

Chun-Ting Hsu (Mr.)

Psychological Process Research Team, Guardian Robot Project,
RIKEN Information R&D and Strategy Headquarters, RIKEN
3rd Floor, Advanced Telecommunications Research Institute International
2-2-2 Hikaridai Seika-cho, Sorakugun, Kyoto, 619-0288, Japan
Email: chun-ting.hsu@riken.jp; TEL(O): +81-774-95-1360

ACADEMIC EDUCATION

Ph.D. (Dr. phil.) Department of Education and Psychology, Freie Universität Berlin, Germany
2010.11 – 2014.12 Thesis: *Textual emotion potential, fiction feelings, and immersion: an fMRI study testing the neurocognitive poetics model of literary reading*
Supervision: Dr. Markus Conrad and Professor Arthur M. Jacobs

Master of Science Integrative Neuroscience Master Program,
2008.10 – 2010.10 Otto-von-Guericke-University-Magdeburg, Germany
Thesis: *Neural processing of pitch variations in speech and music*
Supervision: Dr. Nicole Angenstein and Dr. André Brechmann
The Special Lab of Non-Invasive Brain Imaging,
Leibniz Institute for Neurobiology, Magdeburg, Germany

Doctor of Medicine Department of Medicine, National Taiwan University, Taiwan
1999.09 – 2006.06

EMPLOYMENT

Research Scientist Psychological Process Research Team, Team Leader: Wataru Sato,
2020.06 – Present Guardian Robot Project, RIKEN, Japan

Research Fellow Kamogawa Lab, PI: Professor Wataru Sato,
2018.08 – 2020.04 Kokoro Research Center, Kyoto University, Japan

Postdoctoral Scholar Brain, Language, and Computation Lab, PI: Professor Ping Li
2016.05 – 2018.07 Department of Psychology, College of Liberal Arts, Penn State University, USA

Postdoctoral Research Associate, PI: Professor Bhisudev Chakrabarti,
2015.02 – 2016.04 School of Psychology and Clinical Language Sciences, University of Reading, UK

Research Assistant Research Group of Dr. Markus Conrad and Professor Arthur M. Jacobs,
2010.11 – 2013.09 Department of Education and Psychology, Freie Universität Berlin, Germany

TEACHING EXPERIENCE

Spring 2017 Pennsylvania State University, Department of Psychology. Advanced Cognitive Psychology: Brain Mapping Methods; Discourse Comprehension and Production.

EXPERIMENTAL SKILLS

MRI: Functional MRI: General linear model, fixation (eye-tracking)-related fMRI
Structural MRI: Voxel-based morphometry
Functional connectivity: generalized Psychophysiological Interaction and Dynamic Causal Modeling
Machine learning: Multivariate Pattern Analysis of fMRI data using support vector machine

Physiological signals: Physiological recording using **BrainAmp** and **PowerLab**; EMG and EEG processing with **EEGLAB**; SCR processing and analysis with **PsPM** and **Ledalab**

Eye-tracker: Eye-Link 1000 Plus, Tobii Glasses 3, Tobii pro fusion, Tobii X2-60
Experiment Software: **PsychoPy**, **Presentation** (Neurobehavioral Systems), and **E-Prime**
Programming and Statistics Tools: **R/RStudio**, **Matlab**, **Python**, **SPSS**, and **JMP**

PEER-REVIEWED PUBLICATIONS

- Hsu, C-T, Sato, W, Kochiyama, T, Nakai, R, Asano, K, Abe, N, & Yoshikawa, S. (2022).** Enhanced mirror neuron network activity and effective connectivity during live interaction among female subjects. *NeuroImage*. 263, 1–19.
- Hsu, C.-T., Sato, W. & Yoshikawa, S. (2020).** Enhanced emotional and motor responses to live versus videotaped dynamic facial expressions. *Scientific Reports* 10, 16825.
- Hsu, C.-T., Clariana, R., Schloss, B., & Li, P. (2019).** Neurocognitive Signatures of Naturalistic Reading of Scientific Texts: A Fixation-Related fMRI Study. *Scientific Reports*, 9(1), 10678.
- Aryani, A., **Hsu, C.-T.**, & Jacobs, A. M. (2019). Affective iconic words benefit from additional sound–meaning integration in the left amygdala. *Hum Brain Mapp*, 40(18), 5289-5300.
- Citron, F. M. M., Cacciari, C., Funcke, J. M., **Hsu, C.-T.**, & Jacobs, A. M. (2019). Idiomatic expressions evoke stronger emotional responses in the brain than literal sentences. *Neuropsychologia*, 131, 233–248.
- Neufeld, J., **Hsu, C.-T.**, & Chakrabarti, B. (2019). Atypical Reward-Driven Modulation of Mimicry-Related Neural Activity in Autism. *Frontiers in Psychiatry*, 10(327). doi: 10.3389/fpsy.2019.00327
- Aryani, A., **Hsu, C.-T.**, & Jacobs, A. M. (2018). The Sound of Words Evokes Affective Brain Responses. *Brain Sci*, 8(6), 94.
- O'Connell, G.* , **Hsu, C.-T.***, Christakou, A., Chakrabarti, B. (2017). Shared neural mechanisms for controlling egocentric bias during perspective-taking and intertemporal choices. *Cogn Affect Behav Neurosci*, 18(1), 35–42.
- Hsu, C.-T.***, Sims, T.* , & Chakrabarti, B. (2017). How mimicry influences the neural correlates of reward: an fMRI study. *Neuropsychologia*, 116, 61-67.
- Hsu, C.-T.***, Neufeld, J.* , & Chakrabarti, B. (2017). Reduced reward-related striatal response to imitation in individuals with autism. *Eur J Neurosci*, 47(6), 610-618
- Hsu, C.-T.**, Jacobs, A. M., & Conrad, M. (2015). Can Harry Potter still put a spell on us in a second language? An fMRI study on reading emotion-laden literature in late bilinguals. *Cortex*, 63, 282-295.
- Hsu, C.-T.**, Jacobs, A. M., Citron, F. M. M., & Conrad, M. (2015). The emotion potential of words and passages in reading Harry Potter - an fMRI study. *Brain Lang*, 142, 96-114.
- Hsu, C.-T.**, Jacobs, A. M., Altmann, U., & Conrad, M. (2015). The magical activation of left amygdala when reading Harry Potter: An fMRI study on how descriptions of supra-natural events entertain and enchant. *PLoS One*, 10, e0118179.
- Hsu, C.-T.**, Conrad, M., & Jacobs, A. M. (2014). Fiction feelings in Harry Potter: Haemodynamic response in the mid-cingulate cortex correlates with immersive reading experience. *Neuroreport*, 25, 1356–1361.

* Equal contribution

PREPRINTS

Hsu, C.-T., Sato, W., Yoshikawa, S. An Investigation of the Modulatory Effects of Empathic and Autistic Traits on Emotional and Facial Motor Responses during Live Social Interactions. (*PsyArXiv*, 2022)
<https://doi.org/10.31234/osf.io/aqnrq>

Schauenburg, G., Aryani, A., **Hsu, C.-T.**, Schröder, T., Conrad, M., von Scheve, C., Jacobs, A.M. Conflict Detection In Affective Language Content: Affective Incongruity In Semantically Correct Sentences Describing Social Interactions Activates The Anterior Cingulate Cortex. (*Research Square*, 2021)
<https://doi.org/10.21203/rs.3.rs-549518/v1>

CONFERENCE CONTRIBUTIONS

Hsu, C.-T., Sato, W. & Yoshikawa, S. (2020) *Enhanced Emotional Responses to Live Facial Expressions*. Poster presented at the *Cognitive Neuroscience Society 2020 Annual Meeting*, Virtual, May 2020

Hsu, C.-T., Clariana, R., Schloss, B., & Li, P. (2019). *Neurocognitive Correlates of Scientific Text Comprehension: Individual Differences in Executive Functions, Electronic Device Usage, and Reading Habits*. Talk held in the symposium “Non-linguistic bases of language and its acquisition: Music, Mathematics, Executive Function, Information Technology, and Social Cognition” at the 42nd Annual Meeting of the Japan Neuroscience Society *NEURO2019*, Niigata, Japan, July 2019

Hsu, C.-T., Schloss, B.J., Li, P. (2017) *Individual Competence in Reading Comprehension and Fluid Intelligence Modulates Right DLPFC Activity when Reading Scientific Texts*. Poster presented at the *Ninth Annual Meeting of the Society for the Neurobiology of Language*, Baltimore, USA, November 2017

Schloss, B.J., **Hsu, C.-T., Li, P. (2017)** *Extracting Single Word Voxel Patterns from Self-Paced Reading Using Simultaneous Eye-Tracking and Multiband fMRI*. Poster presented at the *Ninth Annual Meeting of the Society for the Neurobiology of Language*, Baltimore, USA, November 2017

Schloss, B.J., **Hsu, C.-T., Li, P. (2017)** *A sensorimotor network for voluntary oculomotor function in skilled reading: From cortex to brainstem*. Poster presented at the *Cognitive Neuroscience Society 2017 Annual Meeting*, San Francisco, USA, March 2017

Hsu, C.-T.*, Neufeld, J.*, and Chakrabarti, B. (2015) *Reduced reward-related striatal response to imitation in individuals with autism*. Talk held in the nanosymposium “Individual Differences” at the Society for Neuroscience conference *Neuroscience 2015*, Chicago, USA, October 2015

Hsu, C.-T.*, Sims, T.*, Chakrabarti, B. (2015) *How mimicry influences the neural correlates of reward*. Poster presented at the *Society for Social Neuroscience 2015 Annual Meeting*, Chicago, USA, October 2015

Hsu, C.-T., Conrad, M., Citron, F. M. M., Jacobs, A. M. (2014) *The emotion potential of words in literary reading - An fMRI study*. Talk held at the *14th Conference of the International Society for the Empirical Study of Literature and Media*, Turin, Italy, July 2014

Hsu, C.-T., Jacobs, A. M., & Conrad, M. (2013) *Bilingualism and affectivity in reading: an fMRI study*. Poster presented at the *11th Symposium of Psycholinguistics*, Tenerife, Spain, March 2013

Hsu, C.-T., Jacobs, A. M., & Conrad, M. (2013) *Bilingualism and affectivity in reading: an fMRI study*. Talk held within the symposium: “Languages of Emotion” at the *Tagung experimentell arbeitender Psychologen (Conference of Experimental Psychologists)*, Vienna, Austria, March 2013

* Equal contribution

CERTIFICATES

Deep Learning, a 5-course specialization by deeplearning.ai on Coursera.

Specialization Certificate earned on February 17, 2018

Neural Networks for Machine Learning by the University of Toronto on Coursera.

Certificate earned on August 23, 2017

Machine Learning by Stanford University on Coursera. Certificate earned on July 29, 2017

AWARDS

2013/07/05 Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)
via the Excellence Cluster Languages of Emotion at Freie Universität Berlin –
Promotionsstipendium (Doctoral Scholarship) of 8,808 Euro

2022/06/25 Meiji Yasuda Mental Health Foundation Research Grant 2022 – 480,000 Yen

INVITED TALKS

2019.02.01. Smart-aging Research Center, Tohoku University, Sendai, Japan.

*Methods in Neuroimaging Research on Text Comprehension of Affective Narrative and Expository Texts.
Recent Issues in fMRI: Cluster-level Inference and Vascular Confound.*

2016.12.16. Research Center for Mind, Brain & Learning, National Chengchi University, Taipei, Taiwan.

Textual emotion potential, fiction feelings, and immersion: an fMRI study testing the neurocognitive poetics model of literary reading.

COMMUNITY OUTREACH

2017.05.15 Young Scholars of Central PA Charter School: Extended day program – Scientific Text Reading