

## Boster, Kobayashi & Associates

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### Bong J. Walsh, Ph.D.

#### Curriculum Vitae

#### **Education:**

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

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

#### **Present Position:** 2017 - Present

Associate of Boster, Kobayashi & Associates, a consulting firm specializing in the technical aspects of accident reconstruction and failure analysis. Typical assignments involve applications of human factors, perception, attention, and decision-making to accident reconstruction and product design/defect analysis.

#### **Industrial and Academic Positions:**

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

Has developed curriculum and taught several sections of Cognitive and Affective Bases of Behavior. Topics include many 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, American School of Professional Psychology, 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, and Neuroscientific Bases of Psychopathology. Supervised over 20 doctoral student 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.

**Industrial and Academic Positions (cont.):**

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.

### **Professional Society Memberships:**

Human Factors and Ergonomics Society (HFES)  
 HFES Forensics Professional Group  
 HFES Perception and Performance Technical Group  
 HFES Safety Technical Group  
 HFES Surface Transportation Technical Group

Society of Automotive Engineers

Transportation Research Board (TRB)  
 Standing Committee on Highway Safety Performance  
 Standing Committee on Visibility  
 Standing Committee on Alcohol, Other Drugs, and Transportation

### **Specialized Training:**

Neurocognition and Transportation Operations: Attentional State and Operator Behavior Workshop – 2018

Transportation Research Board, Washington DC

Workshop on neurocognition and behavior as related to transportation operator safety, including use of neurocognitive sensors to assess alertness to predict and prevent operator impairment.

### **Selected Presentations and Publications:**

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.

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 processing & memory encoding *Society for Neuroscience Annual Meeting*, San Diego, CA.