

## **Tate Kubose, Ph.D.**

### **Professional Profile**

Dr. Kubose's work utilizes his knowledge of human perceptual and cognitive abilities and limitations, which he applies to the study of safety-related behavior and risk. He has studied the patterns of human behavior in a wide variety of accidents such as those involving traffic collisions, slips, trips and falls, visibility issues, drowning, burns, and asphyxiation. Dr. Kubose has also examined driver behavior and reaction time, evaluated warnings and safety information, and analyzed injury and accident patterns associated with various consumer products, industrial operations, and medical devices. He has experience with night-time photography and research methods involving large-scale databases, questionnaire and survey administration, and testing of human subjects.

Dr. Kubose completed a Ph.D. in cognitive psychology at the University of California, Los Angeles and held postdoctoral positions at Columbia University and the University of Illinois, Urbana-Champaign. During that time his research focused on topics such as the effects of speech activities on driving performance, analysis of errors in the medical field, cognitive analysis of infusion pump usability, development of cognitive models of decision making, and computational modeling of analogical reasoning. Prior to joining InSciTech, Dr. Kubose was employed at Exponent Failure Analysis Associates in Menlo Park, CA.

### **Credentials and Professional Affiliations**

Ph.D. (Cognitive Psychology), University of California, Los Angeles, 2000

M.A. (Psychology), University of California, Los Angeles, 1996

B.S. (Psychology), University of Illinois (*magna cum laude*), 1994

University of Illinois Honors, 1994

Phi Beta Kappa, University of Illinois, 1994

Dean's List, University of Illinois, 1990–1994

NIH Postdoctoral Fellow, University of Illinois, 2003–2006

NLM Postdoctoral Fellow, Columbia University, 2000–2002

Collegium of Teaching Fellows, University of California, Los Angeles, 1999

### **Peer Reviewer**

Applied Cognitive Psychology

Human Factors and Ergonomics Society

## Publications and Presentations

“A framework for analyzing intersection timing and red light collisions,” Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2014, 58:549-553. T. Ayres, C. Dyrby, R. Kelkar, T. Kubose.

“Prediction of stiffness coefficients for frontal impacts in passenger vehicles,” *SAE Technical Paper 2014-01-0468*. M. Wood, V. Shekhawat, T. Kubose, R. Kelkar.

“Speed and accuracy in driver emergency avoidance,” Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2012, 56:2301-5. T. Ayres, T. Kubose

“Driving impairs talking,” *Psychonomic Bulletin & Review*, 2010, 17:15-21. E. Becic, G. S. Dell, K. Bock, S. M. Garnsey, T. Kubose, A. F. Kramer.

“An analysis of low speed pedestrian crashes involving electric-powered and combustion-powered vehicles,” Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 2009, 53:2029-2033. J. A. Droll, T. Kubose, S. Huang, D. T. Aharoni, D. E. Young.

“Methodological considerations for using the English XL tribometer for post-hoc slip-and-fall evaluations,” Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Santa Monica, CA, 2008. 52:1738-1742. T. Kubose, D. Krauss.

“Comparison of subjective ratings of slipperiness to the measured slip resistance of real-world walking surfaces,” International Conference on Slips, Trips and Falls, From Research to Practice, 2007. M. Kuzel, D. Krauss, M. Moralde, T. Kubose.

“Aging and the effects of conversation with a passenger or caller on simulated driving performance,” Proceedings, Driving Assessment, Stevenson, WA, 2007, 4:98-104. E. Becic, T. Kubose, A. F. Kramer, G. S. Dell, S. M. Garnsey, K. Bock.

“Car talk, car listen,” In: *Automaticity and Control in Language Processing*. A. S. Meyer, L.R. Wheeldon and A. Krott (eds), Hove, England, Psychology Press, 2007, 21–42. J. K. Bock, G. S. Dell, S. M. Garnsey, A. F. Kramer, T. Kubose.

“Detecting transient changes in dynamic displays: The more you look, the less you see,” *Human Factors*, 2006; 48:759–773. W. R. Boot, A. F. Kramer, E. Becic, D. A. Wiegmann, T. Kubose.

“The effects of speech production and speech comprehension on simulated driving performance,” *Applied Cognitive Psychology*, 2006; 20:43–63. T. Kubose, K. Bock, G. S. Dell, S. M. Garnsey, A. F. Kramer, J. Mayhugh.

## **Publications and Presentations (continued)**

“The effects of speech production and speech comprehension on simulated driving performance,” Proceedings, Driving Assessment, Rockport, ME, 2005. T. Kubose, K. Bock, G. S. Dell, S. M. Garnsey, A. F. Kramer, J. Mayhugh.

“Heuristic evaluation of infusion pumps: Implications for patient safety in Intensive Care Units,” *International Journal of Medical Informatics*, 2004; 73:771–9. M. J. Graham, T. Kubose, D. Jordan, J. Zhang, T. R. Johnson, V. L. Patel.

“Using usability heuristics to evaluate patient safety of medical devices,” *Journal of Biomedical Informatics*, 2003; 36:23–30. J. Zhang, T. R. Johnson, V. L. Patel, D. L. Paige, T. Kubose.

“Cognitive models of HIV decision-making in young adults,” Proceedings of the American Medical Informatics Association Symposium, San Antonio, TX, 2002, 1069. T. Kubose, L. O’Sullivan, V. Patel.

“The role of textual coherence in incremental analogical mapping,” *Journal of Memory and Language*, 2002; 47:407–435. T. Kubose, K. J. Holyoak, J. Hummel.

“Development of an ontology to model medical errors, information needs, and the clinical communication space,” Proceedings of the American Medical Informatics Association, Symposium, Washington, DC, 2001, 672. P. D. Stetson, L. K. McKnight, S. Bakken, C. Curran, T. Kubose, J. J. Cimino.

“Assessment of information needs for informed, coordinated activities in the clinical environment,” Proceedings of the American Medical Informatics Association Symposium, Washington, DC, 2001, 948. T. Kubose, J. Cimino, V. Patel.

“Coherence and mapping: tests of the LISA model of analogy,” Proceedings of the 41<sup>st</sup> Annual Meeting of the Psychonomic Society, New Orleans, LA, 2000. T. Kubose, K. J. Holyoak, J. E. Hummel.

“Perceptual learning modules in mathematics and science instruction,” In: *Teaching and Learning in a Network World*. P. Hoffman P and D. Lemke (eds), IOS Press, Amsterdam, The Netherlands, 2000, 169–176. J. A. Wise, T. Kubose, N. Chang, A. Russel, P. J. Kellman.

“Mapping asymmetries in analogical problem solving,” Proceedings of the 12<sup>th</sup> Annual Conference for the Cognitive Science Society, Madison, WI, 1998. T. Kubose, K. J. Holyoak, J. E. Hummel.

“Control processes in analogical mapping: Tests of the LISA model,” Proceedings of the 38<sup>th</sup> Annual Conference for the Psychonomic Society, Philadelphia, PA, 1997. T. Kubose, K. J. Holyoak, J. E. Hummel.