, 52, ARVO E-abstract 1196.
9. Alberti, C.F., Bronstad, P.M., Hwang, A., Albu, A., Ananev, E., Goldstein, R., Peli, E., Bowers, A.R. Scanning and detection of static and moving pedestrians by drivers with hemianopia in a simulator. May 2012, *Ophthalmol. Vis. Sci.* 53: ARVO E-Abstract, 4356. * **Envision-Atwell Award for best ARVO presentation by a young researcher in visual impairment research.**
10. Bowers, A.B., Alberti, C.F., Bronstad, P. M., Albu, A., Horowitz, T. (2012). Does dynamic attention predict hazard detection in people with central field loss? *Investigative Ophthalmology and Vision Sciences*, 53, ARVO E-Abstract, 3150.
11. Wilmer, J., Russell, R., Bronstad, P.M., Kwok, H. Anthony, S., Germine, L. (2013). Disagreements about the attractiveness of faces arise largely from past experiences: Evidence from twins. *Journal of Vision*, 13, 854.
12. Bronstad, P.M., Fulton, A., Peli, E. (2014). Is pediatric strabismus compensatory to homonymous hemianopia? The 11th International Conference on Low Vision, Melbourne, Australia.
13. Bronstad, P.M., Peli, E., Doherty, A., Liu, R., Fulton, A. (2015). Can strabismus compensate for early-onset hemianopic field loss? A case series. *American Academy of Optometry*.

14. Bronstad, P.M., Bowers, A., Albu, A., Goldstein, B., Peli, E. (2015). The effects of central field loss on vehicle control in a driving simulator. *American Academy of Optometry*.
15. Bowers, A.R., Bronstad, PM, Spano, L., Huq, B., Alberti, C., Doherty, A., Peli, E., Luo, G. (2016) Hazard detection with bioptic telescopes and simulated visual acuity loss. *American Academy of Optometry*.
16. Bronstad, P.M., Peli, E., Doherty, A., Liu, R., Fulton, A.B. (2016). Does field-expanding-strabismus in hemianopia improve mobility? *Association for Research in Vision and Ophthalmology*.
17. Bronstad, PM, Peli, E., Doherty, A., Fulton, A. (2017). Strabismic hemianopic field expansion and mobility. *Association for Research in Vision and Ophthalmology*.
18. Bronstad, PM. (2018). Measuring the usefulness of strabismic field expansion in hemianopia. *Association for Research in Vision and Ophthalmology*.