

Po-He Tseng

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Education

2007-2012 University of Southern California, PhD Computer Science
2005-2007 University of Southern California, MSc Computer Science
1998-2002 National Chiao-Tung University, BSc. Industrial Engineering and Management

Academic Positions

2013- Postdoctoral Associate, Duke University (Dr. Miguel Nicolelis)
2006-2012 Research Assistant, iLab, University of Southern California (Dr. Laurent Itti)
2004-2005 Research Assistant, Laboratory of Integrated Brain Research, Taipei Veterans General Hospital, Taiwan (Dr. Li-Fen Chen)
2002-2004 Research Assistant, Adaptive Intelligent Internet Agent Research Laboratory, Institute of Information Science, Academia Sinica, Taiwan (Dr. Chun-Nan Hsu)

Research Interests

Machine Learning; Deep Learning; Neuroprosthesis, Brain-Computer Interface; Vision; Attention; Attention-Deficits; Eye Movements; Movement Disorders

Publications

- P. Tseng**, A. Paolozza, D. P. Munoz, J. N. Reynolds, L. Itti, Deep learning on natural viewing behaviors to differentiate children with fetal alcohol spectrum disorder, In: The 14th International Conference on Intelligent Data Engineering and Automated Learning (IDEAL 2013), Hefei, China (LNCS 8206), pp. 178-185, Oct 2013.
- P. Tseng**, I. G. M. Cameron, G. Pari, J. N. Reynolds, D.P. Munoz, L. Itti, High-throughput classification of clinical populations from natural viewing eye movements, *Journal of Neurology*, Vol. 260, Issue 1, pp. 275-284, 2013
- P. Tseng**, R. Carmi, I. G. M. Cameron, D.P. Munoz, L. Itti, Quantifying center bias of observers in free viewing of dynamic natural scene, *Journal of Vision*, Vol. 9, No. 7:4, pp. 1-16, July 2009.
- P. Tseng**, Y.-S. Chen, J.-C. Hsieh, L.-F. Chen. (2005). Group analysis of frequency-dependent cortical organization using neuromagnetic signals. *Proceedings of the International Conference on Neural Information Processing, Taipei, Taiwan*, October 2005.

Patents

- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti (pending) Eye-tracking method and system for screening human diseases, University of Southern California and Queen's University, Aug. 2010, United States Patent Application 20100208205

Honors & Awards

Best Poster Award, Agent-based Web Information Integration for SNP Association Study, Symposium of Bioinformatics in Taiwan, 2003

Talk Presentation

- P. Tseng**, A. Paolozza, D. P. Munoz, J. N. Reynolds, L. Itti, Deep learning on natural viewing behaviors to differentiate children with fetal alcohol spectrum disorder, IDEAL 2013, Hefei, China, Oct 2013.
- P. Tseng**, Differentiating Patients with Attention Deficits by Natural-viewing Eye Traces, 10th Annual USC Vision Symposium, April 2012.
- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, Differentiating patients from controls based on correlation between salience and gaze, **In: Proc. Vision Science Society Annual Meeting (VSS08)**, May 2008.

Poster Presentations

- C. Zhang, A. Paolozza, **P. Tseng**, J. Reynolds, D. P. Munoz, L. Itti, Classification of children with FASD from neuroimaging, neuropsychological and natural eye movement data, In: Society for Neuroscience Annual Meeting (SfN13), Nov 2013.
- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, Effects of development on low-level feature processing during natural viewing of dynamic scenes, In: Proc. Vision Science Society Annual Meeting (VSS11), May 2011.
- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, Differentiating patients (ADHD, FASD, Parkinson's Disease) from controls by gazing patterns, In: Society for Neuroscience Annual Meeting (SfN10), Nov 2010.
- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, Differentiating Patients from Controls by Gazing Patterns, **In: Proc. Vision Science Society Annual Meeting (VSS10)**, May 2010.
- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, Screening Attentional-related Diseases based on Correlation between Salience and Gaze, **In: Proc. Vision Science Society Annual Meeting (VSS09)**, May 2009.
- P. Tseng**, D. J. Berg, M. Yoshida, I. G. M. Cameron, S. E. Boehnke, R. A. Marino, T. Ikeda, R. Kato, K. Takaura, L. Itti, T. Isa, D. P. Munoz, Deployment of visual attention and of the eyes differentiate observer populations, **In: Annual Meeting of the Human Frontier Science Program (HFSP)**, Berlin, Germany, Jul 2008.
- P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, Differentiating Patients from Controls Based on Correlation between Salience and Gaze, **In: Collaborative Research in Computational Neuroscience Annual Meeting, Los Angeles, California**, June 2008.
- R. Carmi, **P. Tseng**, I. G. M. Cameron, D. P. Munoz, L. Itti, The impact of maturation and aging on mechanisms of attentional selection, **In: Proc. Vision Science Society Annual Meeting (VSS07)**, May 2007.
- P. Tseng**, R. Carmi, I. G. M. Cameron, D. P. Munoz, L. Itti, The impact of content-independent mechanisms on guiding attention, **In: Proc. Vision Science Society Annual Meeting (VSS07)**, May 2007.
- H. Yuan, **P. Tseng**, et al., SNP prioritization using FASTSNP, International Society for Computational Biology, 2005
- P. Tseng**, et al., Agent-based Web Information Integration for SNP Association Study, Symposium of Bioinformatics in Taiwan, 2003

Ad hoc reviewer

European Journal of Neuroscience, Journal of Electronic Imaging

Teaching Experience

2010 CSCI-561 Foundations of Artificial Intelligence (Dr. Laurent Itti)