

Division of Psychology  
School of Humanities and Social Science  
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## **Education**

### **The University of Chicago, Chicago, IL, USA**

Ph.D. in Psychology, March 2007

Area: Integrative Neuroscience and Perception

M.S. in Statistics, August 2005

Area: Mathematical Statistics and Biostatistics

### **Peking University, Beijing, China**

B.S. in Psychology, July 2000

## **Research Interests**

Object and face perception, Motion perception (e.g. self motion and navigation), Attention and visual search, Visual adaptation, Memory and learning, Visual auditory interaction, Psychophysical experiment, computational modeling, Electrophysiology and EEG

## **Work in Progress**

Spatial and temporal resolution of facial expression aftereffect and curvature aftereffect, locus of face aftereffects comparing facial expression and face identity perception, crowding effect, visual auditory interaction, inexact design for hearing aid

## **Research Grants**

School of Humanities and Social Sciences, Nanyang Technological University, HSS  
SGD 5,000 Research Grant (RCC45/2009/SHSS)

Xu Hong (PI) – “Effect of distorted face adaptation on facial expression judgment – an investigation of internal crowding effect on adaptation between expanded and contracted faces”, 2010 – 2011

School of Humanities and Social Sciences, Nanyang Technological University, Start-Up Grant (SUG)

Xu Hong (PI) – “Short term plasticity of face perception – Low level adaptation contribution to facial expression and face identity judgments”, 2010 – 2012

## **Publications**

**Xu H.**, Wallisch P. and Bradley D. C., The computational basis for heading perceptual decisions in a population of MSTd neurons (*submitted*)

Wu J. \*, **Xu, H. \***, Dayan P. and Qian N., The role of background statistics in face adaptation, *Journal of Neuroscience*, Sep. 2009, 29: 12035-12044 (\* co-first author)

**Xu H.**, Dayan P., Lipkin R. M., Qian N., Adaptation across the cortical hierarchy: low-level curve adaptation affects high-level facial-expression judgments, *Journal of Neuroscience*, Mar. 2008; 28: 3374-3383

Bradley D. C., Troyk P. R., Berg J. A., Bak M., Cogan S., Erickson R., Kufra C., Mascaro M., McCreery D., Schmidt E. M., Towle V. L., and **Xu H.**, Visuotopic Mapping Through a Multichannel Stimulating Implant in Primate V1, *Journal of Neurophysiology*, Mar 2005; 93: 1659 - 1670.

**Xu H.**, Liu P., Dayan P. and Qian N., Dissociating low-level curvature aftereffect and high-level facial-expression aftereffect via crowding and brief adaptation (*to be submitted*)

**Xu H.**, Montaser-Kouhsari L. and Liu P., The spatial properties of crowding effect on face adaptation aftereffects (*in prep*)

**Xu H.**, Low J., Dayan P, Qian N. (2011), Local feature processing in facial expression and face identity adaptation (*in prep*)

**Xu H.**, Liu P., Dayan P, Qian N. (2011), Nonlinear interactions among face parts in facial-expression adaptation (*in prep*)

**Xu H.**, Margoliash D., Shank SS. and Chi Z., Using hidden Markov model to classify bird sleep stages from EEG waves (*in prep*)

### Conference Presentations

**Xu H.**, Liu P., Dayan P, Qian N., Nonlinear interactions among face parts in facial-expression adaptation, *Society for Neuroscience*, 2011, Washington, DC

**Xu H.**, Low J., Dayan P, Qian N., Local feature processing in facial expression and face identity adaptation, *The 3rd Beijing International Symposium on Computational Neuroscience*, 2011, Beijing, China

**Xu H.**, Montaser-Kouhsari L. and Liu P., Strength of the adapter signal, not adapter discriminability, produces reduced facial expression after-effect in crowding, *Vision Science Society*, 2011, Naples, FL

**Xu H.**, Shank S., Margoliash D. and Chi Z., Automatic multiple-stage classification of sleep stages of songbirds, *Joint Statistical Meetings*, 2010, Vancouver, BC, Canada

Wu J., **Xu, H.**, Dayan P. and Qian N., Motion-gradient defined facial expressions and the nature of face representation, *Vision Science Society*, 2009, Naples, FL

**Xu H.**, Dayan P. and Qian N., The impact of crowding on low-level curvature aftereffect and high-level facial-expression aftereffect. Slide presentation, *Society for Neuroscience*, 2008, Washington, DC

**Xu H.**, Dayan P., Lipkin R. M. and Qian N., Low level curve adaptation affects High level facial expression judgments. Slide presentation, *Society for Neuroscience*, 2007, San Diego, CA

**Xu H.**, Wallisch P. and Bradley D., Neural basis of heading discrimination in macaque MSTd. Slide presentation, *Society for Neuroscience*, 2006, Atlanta, GA

### **Invited Talks**

- 2011 “Probing Cortical Hierarchy in Face Perception by Visual Adaptation”, Peking University, Beijing, China, July 13  
2011 “From Vision to Audition”, Rice University, Houston, Texas, USA, January 6

### **Reviews**

Ad Hoc External Reviewer for Journal  
*Frontiers in Quantitative Psychology and Measurement*

### **Work Experiences**

**Nanyang Technological University, Singapore**  
Assistant Professor, Division of Psychology, HSS July 2009 – present

**Columbia University, New York, NY, USA**  
Postdoctoral Fellow, Qian Lab March 2007 – March 2009

**University of Chicago, Chicago, IL, USA**  
Research Assistant, Bradley Lab 2001 – 2007

Graduate student and consultant, Department of Statistics 2002 – 2005

Teaching Assistant, Department of Psychology 2003 – 2006

Grader, Department of Statistics 2003

**Peking University, Beijing, China**  
Research Assistant, Department of Psychology 1997 – 2000

### **Awards and Fellowships**

- Doolittle-Harrison Fellowship, University of Chicago, 2006  
Graduate Tuition Fellowship and Stipend, University of Chicago, 2000 – 2004  
Far East Fund, Division of Social Sciences, University of Chicago, 2000 – 2001  
Chen Naiyi scholarship, Department of Psychology, Peking University, Beijing, China, 1997  
Outstanding Student Prize in Su Zhou city, Su Zhou, China, 1996

### **Membership**

- Member, Vision Science Society (VSS), Novato, CA, USA, 2010 – present  
Member, Society for Neuroscience (SfN), Washington, DC, USA, 2004 – present  
President, Student Psychology Association of Peking University, Peking University, Beijing, China, 1997  
Member, Student Psychology Association of Peking University, Peking University, Beijing, China, 1996 – 2000  
Member of Organization team, Challenge Cup in Science and Technology Contest in Peking University, Peking University, Beijing, China, 1997