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Robert Tromm

Curriculum vitae

Education

2021–2023 **MSc Cognitive and Clinical Neuroscience**, *Maastricht University*, *8.45/10*
Supervised by: Dr. Jan Ramaekers, Dr. Morten Kringelbach

2016–2020 **BS Neuroscience**, *Brandeis University*, *Cum laude*
Supervised by: Dr. Eve Marder

Honors and awards (partial list)

2024 **Usona Institute Scholarship**, *Usona Institute*

2024 **Polaris Fellowship**, *Entrepreneur First*

2023 **Usona Institute Scholarship**, *Usona Institute*

2020 **Justice Brandeis Scholarship**, *Brandeis University*

2016 **AHEPA Scholarship**, *American Hellenic Educational Progressive Association*

2016 **Academic and Adversity Scholarship**, *Southern Alumni Scholarship Foundation*

Skills

Programming MATLAB, Python, Java, C++, R, Bash, neuroimaging frameworks (SPM/FSL/FreeSurfer)

Computational Neuroimaging analysis, whole-brain modeling, numerical simulation, information decomposition, unsupervised data analysis, artificial neural networks

Soft skills Project management, public speaking, networking, collaboration

Experience

Research

2024–Present **Research Engineer**, *Karalis Lab*, Paris Brain Institute, Institut du Cerveau
Causal decoupling in neuromodulatory rhythms

2023 **Visiting Researcher**, *Centre for Eudaimonia and Human Flourishing*, Department of Psychiatry, University of Oxford
Thesis: Changes in brain hierarchy following acute and chronic use of DMT and cannabis
- Analyzed changes in functional hierarchy using whole-brain modeling and information decomposition.

2022–2023 **Research Assistant**, *Ramaekers Lab*, Maastricht University
fMRI preprocessing pipeline development

2020–2021 **Research Assistant**, *Novamind*
Analysis of studies on emotion-focused ketamine-assisted psychotherapy in eating disorders

2019–2020 **Undergraduate Researcher**, *Marder Lab*, Brandeis University
Thesis: Variability in homeostatic tuning rules produces diverse correlations in ion channels
- **Key finding:** Model neurons express variability in mRNA- and ion channel-level maximal conductance across neurons of the same cell type through differential regulation of ion channel associated mRNA transcription rates.
- Implemented and analyzed 2 homeostatic control mechanisms in C++ for use with Xolotl, improving performance by 3x versus the gold-standard simulator, NEURON.

2018–2019 **Undergraduate Researcher**, *Miller Lab*, Brandeis University
Neuronal homeostasis, dynamical systems theory

Professional

2020-2022 **Founder and CTO**, *Psygaia*
Educational programs for psychedelic science and therapy

2019-2021 **Coordinator**, *Intercollegiate Psychedelics Network*
Research & Professional Development
- Organized first iteration of PsychedelX, a virtual conference and talk competition.

Conferences and Speaking Opportunities

2023 **Awareness Lectures on Psychedelic Science**, *Geneva*, Poster
'The anarchically organised brain: changes in functional hierarchical organisation after acute and chronic use of ayahuasca and DMT'

2020 **PsychedelX**, *Online*, Panel moderator
Industry leaders on working in the psychedelic industry

2020 **Intercollegiate Psychedelics Summit**, *Harvard University*, Organiser

2019 **SciFest IX**, *Brandeis University*, Poster
Dual homeostatic mechanisms can reproduce diverse ion channel correlations

Workshops and Certifications

2024 **Mediterranean Society for the Study of Consciousness Winter School**, *Catalunya*

2020 **Neuromatch Academy Computational Neuroscience**, *Online*