Jeshua J. **Tromp**

Cognitive Neuroscientist

Nijmegen, Netherlands

jeshuatromp.com | GitHub

RESEARCH PROFILE

I am a postdoctoral research fellow in cognitive neuroscience, building an independent research program at the intersection of **nutrition**, the **gut microbiome**, and **brain health**. A central focus of this program is **brain iron metabolism**, which I investigate using large multimodal datasets and **advanced statistical modeling**, examining both iron deficiency as a driver of mental and cognitive **fatigue** and iron overload as a factor in **neurodegeneration**.

RESEARCH POSITIONS

2024 - current
Nijmegen, Netherlands

Postdoctoral Researcher
Donders Institute, Medical Neuroscience, Radboudumc
Funded by Horizon Europe

2019 - 2024
Leiden, Netherlands

Research Scientist
Cognitive Psychology Unit, Leiden University
Funded by NWO VICI

2019
Stockholm, Sweden

Research Intern
Department of Neuroscience, Karolinska Institutet

2018
Utrecht, Netherlands

Research Intern
Psychiatry Department, UMC Utrecht

2017
Utrecht, Netherlands

Research Intern
Translational Neuroimmunology, Wilhelmina Kinderziekenhuis

EDUCATION

2019 - 2025
Leiden, Netherlands

Ph.D. Cognitive Neuroscience
Leiden University

2017 - 2019
Utrecht, Netherlands

Master Neuroscience & Cognition
Utrecht University

2014 - 2016
Utrecht, Netherlands

Science Honours Academy
Utrecht University

2013 - 2016
Utrecht, Netherlands

Honours Bachelor College of Pharmaceutical Sciences
Utrecht University

SKILLS & PROFICIENCIES

Programming	Python, R, BASH, HTML, git, GitHub
Teaching	Course development, workgroup leader, lectures (consciousness, cognitive robotics, cognitive modeling, experimental methods, philosophy of science)
Scientific outreach	Blog hersenvoer.substack.com

PUBLICATIONS

Lopez-Sanchez, L., Papalini, S., **Tromp, J.**, Albayay, J. & Kohn, N. Interaction of physical activity and gut-brain axis: relevance for obesity. *Reviews in Endocrine and Metabolic Disorders* (in press).

Tromp, J., Nieuwenhuis, S., Lucchi, F., Cohen, J. D. & Jongkees, B. A normative account of the trade-off between cognitive stability and flexibility in task switching. *PsyArXiv* (2026) doi:10.31234/osf.io/5rx9v_v2.

Tromp, J., Wurm, F., Lucchi, F., de Kleijn, R. & Nieuwenhuis, S. Phasic alertness impairs cognitive control by amplifying competition between evidence accumulators. *J. Neurosci.* 45, e1595242025 (2025). doi:10.1523/JNEUROSCI.1595-24.2025.

Tromp, J., Nieuwenhuis, S. & Murphy, P. The effects of neural gain on reactive cognitive control. *Comput. Brain Behav.* 5, 422-433 (2022). doi:10.1007/s42113-022-00140-7.

Judd, N., Sauce, B., Wiedenhoeft, J., **Tromp, J.**, Chaarani, B., Schliep, A., van Noort, B., Penttila, J., Grimmer, Y., Insensee, C., Becker, A., Banaschewski, T., Bokde, A. L. W., Quinlan, E. B., Desrivieres, S., Flor, H., Grigis, A., Gowland, P., Heinz, A., et al. Cognitive and brain development is independently influenced by socioeconomic status and polygenic scores for educational attainment. *Proc. Natl. Acad. Sci. U. S. A.* 117, 12411-12418 (2020). doi:10.1073/pnas.2001228117.

Willemen, H. L. D. M., Kavelaars, A., Prado, J., Maas, M., Versteeg, S., Nellissen, L. J. J., **Tromp, J.**, Gonzalez Cano, R., Zhou, W., Jakobsson, M. E., Malecki, J., Posthuma, G., Habib, A. M., Heijnen, C. J., Falnes, P. O. & Eijkelkamp, N. Identification of FAM173B as a protein methyltransferase promoting chronic pain. *PLoS Biol.* 16, e2003452 (2018). doi:10.1371/journal.pbio.2003452.

CONFERENCES

2026 (forthcoming) — **Organization for Human Brain Mapping**
Bordeaux, France

2025 — **Hereditary Plenary Meeting**
Barcelona, Spain

2025 — **Cognitive Science Society**
Rotterdam, Netherlands

2025 — **NVP Winter Conference for Brain and Cognition**
Egmond aan Zee, Netherlands

2024 — **NVP Winter Conference for Brain and Cognition**
Egmond aan Zee, Netherlands

2023 — **Cognitive Computational Neuroscience**
Oxford, England

2022 — **NVP Winter Conference for Brain and Cognition**
Egmond aan Zee, Netherlands

2021 — **NVP Winter Conference for Brain and Cognition**
Egmond aan Zee, Netherlands

AWARDS

2026 — **Donders Collaboration Grant**
10,000 euros