

Shengjie Xu

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Academic Positions

02/2026-present Julius-Maximilians-Universität, Würzburg
Postdoctoral Researcher Supervisor: Dr. Mona Garvert

10/2025-01/2026 Department of Experiment Psychology, Ghent University
Postdoctoral Researcher Supervisor: Dr. Senne Braem

Education

10/2020-09/2025 Department of Experiment Psychology, Ghent University
Ph.D Student Supervisor: Dr. Senne Braem
Co-supervisor: Dr. Tom Verguts

07/2021-08/2021 Computational Neuroscience summer course,
Neuromatch Academy

09/2016-09/2017 Department of Psychology, University of York
M.Sc. in Cognitive Neuroscience in Psychology
Supervisor: Dr. Keise Izuma

09/2012-07/2016 Department of Psychology and Cognitive Science,
East China Normal University
B.Sc. in Psychology, (Top 10% in class, Honoured)

Academic Experience

06/2025-08/2025. Center for Molecular and Behavioral Neuroscience
(CMBN), Rutgers University
Visiting Scholar Supervisor: Dr. Michael W. Cole
Dr. Ravi Mill

10/2017-10/2019 NYU-ECNU Institute of Brain and Cognitive Science,
NYU Shanghai
Research Intern Supervisor: Dr. Jeffrey C. Erlich
Dr. Evgeniya Lukinova

Publications

Xu, S., Wen, T., Egner, T., Verguts, T., & Braem, S. (2025). Learning and using different task updating strategies require extensive practice. In *Proceedings of the Annual Meeting of the*

Cognitive Science Society (Vol. 47).

Vasta, N., **Xu, S.**, Verguts, T., & Braem, S. (2025). A shared temporal window of integration across cognitive control and reinforcement learning paradigms: A correlational study. *Memory & Cognition*. <https://doi.org/10.3758/s13421-024-01626-4>

Braem, S., Chai, M., Held, L. K., & **Xu, S.** (2024). One cannot simply 'be flexible': Regulating control parameters requires learning. *Current Opinion in Behavioral Sciences*, 55, 101347. <https://doi.org/10.1016/j.cobeha.2023.101347>

Xu, S., Simoens, J., Verguts, T., & Braem, S. (2024). Learning where to be flexible: Using environmental cues to regulate cognitive control. *Journal of Experimental Psychology: General*, 153(2), 328–338. <https://doi.org/10.1037/xge0001488>

Articles under review and preprints

Xu, S., Chai M., Liefoghe, B., Abrahamse, E., & Braem, S. (2025). Learning when to learn: Context-specific instruction encoding. OSF. https://osf.io/preprints/psyarxiv/7tvx3_v2

Xu, S., Erlich, J., & Lukinova, E. (2025, under review at *Imaging Neuroscience*). Intertemporal choice across short and long time horizons: an fMRI study.

Xu, S., Verguts, T., & Braem, S. (2024, under revision at *Communications Psychology*). Cognitive flexibility versus stability via activation-based and weight-based adaptations. OSF. <https://doi.org/10.31234/osf.io/w8meh>

Awards

1. CWO Ghent University congress grant, € 800 (2025)
2. FWO travel grant for a long stay abroad, € 4752 (2025)
3. FWO grant for participation in a conference abroad (2024)
4. CWO Ghent University congress grant, € 1000 (2024)
5. CWO Ghent University congress grant, € 800 (2023)
6. International student scholarship, University of York, £ 1000 (2017)
7. Honoured Graduates of Shanghai (2016)
8. Scholarship for excellent students, East China Normal University, ¥ 2000 (2016)
9. National College Student Innovation and Entrepreneurship Training Program, ¥ 8000 (2015)

Conference Talks

1. Tagung experimentell arbeitender Psycholog: innen (TeaP), Trier, Germany, invited talk in the symposium of Current directions in free-choice paradigms I: What we can learn from giving more control to the participant. (March 2023)
2. The 20th NVP Dutch Society for Brain and Cognition Winter Conference, Egmond aan Zee, Netherlands, talk: Learning of Cognitive Control during Task Switching in Recurrent Neural Networks. (December 2023)
3. A Bunch of Control Datablitzes (ABCD), online: Contextual Modulation of Cognitive Flexibility: Learning Where to Be Flexible. (May 2022)

Conference Presentations

1. Xu, S., Wen, T., Egnér, T., Verguts, T., & Braem, S. (2025). Learning and using different task

- updating strategies require extensive practice. Poster presented at the Computational Cognitive Neuroscience Society Meeting (CCN) 2025, Amsterdam, Netherlands.
2. Xu, S., Wen, T., Egner, T., Verguts, T., & Braem, S. (2025). Learning and using different task updating strategies require extensive practice. Proceeding paper accepted for poster presentation at the Annual Meeting of the Cognitive Science Society, San Francisco, USA.
 3. Xu, S., Verguts, T., & Braem, S. (2024). Learning of Cognitive Control during Task Switching in Recurrent Neural Networks. Poster accepted by the Psychonomic Society's 65th Annual Meeting, New York, USA.
 4. Xu, S., Verguts, T., & Braem, S. (2024). Learning of Cognitive Control during Task Switching in Recurrent Neural Networks. Poster presented at the symposium: Integrative Perspectives on Conflict and Control, Tübingen, Germany.
 5. Xu, S., Verguts, T., & Braem, S. (2023). Learning of Cognitive Control during Task Switching in Recurrent Neural Networks. Poster presented at the Computational Cognitive Neuroscience Society Meeting (CCN) 2023, Oxford, UK.
 6. Xu, S., Verguts, T., & Braem, S. (2023). Learning of Cognitive Control during Task Switching in Recurrent Neural Networks. Poster presented at the 11th Symposium on Biology of Decision-Making (SBDM), Paris, France.
 7. Xu, S., Simoens, J., Verguts, T., & Braem, S. (2022). Contextual Modulation of Cognitive Flexibility: Learning Where to Be Flexible. Poster presented at the 18th Dutch Society for Brain and Cognition (NVP), Egmond aan Zee, Netherlands.
 8. Xu, S., Simoens, J., Verguts, T., & Braem, S. (2022). Contextual Modulation of Cognitive Flexibility: Learning Where to Be Flexible. Poster presented at the 22nd Conference of the European Society for Cognitive Psychology (ES COP), Lille, France.
 9. Xu, S., Simoens, J., Verguts, T., & Braem, S. (2022). The Role of Contextual Cues in Regulating Cognitive Flexibility. Poster presented at the annual meeting of the Belgian Association for Psychological Sciences (BAPS), Leuven, Belgium.
 10. Xu, S., Simoens, J., Verguts, T., & Braem, S. (2022). Contextual modulation of cognitive flexibility. Poster presented at the conference Cognitive Control and Performance Monitoring (CCPM), Marseille, France.

Teaching Activities

Master thesis

- Co-supervisor, The role of awake replay in learning where to be cognitively flexible, Marie Van de Walle, 2024
- Co-supervisor, Learning cognitive flexibility from VR-environments, Wout Coolen, 2023

Teaching assistant

- 2022-2024, Modelling of cognitive processes, Prof. Tom Verguts

Skills

- Programming: Python, R, MATLAB, Shell scripting
- Statistical Modeling & Machine Learning: Stan, TensorFlow
- Neuroimaging Analysis: SPM, FSL, Nilearn
- Stimulus Presentation: PsychoPy, jsPsych