

Xiaoyan Wu

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Postdoc at the Psychiatrische Universitätsklinik Zürich, University of Zürich, Zurich, Switzerland

Work Experience

University of Zürich, Psychiatrische Universitätsklinik Zürich **2024/12-Present**
Postdoctoral researcher in Computational Psychiatry *Zurich, Switzerland*
• Supervisor: Prof. Philipp Homan.

Education

Beijing Normal University, School of Psychology **2020/09-2024/10**
PhD in Cognitive Neuroscience (Cum-GPA: 3.38/4.0) *Beijing, China*
• Supervisor: Prof. Chao Liu, Co-Supervisor: Prof. Hang Zhang (Peking University)

University of Zurich, Zurich Center for Neuroeconomics **2021/12-2024/01**
PhD in Neuroeconomics (Exchange) *Zurich, Switzerland*
• Supervisor: Prof. **Christian C. Ruff** (This is a two-year exchange program as part of my PhD. I study the neurocomputational components of trust during the exchange)

Shenzhen University, Department of Psychology **2017/09-2020/07**
MSc in Psychology (Cum-GPA: 3.28/4.0) *Shenzhen, China*
• Supervisor: Prof. Yuejia Luo

Zhuhai College of Jilin University, Business School **2015/09-2017/07**
BS in Economics and Business Administration (Cum-GPA: 3.26/4.0) *Zhuhai, China*

Training

MRI User Training with Qualified Certificate **2022/06-2023/06**
University Hospital Zurich *Zurich, Switzerland*

The 2023 Neuroeconomics Summer School **2023/07**
University of Pennsylvania *Philadelphia, PA, USA*

Computational Psychiatry Course Zurich 2022 **2022/09**
University of Zurich *Zurich, Switzerland*

Publications

Under-review:

1. **Wu, X.**, Fu, H., Aydogan, G., ...& Liu, C.(2024).The Self-Interest of Adolescents Overrides Cooperation in Social Dilemmas. *Currently under peer review at eLife*. [DOI](#)

Published:

2. **Wu, X[#].**, Ren[#], X., Liu, C., & Zhang, H.(2024). The motive cocktail in altruistic behaviors. *Nature Computational Science*. [DOI](#)
3. **Wu, X.**, Zhu, R., & Liu, C.(2024). A Cognitive Computational Mechanism for Mutual Cooperation: The Roles of Positive Expectation and Social Reward. *Acta Psychologica Sinica (Best Chinese Journal)*. [DOI](#)
4. Wang, H., **Wu, X.**, ... & Qin, S. (2024). Acute stress during witnessing injustice shifts third-party interventions from punishing the perpetrator to helping the victim. *PLOS Biology* [DOI](#)

5. Jin, K., Wu, J., Zhang, S., **Wu, X.**, Gu, R., Liu, Chao. (2024). Observing heroic behavior and its gender difference in immersive virtual environments. *Proceedings of the National Academy of Sciences*. DOI
6. **Wu, X.**, Zhu, R., Gong, X., Luo, Y., & Liu, C.(2023). Social incentives foster cooperation through guilt aversion: an effect that diminishes with primary psychopathic traits. *PsyCh Journal*. DOI
7. **Wu, X[#].**, Feng, C[#]., He, Z., Gong, X., Luo, Y. J., & Luo, Y. (2019). Gender-specific effects of vasopressin on human social communication: An ERP study. *Hormones and behavior* DOI
8. **Wu, X.**, Xu, P., Luo, Y. J., & Feng, C. (2018). Differential effects of intranasal vasopressin on the processing of adult and infant cues: an ERP study. *Frontiers in human neuroscience* DOI
9. **Wu, X.**, Feng, C., Xu, J., He, Z., Luo, Y., & Luo, Y. (2019). The Effects of vasopressin on human social behaviors. *Advances in Psychological Science (Top Chinese Journal)*, DOI

Selected Poster Presentations

- **Wu, X.**, Ren X., Liu, C., & Zhang, H. The Neural Signature of "Motive Cocktail" in Altruistic Behavior *21st Annual Society for Neuroeconomics Meeting, Cascais, Portugal, 2024.*
- **Wu, X.**, Bürgi, N., Ruff, C. Cognitive Components of Trust. *Society for Social Neuroscience annual meeting, Tsukuba, Ibaraki Prefecture, Japan, 2024.*
- **Wu, X.**, Ren X., Liu, C., & Zhang, H. The "motive cocktail" in third-party punishment and helping. *21st Annual Society for Neuroeconomics Meeting, Vancouver, British Columbia, Canada, 2023.*
- **Wu, X.**, Bürgi, N., Ruff, C. Cognitive Components of Trust. *21st Annual Society for Neuroeconomics Meeting, Vancouver, British Columbia, Canada, 2023.*

Teaching

- Lecturer of Methods in Cognitive Neuroscience at **University of Zurich** 2023/08/10
A lecture aiming to provide a comprehensive introduction to functional Magnetic Resonance Imaging (fMRI) in cognitive neuroscience for high school students preparing for university.
- Teaching assistant of Social and Affective Neuroscience at **Beijing Normal University** 2020/09-2020/01
Teaching assistant to prof. Chao Liu's Social and Affective Neuroscience course for graduate students.
- Invited lecture at **National University of Singapore** 2024/07
Invited to teach Methods in Psychological Research and Neuroscience at NUS Business School for a summer school.

Advising and Mentorship

- Advisor of Bachelor's Thesis at **Beijing Normal University** 2021/06-2022/07
Title: The computational mechanisms underlying the effect of favoritism on reciprocity decision-making (Outstanding undergraduate dissertation).
- Advisor of Bachelor's Thesis at **Beijing Normal University** 2023/06-2024/07
Title: Dynamic learning in human-AI cooperative interaction: a cognitive computational approach (Outstanding undergraduate dissertation).

Research Grants

- Key Projects of Shenzhen University Innovation Development Grant 2019-2020
PI, \$2300
- Beijing Normal University Doctoral Interdisciplinary Grant 2019-2020
co-PI, \$1500

Invited Talks

- The Socioeconomic Motives for Third-party Punishment and Help
Invited by Prof. Kazuhisa Takemura at *Department of Psychology, Waseda University* **2024/03**
- The "Motive Cocktail" in Altruistic Behaviors
Invited by Prof. Yohsuke Ohtsubo
at *Graduate School of Humanities and Sociology, University of Tokyo* **2024/03**
- Neurocomputational Components of Trust
Invited by prof. Brian Knutson at *Department of Psychology, Stanford University* **2024/01**
- The "Motive Cocktail" in Altruistic Behaviors
Invited by prof. Philippe Tobler at *Department of Economics, University of Zurich* **2022/12**
- The Motivations Underlies Human Third-party Punishment and Help
Invited by prof. Hang Zhang at *Department of Psychology, Peking University* **2022/08**

Selected Awards

- Best PhD Dissertation Award (Top 1%) **2025**
Beijing Normal University, Beijing, China.
- S4SN Travailing Award **2024**
Travailing Award of Society for Social Neuroscience annual meeting, Tsukuba, Japan.
- Outstanding Graduates (Top 1%) **2020**
Outstanding graduate of Shenzhen University.
- The First Prize Scholarship (Top 10%) **2019**
An academic award that recognizes outstanding achievements during my master's studies.
- National scholarship (Top 3%) **2018**
The highest academic award given by the Chinese government to exceptional undergraduate and postgraduate students.

Skills

- Programming: MATLAB, Python, and R. [View code samples.](#)
- EEG, MEG, fMRI, and eye-tracking.
- Excellent communication skills in spoken and written English.
- Native speaker of Mandarin, Cantonese, and Hokkien; A1 level in German.