

CURRICULUM VITAE

MARY A. PETERSON

September 28, 2008

PERSONAL

Office Address: Department of Psychology
The University of Arizona
Tucson, AZ 85721
Office: (520) 621 - 5365
Lab: (520) 621 - 5543
Email: mapeters@u.arizona.edu
<http://www.u.arizona.edu/~mapeters>

EDUCATION

Ph.D. 1984 Columbia University, Psychology
Dissertation title:
Measures of selective components in perceptual organization
Dissertation advisor: Julian Hochberg

M. Phil. 1983 Columbia University

M.A. 1978 - 1980 Columbia University

B.A. 1968 - 1972 Marymount Manhattan College, English Literature,
summa cum laude

APPOINTMENTS

2000 – present Professor, Department of Psychology, and Research Social Scientist,
Cognitive Science Program, The University of Arizona

1995 – August, 2002 Director, Cognitive Psychology Program, University of Arizona

1988 - 2000 Assistant through Full Professor, Department of Psychology, and
Research Social Scientist, Cognitive Science Program, The University
of Arizona

1984 - 1988 Assistant Professor, Department of Psychology,
State University of New York at Stony Brook.

Fall, 1983 Instructor, Department of Psychology,
State University of New York at Stony Brook.

1978 - 1983 Graduate Faculty Fellow, Psychology Department,
Columbia University.

1980 and 1982 Research Assistant, Columbia University with Julian Hochberg.

RESEARCH AWARDS

- 8/2004 – 7/2008 National Science Foundation, "Implicit Measures of Shape Learning and Shape Perception." \$343,396.
- 8/2004 – 7/2008 National Science Foundation, "Perceptual Organization in Visual Search: Context Effects, \$255,105. (Sole PI years 2 & 3; co-PI with Robert Rauschenberger, year 1.)
- 8/15/99-7/30/2003 National Science Foundation, "Inhibitory and Facilitatory Processing in Image Segregation." \$220,815.
- Summer, 1996 Social and Behavioral Sciences Research Institute, University of Arizona, Grant development award, \$2,500.
- 12/15/90-5/31/94 National Science Foundation, "Shape Recognition and Figure-Ground Organization," \$202,843. (Jointly funded by Air Force Office of Scientific Research.)
- 11/13/92-8/10/93 Social and Behavioral Sciences Research Institute, University of Arizona, "The Neuropsychology of Object Recognition," \$1,324.
- 3/1/92-9/30/93 Biomedical Research Support Grant Program, "The Neuropsychology of Visual Perception," \$3,500.
- 9/1/88-2/28/91 National Science Foundation, "Measures of Subjective Variables in Visual Cognition," \$85,000. (Jointly funded by Air Force Office of Scientific Research.)
- 1985-1986 Office of the Provost Non-Tenured Faculty Research Grant-in Aid, State University of New York at Stony Brook, \$3,000.
- 1985: New York State/United University Professions New Faculty Development Award, \$1,000.
- 1984: State University of New York at Stony Brook Psychology Dept. Research Incentive Award, \$990.
- 1983-1987 PHS Biomedical Research Support, The structure of sensory expectations and the limits of the effects of intention on perception, \$16,422.

RESEARCH HONORS

- 12/2004 Elected to the Society of Experimental Psychologists
- 5/2003 Elected Fellow, Association for Psychological Science
- 8/2001 Elected Fellow, Division 3, American Psychological Association
- 7/2000 Elected Member of the International Neuropsychological Symposium
- 8/20/92 - 12/18/92 Research Professorship, College of Arts and Sciences, University of Arizona

TEACHING AWARDS

- 2000 & 2007 University of Arizona, Honors College: Outstanding Honors Advisor
- 1986-87 & 1987-88 State University of New York at Stony Brook Psychology Department: Teacher of the Year

PROFESSIONAL ACTIVITIES

- Chair Elect, Governing Board, Psychonomic Society, 2008 (Chair: 2009)
Chair, Psychonomic Society Publications Committee, 2008 – present; Member 2005 – 2007.
Chair, Search Committee for Editor of Perception & Psychophysics, 2007
Governing Board Member, Psychonomic Society, 2005 – 2010
- Governing Board Member, Vision Sciences Society, May 2005 – present
Board of Abstract Reviewers, Vision Sciences Society, 2000 – 2005
- Advisory Board Member, Women in Cognitive Science, 2003 – present
Chair of Travel Award Committee, 2003 - 2006
- Series Co-Editor, with Gillian Rhodes, *Oxford Series in Visual Cognition*, Oxford University Press, 2003 – present
- Associate Editor: Journal of Experimental Psychology: Human Perception and Performance
July, 1996 – July, 1999
- Editorial Board Membership
Journal of Experimental Psychology: Human Perception and Performance,
1991 – 1996 and 2000 - present
Psychological Science, 1999 – 2007
Psychonomic Bulletin & Review, 1993 – 1997; 2007 - present
- Member, Human Cognition and Perception Panel, National Science Foundation, 2000 - 2002
- Program Director, Rocky Mountain Psychological Association Meeting, April 27-29, 1990
- Associate: Behavioral and Brain Sciences
- Ad hoc reviewer: Acta Psychologica, Brain Research, Cognitive, Affective & Behavioral Neuroscience, Cognitive Psychology, Current Directions in Cognitive Science, , Journal of Cognitive Neuroscience, Journal of Experimental Psychology: General, Memory & Cognition, Neuropsychologia, Perception, Perception & Psychophysics, Proceedings of the Natl. Academy of Sciences, Psychobiology, Psychological Bulletin, Psychological Review, Psycholoquy, Science, Visual Cognition, Vision Research Air Force Office of Scientific Research, Israel Science Foundation, National Science Foundation, Allyn and Bacon, Inc., Sinauer Associates.

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS: Association for Psychological Science, American Psychological Association, Cognitive Neuroscience Society, International Neuropsychology Symposium, Psychonomic Society, Society for Neuroscience, Vision Sciences Society, Association of Women Faculty, Women in Cognitive Science.

SERVICE AT THE UNIVERSITY LEVEL (recent)

2007	Member, Head of Psychology, 5-year Review Committee
2003 – 2006	Promotion and Tenure Committee, College of Social and Behavioral Science, University of Arizona (Chair, 2004)
1999 – 2002	University of Arizona Committee on Ethics and Commitment
1995 – 1998	Sabbatical Review Committee, College of Social and Behavioral Sciences (Chair, 1998)

SERVICE AT THE DEPARTMENT LEVEL (recent)

2007 - present	Promotion and Tenure Committee, Psychology Department
1995 – present	Psychology Department Honors Advisor
2005 – 2007	Chair, Faculty Executive Advisory Committee
2004 – 2005	Cognition and Neural Systems, Search Committee Member
2000 – 2006	Faculty Annual Review Committee (Chair, 2003 – 2005)
2000 – 2006	Psi Chi Advisor
1999 - 2001	Chair, Cognitive Psychology Search Committee
1999 – 2002	Colloquium Committee, Co-Chair
1997 – 2002	Subject Pool Committee
1997 – 2000	Technology Committee

STUDENTS (Primary Advisor)

Post-Doctoral Fellows

Peter C. Gerhardstein, now Associate Professor, Binghamton University, SUNY
Satoru Suzuki, now Assistant Professor, Northwestern University
Robert Rauschenberger, now employed by Siemens Corporation

Ph.D. Advisor

Gary Chon-Wen Shyi (1988), Professor, National Chung Cheng University
Bradley S. Gibson (1992), Associate Professor, University of Notre Dame
Logan T. Trujillo (May, 2007), Post-doctoral fellow, UT Austin
Emily Skow-Grant (August, 2007), Assistant Professor, Simpson College, Indianola, Iowa
Andrew J. Mojica, in progress

Masters Degrees

University of Arizona

Sabrina Geoffrion
Erin M. Harvey, Assistant Professor, Ophthalmology Department, University of Arizona
Jee Hyun Kim
Elizabeth P. Merikle
Abrie Schroeder
Melissa F. Schulz
Emily Skow-Grant
Logan T. Trujillo
Elizabeth M. Salvagio, in progress

SUNY, Stony Brook

Gary Chon-Wen Shyi
Elliot Sprecher (co-advisor with Robert Liebert)
Hollis L. Weidenbacher

PUBLICATIONS (Books in Boldface)

1. Peterson, M. A., and Hochberg, J. (1983). Opposed-set measurement procedure: A quantitative analysis of the role of local cues and intention in form perception. *Journal of Experimental Psychology: Human Perception and Performance*, 9, 183-193.
2. Peterson, M. A. (1986). Illusory concomitant motion in ambiguous stereograms: Evidence for nonsensory components in perceptual organization. *Journal of Experimental Psychology: Human Perception and Performance*, 12, 50-60.
3. Peterson, M. A. (1986). Something for everyone: Four new sensation and perception texts [Review of *Sensation & Perception*, *Sensation and Perception*, *Introduction to Sensation/Perception*, *Perception*]. *Contemporary Psychology*, 31, 137-138.
4. Hochberg, J., and Peterson, M. A. (1987). Piecemeal organization and cognitive components in object perception: Perceptually coupled responses to moving objects. *Journal of Experimental Psychology: General*, 116, 370-380.
5. Peterson, M. A., and Shyi, G. C. -W. (1988). The perception of real and illusory concomitant rotation in a three-dimensional cube. *Perception & Psychophysics*, 44, 31-42.
6. Johnson, M. K., Peterson, M. A., Chua-Yap, E. and Rose, P. (1989). Frequency judgments: The problem of defining a perceptual event. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 15, 126-136.
7. Hochberg, J., and Peterson, M. A. (1989). Pictures in the mind's eye: Images in our perception of world and art. In M. Schuster and B. Woschek (Eds.), *Nonverbale Kommunikation durch Bilder*. (pp. 33 – 51) Stuttgart: Verlag fur Angewandte Psychologie.
8. Peterson, M. A., and Hochberg, J. (1989). Necessary considerations for a theory of form perception: A theoretical and empirical reply to Boselie and Leeuwenberg, *Perception*, 18, 105-119.
9. Kihlstrom, J. F., Glisky, M. L., Peterson, M. A., Harvey, E. M., and Rose, P. M. (1990). Vividness and control of mental imagery: A psychometric analysis. *Journal of Mental Imagery*, 15, 133-142.
10. Peterson, M. A., and Gibson, B. S. (1991). Directing spatial attention within an object: Altering the functional equivalence of shape descriptions. *Journal of Experimental Psychology: Human Perception and Performance*, 17, 170-182.
11. Peterson, M. A., and Gibson, B. S. (1991). The initial identification of figure-ground relationships: Contributions from shape recognition routines. *Bulletin of the Psychonomic Society*, 29, 199-202.
12. Schacter, D. L., Cooper, L. A., Delaney, S. M., Peterson, M. A., and Tharan, M. (1991). Implicit memory for possible and impossible objects: Constraints on the construction of structural descriptions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 17, 3-19.

PUBLICATIONS (continued)

13. Peterson, M. A., Harvey, E. H., and Weidenbacher, H. L. (1991). Shape recognition inputs to figure-ground organization: Which route counts? *Journal of Experimental Psychology: Human Perception and Performance*, 17, 1075-1089.
14. Peterson, M. A., Kihlstrom, J. F., Rose, P. M., and Glisky, M. L. (1992). Mental images can be ambiguous: Reconstruals and reference-frame reversals. *Memory & Cognition*, 20, 107-123.
15. Shyi, G. C. -W., and Peterson, M. A. (1992). Perceptual organization in a brief glance: The effects of figure size, figure location, and the attentional focus. *Chinese Journal of Psychology*, 34, 1-18.
16. Peterson, M. A., and Gibson, B. S. (1993). Shape recognition contributions to figure-ground organization in three-dimensional displays. *Cognitive Psychology*, 25, 383-429.
17. Peterson, M. A. (1993). The ambiguity of mental images: Insights regarding the structure of shape memory and it's function in creativity. In B. Roskos-Ewoldsen, M. J. Intons-Peterson, and R. Anderson (Eds.), *Imagery, Creativity, and Discovery: A Cognitive Perspective*. (pp. 151 – 185) Amsterdam: North Holland.
18. Hochberg, J., and Peterson, M. A. (1993). Mental representations of occluded objects: Sequential disclosure and intentional construal. *Giornale Italiano di Psicologia*, 20, 805-820. (Monograph edition published in English in honor of Gaetano Kanizsa.)
19. Peterson, M. A. (1994). Object recognition processes can and do operate before figure-ground organization. *Current Directions in Psychological Science*, 3, 105-111.
20. Peterson, M. A. (1994b). The proper placement of uniform connectedness. *Psychonomic Bulletin and Review*, 1, 509-514.
21. Peterson, M. A., and Gibson, B. S. (1994a). Must figure-ground organization precede object recognition? An assumption in peril. *Psychological Science*, 5, 253-259.
22. Peterson, M. A., and Gibson, B. S. (1994b). Object recognition contributions to figure-ground organization: Operations on outlines and subjective contours. *Perception & Psychophysics*, 56, 551-564.
23. Gibson, B. S., and Peterson, M. A. (1994). Does orientation-independent object recognition precede orientation-dependent recognition? Evidence from a cueing paradigm. *Journal of Experimental Psychology: Human Perception and Performance*, 20, 299-316.
24. **Bloom, P., Peterson, M. A., Nadel, L., and Garrett, M. F. (1996). *Language and Space*. Cambridge, Mass: MIT Press.**
25. Peterson, M. A., Nadel, L., Bloom, P., and Garrett, M. F. (1996). Space and Language. In P. Bloom, M. A. Peterson, L. Nadel, and M. F. Garrett (Eds.), *Language and Space*. (pp. 553 – 577) Cambridge, Mass: MIT Press.

PUBLICATIONS (continued)

26. Peterson, M. A., Gerhardstein, P. C., Mennemeier, M., & Rapcsak, S. Z. (1998). Object-centered attentional biases and object recognition contributions to scene segmentation in left- and right-hemisphere-damaged patients. *Psychobiology*, 26, 557-570.
27. Gerhardstein, P. C., Peterson, M. A., & Rapcsak, S. Z. (1998). Age-related hemispheric asymmetries in object discrimination. *Journal of Clinical and Experimental Neuropsychology*, 20, 174-185.
28. Peterson, M. A. (1999). What's in a stage name? *Journal of Experimental Psychology: Human Perception and Performance*, 25, 276-286.
29. Peterson, M. A. (1999). Organization, segregation, and recognition. *Intellectica*, 28, 37 - 51.
30. Peterson, M. A. (1999). High-level vision. In R. A. Wilson, F. C. Keil (Eds.), *The MIT Encyclopedia of the Cognitive Sciences*. (pp. 374-377) Cambridge, MA: The MIT Press.
31. Peterson, M. A. (1999). Knowledge and intention can penetrate vision. *Behavioral and Brain Sciences*, 22, 389 - 390.
32. Peterson, M. A., de Gelder, B., Rapcsak, S. Z., Gerhardstein, P. C., and Bachoud-Lévi, A.-C. (2000). Object memory effects on figure assignment: Conscious object recognition is not necessary or sufficient. *Vision Research*, 40, 1549-1567.
33. Suzuki, S., and Peterson, M. A. (2000). Multiplicative effects of intention on the perception of bistable apparent motion. *Psychological Science*, 11, 202-209.
34. Peterson, M. A. Object perception. (2001). In E. B. Goldstein (Ed.), *Blackwell Handbook of Perception*, Chapter 6, pp. 168-203. Oxford: Blackwell Publishers.
35. Peterson, M. A. & Kim, J. H. (2001). On what is bound in figures and grounds. *Visual Cognition. Special Issue: "Neural Binding of Space and Time,"* 8, 329-348.
36. Gibson, B. S. and Peterson, M. A. (2001). Inattention blindness and attentional capture: Evidence for attention-based theories of visual salience. In C. L. Folk & B. S. Gibson (Eds.), *Attraction, Distraction, and Action: Multiple Perspectives on Attentional Capture*. (pp. 51-76) Elsevier Science: Oxford, London.
37. Peterson, M. A. (2003). Vision: Top-down effects. In L. Nadel (Ed.), *Encyclopedia of Cognitive Science*, volume 4, pp. 500-504. London: Macmillan.
38. Peterson, M. A. (2003). On figures, grounds, and varieties of amodal surface completion. In R. Kimchi, M. Behrmann, & C. Olson (Eds.) *Perceptual Organization in Vision: Behavioral and Neural Perspectives*. pp. 87-116. Mahwah, NJ: LEA.
39. **Peterson, M. A., & Rhodes, Gillian (2003). *Perception of Faces, Objects, and Scenes: Analytic and Holistic Processes*. New York: Oxford University Press.**
40. Peterson, M. A. (2003). Overlapping partial configurations in object memory: an alternative solution to classic problems in perception and recognition. In M. A. Peterson & G. Rhodes (Eds.) *Perception of Faces, Objects, and Scenes: Analytic and Holistic Processes*. pp. 269-294. New York: Oxford University Press.

PUBLICATIONS (continued)

41. Peterson, M. A., & Rhodes, Gillian (2003). Analytic and holistic processing: The view through different lenses. In M. A. Peterson & G. Rhodes (Eds.), *Perception of Faces, Objects, and Scenes: Analytic and Holistic Processes*. pp. 3-19. New York: Oxford University Press.
42. Peterson, M. A. & Skow-Grant, E. (2003). Memory and learning in figure-ground perception. In B. Ross & D. Irwin (Eds.) *Cognitive Vision: Psychology of Learning and Motivation*, 42, 1-34.
43. Peterson, M. A. & Lampignano, D. L. (2003). Implicit memory for novel figure-ground displays includes a history of border competition. *Journal of Experimental Psychology: Human Perception and Performance*, 29, 808-822.
44. Rauschenberger, R., Peterson, M. A., Mosca, F., & Bruno, N. (2004). Amodal completion in visual search: Preemption or context effects? *Psychological Science*, 15, 351-355.
45. Trujillo, L.T., Peterson, M.A., Kaszniak, A.W., & Allen, J. J. B. (2005). EEG Phase Synchrony: An Investigation of Recording and Analysis Artifacts in the Context of a Visual Cognition Experiment. *Clinical Neurophysiology*, 116, 172-189.
46. Burge, J., Peterson, M. A., Palmer, S. E. (2005). Ordinal configural cues combine with metric disparity in depth perception. *Journal of Vision*, 5(6), 534-542.
47. Peterson, M. A., & Enns, J. T. (2005). The edge complex: Implicit perceptual memory for cross-edge competition leading to figure assignment. *Perception & Psychophysics*, 4, 727-740.
48. Behrmann, M., Peterson, M. A., Suzuki, S., & Moscovitch, M. (2006). Independent representation of parts and the relations between them: Evidence from integrative agnosia. *Journal of Experimental Psychology: Human Perception and Performance*, 32(5), 1169-1184.
49. **Peterson, M. A., Gillam, B., Sedgwick, H. A. (2007). *In the Mind's Eye: Julian Hochberg's Contributions to Our Understanding of the Perception of Pictures, Films, and the World*. NY: Oxford University Press.**
50. Peterson, M. A. (2007). The Piecemeal, Constructive, and Schematic Nature of Perception. In M. A. Peterson, B. Gillam, H. A. Sedgwick (Eds). *In the Mind's Eye: Julian Hochberg's Contributions to Our Understanding of the Perception of Pictures, Films, and the World*. Pp. 419-428. NY: Oxford University Press.
51. Gillam, B., Sedgwick, H. A., & Peterson, Mary A. (2007). Introduction: In the Mind's Eye. In M. A. Peterson, B. Gillam, H. A. Sedgwick (Eds). *In the Mind's Eye: Julian Hochberg's Contributions to Our Understanding of the Perception of Pictures, Films, and the World*. Pp. xv – xxi. NY: Oxford University Press.
52. Aviezer, H., Landau, A. N., Robertson, L. C., Peterson, M. A., Soroker, N., Sacher, Y., Bonne, Y., & Bentin, S. (2007). Implicit integration in a case of integrative visual agnosia. *Neuropsychologia*, 45 (9), 2066-2077.
53. Peterson, M. A., & Skow, E. (2008). Suppression Of Shape Properties On The Ground Side Of An Edge: Evidence For A Competitive Model Of Figure Assignment. *Journal of Experimental Psychology: Human Perception and Performance*, 34 (2), 251-267.

PUBLICATIONS (continued)

54. Thomas, C., Moya, L., Avidan, G., Humphreys, K., Jung, K.J., Peterson, M. and Behrmann, M. (2008). Reduction in white matter connectivity, revealed by DTI, may account for age-related changes in face perception. *Journal of Cognitive Neuroscience*, 20 (2), 268-284.
55. Kimchi, R. & Peterson, M. A. (2008). Figure-ground Segmentation Can Occur Without Attention. *Psychological Science*, 19(7), 660-668.
56. Gothard, K., Brooks, K., & Peterson, M. A. (in press). Multiple perceptual mechanisms of face processing in macaque monkeys. *Animal Cognition*.
57. Peterson, M. A., & Salvagio, E. (in press). Context Enhances the Effectiveness of Convexity as a Figural Cue: Evidence for Biased Competition in Figure-Ground Perception. *Journal of Vision*.
58. Trujillo, L. T., Allen, J. J. B., & Peterson, M. A. (under review). Neurophysiological Evidence for Inhibitory Competition in Figure-Ground Perception.
59. **Tommasi, L., Peterson, M. A., & Nadel, L. (in press). *Cognitive Biology: Evolutionary and Developmental Perspectives on Mind, Brain and Behavior*. Cambridge, MA: MIT Press.**
60. Tommasi, L., Peterson, M. A., & Nadel, L. (in press). Cognitive Biology: The New Cognitive Sciences? In *Cognitive Biology: Evolutionary and Developmental Perspectives on Mind, Brain and Behavior*. L. Tommasi, L. Nadel, & M. A. Peterson (Eds). Cambridge, MA: MIT Press.
61. **Koch, C. & Peterson, M. A. (in press). *Current Directions in Sensation and Perception*. NJ: Prentice Hall.**
62. Peterson, M. A. & Salvagio, E. (in preparation). Figure-ground perception. *Scholarpedia*.
63. Peterson, M. A. (in preparation). Figure-ground perception. *Perception & Psychophysics*.
64. Skow, E., Peterson, M. A., & Rauschenberger, R. (under revision for resubmission). On the separability of Object-Based and Location-Based IOR. *Journal of Vision*.
65. Trujillo, L. T., Allen, J. J. B., & Peterson, M. A. (under revision for resubmission). Early and Late Event-Related Potentials Reflect Successful Perception of Mooney Faces. *Journal of Cognitive Neuroscience*.
66. Skow, E., & Peterson, M. A. (in preparation). Memory in Visual Search.

CONFERENCE PRESENTATIONS AND POSTERS (*since 1997 only*) * = *published abstract*

Suzuki, S., Peterson, M. A., Moscovitch, M., and Behrmann, M. (1997, March).

Viewpoint Specificity in the Identification of Simple Volumetric Objects (Geons) is Evident in Control Subjects and Very Exaggerated in Persons with Visual Object Agnosia. Poster presented at the Fourth Annual Meeting of the Cognitive Neuroscience Society, Boston, MA.

* Suzuki, S., & Peterson, M. A. (1997, May). Intentional (Attentional) Control of Bi-Stable Apparent Motion Depends Upon Retinal Location. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL.

Peterson, M. A., & deGelder, B. (1997, June). Preserved object recognition contributions to depth segregation in an agnosic patient. Poster presented at the McDonnell-Pew Cognitive Neuroscience Meeting, Oxford, England.

Peterson, M. A. & Hector, J. E. (1997, November). Relative location-specificity of object recognition cues to depth segregation. Paper presented at the Annual Meeting of the Psychonomic Society, Philadelphia, PA.

Peterson, M. A., Suzuki, S., Zemel, R. S., & Rapsack, S. Z. (1998, March). Intact and impaired object processing following dorsal visual system damage. Poster presented at the Fifth Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA.

* Peterson, M. A., de Gelder, B., Rapsack, S. Z., Gerhardstein, P. C., and Bachoud-Lévi, A.-C. (1998, May). A double dissociation between implicit and explicit object recognition processes revealed by figure-ground segmentation. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL.

Peterson, M. A., & Zemel, R. S. (1998, November). Location specificity in memories of novel objects. Paper presented at the Annual Meeting of the Psychonomic Society, Dallas, TX.

* Peterson, M. A. & Gerhardstein, P. C. (1999, May). Object-centered attentional biases in the intact brain. Poster presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL.

Peterson, M. A. (1999, November). Inhibition and facilitation of object memories during image segregation. Paper presented at the Annual Meeting of the Psychonomic Society, Los Angeles, CA.

* Peterson, M. A. & Zemel, R. S. (2000, May). Location specificity in object learning. Paper presented at the Annual Meeting of the Association for Research in Vision and Ophthalmology, Fort Lauderdale, FL. Abstract published in: *Investigative Ophthalmology and Visual Sciences*, 41, 1725.

Peterson, M.A., & Rapsack, S. Z. (2001, March). Task requirements and attention. Poster presented at the Eighth Annual Meeting of the Cognitive Neuroscience Society, New York, NY.

CONFERENCE PRESENTATIONS and POSTERS (since 1997, continued)

- * Lampignano, D. L., & Peterson, M. A. (2001, March). Are long term memories established for the shapes of grounds? Poster presented at the Eighth Annual Meeting of the Cognitive Neuroscience Society, New York, NY.
- * Kim, J. H. & Peterson, M. A. (2001, May). Contextual modulation of the strength of the Gestalt configural cues. Poster presented at the first annual meeting of the Vision Sciences Society, Sarasota, FL. Abstract published in: *Journal of Vision*, 1, 3, 390.
- Payne, J.D. Peterson, M.A. Jacobs, W.J.& Nadel, L. (2001, November). Stress Effects On Perceptual Binding, Attention And False Memory. Poster presented at the Annual Society for Neuroscience Meeting, San Diego, CA.
- Schulz, M. F., Peterson, M. A., Sanocki, T., & Sellers, E. W. (2001, November). Time course of perceptual grouping: A priming study. Paper to be presented at the Annual Object Perception and Memory Meeting, Orlando, FL.
- Peterson, M. A., & Kim, J.H. (2001, November). Context Modulates the Gestalt Configural Cue of Convexity. Paper presented at the Annual Meeting of the Psychonomic Society, Orlando.
- Payne, J. D, Jacobs, W.J., Peterson, M. A., Lopez, C., Hardt, O., & Nadel, L. (2002, April). Stressing Memory: Effects on Spatial and Episodic Memory. Cognitive Neuroscience Meeting, San Francisco, CA.
- * Peterson, M. A. & Lampignano, D. L. (2002, May). Memory for novel shapes of grounds? An alternative hypothesis. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 2, 408.
- * Peterson, M. A. & Enns, J. T. (2002, May). Memory for an edge includes figure and ground assignment. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 2, 7, 497.
- * Rauschenberger, R. Peterson, M. A., Mosca, F., & Bruno N. (2002, May). A modified search task investigates an alternative to the two-stage model of amodal completion. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 2, 7, 680.
- * Skow Grant, E. , Lampignano, D. W., Kim, J. H., & Peterson, M. A. (2002, May). Tests of a competitive interactive model of figure assignment. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 2, 7, 472.
- * Schulz, M. F., Rauschenberger, R., & Peterson, M. A. (2002, May). Amodal completion in passively viewed displays: A priming study. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 2, 681.
- * Kim, J.H., & Peterson, M.A. (2002, May). Contextual modulation of the strength of Gestalt configural cues. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 2, 7, 481.
- * Peterson, M. A., & Rauschenberger, R. (2003, May). Context affects border assignment in the target stimulus in visual search. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 3, 9, 232.

CONFERENCE PRESENTATIONS and POSTERS (since 1997, continued)

- *Skow-Grant, E. & Peterson, M. A. (2003, May). Where has object-based IOR gone? Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 3, 9, 335.
- *Peterson, M. A., & Kim, J. H. (2003, October). Does context modulate the strength of the configural cue of symmetry? Fall Vision Meeting, Tucson, AZ. Abstract published in: *Journal of Vision*, 3, 12, 80.
- Kim, J.H., & Peterson, M.A. (2003, November). Long range interactions among local competitions for figural status. Object Perception, Attention, and Memory meeting, Vancouver, B.C.
- Skow-Grant, E., Rauschenberger, R., & Peterson, M. A. (2003, November). Attention, not Inhibition of Return, Tracks Objects. Object Perception, Attention, and Memory Meeting, Vancouver, B.C.
- *Burge, J., Peterson, M. A., & Palmer, S. E. (May, 2004). Perceived depth is influenced both by binocular disparity and configural cues. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 4, 8, 193.
- *Rauschenberger, R., & Peterson, M. A. (May, 2004). When unambiguous stimuli become ambiguous: Spatiotemporal context effects with nominally unambiguous stimuli. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 4, 8, 179.
- *Skow-Grant, E., & Peterson, M. A. (May, 2004). Past experience in figural assignment: partial configurations are sufficient. Vision Sciences Society Meeting, Sarasota, FL. Abstract published in: *Journal of Vision*, 4, 8, 725.
- Peterson, Mary A. (August, 2004). Past Experience and Competition in Figure Assignment. Talk invited for symposium, "Neo-Gestalt Contributions to the Understanding of Perceptual Organization," at the International Congress of Psychology, Beijing, China.
- Trujillo, L. T. & Peterson, M. A. (October, 2004). P100 and N170 ERP Components Reflect Differences Among Upright, Inverted, And Scrambled Mooney Faces. Poster presented at the Annual Society for Neuroscience Meeting, San Diego, CA.
- *Peterson, M.A., & Skow, E. (May, 2005). Intermediate level medium-span configurations can mediate past experience effects on figure assignment. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 5(8), 217.
- *Kim, J.H., & Peterson, M.A. (May, 2005). The time course of the operation of bilateral symmetry as a configural cue. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 5(8), 342.
- *Landau, A., Aviezer, H., Robertson, L.C., Peterson, M.A., Soroker, N., Sacher, Y., Boneh, Y., & Bentin, B. Implicit object recognition in visual integrative agnosia: case SE. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 5(8), 289.
- *Skow, E., & Peterson, M.A. (May, 2005). Competing action memories can produce the appearance of memory-free visual search. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 5(8), 418.

CONFERENCE PRESENTATIONS and POSTERS (since 1997, continued)

- *Trujillo, L.T., Peterson, M.A., & Allen, J.B. (May, 2005). Electrophysiological evidence for early access to object memories during figure assignment in humans. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 5(8), 910.
- Trujillo, L.T., Peterson, M.A., & Allen, J.B. (November, 2005). Human ERP Correlates of Cross-Edge Figure Competition During Figure-Assignment. Poster presented at the Annual Society for Neuroscience Meeting, Washington, D.C.
- *Trujillo et al (May, 2006). ERP Components Index Unconscious versus Conscious Perception of Familiar Shape With Figure-Ground Reversal. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 6(6), 97.
- *Schroeder, A. & Peterson, M. A. (May, 2006). Do Synesthetes Excel Under Object-Substitution Masking? Type of Attention Matters. Vision Sciences Society Meeting, Sarasota, FL. Published abstract: *Journal of Vision*, 6(6), 1075.
- Peterson, M. A., Kim, J. H., & Salvagio, E. (November, 2006). Psychonomic Society Meeting, Houston, TX.
- * Salvagio, E., Kim, J.H., & Peterson, M.A. (May, 2007). Context determines figure-ground perception by suppressing competition. Vision Sciences Society Meeting, Sarasota, FL. Published Abstract: *Journal of Vision*, 7(9), 904.
- * Skow, E., & Peterson, M. A. (2007, May). Identity, location, and direction can be learned quickly in repeated search. Vision Sciences Society Meeting, Sarasota, FL. Published Abstract: *Journal of Vision*, 7(9), 1058.
- Kimchi, R., & Peterson, M. A. (2007, November). Figure-ground perception can occur without attention. Talk presented at the Psychonomic Society meeting, Long Beach, FL.
- * Salvagio, E. M., Mojica, A. J., & Peterson, M. A. (May, 2008). Context effects in figure-ground perception: The role of biased competition, suppression and long-range connections. Vision Sciences Society Meeting, Naples, FL. Published Abstract: *Journal of Vision*, 8(6), 1007.
- * Kimchi, R. & Peterson, M. A. (May, 2008). Figure-ground segmentation can occur without attention. Vision Sciences Society Meeting, Naples, FL. Published Abstract: *Journal of Vision*, 8(6), 825.

INVITED TALKS (since 1997 only)

The visual perception of holes. (February, 1997). Commentator: Reasoning and Rationality Session. Reasoning, Language, and Cognition Conference, Tucson-Paris (CREA), Tucson, AZ.

Image segmentation, depth segregation, and object recognition. (May 29, 1997). Talk presented at the First Conference of the Arizona Visionaries.

Figure-ground illuminates object recognition. (June 16, 1998). Language, Reasoning, and Cognition Conference, Villard de Lans, France.

Figure-ground illuminates object recognition. (June 27, 1998). Object and Face Recognition Symposium at the International Neuropsychological Symposium, Jerusalem, Israel.

Figure-ground illuminates object recognition. (July 14, 1998). In the Mind, Brain, and Behavior Symposium Series, jointly sponsored by Divisions 3 and 6, American Psychological Association Meeting, San Francisco, CA.

Quick, unconscious object recognition effects on scene segmentation. (May 7, 1999) Third Annual Vision Research Conference: Preattentive and Attentive Mechanisms in Vision, Fort Lauderdale, FL.

Access to object memories in the course of figure-ground assignment: Inhibitory and facilitatory processes. (March 17, 2000). The Symposium on Neural binding of space and time: Spatial and temporal mechanisms for feature-object binding. University of Leipzig, Germany

Inhibition and facilitation in figure-ground assignment. (March 14, 2000). Max Planck Institute, Tübingen, Germany.

On figures, grounds, and the perception of shape and relative depth. (June 2, 2000). The 31st Carnegie Mellon Symposium on Cognition.

Object Perception Workshop (June 13, 2001), Institute Jean Nicod, Paris, France.

A Parallel Interactive Approach to Figure Assignment. (October 5, 2001). The Salk Institute, LaJolla, CA.

On Figure and Ground Assignment: The Role of Memory and Context. (December 10, 2001). Concordia University, Montreal, PQ.

On Figure and Ground Assignment: The Role of Memory and Context. (March 7, 2002). University of Auckland, Auckland, New Zealand.

On Figure and Ground Assignment: The Role of Memory and Context. (March 11, 2002). University of Otago, Dunedin, New Zealand.

On Figure and Ground Assignment: The Role of Past Experience (May 2, 2002). University of California, Riverside.

On Figure and Ground Assignment: The Role of Past Experience (June 6, 2002). University College, London.

Memory and Learning in Figure and Ground Perception. (September 13, 2002). *Irvin Rock Memorial Lecture*, University of California, Berkeley.

The Front End of Spatial Cognition: Figures and Grounds. (October 26, 2002). Spatial Thinking in Humanities and Sciences: From Perception to Meaning. Stanford University. Interdisciplinary Workshop sponsored by the Center for the Study of Language and Information and the Stanford Center for Innovative Learning.

Memory and Learning in Figure-Ground Perception (February 13, 2003). Center for the Study of Language and Information, Stanford University.

Rethinking Figure-Ground Perception (March 20, 2003). NASA Ames Research Center, Moffett Field, California.

INVITED TALKS (*since 1997 only; continued*)

Past experience and figure assignment (April 4, 2003), Redwoods Neuroscience Institute, Menlo Park, CA.

Rethinking figure assignment and the role of past experience. (May 20, 2003). Center For Neuroscience, University of California, Davis.

Rethinking figure assignment and the role of past experience. (September 12, 2003). Cognitive Science Program, University of Arizona.

Rethinking figure assignment with an emphasis on inhibitory processes. (November 10, 2003). University of British Columbia.

Past experience and competition in figure assignment. (February 20, 2004). Department of Psychology, Rice University.

Past Experience and Competition in Figure Assignment (Shape Perception). (May 16, 2005). Center for Visual Science, University of Rochester.

Behavioral and Electrophysiological Evidence of Competition in Figure Assignment. (June 21, 2005). Invited Symposium speaker, International Neuropsychological Society, Alghero.

Competition and Suppression In Figure-Ground Perception (*aka Shape Perception*). (October 19, 2005). Princeton University.

Partial Configurations: Less than an object, more than a feature. (May 5, 2006). Invited Satellite Symposium speaker, Object Recognition – 20 Years Later, Vision Sciences Society Meeting, Sarasota, FL.

Context and Past Experience Effects on Shape Perception (October 8, 2006). Invited workshop talk, Perceptual Expertise Network XIII Workshop, Tucson, AZ.

Context and Past Experience Effects on Figure-Ground Perception (*aka Shape Perception*). Psychology Department, Rutgers University, Newark, NJ. (October 27, 2006).

Reconceptualizing figure-ground perception as biased competition. May 3, 2007. Barrow Neurological Institute, Phoenix, AZ.

Biased Competition in Figure-Ground Perception. Invited General Audience Talk, Configural Processing Consortium, Long Beach California, November, 2007.

Reconceptualizing Figure-Ground Segregation As Between-Shape Competition: Familiarity Led Me To It. Invited presentation in the 2008 Second Annual Tufts University Conference on Emerging Trends in Behavioral, Affective, Social, and Cognitive Neurosciences. Cognitive Neuroscience of Visual Knowledge: Where Vision Meets Memory, May 29-31, 2008.

Re-conceptualizing figure-ground perception. International Congress of Psychology, Berlin, Germany, July, 2008. (In invited symposium organized by Marlene Behrmann and Mary Peterson: Object Perception: New Views.)

INVITED TALKS *(since 1997 only; continued)*

Figure-Ground Perception: From Familiarity to Competition. Invited Cognitive Science Colloquium, Indiana University, September 15, 2008.

Context Affects Figure-Ground Perception: Global Effects on Local Competition. Invited Cognitive Colloquium, Indiana University, September 17, 2008.

RESEARCH IN PROGRESS

- Investigating the neural substrates of object recognition and figure assignment using fMRI, EEGs, and tests of brain damaged individuals
- Examining context effects in shape perception
- Investigating competition in visual perception
- Exploring the implications of synesthesia and hallucinations for theories of visual perception
- Investigating attention effects on perception

COURSES TAUGHT

Undergraduate

Sensation and Perception
Research Methodology Laboratory
Attention and Perception
Vision and Art
Advanced Research in Psychology
Teaching Methods and Practicum
Honors ProSeminar

Graduate

Sensation and Perception
Attention and Perception
Vision and the Brain
Language and Vision
Visual Cognition
Neuropsychology of Visual Perception
Perception, Recognition, Attention
Theories of Object and Shape Recognition
Object Recognition and Scene Perception
Perceptual Learning
Top-down Processing and Cross Modal Perception
Cognition and Neural Systems Core Seminar
Teaching Methods and Practicum
Presentation Skills (practicum)