

# TIFFANY WEITING HSU

Curriculum Vitae

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## RESEARCH INTERESTS

My research examines how cultural values influence human behavior on social media, using a variety of machine learning, natural language processing, and experimental methods. Currently, my research focuses on understanding how people's values around emotions shape the types of content they engage with, post, and spread online, and how to utilize this knowledge in designing algorithms that combat fake news and other forms of misinformation. In addition to empirical work, I develop tools to facilitate cross-cultural big data research, such as sentiment analysis tools for non-English texts.

## EDUCATION

- 2017- **Stanford University**, Stanford, CA  
Ph.D., Psychology (Affective Science)  
Advisors: Johannes Eichstaedt & Jeanne Tsai
- 2012-2016 **Yale University**, New Haven, CT  
B.A., Computer Science and Psychology  
Advisor: Marvin Chun

## WORK POSITIONS

- Jun. 2019 - **Quantitative User Experience Research Intern, Google**, New York, NY  
Sep. 2019
- Developed and built a methodology and intuitive tool to analyze open-text user feedback in an automated and context-specific way.
  - Utilized Python packages for text processing and sentiment analysis such as nltk and gensim.
  - Analyzed and derived insights from 20,000+ feedback texts on a corporate advertising platform.
  - Communicated continuously across UX, engineering, and product management teams to ensure the tool is robust and useful.
- 2015-2017 **Research Assistant and Lab Manager (2016-), Yale Visual Cognitive Neuroscience Lab**  
**Director: Marvin Chun**
- Published six papers (1 first-author, 2 second-author) in top neuroscience journals.
  - Applied machine-learning and statistical models on whole-brain networks to predict psychological constructs, particularly attention and personality traits.
  - Independently developed a data visualization tool using Matlab to more concisely and clearly represent brain predictive networks now used widely by the lab in publications.

## REFEREED JOURNAL PUBLICATIONS

**Hsu, T. W.**, Niiya, Y., Thelwall, M., Ko, M., Knutson, B., Tsai, J. L. (in press) Social media users produce more affect that supports cultural values, but are more influenced by affect that violates cultural values. *Journal of Personality and Social Psychology*.

Scheinost, D., **Hsu, T. W.**, Avery, E. W., Hampson, M., Constable, R. T., Chun, M. M., Rosenberg, M. D. (2020). Connectome-based neurofeedback: A pilot study to improve sustained attention. *NeuroImage*, 22, 116684.

**Hsu, W.-T.**, Rosenberg, M. D., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Resting-state functional connectivity predicts neuroticism and extraversion in novel individuals. *Social Cognitive Affective Neuroscience*, 13(2), 224-232.

Lin, Q., Rosenberg, M. D., Yoo, K., **Hsu, W.-T.**, O'Connell, T. P., Chun, M. M. (2018). Resting-state functional connectivity predicts cognitive impairment related to Alzheimer's disease. *Frontiers in Aging Neuroscience*, 10, 94.

Yoo, K., Rosenberg, M. D., **Hsu, W.-T.**, Zhang, S., Li, C.-S.R., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Connectome-based predictive modeling of sustained attention: Comparing different functional connectivity measures and prediction methods across datasets. *Neuroimage*, 167, 11-12.

Rosenberg, M. D., **Hsu, W.-T.**, Scheinost, D., Constable, R. T., Chun, M. M. (2018). Connectome-based models predict separable components of attention in novel individuals. *Journal of Cognitive Neuroscience*, 30(2): 160-173.

Rosenberg, M. D., Zhang, S., **Hsu, W.-T.**, Scheinost, D., Finn, E. S., Shen, X., Constable, R. T., Li, C.- S. R., Chun, M. M. (2016). Methylphenidate modulates functional network connectivity to enhance attention. *Journal of Neuroscience*, 36(37): 9547-9557.

## Manuscripts in the Oven

**Hsu, T. W.**, Knutson, B., Tsai, J. L. (in prep). Anger and disgust are produced and spread more for extreme left and right leaning news media than balanced news media.

## REFEREED CONFERENCE PUBLICATIONS

Luo, M., **Hsu, T. W.**, Park, J. S., Hancock, J. (2020). Emotional Amplification During Live-Streaming: Evidence from Comments During and After News Events. *Proc. ACM Hum.-Comput. Interact. 1, CSCW*, 19 pages. <https://doi.org/10.1145/1122445.1122456>

## RESEARCH GRANTS

2020-2021 **Stanford Institute for Human-Centered Artificial Intelligence Seed Grant**

*Title:* Building Culturally-Resonant AI to Fight Affective Propaganda

*Total amount:* \$75,000

2020-2021 **Stanford Ethics, Society, and Technology Hub Seed Grant**

*Title:* Can Affective Digital Defense Tools Be Used to Combat Polarization and the Spread of Misinformation Across Cultures?

*Total amount:* \$22,500

## CONFERENCE PRESENTATIONS

**Hsu, T. W.**, Niiya, Y., Thelwall, M., Knutson, B., Ko, M., Tsai, J. L. (2020). On Social Media, People Post Emotions That Conform to Cultural Values But Catch Emotions That Violate Them. Poster presented at the *Psychology of Media and Technology Preconference at Society for Personality and Social Psychology*, New Orleans, LA.

**Hsu, T. W.**, Niiya, Y., Thelwall, M., Knutson, B., Ko, M., Tsai, J. L. (2020). On Social Media, People Post Emotions That Conform to Cultural Values But Catch Emotions That Violate Them. Poster presented at *Society for Personality and Social Psychology*, New Orleans, LA.

**Hsu, T. W.**, Knutson, B., Niiya, Y., Tsai, J. L. (2019). Social media emotion content and spread differ across cultures. Poster presented at *Society for Affective Science*, Boston, MA. Selected for Poster Highlight talk.

**Hsu, T. W.**, Knutson, B., Niiya, Y., Tsai, J. L. (2019). Social media emotion content and spread differ across cultures. Poster presented at the *Psychology of Media and Technology Preconference at Society for Personality and Social Psychology*, Portland, OR.

**Hsu, T. W.**, Knutson, B., Niiya, Y., Tsai, J. L. (2019). Social media emotion content and spread differ across cultures. Poster presented at *Society for Personality and Social Psychology*, Portland, OR.

**Hsu, W.-T.**, Rosenberg, M. D., Scheinost, D., Finn, E. S., Constable, R. T., Chun, M. M. (2017). Resting-state functional connectivity in large-scale brain networks predicts neuroticism and extraversion in novel individuals. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

### **Contributed Conference Presentations**

Luo, M., **Hsu, T. W.**, Park, J. S., Hancock, J. (2020, May 21-25). Live Streaming Intensifies Emotions: Evidence from Live and Retrospective Comments on YouTube. Paper to be presented at the *International Communication Association Annual Conference*, Gold Coast, Australia. <https://www.icahdq.org/page/ICA2020>

Rosenberg, M. D., Scheinost, D., **Hsu, W.-T.**, Constable, R. T., Chun, M. M. (2017). Real-time neurofeedback of functional connectivity in large-scale brain networks that predict attention Talk presented at *Society for Neuroscience*, Washington, DC.

Yoo, K., Rosenberg, M. D., **Hsu, W.-T.**, Zhang, S., Li, C.-S. R., Scheinost, D., Constable, R. T., Chun, M. M. (2017). Connectome-based predictive modeling (CPM) of sustained attention: Comparing different methods for feature selection and prediction. Talk to be presented at *Society for Neuroscience*, Washington, DC.

Lin, Q., Rosenberg, M. D., Yoo, K., **Hsu, W.-T.**, O'Connell, T. P., Chun, M. M. (2017). Resting-state functional connectivity in large-scale brain networks predicts Alzheimer's disease symptom severity in novel individuals. Poster to be presented at *Society for Neuroscience*, Washington, DC.

Rosenberg, M. D., Scheinost, D., **Hsu, W.-T.**, Finn, E. S., Constable, R. T., Chun, M. M. (2017). Large-scale functional connectivity networks predict individual differences and fluctuations in attention. Talk presented at *Organization of Human Brain Mapping*, Vancouver, BC, Canada.

Rosenberg, M. D., **Hsu, W.-T.**, Scheinost, D., Finn, E. S., Constable, R. T., Chun, M. M. (2016). Connectome-based fMRI models predict separable components of attention in novel individuals. Talk presented at *Object Perception, Attention, & Memory*, Boston, MA.

Rosenberg, M. D., Zhang, S., **Hsu, W.-T.**, Scheinost, D., Finn, E. S., Shen, X., Constable, R. T., Chun, M. M. (2015). Resting-state brain connectivity predicts ADHD symptom severity in individual children. Poster presented at *Organization for Human Brain Mapping*, Honolulu, HI.

### **AD HOC REVIEW**

*Cognitive, Affective, & Behavioral Neuroscience*

*Social Cognitive and Affective Neuroscience*

*Scientific Reports*

## **TEACHING ASSISTANTSHIPS**

- Winter 2018-2019 Psych10/Stats60: Introduction to Statistical Methods
- Spring 2018-2019 Psych80: Introduction to Personality and Affective Science  
*Guest Lecture:* What does social media say about your personality and emotions?
- Autumn 2019-2020 Psych90: Introduction to Clinical Psychology
- Winter 2019-2020 Psych80: Introduction to Personality and Affective Science  
*Guest Lecture:* What does social media say about your personality and emotions?
- Spring 2019-2020 Psych70/Socio2: Self and Society: Introduction to Social Psychology

## **OUTREACH AND DEPARTMENTAL SERVICE**

- 2018-2019 Co-organizer for Affective Science Seminar
- 2018-2019 Stanford Department of Psychology graduate admissions committee

## **PROFESSIONAL MEMBERSHIPS**

- Society for Personality and Social Psychology
- Society for Affective Science

## **HONORS AND REWARDS**

- 2019 Selected for *Society for Affective Science* Poster Highlight Talk.
- 2015 Yale Dean's Research Fellowship in the Physical Sciences
- 2013 Yale Dean's Freshman Research Fellowship in Science and Engineering

## **SKILLS**

- Computer: Python, R, Matlab, C, Shell scripting, web development (HTML, CSS, Javascript), SQL.
- Language: Native fluency in Mandarin Chinese. Working knowledge in Spanish.