# Chi-Lin Yu

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#### **EDUCATION**

National Taiwan University (NTU), Taipei, Taiwan

2017/2-2018/6

Degree: M.S. Psychology (Thesis: "Neural Correlates of Theory of Mind in Typically Developing Youths and Youths with Autism Spectrum Disorder")

National Cheng Kung University (NCKU), Tainan, Taiwan

2012/9-2016/7

Degree: B.S. Psychology

#### PROFESSIONAL EXPERIENCE

NTU, Language Neuroscience Laboratory (Mentor: Prof. Tai-Li Chou)

2017/2-Now

- Develop functional magnetic resonance imaging (fMRI) studies to investigate the underlying mechanism of social cognition in typical developing children.
- Identify aberrant cognitive organizations in autism spectrum disorder (ASD) patients and propose a framework for their atypical social processing.
- Understand the differences in neural correlates of semantic processing between typical developing subjects and schizophrenia patients.
- Investigate language comprehension and the corresponding neural activities in bilingual adults.
- Design a new analysis method that implement machine learning algorithms to analyze near functional infrared spectroscopy (fNIRS) data.
- Establish a model to interpret the mechanism of human empathy.

NCKU, Language Acquisition and Cognitive Development Laboratory (Mentor: Prof. Jon-Fan Hu) 2014/9-Now

- Pioneer fNIRS research in Taiwan to explore the neural mechanism of first impression formation.
- Adopt behavioral experiments in embodied perspective to probe semantic properties of emotion words.
- Develop fMRI studies to investigate the underlying relationships between ToM and humor processing.
- Establish valid and reliable scales to measure self-report empathy ability.
- Design developmental experiments to understand the interaction between ToM, empathy and social development.

NCKU, Cognitive and Affective Neuroscience Laboratory (Mentor: Prof. Der-Yow Chen)

2014/9-Now

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- Develop a hyper-scanning paradigm with multi-fMRI scanners to investigate the neural underpinnings of social interaction.
- Probe the underlying metalizing processes and cognitive abilities of playing Chinese Go from the experimental psychology and artificial intelligence perspectives.
- Investigate the relationship between perspective taking and emotion processing using interactive social decision-making tasks.

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- Design an user-friendly web application for exploratory factor analysis (EFA) by using shiny package in R
- Develop exploratory graphical tools for Event Related Potentials (ERPs) and fNIRS data analysis

NTHU (National Tsing Hua University), Center for General Education (Mentor: Prof. Shu-Hui Lee) 2018/7-Now

- Develop fMRI studies to explore the neural correlates of Chinese classifiers in typical developing children
- Design behavorial and neuroimaging experiments to investigate the aberrant neural mechanisms of Theory of Mind and emotion-related semanti cprocessing in patients with alexithymia

## **PUBLICATIONS**

Journal Articles

- Chen, D. Y., Yu, C. L., Su, C. W., Liao, K. H., & Hsiao, H. Y. (Accepted). Cognitive Abilities in the Game of Go during the Opening, Middle, and Endgame Phases: When Experimental Psychology Meets Artificial Intelligence. This paper has been accepted in *Chinese Journal of Psychology* on 2018/10/26 and will be available on 2019/01/31 (As the co-first author).
- Yu, C. L. & Chou, T. L. (Accepted). A Dual Route Model of Empathy: A Neurobiological Prospective. This paper has been accepted in *Frontiers in Psychology* on 2018/10/25 and will be available soon.
- Yu, C. L., & Sheu, C. F. (2018). EFAshiny: An User-Friendly Shiny Application for Exploratory Factor Analysis. Journal of Open Source Software, 3(22), 567.
- Yu, C. L., Wang, M. Y., & Hu, J. F. (2016). Valence processing of first impressions in the dorsomedial prefrontal cortex: a near-infrared spectroscopy study. *NeuroReport*, 27(8), 574-579.

Journal Articles: Under Review/Revision

- Yu, C. L., Chen, H. C., Yang, Z. Y., & Chou, T. L. "Multi-Time Points Analysis: A Time Course Analysis with Functional Near-Infrared Spectroscopy"
- Hu, J. F., Yu, C. L., Tsai Y. L., Hsiao, Y. R. & Chen, H. C. "The Role of Theory of Mind Ability in Verbal Humor Comprehension: A functional magnetic resonance imaging study" (As the corresponding author)

Journal Articles: In Preparation

- Yu, C. L., Lee, S. H., Gau S., & Chou, T. L. "Neural Correlates of Theory of Mind in Typically Developing Youths and Youths with Autism Spectrum Disorder"
- Yu, C. L., Causeur D., Shen, I. H., & Sheu, C. F. "ggerp: Visualization of Event-Related Brain Potentials with ggplot2"
- Yu, C. L., Wang, M. Y., & Hu, J. F. "Early Development of the Relationship between Empathy and Theory of Mind" (As the co-first author)
- Yu, C. L., Hu, J. F., Chu, C. & Chuang Y. Y. "The Impact of Facial Expressions On the Rating of Valence, Arousal, and Typicality for Positive and Negative Emotion Words: An Embodied Cognition Approach"
- Hu, J. F., Yu, C. L., Hsiao, Y. R., Chou, L. F. & Wang, P, L. "The Development of Chinese version of Empathy Quotient"

- Yu, C. L., Hwang, T. J., Chou, T. L. (2018) "Neural Changes Associated with Semantic Processing in Aged Schizophrenia", presented as a poster in the 17th International Conference on the Processing of East Asian Languages and the 9th Conference on Language, Discourse, and Cognition (ICPEAL 17 CLDC 9).
- Yu, C. L., Lee, S. H., Gau S., & Chou, T. L. (2018) "Aberrant Neural Organization of Theory of Mind in Youths with Autism", presented as a poster in the 2018 Annual Meeting of Organization for Human Brain Mapping (OHBM).
- Yu, C. L., Chen, H. C., Yang, Z. Y., & Chou, T. L. (2018) "Multi-Time Points Analysis: A Time Course Analysis with Functional Near-Infrared Spectroscopy", presented as a poster in the 3rd NTU-Kyoto University International Symposium for Cognitive Neuroscience.
- Yu, C. L. & Sheu, C. F. (2017). "EFAshiny: A shiny application for exploratory factor analysis", presented as a poster in 47th annual meeting of the Society for Computers in Psychology (SCiP).
- Yu, C. L., Causeur, D., Lee, Y. s. & Sheu, C. F. (2017). "ggerp: An R Package for Graphical Explorations of Event-Related Potentials", presented as oral presentation in a symposium of 55th Annual Taiwan Psychology Association Meeting.
- Yu, C. L., Causeur, D., Shen, I. H. & Sheu, C. F. (2016). "Using R to explore ERP data", presented as oral presentation in a symposium of 46th annual meeting of the Society for Computers in Psychology (SCiP).
- Yu, C. L., Wang, M. Y., Chen, P. W., Yap, J. Y., Chang, J. S., Hsiao, Y. R. & Hu, J. F (2015). "Using false belief task to explore the effect of empathy situation on theory of mind function", presented as a poster at the 37th Annual Cognitive Science Society Meeting.
- Chu, C., Yu, C. L., Chuang Y. Y., Tsai Y. L. & Hu, J. F. (2015). "An Embodied Cognition Approach to Studying Emotional Words: The Impact of Positive Facial Experiences on Semantic Properties Judgment", presented as a poster at the 37th Annual Cognitive Science Society Meeting.
- Tsai Y. L., Yu, C. L., Hsiao, Y. R., Cho, S. L., Chen, H. C. & Hu, J. F. (2015). "The differences of semantic features between Chinese concrete, abstract, and emotional concept", presented as a poster at the 37th Annual Cognitive Science Society Meeting.
- Chuang Y. Y., Yu, C. L., Chu, C., Tsai Y. L. & Hu, J. F. (2015) "An Embodied Cognition Approach to Studying the Impact of Negative Facial Experiences on Semantic Properties of Emotional Words", presented as a poster at the 8th Annual Conference on Embodied and Situated Language Processing.
- Chen S. C., Hu, J. F., Chuang Y. Y., Chu, C., & **Yu, C. L.** (2015). "Releasing Strength in Imagination Constructs Implicit Association of Simulated Action and Response Index", presented as a poster at the 8th Annual Conference on Embodied and Situated Language Processing.

#### TEACHING EXPERIENCE

- 2018 Teaching Assistant, Brain and Language Course (English-Taught), Mentor: Prof. Tai-Li Chou
- 2017 Teaching Assistant, General Psychology Course, Mentor: Prof. Tai-Li Chou
- 2016 Teaching Assistant, Cognitive Neuroscience Course, Mentor: Prof. Shu-Lan Hsieh
- 2016 Teaching Assistant, Assessment Practicum Developmental Psychology Course, Mentor: Prof. Jon-Fan Hu
- 2016 Teaching Assistant, Seminar on Emotion and Memory Course, Mentor: Prof. Der-Yow Chen

#### AWARDS & HONORS

2018 Best paper award for Annual Meeting of Taiwanese Society of Child and Adolescent Psychiatry

- 2017 Taiwan Government PhD Fellowship for Studying Abroad: 4 years full funding for studying PhD in U.S.
- This funding supports the best student in psychology/neuroscience domain. Only one student for each year.
- 2016 NCKU President Wei-Noon Wang Memorial Scholarship
- 2016 KYMCO Scholarship for outstanding student
- 2016 Ren-Da Industrial Park outstanding student scholarship
- 2016 Rank 1st in the class of NCKU psychology department in 2015~2016 academic year
- 2015 The title of outstanding student for the academic achievement
- 2015 Rank 1st in the class of NCKU psychology department in 2014~2015 academic year
- 2015 Tainan True Jesus Church outstanding student scholarship
- 2015 Taiwan Ministry of Science and Technology Research Scholarship (Students: Wang, M. Y., Yu, C. L., et al.; Project Number:104-2815-C-006-149-H)
- 2014 Tainan True Jesus Church outstanding student scholarship
- 2014 The second place award of posters in the Experimental Psychology Course

### **SKILLS**

Languages: Mandarin: Native Fluency; English/Taiwanese: Excellent Fluency

Experimental skill: Experimental Design, Imaging Data Analysis, Scale Design and Analysis, Statical Modeling

Computer programing: R, MATLAB, SPM, E-PRIME, HOMER, Oro.Nifti, ANTsR, fslR

#### SELECTED EXTRACURRICULAR

- 2018 Volunteer Assistant, The 17th International Conference on the Processing of East Asian Languages and the 9th Conference on Language, Discourse, and Cognition (ICPEAL 17 CLDC 9)
- 2016 Valedictorian, Department of Psychology, NCKU
- 2015 Representatives of Students in School, Department of Psychology, NCKU
- 2015 Chief Counselor, Psychology Summer Camp, NCKU
- 2015 Volunteer Assistant, The 7th Annual Taiwan Association of Clinical Psychology Meeting
- 2015 Symposium Student for resting state fMRI, Mind Research and imaging center, NCKU
- 2015 Symposium Student for Cognitive Neuroscience of Aging, Mind Research and imaging center, NCKU
- 2014 Activity Leader, The Night of Psychology, NCKU
- 2014 Execute Officer, Psychology Freshman Camp, NCKU
- 2014 Chief Counselor, Kaohsiung Area Alumni Association, NCKU
- 2013 Leader, The Week of Psychology, NCKU
- 2013 Member, Students Association in department of psychology, NCKU
- 2013 Program Director, Psychology Summer Camp, NCKU

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