

Chun-Chia Kung, Ph.D.

Department of Psychology, Center for the Study of Brain, Mind, and Behavior

Princeton University, Princeton NJ 08544

Phone: (609) 258-8179 Fax: (609) 258-1113

Email: chunkung@princeton.edu

EDUCATION

- May 2006** *Brown University, Providence RI*
Ph.D. in *Cognitive Science*
Advisor: Professor Michael J. Tarr
Thesis: *Expanding the FFA Debate: A Reevaluation of Recent Studies and Evidence For the Multimodal and Dynamic Fusiform Gyrus.*
- July 1994** *National Chung-Cheng University, Chia-Yi, Taiwan*
Sc.M. in *Cognitive Psychology*
Advisor: Professor Gary Chon-Wen Shyi
Thesis: *The Exploratory Investigation of Representational Momentum in the 3D space*
- May 1992** *National Cheng-Chi University, Taipei, Taiwan,*
Sc.B. in *Psychology*

RESEARCH INTERESTS

Neural correlates of face and object recognition

- Perceptual expertise
- Multimodal (e.g., audio-visual) integration

Neural correlates of perception and cognitive control in visual cortex and subcortical structure

- The role of magno- and parvo-cellular LGN in vision and attention
- Functional characteristics of LGN subdivisions in dyslexic population

PUBLICATIONS

Rossion, B., **Kung, C.-C.**, & Tarr, M. J. (2004). Visual expertise with nonface objects leads to competition with the early perceptual processing of faces in the human occipitotemporal cortex. *Proc Natl Acad Sci U S A*, *101*(40), 14521-14526.

Kung, C.-C., and Peissig, J., and Tarr, M. J. (*in press*). Is region-of-interest overlap comparison a reliable test of category specificity? *Journal of Cognitive Neuroscience*.

Kung, C. -C., & Ellis, C., and Tarr, M. J. (submitted). Face specificity vs. Perceptual expertise: competing feuds or compatible views? Insights from comparing region-of-interest and whole-brain correlation analyses in the task by other-species interaction of bird expertise

MANUSCRIPTS IN PREPARATION

Kung, C. -C., & Ellis, C. and Tarr, M. J. (in preparation). Dynamic reorganization of fusiform gyrus: long-term bird expertise reduces face selectivity.

Ellis, C., Kung, C.-C., and Tarr, M. J. (in preparation). Category-selectivity in visual cortex for birders listening to bird song.

Kung, C.-C., & Tarr, M. J. (in preparation). How does different tasks affect the face-related activation in the fusiform gyrus? A comparison of 1-back identity, 1-back location, and passive viewing task.

Kung, C.-C., Tarr, M. J. and Gauthier, I. (in preparation). Testing the assumptions of localizer approach in fMRI studies of face recognition: is independent localizer really necessary?

CONFERENCE PROCEEDINGS AND ABSTRACTS

Dynamic Reorganization of fusiform gyrus: long-term bird expertise reduces face selectivity.

Presented at the *Cognitive Neuroscience Society (CNS) Annual Meeting*, New York, NY, 2007

Responses of human Magnocellular and Parvocellular LGN to spatial frequency, temporal frequency, and stimulus contrast. Presented at the *Society of Neuroscience (SfN) Annual Meeting*, Atlanta, GA, 2006

Is ROI overlap comparison a reliable index of category specificity? Presented at the *Society of Neuroscience (SfN) Annual Meeting*, Washington, DC, 2005

An “Other-Race effect” of perceptual expertise: the interaction between task and stimulus category in bird experts. Presented at the *Vision Science Society (VSS) Annual Meeting*, Sarasota, FL, 2005

Asymmetrical Greeble training enhances FFA activation. Presented at the *10th Cognitive Neuroscience Society (CNS) Annual Meeting*, New York City, NY, 2003

How does training experience affects object processing? Presented at the *Vision Science Society (VSS) Annual Meeting*, Sarasota, FL, 2002

Can face inversion effect (FIE) be revealed by eye movements? Presented at the *9th Cognitive Neuroscience Society (CNS) Annual Meeting*, San Francisco, CA, 2002

TEACHING EXPERIENCE

Department of Cognitive and Linguistic Sciences, Brown University

2002-04 *Teaching Assistant, Introduction to Cognitive Sciences (CG1)*

- Led sessions and prepared study and test materials
- Prepared a topical lecture to enrich student learning

Teaching Assistant, Human Cognition (CG42)

- Employed topical lectures and prepared teaching supplements to enhance student understanding
- Held review sessions to ensure student preparedness

Teaching Assistant, Quantitative Methods in Psychology (CG9)

- Delivered topical lectures and prepared teaching supplements to enhance student understanding
- Crafted and graded weekly assignments to enhance student understanding

Sheridan Center for Teaching Advancement

- Participated in seminars/lectures
- Reviewed a video recording of my own teaching
- Received feedback on my teaching from observation from both Sheridan and departmental faculties

Department of Psychology, National Chung-Cheng University

1993-94 *Teaching Assistant, Experimental Methods in Psychology*

- Prepared teaching supplements and led lab exercise to enhance student understanding

RESEARCH EXPERIENCE

2006-present Department of Psychology and Center for the study of Mind, Brain, and Behavior (CSBMB), Princeton University

Post-Doctorial Research Associate

- Design fMRI experiments, analyze data, and write research reports
- Collaborate with Dr. Bruce McCandliss (Cornell) in running dyslexic populations in their visual sensitivities

Supervisor: Professor Sabine Kastner

2004-2005 Department of Cognitive & Linguistic Sciences, Brown University

Research Co-supervisor

- Taught and supervised an undergraduate honors thesis, which turned into a manuscript for publication

2002-2005 Department of Cognitive & Linguistic Sciences, Brown University

Research Assistant

- Carried out functional neuroimaging experiments on domain (e.g., bird) experts
- Trained subjects to become experts in artificial classes, and ran behavioral and neuroimaging experiments, analyzed data

1998-2000 Center for General Education, National Yang-Ming University

Research Assistant

- Studied eye-tracking method, visual attention, memory, and fMRI experimental design
- Programmed and carried out behavioral experiments, analyzed data

1994-1995 Department of Psychology, National Chung-Cheng University

Research Assistant

- Studied object recognition and visual short-term memory
- Designed, ran, and analyzed behavioral experiment data

COMPUTATIONAL EXPERIENCE:

2006-present Department of Psychology, Princeton University

- Used *Matlab* in experiment programming and data presentation
- Used *AFNI+SUMA* for fMRI data analysis

2000-2005 Department of Cognitive & Linguistic Sciences, Brown University

- Used *RSVP and PsyScript* (Mac platform) for experiment programming,
- Used *BrainVoyager* for fMRI data analysis, *Matlab* for fMRI data simulation

1998-2000 Center for General Education, National Yang-Ming University

- Used *EyeLink* system to track eye movements

1994-1995 Department of Psychology, National Chung-Cheng University

- Used 3D Studio to generate 3D artificial object renderings

Programming language: Matlab, C

Platforms: Mac, Unix, and MS-Windows

Applications: Word, Excel, SPSS, and others.

AWARDS AND SOCIETIES

- 2006-present Postdoctoral Associate, Department of Psychology and CSBMB, Princeton University
- 2005 Dissertation Fellowship, Brown University
- 2002-2004 Teaching Assistantship (and nominated for the Teaching Assistant Award by) Department of Cognitive & Linguistic Sciences, Brown University
- 2002-2004 Research Assistantship, Brown University
- 2000-2003 Taiwan Ministry of Education Scholarship for Overseas PhD Study
- 1994 Thesis Award, National Chun-Cheng University

LANGUAGES:

- Mother tongue: Mandarin Chinese
- Language competence in English

PROFESSIONAL REFERENCES:

Michael J. Tarr Department of Cognitive and Linguistic Sciences and Brain Science Program, Box 1978, Brown University, Providence RI 02912

Email: Michael_Tarr@brown.edu, phone: (401) 863-1148

Sabine Kastner Department of Psychology and The Center for Study of Brain, Mind, and Behavior, Green Hall, Princeton University, Princeton NJ 08544

Email: skastner@princeotn.edu, phone: (609) 258-0479

Bruno Rossion Cognition & Development Research Unit and Laboratory of Neurophysiology, Univerisite Catholique de Louvain, Belgium

Email: bruno.rossion@psp.ucl.ac.be, phone: +32 10 47 87 88

Jessie J. Peissig Department of Psychology, California State University, P.O. Box 34080, Fullerton, CA 92834-9480

Email: jpeissig@fullerton.edu, phone: (714) 278-8278