TURAN ORUJLU

Philosophenweg 81, 72076 Tübingen
+49 (0) 176-29770635 ⋄ turan.orujlu@tuebingen.mpg.de

EDUCATION

International Max Planck Research School for Intelligent Systems *December 2022 - Present*
Doctor of Philosophy Candidate
Supervisors: Charley M. Wu and Martin V. Butz

University of Tübingen, Tübingen, Germany *November 2020 - September 2022*
Master of Science, Neural Information Processing

University of Osnabrück, Osnabrück, Germany *April 2016 - November 2020*
Bachelor of Science, Cognitive Science

University of Pennsylvania, Philadelphia, PA, USA *September 2010 - December 2013*
Bachelor of Arts, Mathematical Economics
Minor: Chemistry

RESEARCH INTERESTS

Cognitively Inspired Artifical Intelligence, Model-based Reinforcement Learning, Causality, Intuitive Physics, Compositional Reasoning, Mechanistic Interpretability

POSTERS AND PRESENTATIONS

Reframing attention as a reinforcement learning problem for causal discovery

· Causal RL workshop at the RLC 2025 (oral) *Edmonton, AB, Canada. August 2025*

Intuitive Physics through the Lens of Pearl's Causal Hierarchy

· Machine Learning in Science Conference *Tübingen, Germany. July 2024*

VividDreamer: Tokenized world model with stochastic attention

· Machine Learning in Science Conference *Tübingen, Germany. July 2023*
· Analytical Connectionism Summer School *London, UK. August 2023*

RESEARCH EXPERIENCE

Tübingen AI Center, University of Tübingen *December 2022 - Present*
Research Assistant, Human and Machine Cognition Lab

· Conducting research towards completion of the doctoral degree requirements

Max Planck Institute for Biological Cybernetics *November 2021 - November 2022*
Research Assistant, Computational Neuroscience Department

· Master thesis project
· Lab rotation

Institute of Cognitive Science, University of Osnabrück *December 2016 - February 2017,*
Research Assistant, Neuroinformatics Research Group *November 2018 - July 2019*

· Contributed to the development of the chatbot: www.flu-prediction.com/ask-watson.

TEACHING EXPERIENCE

Tübingen AI Center, University of Tübingen *April 2023 - June 2023,*
Teaching Assistant, Human and Machine Cognition Lab *November 2024 - February 2025*

- Corrected weekly homework assignments accompanying the General Principles of Human and Machine Learning lecture
- Hosted weekly tutorials for the students of the General Principles of Human and Machine Learning lecture

Institute of Cognitive Science, University of Osnabrück *October 2017 - February 2018,*
Teaching Assistant, Neuroinformatics Research Group *October 2018 - February 2019*

- Corrected weekly homework assignments accompanying the Neuroinformatics lecture
- Hosted weekly Q&A sessions for the students of the Neuroinformatics course
- Corrected the final exam for the Neuroinformatics course

Institute of Mathematics, University of Osnabrück *October 2018 - February 2019*
Teaching Assistant, Stochastics Research Group

- Corrected weekly homework assignments accompanying the Probability lecture
- Hosted weekly Tutorials for the students of the Probability course
- Corrected the final exam for the Probability course

SUPERVISION

Marcel De Sutter University of Tübingen
Master Thesis *2023*

- Physical and psychological reasoning in artificial cognitive systems: A benchmark study of Loci's object vs. agent recognition

Trong Vu Le University of Tübingen
Master Rotation *2025*

- The role of positional embeddings in transformer-based transition models for representation learning in compositional environments

AWARDS AND DISTINCTIONS

Germany Scholarship (Deutschlandstipendium) for the academic year 2018/19

DAAD RISE Worldwide Scholarship for the period 08.2019-10.2019

DAAD-PROMOS travel grant for the research stay at the Johns Hopkins University

Stipend covering the Master phase of the 5-year track of the IMPRS for the Mechanisms of Mental Function and Dysfunction

ADDITIONAL INFORMATION

Programming Languages	Proficient: Python (TensorFlow, PyTorch, JAX); Some experience: Java, Scala, OCaml, R, Prolog
Github	`https://github.com/torujlu`