

Bong J. Walsh, Ph.D., CXLT

Curriculum Vitae

Education:

Ph.D. Cognitive Neuroscience, University of California, Davis, 2008

B.S. Biopsychology, University of California, Santa Barbara, 1994

Employment:

2017 - : *Associate, Boster, Kobayashi & Associates, Livermore, CA*

Human Factors Expert of Boster, Kobayashi & Associates, a consulting firm specializing in the technical aspects of accident reconstruction and failure analysis. Have provided litigation consulting as expert on more than 250 cases, including deposition testimony more than 25 times and trial testimony as a human factors expert witness in 6 counties in California. Typical assignments involve applications of human factors, perception, attention, expectation, information processing, decision-making, and reaction/response to motor vehicle and premises liability cases. CXLT-certified to perform slip-resistance testing and perform accident reconstruction in slip & fall cases since January 2019.

2017 - : *Adjunct Faculty, California School of Professional Psychology, Alliant University, Los Angeles, CA*

Developed curriculum and taught sections of Cognitive and Affective Bases of Behavior. Topics included several facets of human factors, including perception, attention, memory, decision-making, language processing, effects of emotion on cognitive processes, and effects of stress and physiological state on cognitive and emotional processes.

2016 – 2017: *Founder, Director, Better Brains for Life, Moraga, CA*

Founded, developed curriculum, ran program, instructed course for Better Brains for Life, a program designed to help older adults maintain cognitive function and brain fitness. Developed cognitive exercises to help improve human factors elements such as memory, attention, and perceptuomotor response.

2011 – 2016: *Associate Professor, ASPP, Argosy University, San Francisco Bay Area*

Core faculty member in Clinical Psychology doctoral program. Taught and developed curricula for several courses including Cognition & Affective Processes, Physiological Psychology, Psychopharmacology, Neuroscience of Psychopathology, Research Methods, and Statistics. Supervised over 20 doctoral dissertations on a variety of aspects of psychology and human experience. Was the resident faculty expert in physiological elements of psychology and components of cognition related to human factors.

2009 – 2012: *Instructor, Lecturer, University of California, Davis*

Taught several iterations of Cognitive Psychology and Cognitive Neuroscience to UC Davis undergraduate psychology students. Topics included human factors considerations such as visual perception, attention, decision-making, and motor response.

2008 – 2009: *Post-doctoral Researcher, Center for Mind & Brain, University of California, Davis*

Post-doctoral Researcher for a Cognitive Psychology/Neuroscience lab. Involved across many essential research duties, including project design, analysis of neuroimaging (fMRI & EEG) data, and manuscript preparation & submission. Co-authored a chapter in a Cognitive Neuroscience anthology on the interaction between visual attention and cognitive control systems.

2002 – 2008: *Graduate Student Researcher, Mangun Lab, University of California, Davis*

Designed, ran, and analyzed results of experiments testing aspects of cognition fundamental to human factors, including perception, attention, arousal, reaction time, cognitive control, and performance. Experiments involved functional magnetic resonance imaging (fMRI), electrophysiological recording (EEG), eye-tracking, and personal observation. Dissertation work showed how cognitive conflict levels could be predictive of future adjustments in attention, arousal, and performance, work published in the Journal of Cognitive Neuroscience.

1998 – 2002: *Research Associate IV, Metabolex, Inc., Hayward, CA*

Performed hands-on laboratory research for a biotechnology company, including several different techniques and assays involving cell biology, molecular biology, and biochemistry.

1996 – 1998: *Instructor, Tutor, Upward Bound, San Francisco, CA*

Taught and tutored science and mathematics courses to inner-city high school students in this federally-funded program. Designed curriculum for the classes as appropriate for students' level of understanding.

1994 – 1996: *Research Associate II, Lalwani Lab, University of California, San Francisco (UCSF)*

Performed various research-related duties for a lab investigating novel gene therapy techniques to address hearing disorders. Co-author of 3 research articles from this work.

Specialized Training:

CXLT Certification Program – 2019, Houston, Texas

Neurocognition and Transportation Operations: Attentional State and Operator Behavior Workshop – 2018, Transportation Research Board, Washington DC

Memberships:

Human Factors and Ergonomics Society (HFES)

HFES Forensics Professional Group

HFES Perception and Performance Technical Group

HFES Safety Technical Group

Transportation Research Board (TRB)

Standing Committee on Alcohol, Other Drugs, & Performance

Standing Committee on Highway Safety Performance

Standing Committee on Visibility

American Society of Safety Professionals (ASSP)

Society of Automotive Engineering (SAE)

Research Interests:

- Human factors, Factors that affect perceptual processing, Perception & attention in driving, Effect of alcohol/drugs on cognition, Real world studies of perception, Brain health & fitness, Distraction/multitasking

Grants and Awards:

2016	Mentored Poster Travel Award, American Audiological Society
2015-2016	Research Grant, American Tinnitus Association
2015	Award for Teaching Excellence, Argosy University
2005-2006	Fellowship – Vision Science Training Program, National Eye Institute (NEI)
2005	ARCS Foundation Fellowship
2004	Annual Center for Neuroscience Poster Award (fMRI study of novelty processing)
2002-2003	Fellowship – Neuroscience, Training Grant, National Institute of Health (NIH)
1990-1994	Undergraduate Fellowship – Mathematics, College of Creative Studies, University of California, Santa Barbara

Academic Reviewer:

Journal of Cognitive Neuroscience

Brain Research

Perception & Psychophysics

Publications:

Book Chapters:

- Walsh, B.J. (2016). Using neuroscience and neuropsychology to guide therapeutic intervention. In R. Valle (Ed.), *The changing faces of therapy: Innovative perspectives on clinical issues and assessment*. Argosy University Press.
- Mangun, G.R., Saron, C.D., & Walsh, B.J. (2009). Integration of conflict detection and attentional control mechanisms: Combined ERP and fMRI studies. In M.S. Gazzaniga, (Ed.), *The Cognitive Neurosciences IV*. Cambridge, MA: MIT Press.

Selected Peer-Reviewed Journal Articles:

- Kupferstein, H., & Walsh, B.J. (2015). Non-verbal paradigm for assessing individuals for absolute pitch. *World Futures*, 0, 1-16.
- Walsh, B.J., Buonocore, M.H., Carter, C.S., & Mangun, G.R. (2011). Integrating conflict detection and attentional control mechanisms. *Journal of Cognitive Neuroscience*, 23, 2211-21.
- Lalwani, A.K., Walsh, B.J., Carvalho, G.J., Muzyczka, N., & Mhatre, A.N. (1998). Expression of adeno-associated virus integrated transgene within the mammalian vestibular organs. *American Journal of Otolaryngology*, 19, 390-5.
- Lalwani, A.K., Han, J.J., Walsh, B.J., Zolotukhin, S., Muzyczka, N., & Mhatre, A.N. (1997). Green fluorescent protein as a reporter for gene transfer studies in the cochlea. *Hearing Research*, 114, 139-47.
- Lalwani, A.K., Walsh, B.J., Reilly, P.G., Muzyczka, N., & Mhatre, A.N. (1996). Development of in vivo gene therapy for hearing disorders: introduction of adeno-associated virus into the cochlea of the guinea pig. *Gene Therapy*, 3, 588-92.

Conference Presentations:

Selected Slide Sessions:

- Walsh, B.J. (2015). Proposed mechanisms of ketamine's effect on depression. *Conference for Ketamine Clinicians & Researchers*, San Mateo, CA.
- Walsh, B.J., Fannon, S.P., Giesbrecht, B., Carter, C.S., & Mangun, G.R. (2006). Trial to trial adjustments: Anterior cingulate activity predicts frontoparietal modulations. *Exploring the Mind: Attention, Awareness and Consciousness*, Davis, CA.
- Walsh, B.J., Rainer, G., Yonelinas, A.P., & Ranganath, C. (2004). Novelty processing and memory encoding. *Bay Area Memory Meeting*, Berkeley, CA.

Selected Posters:

- Greenberg, B., Carlos, M., & Walsh, B.J. (2016). Assessing the impact of sound-sensitivity in tinnitus. *American Auditory Society Annual Meeting*, Scottsdale, AZ.
- Walsh, B.J. (2014). Using genetic information to guide treatment. *American Psychological Association Annual Meeting*, Washington, DC.

- Walsh, B.J., & Klimo, J. (2014). Mental rehearsal primes the brain to support positive action and behavior. *Association for Psychological Science Annual Meeting*, San Francisco, CA.
- Scott, R.A., Hays, F.M., Mihailescu, C., Douangradty, M., & Walsh, B.J. (2013). Using a GPS device while driving affects the formation of cognitive maps. *National Academy of Neuropsychology Annual Meeting*, San Diego, CA.
- Walsh, B.J., Fannon, S.P., Carter, C.S., Saron, C., & Mangun, G.R. (2007). "Next-trial effects" in spatial attention: Evidence supporting enhanced selective attention following high-conflict trials. *Society for Neuroscience Annual Meeting*, San Diego, CA.
- Walsh, B.J., Fannon, S.P., Teng, S., Giesbrecht, B., Carter, C.S., & Mangun, G.R. (2006). Role of anterior cingulate cortex in monitoring spatial attention. *Cognitive Neuroscience Society Annual Meeting*, San Francisco, CA.
- Walsh, B.J., Fannon, S.P., Heipertz D., Teng, S., Sy, J.L., Heldmann, M., Muentel, T., Giesbrecht, B., & Mangun, G.R. (2005). Combining fMRI and ERPs to dissect attentional control systems. *Society for Neuroscience Annual Meeting*, Washington DC.
- Walsh, B.J., Rainer, G., Yonelinas, A.P., & Ranganath, C. (2004). Novelty & encoding: the neural basis of the von Restorff effect. *Society for Neuroscience Annual Meeting*, San Diego, CA.