

Aaron Seitz
Professor
University of California Riverside

CURRICULUM VITAE

Contact Information

Aaron Seitz

Department of Psychology
University of California – Riverside
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Education

1998 - 2003 Ph.D. in Cognitive and Neural Systems, Boston University.
Topic: self organizing models of cortical development.
Advisor: Prof. Stephen Grossberg

1995-1997 Post-baccalaureate work in Cognitive Psychology,
University of Washington, Seattle, WA.
Research with: Prof. Elizabeth Loftus, Jeanette Norris

1991-1994 B.A. in Mathematics, Reed College, Portland, OR.

Current Position

2014-present	Professor	University of California - Riverside
2014-present	Director	UCR Brain Game Center For Mental Fitness and Wellbeing

Past Positions

2016-2017	Interim-Director	UCR Human Imaging Center
2012-2014	Associate Professor	University of California - Riverside
2008-2012	Assitant Professor	University of California - Riverside
2006-2010	Faculty	CELEST
2005-2008	Research Assitant Professor	Boston University
2005-2008	Visiting Scientist	Martinos Center, Mass General Hospital
2002-2005	Research Fellow	Harvard Medical School
2004-2005	Research Fellow	Boston University
2004	Visiting Researcher	ATR Comp. Neurosci. Labs, Japan
1998-2002	Research Assistant	Boston University
1996-1997	Research Assistant	University of Washington
1992-1994	Software Engineer	WRQ (Seattle, WA)

Affiliated Departments

Psychology, Neuroscience, Biomedical Engineering, Biomedical Sciences, Computer Science

Reviewer

Journals

Acta Psychologica, Behavioral Neuroscience, Attention, AP&P, Cognition, Cognitive Neurodynamics, Cerebral Cortex, Current Biology, Ergonomics, JASA, Journal of Cognitive Neuroscience, Journal of Neuroscience, Journal of Neurophysiology, Journal of Experimental Psychology, Journal of Vision, Neural Networks, Neuron, PLoS One, PLoS Computational Biology, PNAS, Psychological Science, Perception & Psychophysics, Springer Books, Systems, Man and Cybernetics, TopiCS, Vision Research

Grants

NSF/PAC College of Reviewers (2013-2015)
NIH – Central Visual Processing (CVP), Cognition and Perception (CP)
NSF - Cognitive Neuroscience
AAAS
Netherlands Institute for Scientific Research
Research Foundation Flanders
Complexity

Other

Vision Sciences Society Annual Conference, Review Committee
UCR Research Ethics Advisory Board

Editorial Positions

Reviewing Editor – Frontiers in Integrative Neuroscience
Reviewing Editor – Frontiers in Perception Science

Funded Grants External

Current

National Institute of Health R01MH111742 (2016-2021; \$ 1,929,278) – Understanding Mediating and Moderating Factors that Determine Transfer of Working Memory Training

National Institute of Health R03HD94234 (2016-2021; \$ 150,000) – Brain training for central auditory dysfunction after traumatic brain injury

National Institute of Health 1R01DC015051 (2016-2021; \$2,284,139) – Efficient diagnostic tools to evaluate central auditory dysfunction

National Science Foundation BCS-1057625 (2015-2018; \$749,999) – SL-CN: Engaging Learning Network (ELN) - Co-PI

National Institute of Health 1R01EY023582 (2013-2018; \$1,777,418) – Integrating Perceptual Learning Approaches into Effective Therapies for Low Vision

Past

National Science Foundation BCS-1057625 (2011-2014; \$238,675) – Collaborative Research: Multisensory Perceptual Learning

Marie Curie (2010 – 2013, EUR 151,200) – Learn 2 Hear & See

PIs: Norbert Kopco, Peggy Series, Barbara Shinn-Cunningham, Aaron Seitz
National Institute Health (2004-2007; \$847,875) -The Mechanisms of Perceptual Learning
PI: Takeo Watanabe (Boston University); Co-PI: Aaron Seitz
National Institute Health (R21 2006-2008; \$440,000) – Effects of Reward on Visual Processing and Plasticity
PI: Takeo Watanabe (Boston University); Co-PI: Aaron Seitz
National Science Foundation (2006-2009; \$500,000) – Neural Basis and Mechanisms of Task-Irrelevant Perceptual Learning
PI: Takeo Watanabe (Boston University); Co-PI: Aaron Seitz
Human Frontier Science group grant (2004-2007; \$480, 000) (PI – Watanabe)
Co-PIs: Wolfram Schultz (University of Cambridge), Rufin Vogels (University of Leuven), Masamichi Sakagami (Tamagawa University)

Funded Grants Internal

UCR Seed Grant (2015-18) - Aaron Seitz and Victor Zordan, “The University of California Riverside Brain Game Center for Mental Fitness and Wellbeing”, \$600,000
UCR Seed Grant (2013-14) - Aaron Seitz and Victor Zordan, “The University of California Riverside Brain Game Center for Mental Fitness and Wellbeing”, \$70,000
UCR Seed Grant (Summer 2013) - Aaron Seitz and Victor Zordan, “Video Game for Memory Improvement”, \$15,924
UCR Senate COR Fellowship (2012-14) – Aaron Seitz, “Development of Perceptual Learning Approaches for Low Vision Populations”, \$7,500
Chancellor's Strategic Investment Funds (2011-12) – Aaron Seitz, \$27,000
Chancellor's Strategic Investment Funds (2011-13) – Christian Chiarello and Aaron Seitz, Seed money of UC Riverside Human Imaging Center, \$94,000
UCR Academic Senate - Regents Faculty Fellowship (2009-10) – Aaron Seitz, “Effect of Caffeine and Nicotine on the Consolidation of Learning and Memory”, \$9,500

Honors and Awards

NIH Postdoctoral Training Grant (2003-2005)
Sigma Xi Award (2002)
Presidential University Graduate Fellowship, Boston University (1998-2002)

Professional Societies

American Association for Advancement of Science
American Psychological Society
International Neural Network Society
Society for Neuroscience
Sigma Xi
Vision Sciences Society

Publications

1. Wenliang & Seitz (2018), "Deep neural networks for modeling visual perceptual learning", *Journal of Neuroscience*, in press
2. Sotiropoulos, Seitz & Series (2018), "Performance-monitoring integrated reweighting model of perceptual learning", *Vision Research*, in press
3. Pahor, Jaeggi & Seitz (2018), "Brain Training", *eLS*, in press
4. Pazzani, Feghahati, Shelton & Seitz(2018), "Explaining Contrasting Categories", Workshop on Explainable Smart Systems (ExSS) at Intelligent User Interfaces
5. Cohen Hoffing, Karvelis, Ruppel, Series & Seitz (2017), "The Influence of Feedback on Task-Switching Performance: A Drift Diffusion Modeling Account ", *Frontiers in Integrative Neuroscience*, in press
6. Sotiropoulos, Seitz & Series (2017), "Performance-monitoring integrated reweighting model of perceptual learning", *Vision Research*, in press
7. Maniglia & Seitz (2017), "Towards a whole brain model of Perceptual Learning ", *Current Opinion in Behavioral Sciences*, in press
8. Seitz (2017), "A new framework of design and continuous evaluation to improve brain training", *Journal of Cognitive Enhancement*, in press
9. Seitz (2017), "Primer: Perceptual Learning", *Current Biology*, in press
10. Mohammed, Flores, Deveau, Cohen Hoffing, Phung, Parlett, Sheehan, Lee, Au, Buschkuehl, Zordan, Jaeggi, & Seitz (2017), "The Benefits and Challenges of Implementing Motivational Features to Boost Cognitive Training Outcome", *Journal of Cognitive Enhancement*, in press
11. Protopapas, Mitsi, Koustoumbardis, Tsitsopoulou, Leventi, Seitz (2017), "Incidental orthographic learning during a color detection task", *Cognition*, in press
12. Waris, Soveri, Ahti, Hoffing, Ventus, Jaeggi, Seitz, Laine (2017), "A Latent Factor Analysis of Working Memory Measures Using Large-Scale Data", *Frontiers in Psychology*, in press
13. Seitz (2017), "Generalizable Learning: Practice Makes Perfect — But at What?", *Current Biology*, in press
14. Thurman, Davey, McCray, Paronian and Seitz (2016), "Predicting Individual Contrast Sensitivity Functions from Acuity and Letter CS Measurements", *Journal of Vision*, in press
15. Zhou, Nanez, Zimmerman, Holloway, Seitz (2016), "Two Visual Training Paradigms Associated with Enhanced Critical Flicker Fusion Threshold", *Frontiers in Psychology*, in press
16. Bays, Turk-Browne and Seitz (2016), "Dissociable behavioral outcomes of visual statistical learning", *Visual Cognition*, in press

17. Butler, Thompson, Seitz, Deveau, Silverstein (2016), "Visual Perceptual Remediation for Individuals with Schizophrenia: Rationale, Method, and Three Case Studies", *Psychiatric Rehabilitation Journal*, in press
18. Green and **Seitz** (2015), "The Impacts of Video Games on Cognition (and How the Government Can Guide the Industry) ", *Policy Insights from the Behavioral and Brain Sciences*, in press.
19. Gori, **Seitz**, Ronconi, Franceschini, and Facoetti (2015), "Multiple causal links between magnocellular-dorsal pathway deficit and developmental dyslexia", *Cerebral Cortex* , in press.
20. Talluri, Hung, Seitz, and Series (2015), "Confidence-based integrated reweighting model of task-difficulty explains location-based specificity in perceptual learning", *Journal of Vision*, in press
21. Bays, Visscher, Le Dantec and **Seitz** (2015). "Alpha-Band EEG Activity in Perceptual Learning", *Journal of Vision*, in press
22. Barakat, **Seitz** and Shams (2015). "Visual Rhythm Perception Improves Through Auditory, But Not Visual, Training", *Current Biology*, Vol. 25, Issue 2, R60-R61
23. Deveau, Jaeggi, Zordan, Phung, and **Seitz** (2015). "How to build better memory training games", *Frontiers in Systems Neuroscience*, doi: 10.3389/fnsys.2014.00243
24. Gekas, **Seitz**, and Series (2015). "Expectations developed over multiple timescales facilitate visual search performance", *Journal of Vision*, 15(9):10. doi: 10.1167/15.9.10.
25. Kim, **Seitz**, Watanabe (2015). "Visual perceptual learning by operant conditioning training follows rules of contingency", *Visual Cognition*, 2015 Jan-Feb;23(1-2):147-160.
26. Hoffing and **Seitz** (2014). "Pupillometry as a glimpse into the neurochemical basis of human memory encoding", *Journal of Cognitive Neuroscience*, Vol. 27, No. 4: 765-774
27. Hung and **Seitz** (2014). "Prolonged Training at Threshold Promotes Robust Retinotopic Specificity in Perceptual Learning", *Journal of Neuroscience*, 34(25): 8423-8431
28. Leclercq, Hoffing, **Seitz** (2014). "Uncertainty in fast-task-irrelevant perceptual learning boosts learning of images in women but not men." *Journal of Vision*, 14(12):26, 1-12
29. Deveau and **Seitz** (2014). "Applying Perceptual Learning to achieve practical changes in vision.", *Frontiers in Psychology*, 5:1166. doi: 10.3389/fpsyg.2014.01166
30. Sotiropoulos, **Seitz**, Series (2014). "Contrast dependency and prior expectations in human speed perception", *Vision Research*, Vol 97, 16-23
31. Deveau, Lovcik, and **Seitz** (2014). "Applications of Perceptual Learning to Ophthalmology", *Ophthalmology - Current Clinical and Research Updates*
32. Deveau, Lovcik, and **Seitz** (2014). "The therapeutic benefits of perceptual learning", *Current*

Trends in Neurology, Vol 7, 39-49.

33. Yarrow, Razak, **Seitz**, and Series (2014). "Detecting and Quantifying Topography in Neural Maps", PLoS ONE, DOI: 10.1371/journal.pone.0087178
34. Deveau, Ozer and **Seitz** (2014). "Improved Vision and On Field Performance in Baseball through Perceptual Learning", Current Biology, 24(4), R146-7
35. Leclercq, Le Dantec, and **Seitz** (2014). "Encoding of episodic information through fast Task-Irrelevant Perceptual Learning", Vision Research, Jun;99:5-11.
36. Deveau, Lovcik, and **Seitz** (2014). "Broad-based visual benefits from training with an integrated perceptual-learning video game", Vision Research, Jun;99:134-40.
37. Holloway, Nanez and **Seitz** (2013). "Word-decoding as a function of temporal processing in the visual system", PLoS ONE, in press.
38. Barakat, **Seitz**, and Shams (2013). "The effect of statistical learning on internal stimulus representations: Predictable items are enhanced even when not predicted", Cognition, Vol. 129: p.205-211
39. Series and **Seitz** (2013). "Learning what to expect (in visual perception)", Frontiers in Human Neuroscience, doi: 10.3389/fnhum.2013.00668.
40. Hládek, Le Dantec, Kopčo, and **Seitz** (2013). "Ventriloquism effect and aftereffect in the distance dimension", Proceedings of Meetings on Acoustics, 19, 050042:1-6.
41. Welch and **Seitz** (2013). "Processing Irrelevant Location Information: Practice and Transfer Effects in a Simon task", PLoS ONE, in press.
42. Jackson, Cook, **Seitz** (2013). "Context is quick, knowledge is slow: rapid time-course of contextual modulations in the horizontal-vertical illusion", Perception and Motor Skills, in press.
43. Gekas, Chalk, **Seitz** and Seriès (2013), "Complexity and specificity of experimentally induced expectations in motion perception", *Journal of Vision*, in press
44. **Seitz** (2013). "Cognitive Neuroscience: Targeting Neuroplasticity with Neural Decoding and Biofeedback", *Current Biology*, in press
45. Leclercq and **Seitz** (2012). "The impact of orienting attention in fast task-irrelevant perceptual learning", *Attention, Perception, & Psychophysics*, May, 74(4), 658-60.
46. Le Dantec and **Seitz** (2012). "High Resolution, High Capacity, Spatial Specificity in Perceptual Learning", *Frontiers in Psychology*, July 3(222), 1-7.
47. Leclercq and **Seitz** (2012). "Enhancement from targets and suppression from cues in fast task-irrelevant perceptual learning", *Acta Psychologica*, Sept. 141(1), 31-8.

48. Leclercq and **Seitz** (2012). "Fast-TIPL Occurs for Salient Images Without a Memorization Requirement in Men but not in Women", *PLoS ONE*, Apr. 7(4):e36228. Epub 2012.
49. Le Dantec, Melton, and **Seitz** (2012). "A triple dissociation between learning of target, distractors and spatial contexts", *Journal of Vision*, Feb 3;12(2).
50. Kaufman, Green, **Seitz**, and Burgess (2012). "Using a Self-Organizing Map (SOM) and the Hyperspace Analog to Language (HAL) model to identify patterns of syntax and structure in the songs of humpback whales", *International Journal of Comparative Psychology*, 25, 237-275.
51. Vlahou, Protopapas, **Seitz** (2012). "Implicit Training of Nonnative Speech Stimuli", *Journal of Experimental Psychology: General*, May;141(2):363-81.
52. Sotiropoulos, **Seitz**, Series (2011). "Changing expectations about speed alters perceived motion directions", *Current Biology*, Volume 21, Issue 21, R883-R884.
53. **Seitz** (2011). "Perceptual Learning; Stimulus Specific Learning From Low-level Visual Plasticity?", *Current Biology*, Volume 21, Issue 19, R814-R815
54. Shams, Wozny, Kim, **Seitz** (2011). "Influences of multisensory experience on subsequent unisensory processing", *Frontiers in Perception Science*, 2:264.
55. Yotsumoto, **Seitz**, Shimojo, Sakagami, Watanabe, Sasaki (2011). "Performance dip in motor response induced by task-irrelevant weaker coherent visual motion signals", *Cerebral Cortex*, Aug, 22 (8), 1887-93.
56. Batson, Beer, **Seitz**, Watanabe (2011). "Spatial Shifts of Audio-visual Interactions by Perceptual Learning Are Specific to the Trained Orientation and Eyes", *Seeing and Perceiving*, 24(6):579-94.
57. Hung and **Seitz** (2011). "Retrograde Interference in Perceptual Learning of a Peripheral Hyperacuity Task", *PLoS ONE* 6(9): e24556.
58. Leclercq and **Seitz** (2011). "Fast task-irrelevant perceptual learning is disrupted by sudden onset of central task elements", *Vision Research*, May 15;61:70-6.
59. Grady, Marie-Pierre, **Seitz** (2011). "Segmentation from a box", *ICCV. 2011*.
60. Sotiropoulos, **Seitz**, Series (2011). "Perceptual learning in visual hyperacuity: A reweighting model", *Vision Research*, Volume 51, Issue 6, 25 March 2011, Pages 585-599.
61. **Seitz** (2011). "Task-Irrelevant Perceptual Learning", *Encyclopedia of the Sciences of Learning*, in press.
62. Dobres and **Seitz** (2010). "Perceptual Learning of Oriented Gratings as Revealed by Classification Images", *Journal of Vision*, Vol. 10, No. 13, DOI: 10.1167/10.13.8.

63. **Seitz** (2010). "Sensory Learning: Rapid Extraction of Meaning from Noise", *Current Biology*, Volume 20, Issue 15, R643-R644
64. Chalk¹, **Seitz**¹, Series (2010). "Rapidly learned stimulus expectations alter perception of motion", *Journal of Vision*, 10(8), 2.
65. **Seitz**¹, Protopapas¹, Tsushima¹, Vlahou, Gori, Grossberg, Watanabe (2010). "Unattended exposure to components of speech sounds yields same benefits as explicit auditory training", *Cognition*, 115(3), 435-443
66. Pilly, Grossberg, **Seitz** (2009). "Low-level sensory plasticity during task-irrelevant perceptual learning: Evidence from conventional and double training procedures", *Vision Research* 50(4), 424-432.
67. **Seitz** and Watanabe (2009). "The Phenomenon of Task-Irrelevant Perceptual Learning", *Vision Research*, Vol 49 (21), Oct. 2009, Pages 2604-2610
68. Choi, **Seitz**, Watanabe (2009). "When Attention Interrupts Learning: Inhibitory Effects of Attention on TIPL", *Vision Research*, *Vision Research*, Vol 49 (21), Oct. 2009, Pages 2604-2610
69. Franko, **Seitz**, Vogels (2009). "Dissociable neural effects of long term stimulus-reward pairing in macaque visual cortex", *Journal of Cognitive Neuroscience*, July 2010, Vol. 22, No. 7, Pages 1425-1439.
70. Kim, **Seitz**, Feenstra, Shams (2009). "Testing Assumptions of Statistical Learning: Is it Long-term and Implicit?", *Neuroscience Letters*, 461(2), 11 Sept. 2009, Pages 145-149
71. Pilly and **Seitz** (2009). "What a difference a parameter makes: a psychophysical comparison of random dot motion algorithms", *Vision Research*, Vol 49, Issue 13, July 2009, Pages 1599-1612
72. **Seitz**¹, Kim¹, Watanabe (2009). "Rewards Evoke Learning of Unconsciously Processed Visual Stimuli in Adult Humans", *Neuron*, March, 12; 61, 700-7
73. **Seitz** and Watanabe (2008). "Is Task-Irrelevant Learning really Task-Irrelevant?", *PLoS ONE*, 3(11): e3792. doi:10.1371/journal.pone.0003792
74. Shams and **Seitz** (2008). "Benefits of multisensory learning", *Trends in Cognitive Science*, Nov (Vol 12(11)) 411-417
75. **Seitz**, Pilly, Pack (2008). "Interactions between contrast and spatial displacement in visual motion processing", *Current Biology*, Oct 14;18(19):R904-6
76. Tsushima¹, **Seitz**¹ and Watanabe (2008). "Task-irrelevant learning occurs only when the irrelevant feature is weak", *Current Biology*, Jun (Vol 18 (12)) R516-7
77. Kim¹, **Seitz**¹, and Shams (2008). "Benefits of Stimulus Congruency for Multisensory Facilitation of Visual Learning", *PLoS ONE*, 3(1): e1532. doi:10.1371/journal.pone.0001532

78. Nishina¹, **Seitz**¹, Kawato, Watanabe (2007). "Effect of spatial distance to the task stimulus on task-irrelevant perceptual learning of static Gabors", *Journal of Vision*, 7(13):2, 1-10
79. **Seitz**, Kim, Van Wassenhove, and Shams (2007). "Simultaneous and Independent Acquisition of Multisensory and Unisensory Associations" *Perception*, 36, 1445 - 1453.
80. **Seitz** and Dinse (2007), "A Common Framework for Perceptual Learning", *Current Opinion of Neurobiology*, April (17(2) 148-153)
81. **Seitz** (2007), Book review of "Visual Masking Time Slices Through Conscious and Unconscious Vision", Neural Networks by Bruno Breitmeyer and Haluk Ogmen, doi:10.1016/j.neunet.2007.05.002
82. **Seitz**, Nanez, Holloway, and Watanabe (2006). "Perceptual learning of motion leads to faster flicker perception", *PLoS ONE* 1(1): e28. doi:10.1371/journal.pone.0000028
83. **Seitz**, Nanez, Holloway, Tsushima, and Watanabe (2006). "Two cases requiring external reinforcement in perceptual learning", *Journal of Vision*, 6(9), 966-973
84. **Seitz**¹, Kim¹, Shams, (2006). Sound Facilitates Visual Learning, *Current Biology*, Jul (Vol 16 (14) 1422-1427)
85. Lee¹, **Seitz**¹, and Assad (2006), "Activity of Tonicly Active Neurons in the Monkey Putamen during Initiation and Withholding of Movement", *J. Neurophys*, Jan (Vol 95 2391-2403)
86. **Seitz**¹, Yamagishi¹, Werner¹, Goda, Kawato, Watanabe (2005). "Task specific disruption of perceptual learning", *PNAS*, Oct 3; 10.1073/pnas.0505765102
87. **Seitz**, Lefebvre, Watanabe, and Jolicoeur (2005). "The requirement of high-level processing in subliminal learning", *Current Biology*, Sep (Vol 15(18) R753-755).
88. **Seitz** and Watanabe (2005). "A unified model of task-irrelevant and task-relevant perceptual learning", *Trends in Cognitive Science*, Jul (Vol 9(7) 329-334).
89. **Seitz**, Nanez, Holloway, Koyama, and Watanabe (2005), "Seeing what isn't there; the costs of perceptual learning", *PNAS*, Jun 21;102(25):9080-5
90. **Seitz**, Nanez, Holloway, and Watanabe (2005). "The effects of experience on Critical Flicker Fusion Thresholds", *Hum Psychopharmacol Clin Exp*, 20: 55-60.
91. **Seitz** and Watanabe (2003). "Is subliminal learning really passive?" *Nature*, Mar 6 (Vol 422(6927): 36).
92. *Grossberg and **Seitz** (2003). "Laminar Development of Receptive Fields, Maps, and Columns in Visual Cortex: The Coordinating Role of the Subplate." *Cerebral Cortex*, Aug (Vol (8): 852-863).

93. Mazzoni, Loftus, **Seitz**, and Lynn, (1999). "Changing beliefs and memories through dream Interpretation." *Applied Cognitive Psychology*, Apr (Vol 13(2): 125-144).

¹ Co-First Authors *Authorship is in Alphabetical order

Symposia Talks

“ Visual perceptual learning for athletes”, ESCoNS, 2015

“ Moving beyond a binary view of specificity in perceptual learning”, VSS 2015

“Perceptual Learning; specificity, transfer and how learning is a distributed process”, The Second Workshop and Lecture Series on Cognitive neuroscience of auditory and cross-modal perception, Košice, Slovakia, 2015

“Brain Training; How to train cognition to yield transfer to real world contexts”, The Second Workshop and Lecture Series on Cognitive neuroscience of auditory and cross-modal perception, Košice, Slovakia, 2015

“Applying neuroscience to produce broad-based benefits to vision”, International Eye Committee, 2014

“Applying neuroscience to produce broad-based benefits to vision”, Sabermetrics, Scouting and the Science of Baseball, 2014

“A New World of Brain Fitness”, World Summit on Innovation and Entrepreneurship, 2014

“The promise of brain training games as an approach to stave off cognitive decline in aging”, Annual German Conference of Psychology, 2014

“How attention and reinforcement guide perceptual learning.” APCV, 2013

“How attention and reinforcement guide perceptual learning.” Learning to Attend and Attending to Learn, 2013

“How Experience Shapes Perception; Environmental Statistics, Attention and Reinforcement”, Sensory processing: how the past affects the present, Paris, 2013

“Psychophysics: How attention and reinforcement guide perceptual learning.” International Graduate School of Neuroscience, Ruhr University Bochum, 2013

“Mechanisms of Human Perceptual Learning.” Brain Awareness Day, UCR, 2013

“When science meets gaming; a novel visual therapy.” ESCONS, 2013

“Task-Irrelevant Auditory Learning”, ESCOP, 2011.

“Disruption and Transfer of Perceptual Learning for Visual Hyperacuity”, VSS, 2011.

“Overcoming the Difficulties of Perceptual Learning”, VSS, 2006.

“How We Can Learn to See What Isn't There”, Implicit Processing in Visual Perception, Decision Making and Learning, APA, 2005.

“Rethinking the roles of attention in perceptual learning”, Windows into the dynamic brain *A mini-Symposium*, Department of Biomedical Engineering, Boston University, 2005.

Invited Talks

Central European University, Department of Psychology, 2015

University of Montreal, Department of Psychology, 2015

University of Alabama, Birmingham, Department of Neurobiology, 2015

Italian Institute of Technology, Department of Psychology, 2014

SUNY, Department of Optometry, 2014

NYU, Department of Psychology, 2014

Peking University, Department of Psychology, 2014

Wuhan Sports University, 2014

Beckman Center, Nation Academy of Sciences, 2014

University of Washington, Department of Psychology, 2014

OHSU, Department of Audiology, 2014

Claremont, Department of Psychology 2014

University of Southern California, Department of Neuroscience, 2013

University of California, Los Angeles, Department of Psychology, 2013

University of California, Berkeley, Oxyopia Lecture 2013

University of California, Irvine, Department of Cognitive Science, 2013

Peking University, Department of Psychology, 2013

University of Leuven, Belgium 2013

Riverside STEM Academy, 2013

Western School of Optometry, 2012

University of California, Riverside, Program in Video Bioinformatics, 2012

University of California, Irvine, Department of Cognitive Science, 2011

University of California, San Diego, Department of Psychology 2011

University of California, Riverside, Department of Psychology 2011
Ruhr University Bochum, Institut für Neuroinformatik, 2010
University of Birmingham, School of Psychology, 2009
Newcastle University, Institute of Neuroscience, 2009
Ecole Polytechnique Federale Lausanne, Switzerland 2009
Ruhr University Bochum, International Graduate School of Neuroscience, 2009
University of Edinburgh, DTC Workshop Series, 2009
University of California, Santa Barbara, Department of Psychology 2009
University of California, Berkeley, Oxyopia Lecture 2009
University of California, Riverside, Neuroscience Seminar 2008
University of California San Diego, Department of Cognitive Sciences 2008
University of California Riverside, Department of Psychology 2008
University of Leuven, Belgium 2008
Massachusetts Institute of Technology, Department Brain and Cognitive Sciences 2007
University of Rochester, CVS Boynton Colloquium Series Presentation 2007
Ohio State University, Department of Psychology, 2007
University of California, Los Angeles, Department of Psychology, 2007
Tamagawa University, Japan 2006
University of California, Los Angeles, Department of Psychology, 2006
University of California, Los Angeles, Department of Psychology, 2005
Martinos Center, Massachusetts General Hospital, 2005
Cambridge University, England UK 2005
Advanced Telecommunications Research Institute International, Japan 2005
Denso Corporation, Japan, 2005
Boston University, Department of Psychology 2002

Conference Presentations

1. Protopapas, Mitsi, Koustoumbardis, Tsitsopoulou, Leventi, Seitz (2017), Incidental orthographic learning during a color detection task, SSSR
2. Butler, P.D., Thompson, J.L., Seitz, A.R., Deveau, J., & Silverstein, S.M. (2017). Visual perceptual remediation for schizophrenia: Rationale, method, and three case studies. *Psychiatric*

Rehabilitation Journal, 40, 43-52.

3. Demmin, D., Rochè, M., Davis, Q., Seitz, A., Menon, A., & Silverstein, S. (2017). Abnormal retinal functioning in schizophrenia and its relationship to performance on low- and mid-level visual processing tasks. *Journal of Vision*, 17, 663. doi:10.1167/17.10.663.
4. Demmin, D., Roché, M., Davis, Q., Seitz, A., Menon, A., & Silverstein, S. (2017, May). Abnormal retinal functioning in schizophrenia and its relationship to performance on low- and mid-level visual processing tasks. Poster presented at the meeting of the Vision Sciences Society, St. Petersburg, FL.
5. Gallun, F.J., Gordon, S.Y., Stavropoulos, T., Seitz, A., Hoover, E.C., Eddins, D.E. (2017) "Evaluating the Apple iPad as a Platform for Psychoacoustic Research" Games for Change Festival, New York, NY
6. Gallun, F.J. and Seitz, A. (2016) "Developing games to improve auditory processing abilities" *Invited Seminar*, P.J. Šafárik University, Košice, Slovakia (simultaneously webcast to Vienna, Austria and Boston, MA, USA)
7. Hládek, L., Seitz, A., & Kopčo, N. (2017) "Adaptation in distance perception induced by audio-visual stimuli with spatial disparity" ([abstract](#); [poster](#)) ([ASA meeting 2017, Boston](#)).
8. Hládek, L., Seitz, & Kopčo, N. (2016). "Modeling the Integration of Audio-Visual Distance Information" presented at the 39th MidWinter meeting of the Association for Research in Otolaryngology, 20 – 24 February, San Diego, CA. ([abstract](#),[poster](#))
9. Vlahou, Seitz, Kopčo (2015), Nonnative Phonetic Category Training in Varying Acoustic Environments, ASA
10. Deveau, Phung, Flores, Cohen-Hoffing, Davis, Zordan, Seitz (2015), Applying Video Game Design and Principles of Perceptual Learning to Working Memory Training in Older Adults, ESCoNS
11. Phung, Deveau, Jaeggi, Buschkuehl, Au, Seitz, Zordan (2015), Applying Game Design in Cognitive Training for Working Memory, ESCoNS
12. Hladek, Seitz, Kopco (2015), Learning of Intensity and Reverberation Cues for Auditory Distance Perception in Rooms, NeuroHAM
13. Davey, McRay, Thurman, and Seitz (2015), Sensitivity of various tests of contrast sensitivity to detecting visual impairment, AAO
14. Seitz (2015), Better Batting through Perceptual Learning, AIC

15. Thurman, Davey, and Seitz (2015), Correcting for measurement bias in contrast sensitivity testing, AAO
16. Thurman, Davey, and Seitz (2015), Improving computerized tests for detecting visual field deficits in AMD, AAO
17. Gori, Seitz, Ronconi, Franceschini, Facoetti (2015), The causal link between magnocellular-dorsal path- way functioning and dyslexia, VSS
18. Hongjing, Seitz, Thurman (2015), Visual Tuning for Perceptual Animacy and its Influence on Multiple Object Tracking, VSS
19. Bays and Seitz (2015), Classifying EEG patterns of visual statistical learning Brett Bays, VSS
20. Sotiropoulos, Seitz, Seriès (2015), A reward-driven reweighting model of perceptual learning, VSS
21. McCray, Paronian, Seitz and Davey “Clinical assessment of Landolt C CSF test of the M&S Smart System contrast sensitivity testing device.” Invest Ophthalmol Vis Sci, 2015; 55: E-Abstract 3902
22. Babakhan, Parfenova, Ha, Maeda, Thurman, Seitz, Davey “Repeatability of measurements obtained using the quick CSF method” Invest Ophthalmol Vis Sci, 2015; 55: E-Abstract 3901
23. Davey, Maeda, Seitz “Assessment of Evans low contrast sensitivity in measuring log contrast sensitivity.” Invest Ophthalmol Vis Sci, 2015; 55: E-Abstract 3903
24. Deveau, Ozer, and Seitz (2014). "Better Batting Through Perceptual Learning", Vision Science Society Annual Conference
25. Hoffing and Seitz (2014). "Investigating Neurochemical Involvement in Task-Irrelevant Perceptual Learning using Pupillometry", Vision Science Society Annual Conference
26. Bays, Visscher, Le Dantec and Seitz (2014). "Alpha-band EEG activity as a signature of automaticity in perceptual learning", Vision Science Society Annual Conference
27. Saygi, Dinse, Seitz (2014), Crossmodal perceptual learning in the tactile system after visual training, FENS

28. Shams, Wozny, Kim, Seitz (2014), Multisensory experience shapes unisensory processing, IMRF
29. Vhalou, Seitz, Kopco (2014), "Adaptation to Room Reverberation in Nonnative Phonetic Training", ARO
30. Hladek, Le Dantec, Seitz, Kopco, (2014) "Visual calibration of auditory distance perception", ARO
31. Nikos Gekas, Aaron R. Seitz, Peggy Seriès (2014), "Rapidly learned spatial expectations interact with repetition priming and long-term structural priors to facilitate performance in a visual search task", Cosyne
32. Seitz (2014), Specificity and Generality of Perceptual Learning, 4rth International Workshop on Perceptual Learning, Switzerland
33. Barakat, Seitz and Shams (2013), Visual rhythm perception is facilitated by multisensory (but not unisensory) training, SFN
34. Bays, Bula, LeDantec and Seitz (2013), BDNF val66met polymorphism is associated with differential learning in a statistical learning paradigm, SFN
35. Hladek, Le Dantec, Kopco, and Seitz (2013), "Ventriloquism effect and aftereffect in the distance dimension", ASA
36. Hladek, Tomonova, Seitz and Kopco (2013), "Rapid recalibration of auditory distance perception in reverberant environments", ARO
37. Welch and Seitz (2014), "Practice and Transfer Effects: Implications for development of computer-based training." ADEA
38. Hung and Seitz (2013), "Spatial Specificity in a 3-dot Hyperacuity Task after Double Training", VSS
39. Deveua, Lovcik, and Seitz (2013), "Visual Improvements Through the Perceptual Learning Based Training Program ULTIMEYES™", VSS
40. Bays, Turk-Browne, and Seitz (2013), Dissociating Behavioral Outcomes of Visuo-temporal Statistical Learning", VSS
41. Yarrow, Razak, Seitz, Series (2013), "Detecting and quantifying topographic order in neural maps" COSYNE
42. Deveau, Lovcik, Seitz (2013), "Visual Improvements Through the Perceptual Learning Based Training Program UltimEyes", ESCONs 2.0
43. Seitz (2012), "Two Stories of Fast-Implicit Learning", 3rd International Workshop on Perceptual Learning

44. Seitz (2012), "The Phenomenon of Task-Irrelevant Perceptual Learning", CVS Symposium on Computational Foundations of Perception and Action
45. Seitz and Leclercq (2012), "Fast Task-Irrelevant Learning: How different types of attention and task-relevance impact memorization of rapidly presented images", VSS
46. Barakat, Seitz, and Shams (2012), "There is more to statistical learning than associative learning; Predictable items are enhanced even when not predicted", VSS
47. Gekas, Seitz, and Series (2012), "Investigating the specificity of experimentally induced expectations in motion perception", VSS
48. Sotiropoulos, Seitz and Series (2012), "How plastic is the "slow speeds prior" Cosyne
49. LeDantec and Seitz (2011), "Orientation and location specificities in the co-development of perceptual learning and contextual learning", ECVF
50. LeDantec and Seitz (2011), "Perceptual and contextual learning of a visual search", VSS
51. Kopčo, Silvera, Tskhay, Tomoriová, and Seitz (2011), "Learning of reverberation cues for auditory distance perception in rooms", ASA
52. Klein, Carney, Levi, Yu, Seitz (2011), "Modelfest for Perceptual Learning", VSS
53. Kim, Berard, Seitz, Watanabe (2011), "The role of contiguity and contingency in visual perceptual learning", VSS
54. Seitz, "Task-Irrelevant Auditory Learning" (2011), 2nd International Workshop on Perceptual Learning
55. LeDantec and Seitz (2010), "Perceptual and contextual learning of a visual search", SFN
56. LeDantec and Seitz (2010), "The co-development of Perceptual Learning and Contextual Learning in a visual search task", ECVF
57. Seitz, Chalk, Series (2010), "Rapidly learned expectations alter perception of motion", VSS
58. Kim, Seitz, Watanabe (2010), "Different properties between reward-driven exposure-based and erward-driven task involved perceptual learning", VSS
59. Náñez, Reyes, Fabian, Ojeda, Dominguez, Berber, Gil-Faddis, Ucelo, Davis, and Seitz (2010), "Effects of Trial Number and Time Differences on Visual Perceptual Learning", WPA
60. Razak and Seitz (2010). "A cortical population code for sound locations", ARO
61. Khafi and Seitz (2010), "The Effects of Caffeine And Nicotine On Learning", UCR Undergraduate Research Symposium

62. Sotiropoulos, Seitz, Series (2009),” Perceptual learning in visual hyperacuity: a reweighting model”, BCCN
63. Chalk, Seitz, Series (2009), “Feature-based attention biases perception of motion direction” BCCN
64. Pilly, Seitz and Grossberg (2009). Contrast polarity-specific learning of motion in the absence of attention. Proceedings of the 13th International Conference on Cognitive and Neural Systems (ICCNS), Boston MA, May.
65. Seitz, Pilly and Pack, C.C. (2009). Can lowering the contrast of a moving stimulus improve the perception of its motion direction? Proceedings of the 13th International Conference on Cognitive and Neural Systems (ICCNS), Boston MA, May.
66. Dobres and Seitz (2009) “Perceptual Learning of Noisy Oriented Gratings as Revealed by Classification Images” VSS
67. Pilly, Seitz and Grossberg (2009). “Where in the motion pathway does task-irrelevant perceptual learning occur?” VSS
68. Seitz, Pilly and Pack (2009) “Reducing contrast improves direction estimation at low speeds”, VSS
69. Vlahou, Seitz, Protopapas (2009), Implicit learning of non-native speech stimuli, ASA
70. Tsushima, Seitz, and Watanabe (2008). The role of attention in perceptual learning. NIN, Amsterdam, Netherlands
71. Seitz (2008). The role of reward in perceptual learning, First Annual Workshop in Perceptual Learning, Beijing China.
72. Wozny, Seitz, & Shams (2008) Learning associations between simple visual and auditory features, VSS
73. Kim, Seitz, & Watanabe (2008) Reward contingency on perceptual learning does not follow rules of classical conditioning, VSS
74. Tsushima, Seitz, & Watanabe (2008) Task-irrelevant perceptual learning occurs only when the irrelevant feature is weak, VSS
75. Kim, Seitz, & Shams (2008) Neural mechanisms of multisensory perceptual learning, VSS
76. Seitz, Kim, Watanabe, (2007), “Reward driven, ocular specific, learning of orientation in the absence of awareness”, SFN
77. Franko, Seitz, Vogels, (2007), “Effect of stimulus-reinforcement pairing on the local field potentials for suprathreshold, ipsilateral stimuli in macaque visual cortex”
78. Kim, Seitz, Shams, (2007), “Congruent sound facilitates visual perceptual learning”, SFN

79. Bartfield, Jourdani, Yorio, Zanutto, Seitz, (2007), "Reward driven learning of associative-rules in the absence of awareness", SFN
80. Kim, Seitz, Watanabe, (2007), "Effect of Reward on Perceptual Learning", VSS
81. Batson, Beer, Seitz, Watanabe, (2007), "Specificity of Crossmodal Links in Exogenous Covert Orienting", VSS
82. Kim, Seitz, Shams (2007), "Visual Perceptual Learning Enhanced with Congruent Sound", VSS
83. Nishina, Seitz, Kawato, Watanabe (2007), "Subliminal visual feature is learned better when spatially closer to attended task", VSS
84. Franko, Seitz, and Vogels (2006), "Effect of stimulus-reinforcement pairing on the local field potentials in macaque visual cortex" SFN
85. Seitz (2006), "Reinforcement and Blinks in Perceptual Learning" ASIC
86. Holloway, Tsushima, Nanez, Watanabe, Seitz (2006), "Two Cases of a Requirement of External Reinforcement in Perceptual Learning", VSS
87. Kim, Seitz and Shams (2006), "Multisensory perceptual learning", VSS
88. Náñez Sr., Holloway, Donahoe, & Seitz (2006), "Flicker Fusion as a Correlate of Word Decoding Ability", VSS
89. Shams, Wassenhove, Seitz (2006), "Audio-Visual Statistical Learning", VSS
90. Nishina, Seitz, Kawato, Watanabe (2006), "The spatio-temporal window of task-irrelevant perceptual learning", VSS
91. Seitz, Náñez Sr., Holloway, and Watanabe (2006), "Perception learning of motion leads to faster-flicker perception", VSS
92. Yotsumoto, Seitz, Sasaki, Shimojo, Yamamoto, Kogure, Sakagami and Watanabe (2006), "Greater response conflict from weaker visual signals", VSS
93. Nishina, Seitz, Kawato, Watanabe (2005). "The spatial spread of task-irrelevant perceptual learning", SFN.
94. Holloway, Nanez, Seitz and Watanabe (2005). "The Relationship between Flicker Fusion and Subliminally Induced Neural Plasticity", OSA.
95. Holloway, Seitz, Nanez and Watanabe (2005). "Dorsal Stream Perceptual Learning is Highly Related to Critical Flicker Fusion Thresholds", OSA.
96. Holloway, Seitz, Náñez. Watanabe (2005). "A Subliminal Experience can alter Critical Flicker Fusion", APS.

97. Seitz, Nanez, Holloway, Koyama, Watanabe (2005). "Seeing what isn't there; the costs of perceptual learning", VSS.
98. Lefebvre, Seitz, Watanabe, Jolicoeur (2005). "Learning Blinks During the Attentional Blink", VSS
99. Nanez, Seitz, Holloway, Koyama, Watanabe (2005). "Subliminal Perceptual Learning of Motion Results in Improvements of Critical Flicker Fusion Thresholds", VSS.
100. Yamagishi, Seitz, Werner, Kawato, Watanabe (2005). "Task specific disruption of perceptual learning", VSS.
101. Holloway, Seitz, Nanez, Engles, Watanabe (2004). "Critical Flicker Fusion Threshold as a Function of Subliminal Neural Plasticity", NAN.
102. Seitz, Nanez, Sasaki, Engles, Holloway, and Watanabe (2003). "Learning spillover to invisible dots?", ECVP.
103. Seitz and Watanabe (2003). How can subliminal perceptual learning be active? *Journal of Vision*, 3(9), 177a.
104. Seitz and Grossberg (2002). "A Neural Model of How the Cortical Subplate Coordinates the Laminar Development of Orientation and Ocular Dominance Maps." *ICCNIS*.
105. Seitz and Grossberg (2002). "How Do Laminar Circuits Develop? The Role of the Cortical Subplate in the Development and Laminar Coordination of Orientation and Ocular Dominance Maps in V1." *Journal of Vision*, 2(7), 100a.
106. Seitz and Grossberg (2001). "Coordination of Laminar Development in V1 by the Cortical Subplate." *Society for Neuroscience Abstracts*, 31, 619.12

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