

Matteo Bortoletto

Ph.D. Student at the University of Stuttgart

matteo.bortoletto@vis.uni-stuttgart.de ♦ [GitHub](#) ♦ [Website](#) ♦ [LinkedIn](#)

EDUCATION

Johns Hopkins University, USA Visiting Graduate Scholar	2025
Advisor: Tianmin Shu	
University of Stuttgart, Germany Ph.D. in Computer Science	2022 - Present
Advisor: Andreas Bulling	
University of Padua, Italy M.Sc. in Physics of Data, <i>cum laude</i>	2019 - 2021
Advisor: Marco Baiesi	
University of Padua, Italy B.Sc. in Physics	2016 - 2019
Advisor: Samir Suweis	

PEER-REVIEWED PUBLICATIONS

-
1. [M. Bortoletto](#), C. Ruhdorfer, A. Bulling. "ToM-SSI: Evaluating Theory of Mind in Situated Social Interactions." **EMNLP 2025**.
 2. [M. Bortoletto](#), C. Ruhdorfer, L. Shi, A. Bulling. "Brittle Minds, Fixable Activations: Understanding Belief Representations in Language Models." **EMNLP 2025 Findings** and **ICML 2024 Workshop on Mechanistic Interpretability**.
 3. C. Ruhdorfer, [M. Bortoletto](#), A. Penzkofer, A. Bulling. "The Overcooked Generalisation Challenge." **TMLR**, 2025.
 4. C. Ruhdorfer, [M. Bortoletto](#), A. Bulling. "The Yokai Learning Environment: Tracking Beliefs Over Space and Time." **IJCAI 2025 Workshop on Theory of Mind**. (Oral)
 5. [M. Bortoletto](#), C. Ruhdorfer, L. Shi, A. Bulling. "Explicit Modelling of Theory of Mind for Belief Prediction in Nonverbal Social Interactions." **ECAI 2024**. (Oral)
 6. [M. Bortoletto](#), C. Ruhdorfer, A. Abdessaied, L. Shi, A. Bulling. "Limits of Theory of Mind Modelling in Dialogue-Based Collaborative Plan Acquisition." **ACL 2024**.
 7. [M. Bortoletto](#), L. Shi, A. Bulling. "Neural Reasoning About Agents' Goals, Preferences, and Actions." **AAAI 2024**.
 8. E. Sood, L. Shi, [M. Bortoletto](#), Y. Wang, P. Müller, A. Bulling. "Improving neural saliency prediction with a cognitive model of human visual attention." **CogSci 2023**.
 9. G. Zhang, [M. Bortoletto](#), Z. Hu, L. Shi, M. Bâce, A. Bulling. "Exploring Natural Language Processing Methods for Interactive Behaviour Modelling." **INTERACT 2023**. 🏆 **Best Student Paper Nomination**


PREPRINTS

-
1. **M. Bortoletto**, Y. Zhou, L. Ying, T. Shu, A. Bulling. "ProToM: Promoting Prosocial Behaviour via Theory of Mind-Informed Feedback." *arXiv:2509.05091*, 2025.
 2. C. Ruhdorfer, **M. Bortoletto**, V. Oei, A. Penzkofer, A. Bulling. "Unsupervised Partner Design Enables Robust Ad-hoc Teamwork." *arXiv:2508.06336*, 2025.

TEACHING EXPERIENCE

Course Organiser , Machine Perception and Learning	WS 2024
Course Organiser and Lecturer , Computational Theory of Mind and Cognition	SS 2024
Teaching Assistant , Machine Perception and Learning	SS 2022, WS 2022, WS 2023

MENTORING

Levi Otterbach, B.Sc. Thesis: “Neural Reasoning with Cognitively-Inspired Representations”
Jonas Allali, M.Sc. Thesis: “Probing for Theory of Mind in the Multi-Agent Cooperation Game Yokai”
Jann-Philipp Thewes, M.Sc. Thesis: “Multimodal LLM for Theory of Mind Modelling in Collaborative Tasks”
Ruben Werbke, B.Sc. Thesis: “Inferring Other Agents’ Goal in Collaborative Environments Using Graphs”
Constantin Ruhdorder, M.Sc. Thesis: “Into the Minds of the Chefs: Using Theory of Mind for Robust Collaboration with Humans in Overcooked”  **Rul Gunzenhäuser Award**
John Pravin Arockiasamy, M.Sc. Research Project: “Transformer Based Architecture for Belief Prediction in Object-Context Scenarios”
Michael Erdemann, M.Sc. Thesis: “Recreating False-Belief Tests as Visual Question Answering Tasks”

WORK EXPERIENCE

University of Padua , Research Fellow	2021
Piritech , Intern	2021

SERVICES

Reviewer: CHI’24, CHI’25, ACL ARR’25, TOCHI, UIST’25, AAAI’26
Student Volunteer: AAAI’24, ACL’24

AWARDS

Volunteer Scholarship AAAI’24, ACL’24	
Best Student Paper Nomination INTERACT’23	
StartCup Veneto Start up competition winner, TooBusy	2021
Research Grant , University of Padua, “Urban Big Data for Economic Development”	2021

EVENTS AND PRESENTATIONS

EMNLP 2025 poster presentation	2025
Invited talk at the SCAI Lab, Johns Hopkins University	2025
ECAI 2024 oral presentation	2024
ACL 2024 poster presentation	2024
ICML 2024 poster presentation	2024
ELLIS CoGenAI Summer School (Aalto University, Finland)	2024
ELLIS Unit Stuttgart Summer Symposium	2024
AAAI 2024 poster presentation	2024
ELLIS Unit Stuttgart Kickoff Symposium	2023
Dagstuhl Seminar on Anticipatory Human-Machine Interaction	2022

SKILLS

Languages: English (fully proficient), Italian (native), Spanish (basic), German (basic)
Programming: Python, PyTorch, Huggingface, NNSight, Julia
Software & Tools: Linux, MacOS, Git, L^AT_EX, Microsoft Suite
Hobbies and activities: Watercolour painting, playing the guitar, swimming, bodyweight exercise

Last update: September 11, 2025