Brian Barton, Ph.D.

Curriculum Vitae

E-mail:
brianbartonphd@gmail.com

Original oils on canvas portrait by my father, Robert H. Barton, in 2010.

THE ENTIRETY OF ANY LIVING BEING'S COGNITIVE EXPERIENCE IS WHOLLY DEPENDENT UPON ITS SENSORY SYSTEMS TO INFORM IT OF THE STATE OF ITS EXISTENCE. As humans, we have many independent sensory systems that allow us to detect wavelengths of light that reflect off of the surfaces of objects around us, to detect pressure waves in the fluids in which we spend our existence, to detect aspects of the chemical composition of nearby things, and others besides. Other animals share similar senses, to the point where they are very useful models of the sensory systems in humans. Still others bear senses that we cannot comprehend, such as the electrochemical sensory systems in platypuses. While we may be able to imagine what it may be like to have different sensory systems, we inevitably compare them to senses we have—Spider Man's "spidey sense" of comic book fame, which alerts him to impending danger, is described as a tactile sensation: A TINGLE.

THESE SENSES INFORM US OF THE WORLD WE INHABIT, AND WE HAVE A SOPHISTICATED SET OF SYSTEMS DESIGNED TO TAKE IN THIS SENSORY INFORMATION, PROCESS IT, AND USE IT TO MAKE CONSCIOUS AND UNCONSCIOUS DECISIONS ABOUT HOW TO RESPOND. From so-called "low-level" systems, which are low in the information processing hierarchy and would generally be termed more strictly "sensory", to "high-level" systems such as conceptual understanding, imagination, and language; all systems in the hierarchy use information originally gathered by sensory organs.

AS SUCH, IT IS ABSOLUTELY VITAL TO UNDERSTAND SENSORY SYSTEMS IN THE HUMAN BRAIN, NOT ONLY IN LOW-LEVEL AREAS, BUT IN HIGHER-ORDER COGNITIVE AREAS THAT ARE BOUND BY INFORMATION FROM THE INPUTS THEY RECEIVE THAT ORIGINATE IN SENSORY ORGANS. Too often, researchers of higher-order cognitive processes ignore what is known about lower-order processes and how the organization of lower-order areas can inform our understanding of the organization of higher-order processes.

It is my goal, therefore, to investigate sensory systems in the human brain according to the following principles: FIRST, STRUCTURE INFORMS FUNCTION, AND BY EXTENSION, COMMON STRUCTURE INFORMS COMMON FUNCTION. If two areas of the brain respond to carefully-crafted stimuli in very similar ways, it is highly likely that those two areas are involved in very similar types of processing. SECOND, SENSORY SYSTEMS SHOULD NOT BE STUDIED IN ISOLATION. While it is understandable that it requires a great deal of expertise to study the brain underpinnings of any given sense, there are valuable insights to be gleaned about any given sense from other senses.

Updated: May 8, 2023

TABLE OF CONTENTS

To jump to a location, click on an entry in the table or on blue underlined text.

BIOGRAPHICAL INFORMATION

EDUCATION

2013 **Psychology with a concentration in Cognitive Neuroscience** **Ph.D.**
- University of California, Irvine
- Dissertation: *Mapping Human Visual and Auditory Cortex, Tracking Plasticity, and Linking fMRI to Perception*

2011 **Psychology** **M.A.**
- University of California, Irvine

2007 **Psychology** **B.S.**
- University of Oregon
- Graduated with Honors

Back to: Top | Contents | Biographical Information

POSITIONS AND EMPLOYMENT

2018 – 2023 **Consultant**
- University of California, Irvine
- Department of Cognitive Sciences
- Professor Alyssa A. Brewer, M.D., Ph.D.

2014 - 2017 **Postdoctoral Fellow**
- University of California, Irvine
- Department of Cognitive Sciences
- Professors Gregory Hickok, Ph.D. , Kourosh Saberi, Ph.D., and Alyssa A. Brewer, M.D., Ph.D.

2008 - 2013 **Graduate Student Researcher**
- University of California, Irvine
- Department of Cognitive Sciences
- Professor Alyssa A. Brewer, M.D., Ph.D.

2013 **Teaching Associate (Lecturer)**
- University of California, Irvine

2008 - 2013 **Teaching Assistant**
- University of California, Irvine

2005 - 2008 **Research Assistant**
- University of Oregon
- Department of Psychology
- Professor Edward Awh, Ph.D.

Back to: Top | Contents | Biographical Information

ACADEMIC AND PROFESSIONAL HONORS

2011 **Jean-Claude Falmagne Award**
- University of California, Irvine
- $3,000 Honorarium

2011 **Social Sciences Graduate Fellowship**
- University of California, Irvine
- $5,500 Honorarium

2010 **Honorable Mention**
- National Science Foundation Graduate Research Fellowship Program

2007 **Graduated with Honors**
- University of Oregon

2003 - 2007 **Dean's Merit Scholarship**
- University of Oregon
- $6,000 Honorarium

2003 **Graduated with Honors**
- Winston Churchill High School

2003 **Certificate of Commendation**
- Eugene International High School

2003 **Certificate of Initial Mastery**
- Eugene School District

2002 **National Merit Commended Scholar**

2002 **President's Education Award for Outstanding Academic Excellence**

Back to: Top | Contents | Biographical Information

RESEARCH ACTIVITIES

GRANTS, FELLOWSHIPS, AND SCHOLARSHIPS

2013 - 2017	**National Science Foundation (NSF), Cognitive Neuroscience.** *'Acoustic Foundations of Speech Perception.'* **Award #1329255.** **Award Total:** $475,958 **PI :** Alyssa A. Brewer, M.D., Ph.D. **Co-PIs :** Gregory Hickok, Ph.D.; Kourosh Saberi, Ph.D., Dept. of Cognitive Sciences, UCI.	Post-doctoral Fellowship
2011	**Jean-Claude Falmagne Award.** University of California, Irvine. Won by my research proposal, entitled '*Orthogonal Maps of Tonotopy and Periodicity in the Human Auditory Core'*, in	Graduate Fellowship $3,000

	competition against graduate students across the School of Social Sciences.	
2011	**Social Sciences Graduate Fellowship.** University of California, Irvine. Awarded to support research for my dissertation, entitled *'Mapping Human Visual and Auditory Cortex, Tracking Plasticity, and Linking fMRI to Perception.'*	Graduate Fellowship $5,500
2003 - 2007	**Dean's Merit Scholarship**. University of Oregon. Awarded upon admission to the university for excellent academic performance in high school. The scholarship was conditional upon maitenance of a high cumulative GPA throughout my years as an undergraduate.	Undergraduate Scholarship $6,000

Back to: Top | Contents | Research Activities

PUBLICATIONS

Total Publications : **21** **(*9 more in preparation*)**
- Journal Articles : 12 (*6 more in preparation*)
- Dissertation : 1
- Books : - (*2 in preparation*)
- Book Chapters : 5 (1 *in preparation*)
- Conference Proceedings : 3

Google Scholar: 1584 citations, H-index = 12, i10-index = 12
ResearchGate: Research Interest Score: 625.5 (higher than 89% of all members)

JOURNAL ARTICLES (PEER-REVIEWED)

Barton, B. & Brewer, A.A. (in preparation) Filling-in of the human rod scotoma : linking fMRI to perception.

Barton, B. & Brewer, A.A. (in preparation) Visual working memory in posterior parietal cortex.

Barton, B., Venezia, J., Saberi, K., Hickok, G., & Brewer, A.A. (in preparation) Auditory field maps beyond human primary auditory cortex.

Barton, B., Venezia, J., Saberi, K., Hickok, G., & Brewer, A.A. (in preparation) Audiovisual Processing: fMRI investigations into the relationships between human visual and auditory field maps.

Barton, B. & Brewer, A.A. (submitted) 'Clover Leaf' Clusters: A Fundamental Organizing Principle of the Human Visual System. **Nature Neuroscience.**

Brewer, A.A., **Barton, B.**, & Lin, L. (in revision) Sustained Functional Plasticity can be Induced in Human Parietal Cortex with Adaptation to Reversed Visual Input.

Cerebral Cortex.

12. **Barton, B.** & Brewer, A.A. (2017) Visual field map clusters in high-order visual processing: Organization of V3A/V3B and a new cloverleaf cluster in the posterior superior temporal sulcus. ***Frontiers in Integrative Neuroscience*.** 11:14 doi: 10.3389/fnint.2017.00004

    ≥ 8 citations
    Impact Factor : 1.98

11. Brewer, A.A. & **Barton, B.** (2016) Maps of the Auditory Cortex. **Annual Review of Neuroscience.** 39:1-435, July 2016 doi: 10.1146/annurev-neuro-070815-014045

    ≥ 61 citations
    Impact Factor : 19.32

10. **Barton, B.** & Brewer, A.A. (2015) FMRI of the rod scotoma elucidates cortical rod pathways and implications for lesion measurements. ***Proceedings of the National Academy of Sciencies (PNAS) USA***. 112(16), 5201-5206, Apr 2015 doi : 10.1073/pnas.1423673112

    ≥ 30 citations
    Impact Factor : 9.81

9. **Barton, B.**, Treister, A., Humphrey, M., Abedi, G., Cramer, S.C., & Brewer, A.A. (2014) Paradoxical Visuomotor Adaptation Predicted by BDNF Val^{66}Met Polymorphism. ***Journal of Vision*** 14(9):4, 1-13. doi: 10.1167/14.9.4

    ≥16 citations
    Impact Factor : 3.38

8. Brewer, A.A. & **Barton, B.** (2014) Visual cortex in aging and Alzheimer's disease : Changes in visual field maps and population receptive fields. ***Frontiers in Psychology*** 5:74. doi: 10.3389/fpsyg.2014.00074

    ≥96 citations
    Impact Factor : 2.80

7. **Barton, B.** & Brewer, A.A. (2013). Visual Working Memory in Human Cortex. ***Psychology****, 4*(8), Aug 2013, 655-662. doi: 10.4236/psych.2013.48093

    ≥19 citations
    Impact Factor : 0.98

6. **Barton, B.**, Venezia, J., Saberi, K., Hickok, G., & Brewer, A.A. (2012) Orthogonal acoustic dimensions define auditory field maps in human cortex. ***Proceedings of the National Academy of Sciencies (PNAS) USA***. 109(50), 20738-20743, Dec 2012,. doi :10.1073/pnas.1213381109

    ≥111 citations

Impact Factor : 9.81

5. Brewer, A.A. & **Barton, B.** (2012) Effects of healthy aging on human primary visual cortex. ***Health***. *4*(09A – Special Issue). doi : 10.4236/health.2012.429109

   ≥24 citations
   Impact Factor : 0.42

4. Asher, D., Zaldivar, A., **Barton, B.**, Brewer, A.A., & Krichmar, J. (2012) Reciprocity and Retaliation in Social Games with Adaptive Agents. ***IEEE: Transactions on Autonomous Mental Development***, *4*(3), Sept 2012, 226-238. doi:10.1109/TAMD.2012.2202658

   ≥24 citations
   Impact Factor : 1.35

3. **Barton, B.**, Ester, E., & Awh, E. (2009) Discrete Resource Allocation in Visual Working Memory. ***Journal of Experimental Psychology: Human Perception and Performance***. *35*(5), Oct 2009, 1359-1367. doi:10.1037/a0015792

   ≥118 citations
   Impact Factor : 2.29

2. Awh, E., **Barton, B.**, Vogel, E.K. (2007) Visual working memory represents a fixed number of tems, regardless of complexity. ***Psychological Science***, *18*(7), 622-628. doi:10.1111/j.1467-9280.2007.01949.x

   ≥862 citations
   Impact Factor : 6.13

1. Scolari, M., Kohnen, A. **Barton, B.**, & Awh, E. (2007) Spatial attention, preview, and popout: Which factors influence critical spacing in crowded displays? ***Journal of Vision***, *7*(2):7, 1-23. doi:10.1167/7.2.7

   ≥125 citations
   Impact Factor : 3.38

Back to: Top | Contents | Research Activities

BOOK CHAPTERS (PEER-REVIEWED)

Barton, B. & Brewer, A.A. (in preparation) Attention and working memory in human auditory cortex.

5. Brewer, A.A. & **Barton, B.** (2018) Cloverleaf Clusters: A Common Macrostructural Organization across Human Visual and Auditory Cortex. ***Sensory Nervous System***, Ed. Thomas Heinbockel . InTech. ISBN 978-1-78923-359-9.

≥1 citations

4. Brewer, A.A. & **Barton, B.** (2016) Changes in visual cortex in healthy aging and dementia. ***Update on Dementia***, Ed. Davide Moretti. InTech. ISBN 978-953-51-4833-3.

≥6 citations

3. **Barton, B.** & Brewer, A.A. (2015) Human Auditory Cortex. ***Neurobiology of Language***, Eds. G. Hickok and S. Small. Elsevier. doi: 10.1016/B978-0-12-407794-2.00005-5

≥5 citations

2. Brewer, A.A. & **Barton, B.** (2014) Developmental Plasticity: FMRI Investigations into Human Visual Cortex. ***Advanced Brain Neuroimaging Topics in Health and Disease - Methods and Applications*** . Eds. T.D. Papageorgiou, G. Christopoulos, S. Smirnakis. InTech. ISBN: 978-953-307-669-0. Ch. 12, pp. 305-334. doi:10.5772/58256.

≥6 citations

1. Brewer, A.A. & **Barton, B.** (2012) Visual Field Map Organization in Human Visual Cortex. ***Visual Cortex – Current Status and Perspectives***, S. Molotchnikoff and J. Rouat (Ed.). InTech. ISBN: 978-953-51-0760-6. Ch. 2, pp. 30-60. doi:10.5772/51914

≥43 citations

Back to: Top | Contents | Research Activities

CONFERENCE PROCEEDINGS (PEER-REVIEWED)

3. Ta, D., **Barton, B.,** Brewer, A.A., Lu, Z.-L., Wang, Y. (2015) Characterizing Human Retinotopic Mapping Using Conformal Geometry: Conformal Distortion Analysis. ***International Conference on Medical Imaging Computing and Computer Assisted Interventions (HPC – MICCAI)***. Munich, Germany.

2. Ta, D., Shi, J., **Barton, B.**, Brewer, A.A., Lu Z.-L., Wang, Y. (2014) Characterizing human retinotopic mapping with conformal geometry : a preliminary study. ***International Conference on Medical Imaging Computing and Computer Assisted Interventions (HPC – MICCAI)***. Munich, Germany.

1. Asher, D., Zaldivar, A., **Barton, B.**, Brewer, A.A., & Krichmar, J. (2011) The Effects of Neuromodulation on Human-Robot Interaction in Games of Conflict and Cooperation. ***International Joint Conference on Neural Networks (IJCNN)***. San Jose, CA. p. 2087. doi: 10.1109/IJCNN.2011.6033484

Back to: Top | Contents | Research Activities

BOOKS (PEER-REVIEWED)

Brewer, A.A. & **Barton, B.** (under contract ; co-editor) Cortical Plasticity – Computational Investigations of Human Visual Cortex. InTech.

Brewer, A.A. & **Barton, B.** (under contract ; co-author) Cortical Plasticity in the Human Visual System. Springer.

Back to: Top | Contents | Research Activities

DISSERTATION

1. **Barton, B.** (2013) Mapping Human Visual and Auditory Cortex, Tracking Plasticity, and Linking fMRI to Perception. ***Doctoral Dissertation, University of California, Irvine.***, 438 pp. (Ann Arbor: ProQuest/UMI) Proquest document ID: 1494081711; Dissertation/thesis number: 3607761. (Dissertation Abstracts International DAI-B 75/04(E), Oct 2014), ISBN: 9781303654725.

Back to: Top | Contents | Research Activities

BROADCAST MEDIA

1. **'What is Reality?' - Part 1 of The Brain by Dr. David Eagleman** (Originally aired: 10/14/15). Publisher: **PBS**, produced by Blink Films. Featured scientists in Part 1: Alyssa A. Brewer, M.D., Ph.D., **Brian Barton, Ph.D.**, and David Eagleman, Ph.D.

Back to: Top | Contents | Research Activities

INVITED TALKS

13. October, 2016	Spinoza Centre for Neuroimaging & Utrecht University, Amsterdam, **Netherlands** (NextGenVis consortium)
12. October, 2016	Perceptual and Cognitive Neuroscience (PCN), University Medical Center of Groningen, Groningen, **Netherlands** (NextGenVis consortium)
11. Sept., 2016	Symposium on "Bridging the gap in ophthalmology: From physics to visual cognition", German Ophthalmology Society (DOG), Berlin, **Germany**
10. Sept., 2016	Section for Clinical and Experimental Sensory Physiology, Magdeburg

	University, Magdeburg, **Germany** (NextGenVis consortium)
9. Summer, 2013	Guest lecture: Memory Disorders. ***Brain Disorders.*** University of California, Irvine.
8. Spring, 2013	Guest lecture: Memory Disorders. ***Brain Disorders.*** University of California, Irvine.
7. July, 2012	Applications for Auditory Field Map Clusters. ***Towards a "Closed Loop" Neuro-Computational Model of Speech Processing.*** University of California, Irvine.
6. Fall, 2011	Guest lecture: Memory Disorders. ***Brain Disorders.*** University of California, Irvine.
5. Fall, 2011	Guest lecture: Memory Disorders. ***Visiting Tibetan Scholars Seminar Series.*** University of California, Irvine.
4. Winter, 2011	Guest lecture: Memory Disorders and Dementia. ***Cognitive Neuroscience.*** University of California, Irvine.
3. Fall, 2010	Guest lecture: Memory Disorders. ***Brain Disorders.*** University of California, Irvine.
2. Winter, 2010	Guest lecture: Memory Disorders. ***Brain Disorders.*** University of California, Irvine.
1. Fall, 2008	Guest lecture. ***Introduction to Psychology*.** University of California, Irvine

From left: **Brian Barton**, Geshe Lobsang Jamyang, Kungsang Dorjee, and Geshe Lobsang Sopa

Back to: Top | Contents | Research Activities

CONFERENCE PRESENTATIONS AND PUBLISHED ABSTRACTS

*64 total, 25 as first author. 38 total have associated published abstracts. * indicates a published abstract. 9 total are from conferences outside the USA. † indicates international.*

ORAL PRESENTATIONS

*11 as first author. 15 total have associated published abstracts. * indicates a published abstract. 6 total are from conferences outside the USA. † indicates international.*

30. * **B. Barton**, A.A. Brewer. (2016) Visual field map clusters in high-order visual processing: An analysis of a new cluster in the posterior superior temporal sulcus. Society for Neuroscience Abstracts. Program No. *in press*. Neuroscience 2013 Abstracts. San Diego, CA: *Society for Neuroscience*.

29. A.A. Brewer, **B. Barton**. (2016) Cortical plasticity of human visual function.

† Symposium on "Bridging the gap in ophthalmology: From physics to visual cognition", *114th Congress of the German Ophthalmology Society (DOG)*, Berlin, Germany.

28. † **B. Barton**, A.A. Brewer. (2016) fMRI of the rod scotoma: cortical rod pathways and implications for lesion measurements. Symposium on "Bridging the gap in ophthalmology: From physics to visual cognition", *114th Congress of the German Ophthalmology Society (DOG)*, Berlin, Germany.

27. **B. Barton** & A.A. Brewer. (2013) Filling-In of the Rod Scotoma: Linking fMRI to Perception. Program No. 120.06. Neuroscience 2013 Abstracts. San Diego, CA: *Society for Neuroscience*. Online.

26. A.A. Brewer & **B. Barton**. (2013) FMRI of the Rod Scotoma: Population Receptive Fields Silenced, Shifted, and Scaled. Program No. 120.05. Neuroscience 2013 Abstracts. San Diego, CA: *Society for Neuroscience*. Online.

25. A.A. Brewer & **B. Barton**. (2013) 'Clover Leaf' Clusters and Functional Plasticity in Human Visual Cortex. Neuroscience Seminar Series. Austin, TX.

24. **B. Barton**, J. Venezia, K. Saberi, G. Hickok, A.A. Brewer. (2013) Cross-sensory activation of 'clover leaf' clusters in human visual and auditory cortex. Spoken presentation at the **2013 OSA Vision Meeting**, October, 2013, Houston, TX.

23. * **B. Barton**, J. Venezia, K. Saberi, G. Hickok, A.A. Brewer. (2012) Audiovisual Processing: fMRI investigations into the relationships between human visual and auditory field maps. Program No. 723.06. Neuroscience 2012 Abstracts. New Orleans, LA: ***Society for Neuroscience***. Online.

22. * A.A.Brewer & **B. Barton**. (2012) Functional plasticity in human occipito-temporal visual field map clusters: adapting to reversed visual input. Society for Neuroscience Abstracts. Program No. 723.05. Neuroscience 2012 Abstracts. New Orleans, LA: ***Society for Neuroscience***. Online.

21. * Brewer, A.A. & **Barton, B.** (2012) Functional Plasticity in Human Parietal Visual Field Map Clusters: Adapting to Reversed Visual Input. ***Journal of Vision.*** 12(9): 1398; doi:10.1167/12.9.1398.

20. * A.A. Brewer, **B. Barton**. (2011) 'Clover Leaf' Cartography: Connectivity Among Visual Field Map Clusters. Program No. 851.01. Neuroscience 2011 Abstracts. Washington, D.C.: ***Society for Neuroscience***. Online.

19. * **B. Barton**, A.A. Brewer. (2011) FMRI of the Rod Scotoma: Filling-In, Rod Pathway Projections, and Insights into Plasticity. Optical Society of America, Fall Vision Meeting. ***Journal of Vision*** 11 (15), 9. doi:10.1167/11.15.9.

18. *† **B. Barton**, A.A. Brewer. (2011) fMRI of the Rod Scotoma: Filling-In, Rod Pathway Projections, and How It Informs Plasticity. European Conference on Visual Perception. Toulouse, France. ***Perception*** 40 ECVP Abstract Supplement, 14.

17. *† A.A. Brewer, **B. Barton**. (2011) 'Clover Leaf' Clusters in Human Visual Cortex. European Conference on Visual Perception. Toulouse, France. ***Perception*** 40

ECVP Abstract Supplement, 48.

16. * Asher, D., Zaldivar, A., **Barton, B.**, Brewer, A.A., & Krichmar, J. (2011) The Effects of Neuromodulation on Human-Robot Interaction in Games of Conflict and Cooperation. ***International Joint Conference on Neural Networks (IJCNN).*** San Jose, CA. p. 2087. doi: 10.1109/IJCNN.2011.6033484

15. Brewer, A.A. & **Barton, B.** Functional Plasticity in Human Parietal Cortex: Adapting to Reversed Visual Input. Spoken presentation at the ***Joint Symposium on Neural Computation***. June 2011, La Jolla, CA.

14. † Brewer, A.A. & **Barton, B.** Functional Plasticity in Adult Human Cortex in Response to an Extreme Alteration of Visual Input. Spoken presentation at the ***Neurowissenschaftliche Gesellschaft: Ninth Göttingen Meeting of the German Neuroscience Society, 33rd Göttingen Neurobiology Conference***. March 2011, Göttingen, Germany.

13. Brewer, A.A. & **Barton, B.** 'Clover Leaf' Clusters in Human Visual Cortex. Spoken presentation at the ***Southern California Cognitive Neuroscience Meeting***. March 2011, Irvine, CA.

12. * **B. Barton** & A.A. Brewer. (2010) Pinwheel cartography: A fundamental organizing principle of the human visual system. Program No. 19.1. Neuroscience 2010 Abstracts. San Deigo, CA*:* ***Society for Neuroscience***. Online.

11. * **B. Barton**, L. Lin, & A.A. Brewer. (2009) Functional plasticity in normal adult humans demonstrated by shifts in laterality of visual field representation in a wide array of visual field maps. Society for Neuroscience Abstracts. Program No. 404.5. Neuroscience 2009 Abstracts. Chicago, IL: ***Society for Neuroscience***. Online.

10. * L. Lin, **B. Barton**, D.E. Asher, & A.A. Brewer. (2009) Visual field mapping of visuomotor adaptation to reversing prisms. Society for Neuroscience Abstracts. Program No. 404.1. Neuroscience 2009 Abstracts. Chicago, IL: ***Society for Neuroscience***. Online.

9. * **B. Barton**, D.E. Asher, & A.A. Brewer. (2009) Rod Pathway Projections in Human Visual Cortex. Optical Society of America, Fall Vision Meeting. ***Journal of Vision*** 9 (14), 90. doi:10.1167/9.14.90.

8. * A.A. Brewer, **B. Barton**, & L. Lin. (2009) A Novel Use for Visual Field Maps: Tracking Functional Plasticity in Posterior Parietal Cortex. Optical Society of America, Fall Vision Meeting. ***Journal of Vision*** 9 (14), 19. doi:10.1167/9.14.19.

7. **Barton, B.**, Lin, L., & Brewer, A. A. Visuomotor Adaptation to an Extreme Alteration of Visual Input. Spoken presentation at the ***Annual Meeting of the Center for Cognitive Neuroscience***. March 2009, Irvine, CA.

6. Awh, E. & **Barton, B.** Resolution in Visual Working Memory Is Determined by the Number Rather Than the Complexity of the Stored Items. Spoken presentation at the ***Annual Meeting of the Psychonomic Society***. November 2007, Long Beach, CA.

5. Awh, E. & **Barton, B.** Interactions between number and resolution in visual working memory. Paper presented at ***Cognitive Science and Interdisciplinary Learning Conference***. August 2007. Hood River, OR.

4. * Awh, E., **Barton, B.**, Vogel, E.K. Visual working memory represents a fixed number of items, regardless of complexity. Vision Sciences Society. ***Journal of Vision*** 7 (9), 352. doi:10.1167/7.9.352

3. Awh, E., **Barton, B.**, Vogel, E.K. Complexity, number and resolution in visual working memory. Spoken presentation at the ***Psychonomics Society Annual Meeting***. November 2006, Houston, TX

2. † Awh, E., **Barton, B.**, & Vogel, E.K. The determinants of capacity in visual working memory. Spoken presentation at the ***International Society for Behavioral Neuroscience***. June 2006, Bath Spa, England.

1. Awh, E., **Barton, B.**, Vogel, E.K. Visual working memory holds a fixed number of items regardless of complexity. Spoken presentation at ***Cognitive Science and Interdisciplinary Learning Conference***. August 2006, Hood River, OR.

Back to: Top | Contents | Research Activities

POSTER PRESENTATIONS

*14 as first author. 24 total have associated published abstracts. * indicates a published abstract. 3 total are from conferences outside the USA. † indicates international.*

34. * **B. Barton**, A.A. Brewer. (2017) Visual field map clusters in high-order visual processing: Organization of V3A/V3B and a new cloverleaf cluster in the posterior superior temporal sulcus. Society for Neuroscience Abstracts. Program No. 403.21. Neuroscience 2017 Abstracts. Washington, D.C.: ***Society for Neuroscience***. Online.

33. * A.A. Brewer, **B. Barton**. (2017) Visual field map clusters in higher-order visual processing: Organization of visual field maps within the human lateral occipital cortex. Society for Neuroscience Abstracts. Program No. 403.20. Neuroscience 2017 Abstracts. Washington, D.C.: *Society for Neuroscience*. Online.

32. * **B. Barton**, J. Venezia, K. Saberi, G. Hickok, A.A. Brewer. (2014) Auditory field maps beyond human primary auditory cortex. Society for Neuroscience Abstracts. Program No. 328.11. **Neuroscience 2014** Abstracts. Washington, D.C.: Society for Neuroscience. Online.

31. **B. Barton**, J. Venezia, K. Saberi, G. Hickok, A.A. Brewer. (2013) Orthogonal acoustic dimensions define auditory field maps in human cortex. ***Cognitive Neuroscience Society 2013 Annual Meeting***. April 13, San Francisco, CA.

30. A.A. Brewer, **B. Barton**, J. Venezia, K. Saberi, & G. Hickok (2013) Cross-sensory activation of 'clover leaf' clusters in human auditory and visual cortex. ***Cognitive Neuroscience Society 2013 Annual Meeting***. April 13, San Francisco, CA.

29. Venezia, J., **Barton, B.**, Saberi, K., Brewer, A.A., & Hickok, G. (2013) The distribution of cortical surface area dedicated to auditory temporal receptive fields is symmetric between hemispheres in auditory core and belt. ***Cognitive Neuroscience Society 2013 Annual Meeting***. April 15, San Francisco, CA.

28. *† Venezia, J., **Barton, B.**, Saberi, K., Brewer, A.A., & Hickok, G. (2012) The distribution of cortical surface area dedicated to auditory temporal receptive fields is symmetric between hemispheres in auditory core and belt. San Sebastian, Spain. ***Neurobiology of Language Conference***. Online.

27. * **B. Barton**, A. Treister, G. Abedi, M. Humphrey, S.C. Cramer, A.A. Brewer. (2012) BDNF Polymorphism Affecting Neural Plasticity Predicts Visuo-Motor Adaptation to Left-Right Visual Reversal. Vision Sciences Society. ***Journal of Vision***. 12 (9), 1328-1328.

26. * D.E. Asher, A. Zaldivar, **B. Barton**, A.A. Brewer, J.L. Krichmar. (2011) Effects of Neuromodulation on Adaptive Behavior on Reciprocity During Human-Robot Interactions. Program No. 725.08. Neuroscience 2011 Abstracts. Washington, D.C.: ***Society for Neuroscience***. Online.

25. * **B. Barton**, J. Venezia, K. Saberi, G. Hickok, A.A. Brewer. (2011) Orthogonal Maps of Tonotopy and Periodicity in Human Auditory Core. Program No. 171.25. Neuroscience 2011 Abstracts. Washington, D.C.: ***Society for Neuroscience***. Online.

24. * A.A. Brewer, **B. Barton**. (2011) Aging and dementia in human visual cortex: Visual field map organization and population receptive fields. Optical Society of America, Fall Vision Meeting. ***Journal of Vision*** 11 (15), 28. doi:10.1167/11.15.28.

23. **Barton, B.** & Brewer, A.A. Perceptual and fMRI Evidence for Filling-In of the Rod Scotoma Under Scotopic Conditions. Poster presented at the ***Joint Symposium on Neural Computation***. June 2011, La Jolla, CA.

22. † **Barton, B.** & Brewer, A.A. 'Clover Leaf' Cartography: Visual Field Map Clusters in Ventral-, Medial-, and Lateral-Occipital Cortex. Poster presentation at the ***Neurowissenschaftliche Gesellschaft: Ninth Göttingen Meeting of the German Neuroscience Society, 33rd Göttingen Neurobiology Conference***. March 2011, Göttingen, Germany.

21. † Brewer, A.A. & **Barton, B.** Perceptual and fMRI Evidence for Filling-In of the Rod Scotoma Under Scotopic Conditions. Poster presentation at the ***Neurowissenschaftliche Gesellschaft: Ninth Göttingen Meeting of the German Neuroscience Society, 33rd Göttingen Neurobiology Conference***. March 2011, Göttingen, Germany.

20. **Barton, B.** & Brewer, A.A. Perceptual and fMRI Evidence for Filling-In of the Rod Scotoma Under Scotopic Conditions. Poster presentation at the ***Southern California Cognitive Neuroscience Meeting***. March 2011, Irvine, CA.

19. * A.A. Brewer & **B. Barton**. (2010) Pinwheel cartography: Visual field map clusters in posterior parietal cortex that subserve visual attention and working memory. Program No. 580.9. Neuroscience 2010 Abstracts. San Deigo, CA: ***Society for Neuroscience***. Online.

18. * S.A. Drew, D.E. Asher, **B. Barton**, A.A. Brewer. (2010) Pinwheel cartography: New visual field map cluster in the human posterior parahippocampal complex. Program No. 580.7. Neuroscience 2010 Abstracts. San Deigo, CA: ***Society for Neuroscience***. Online.

17. * D.E. Asher, S.A. Drew, **B. Barton** &, A.A. Brewer. (2010) Pinwheel cartography: Novel visual field map cluster within human ventro-lateral occipital cortex. Society for Neuroscience Abstracts. Program No. 580.8. Neuroscience 2010 Abstracts. San Diego, CA: ***Society for Neuroscience***. Online.

16. * **B. Barton** & A.A. Brewer. (2010) Perceptual and fMRI Evidence for Filling-In of the Rod Scotoma Under Scotopic Conditions. Optical Society of America Fall Vision Meeting. ***Journal of Vision*** 10 (15), 52. doi:10.1167/10.15.52.

15. * A.A. Brewer & **B. Barton**. (2010) Pinwheel Cartography: A fundamental organizing principle of the human visual system. Optical Society of America Fall Vision Meeting. ***Journal of Vision*** 10 (15), 49. doi:10.1167/10.15.49.

14. * **B. Barton** & A.A. Brewer. (2010) White and gray matter of visual cortex in Alzheimer's disease: Visual field maps, population receptive fields, and diffusion tensor imaging. Alzheimer's Association International Conference on Alzheimer's Disease. ***Alzheimer's & Dementia***: The Journal of the Alzheimer's Association Volume 6, Issue 4, July Supplement pg. S284, Abstract P1-382. doi:10.1016/j.jalz.2010.05.936.

13. * A.A. Brewer & **B. Barton**. (2010) Visual field map organization and connectivity in aging human visual cortex. Alzheimer's Association International Conference on Alzheimer's Disease. ***Alzheimer's & Dementia***: The Journal of the Alzheimer's Association Volume 6, Issue 4, July Supplement pg. S437, Abstract P2-405. doi:10.1016/j.jalz.2010.05.1458.

12. **Barton, B.** & Brewer, A.A. White and gray matter of visual cortex in Alzheimer's disease: Visual field maps, population receptive fields, and diffusion tensor imaging. Poster presentation at the ***Alzheimer's Imaging Consortium***. July 2010, Irvine, CA.

11. Brewer, A.A. & **Barton, B.** Visual Field Map Organization and Connectivity in Aging Human Visual Cortex. Poster presentation at the ***Alzheimer's Imaging Consortium***. July 2010, Irvine, CA.

10. Lin, L., **Barton, B.** & Brewer, A.A. Putting The Prisms Back On: Both Maps of Visual Space Persist, as Revealed by Cortical Adaptation to Left-Right Field Reversal. Poster presented at the ***Joint Symposium on Neural Computation***. May 2010, La Jolla, CA.

9. * **B. Barton** & A.A. Brewer. (2010) Visual Working Memory Capacity in Retinotopic Cortex: Number, Resolution, and Population Receptive Fields. Vision Sciences Society. ***Journal of Vision*** 10 (7), 729. doi:10.1167/10.7.729.

8. * A.A. Brewer, **B. Barton**, & L. Lin. (2010) Putting The Prisms Back On: Both Maps of Visual Space Persist, as Revealed by Cortical Adaptation to Left-Right Field Reversal. Vision Sciences Society. ***Journal of Vision*** 10 (7), 899.

doi:10.1167/10.7.899.

7. * A.A. Brewer, **B. Barton**, D.E. Asher. (2009) Projections of rod pathways in human visual cortex. Society for Neuroscience Abstracts. Program No. 453.25. Neuroscience 2009 Abstracts. Chicago, IL: ***Society for Neuroscience***. Online.

6. * D.E. Asher, **B. Barton**, & A.A. Brewer**.** (2009) Novel foveal representations in human ventro-lateral cortex. Society for Neuroscience Abstracts. Program No. 453.5. Neuroscience 2009 Abstracts. Chicago, IL: ***Society for Neuroscience***. Online.

5. * **B. Barton**, L. Lin, D.E. Asher, & A.A. Brewer. (2009) Alteration of Visuomotor Processing Following Left-Right Prism Adaptation. Vision Sciences Society. ***Journal of Vision*** 9 (8), 763. doi:10.1167/9.8.763.

4. * A.A. Brewer, **B. Barton**, D.E. Asher, & D. Liu. (2009) Rod Signals in Human Ventral Cortex. Vision Sciences Society. ***Journal of Vision*** 9 (8), 777. doi:10.1167/9.8.777.

3. * L. Lin, **B. Barton**, D.E. Asher, A.A. Brewer. (2009) Visual Field Mapping of Visuomotor Adaptation to Prisms. Vision Sciences Society. ***Journal of Vision*** 9 (8), 762. doi:10.1167/9.8.762.

2. * **B. Barton** & E. Awh. Interactions between number and resolution in visual working memory. Vision Sciences Society. ***Journal of Vision*** 7 (9), 849. doi:10.1167/7.9.849

1. * M. Scolari, A. Kohnen, B. Barton, & E. Awh. Attention does not influence critical spacing. Vision Sciences Society. ***Journal of Vision*** 7 (9), 444. doi:10.1167/7.9.444

Back to: Top | Contents | Research Activities

IN THE MEDIA – MEDIA COVERAGE OF RESEARCH AND PUBLISHED WORK

7.	2017	*The Brain: The Story of You*. Eagleman, David. (New York, NY: Vintage) [Based on the PBS documentary, 'The Brain with David Eagleman'] ISBN-13: 978-0525433446.
6.	2016	'Flipped Reality.' Westcott, John. *The Brain*, UCI Magazine. Spring 2016. https://communications.uci.edu/magazine/2016/spring/flipped-reality.html
5.	2015	'Skip "American Horror Story: Hotel," watch "The Brain with Dr. David Eagleman"' Hewitt, Michael. The Orange County Register. October 14. http://www.ocregister.com/articles/horror-687252-eagleman-family.html
4.	2015	'Shades of Grey.' Loh, Sandra Tsing. The Loh Down on Science, Southern California Public Radio KPCC 89.3. Septmber 3. http://www.scpr.org/programs/loh-down-on-science/2015/09/03/11947/
3.	2015	'UCI Study sheds new light on low-light vision, could aid people with retinal

		deficits.' Ashbach, Heather. University of California, Irvine, News. May 11. http://news.uci.edu/research/uci-study-sheds-new-light-on-low-light-vision-could-aid-people-with-retinal-deficits/
2.	2013	'The Sounds of Research: UC Irvine scientists probe hearing and speech from a variety of angles.' Cruz, Sherri. The Orange County Register. September 30. http://chr.ss.uci.edu/wp-content/uploads/2013/10/OC-Register-9-30-2013-THE-SOUNDS-OF-RESEARCH.pdf
1.	2012	'UCI researchers map new dimension in human auditory cortex.' Ashbach, Heather. School of Social Sciences News, University of California, Irvine. January 4. http://www.socsci.uci.edu/newsevents/news/2013/2013-01-04-uci-researchers-map-new-dimension-in-human-auditory-cortex.php

Back to: Top | Contents | Research Activities

RESEARCH POSITIONS

Thirteen years of psychology and neuroscience research experience, with three laboratories at two research universities.

Postdoctoral Fellow

2014 to 2017 **Auditory and Language Neuroscience Laboratory**

- Profs. Gregory Hickok, Ph.D. and Kourosh Saberi, Ph.D.
- Department of Cognitive Sciences, University of California, Irvine.

Laboratory for Visual Neuroscience

- Prof. Alyssa A. Brewer, M.D., Ph.D.
- Department of Cognitive Sciences, University of California, Irvine.

Duties

- Designing and conducting psychophysical, functional magnetic resonance imaging (fMRI), computational neuroscience, and human genetics experiments
- Programming experimental stimuli in Matlab
- Processing and analyzing data
- Writing and editing manuscripts
- Subject recruitment
- Participating in and leading lab meetings
- Maintaining research equipment
- Presenting data at conferences
- Training and supervision of undergraduate research assistants

Collaborators

- Prof. Steve Cramer, M.D.
  Neurorehabilitation Laboratory, in the Departments of Neurology and Anatomy and Neurobiology, University of California, Irvine
- Prof. Yalin Wang, Ph.D.
  Department of Computer Science and Engineering, Arizona State University
- Prof. Zhong-Lin Lu, Ph.D.
  Department of Psychology, Ohio State University
- Prof. Anne Sereno, Ph.D.
  Department of Neurobiology and Anatomy, University of Texas Medical School at Houston

Back to: Top | Contents | Research Activities

Graduate Student Researcher / Laboratory Manager

2008 to 2013 **Laboratory for Visual Neuroscience**

- Prof. Alyssa A. Brewer, M.D., Ph.D.
- Department of Cognitive Sciences, University of California, Irvine.

Duties

- Designing and conducting psychophysical, functional magnetic resonance imaging (fMRI), computational neuroscience, and human genetics experiments
- Programming experimental stimuli in Matlab
- Processing and analyzing data
- Writing and editing manuscripts
- Subject recruitment
- Performing neuropsychiatric screening assessments (Structured Clinical Interview for the DSM-IV, SCID)
- Participating in and leading lab meetings
- Maintaining research equipment
- Presenting data at conferences
- Training and supervision of 23 undergraduate research assistants

Collaborators

- Profs. Gregory Hickok, Ph.D. and Kourosh Saberi, Ph.D., of the Auditory and Language Neuroscience Laboratory
- Jeffrey L. Krichmar, Ph.D., of the Cognitive Anteater Robotics Laboratory, in the Department of Cognitive Sciences, University of California, Irvine.
- Prof. Steve Cramer, M.D., of the Neurorehabilitation Laboratory, in the Departments of Neurology and Anatomy and Neurobiology, University of California, Irvine.
- Prof. Yalin Wang, Ph.D., in the Department of Computer Science

and Engineering, Arizona State University
- Prof. Zhong-Lin Lu, Ph.D., in the Department of Psychology, Ohio State University.

Back to: Top | Contents | Research Activities

Research Assistant

2005 to 2008 **Attention and Working Memory Laboratory**
- Prof. Edward Awh, Ph.D.
- Department of Psychology, University of Oregon.

Duties
- Designing and conducting psychophysical experiments
- Programming experimental stimuli in Visual Basic and Matlab
- Processing and analyzing data
- Writing and editing manuscripts
- Subject recruitment
- Performing neuropsychiatric screening assessments (Structured Clinical Interview for the DSM-IV, SCID)
- Presenting data at conferences
- Participating in lab meetings
- Ordering, building, and maintaining research equipment (computers, chairs, tables, lighting, separators, network equipment, cameras)
- Training and supervision of 4 other undergraduate research assistants

Collaborators
- Prof. Edward Vogel, Ph.D., in the Department of Psychology, University of Oregon

Back to: Top | Contents | Research Activities

TEACHING ACTIVITIES

TEACHING POSITIONS

Teaching Associate (Lecturer)

1. Summer Session I, 2013 **Psychology Fundamentals**
- Undergraduate course, lower division
- University of California, Irvine

Duties

- Primary lecturer
- Creating and compiling all course material
- Lecturing for three weekly 2-hour classes over the 6-week summer session
- Creating and grading exams
- Holding office hours
- Handling student communications

Back to: Top | Contents | Teaching Activities

Teaching Assistant

Total: 14 quarters, in 5 classes, over 5 years

Psychology Research Methods:	7 quarters	Sole lecturer of 3-hour weekly lab.
Introduction to Psychology:	3 quarters	Sole lecturer of 1-hour weekly disc.
Brain Disorders:	2 quarters	
Psychology Fundamentals:	1 quarter	Sole lecturer of 2 1-hour weekly discs.
Cognitive Neuroscience:	1 quarter	

14. Fall 2013 **Psychology Research Methods**

- Undergraduate course, upper division
- University of California, Irvine

Duties

- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

13. Spring 2013 **Psychology Research Methods**

- Undergraduate course, upper division
- University of California, Irvine

Duties

- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

12. Winter 2013 **Psychology Fundamentals**
- Undergraduate course, lower division
- University of California, Irvine

Duties
- Sole lecturer for two weekly 1-hour discussion sections
- Grading exams
- Holding office hours
- Answering student questions on an online forum
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

11. Fall 2012 **Psychology Research Methods**
- Undergraduate course, upper division
- University of California, Irvine

Duties
- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

10. Spring 2012 **Psychology Research Methods**
- Undergraduate course, upper division
- University of California, Irvine

Duties
- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

9. Winter 2012 **Introduction to Psychology**
- Undergraduate course, lower division
- University of California, Irvine

Duties
- Sole lecturer for two weekly 1-hour discussion sections
- Preparing and grading exams
- Holding office hours
- Answering student questions on an online forum
- Attending weekly 1-hour course preparation meetings with the

other teaching assistants and primary lecturer
- Handling student e-mails

8. Fall 2011

Psychology Research Methods
- Undergraduate course, upper division
- University of California, Irvine

Duties
- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

7. Winter 2011

Cognitive Neuroscience
- Undergraduate course, upper division
- University of California, Irvine

Duties
- Grading exams
- Holding office hours
- Handling student e-mails

6. Fall 2010

Psychology Research Methods
- Undergraduate course, upper division
- University of California, Irvine

Duties
- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

5. Spring 2010

Psychology Research Methods
- Undergraduate course, upper division
- University of California, Irvine

Duties
- Sole lecturer for a weekly 3-hour laboratory section
- Grading exams
- Holding office hours
- Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
- Handling student e-mails

4. Winter 2010 **Brain Disorders**
   - Undergraduate course, upper division
   - University of California, Irvine

   Duties
   - Preparing and grading exams
   - Holding office hours
   - Handling student e-mails

3. Fall 2009 **Introduction to Psychology**
   - Undergraduate course, lower division
   - University of California, Irvine

   Duties
   - Sole lecturer for two weekly 1-hour discussion sections
   - Preparing and grading exams
   - Holding office hours
   - Answering student questions on an online forum
   - Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
   - Handling student e-mails

2. Winter 2009 **Brain Disorders**
   - Undergraduate course, upper division
   - University of California, Irvine

   Duties
   - Preparing and grading exams
   - Holding office hours
   - Handling student e-mails

1. Fall 2008 **Introduction to Psychology**
   - Undergraduate course, lower division
   - University of California, Irvine

   Duties
   - Sole lecturer for two weekly 1-hour discussion sections
   - Preparing and grading exams
   - Holding office hours
   - Answering student questions on an online forum
   - Attending weekly 1-hour course preparation meetings with the other teaching assistants and primary lecturer
   - Handling student e-mails

Back to: Top | Contents | Teaching Activities

UNDERGRADUATE STUDENT SUPERVISION

Undergraduate Research Opportunities Grant Program (UROP) & Summer Undergraduate Research Program (SURP) Fellowships

11/2011 – 6/2013	Golroxan (Roxan) Shoa, *Visual Working Memory in Cortical Visual Field Maps*
10/2011 – 6/2012	Brianna Penley, *Comparative Analysis of Corollary Discharge between Normal Subjects and Patients with Visual Hemianopsia*
10/2011 – 6/2012	Aaron Craddolph, *Comparative Analysis of Corollary Discharge between Normal Subjects and Patients with Visual Hemianopsia*
11/2010 – 7/2012	Melanie Humphrey, *Visual-Motor Adaptation to Left-Right Reversed Visual Input*
8/2010 – 6/2012	Jacob Redmond (Previously: Messer), *Structural and Functional Analysis of Human Cortical and Subcortical Visual Pathways*

Research Assistants

12/2011 – 6/2012	Elhum (Ellie) Shamshiri
5/2011 – 6/2012	Mark Dennison
12/2010 – 6/2011	Alex Minick
4/2010 – 6/2012	Anne Nguyen
4/2010 – 9/2010	Anthony Bonilla
4/2010 – 3/2011	Benjamin Szu
4/2010 – 1/2011	Chandni Patel
4/2010 – 1/2012	Kelly Wang
4/2010 – 6/2012	Mike Ward
4/2010 – 6/2012	William Quezada
4/2010 – 8/2011	Elizabeth Orient
4/2010 – 6/2010	Yimy Villa
4/2009 – 6/2009	Martin Dean
4/2009 – 6/2009	Elizabeth Jordan
4/2009 – 6/2009	Saman Mohseni
1/2009 – 6/2009	Christine Mikhail
12/2008 – 6/2009	Christian Herrera
9/2008 – 6/2009	Myra Engalla

Back to: Top | Contents | Teaching Activities

PROFESSIONAL ACTIVITIES

SERVICE: PROFESSIONAL

Ad Hoc Reviewer

- Current Biology
- Human Brain Mapping
- NeuroImage
- Neuron
- Journal of Neurophysiology
- Journal of Neuroscience
- Neuroscience Letters
- Proceedings of the National Academy of Sciences of the United States of America
- Journal of Vision
- Journal of Visualized Experiments

Back to: Top | Contents | Professional Activities

Professional Memberships

2013	Cognitive Neuroscience Society
2010	International Society to Advance Alzheimer's Research and Treatment
2009 – 2013	Optical Society of America
2009 - present	Society for Neuroscience
2007 - present	Vision Sciences Society

Back to: Top | Contents | Professional Activities

SERVICE: COMMUNITY OUTREACH PROGRAMS

Girls, Inc.

3/2012	**'The Brilliant Brain': Workshop for the Eureka! Girls Inc. of Orange County**. Tustin, CA. Special presentation on the organization, functions, and diseases of the brain by the Brewer Laboratory of Visual Neuroscience for the 6th and 7th grade girls and families.
7/2012	**Summer Workshop:** Week-long session for **Girls Inc. Summer Camp** by the Brewer Laboratory of Visual Neuroscience on the organization, functions, and diseases of the brain. Costa Mesa, CA

Girls Inc. is a non-profit organization that inspires girls 6-18 across the U.S. and Canada to be strong, smart, and bold through life-changing programs and experiences that help girls navigate gender, economic, and social barriers. *Girls Inc.* develops research-based informal education programs to encourage girls to take risks and master physical, intellectual and emotional challenges. The majority of *Girls Inc.* centers are located in low–income areas and provide a weekly average of 30 hours of after-school, weekend and summer activities (http://www.girlsinc.org). The Brewer lab, with the help of graduate and undergraduate UCI students, is setting up ongoing, annual workshops with *Girls Inc.*

Back to: Top | Contents | Professional Activities
