

Silvia TULLI

Associate Professor (Maître de Conférences) in Artificial Intelligence and Robotics
Institute of Intelligent Systems and Robotics (ISIR, CNRS UMR 7222)
Polytech Sorbonne, Sorbonne Université, Paris

Email: [tulli\[at\]isir.upmc.fr](mailto:tulli[at]isir.upmc.fr)

Web: silviatulli.com · linkedin.com/in/silvia-tulli



Research Profile

My research addresses how autonomous agents and robots learn from the people they work with, and how they explain the decisions they reach. I combine sequential decision making (reinforcement learning, inverse reinforcement learning, planning) with human modelling and explainability, validated in real deployments rather than in simulation alone. My current work concerns how agents infer human goals when information is partial and the human's model of the task differs from the agent's, and how the same machinery applies to generative models of biological sequences.

Current Positions

Associate Professor, ISIR, Polytech Sorbonne, Sorbonne Université Sep 2025 – present
Teaching and research in artificial intelligence and robotics: reinforcement learning, imitation learning and interactive machine learning. Supervision of student projects with industry partners.

Lecturer, Sciences Po Paris Sep 2021 – present
Co-teaching Data Science for Public Policy: statistical analysis, programming and machine learning for data-driven decision making.

Previous Positions

Head of AI Research, HABS — Human Augmented Brain System Apr 2025 – Oct 2026
Led research on multimodal machine learning over biometric data, including pain monitoring.

Postdoctoral Researcher, ISIR, Sorbonne Université Apr 2024 – Jan 2025
Interactive robot learning, supervised by Mohamed Chetouani.

Assistant Professor (ATER), Sorbonne Université Oct 2022 – Mar 2024
Programming, linear control, signal processing, artificial intelligence and robotics, machine learning for human-machine interaction.

Research Fellow, ISTI-CNR, Pisa Jul 2017 – Oct 2018
Technologies for mild cognitive impairment, European Active and Assisted Living Programme, with the Institute of Neuroscience.

Education

PhD in Computer Science and Engineering (Robotics and Machine Learning) 2018 – 2023
Instituto Superior Técnico, University of Lisbon
— Supervisors: Ana Paiva, Francisco S. Melo, Mohamed Chetouani

MSc in Computer Engineering, 110/110 with distinction 2015 – 2018
University of Trento, Italy — Supervisor: Nicu Sebe

National qualification, Maître de Conférences (France) Feb 2024
Section 27 (Computer Science) and Section 61 (Computer Engineering, Automation and Signal Processing)

Selected Publications — Machine Learning and Robot Learning

1. **S. Tulli**, S. L. Vasileiou, M. Chetouani, S. Sreedharan (2026). Inferring Implicit Goals Across Differing Task Models. *AAAI Conference on Artificial Intelligence*. *Lead author*.
2. **S. Tulli** & D. W. Aha (2024). *Explainable Agency in Artificial Intelligence — Research and Practice*. CRC Press. *Lead author and editor*.
3. K. Baraka, . . . , **S. Tulli** et al. (2025). Human-Interactive Robot Learning: Definition, Challenges and Recommendations. *ACM Transactions on Human-Robot Interaction*.
4. H. Baier, M. T. Keane, S. Sreedharan, **S. Tulli**, A. Verma (2026). Explanations for Sequential Decision-Making: An Overview. *AAAI Conference on Artificial Intelligence*.
5. A. Bennetot, . . . , **S. Tulli** et al. (2024). A Practical Tutorial on Explainable AI Techniques. *ACM Computing Surveys*.
6. S. Wallkötter*, **S. Tulli*** et al. (2021). Explainable Embodied Agents Through Social Cues: A Review. *ACM Transactions on Human-Robot Interaction*. *Joint first author*.
7. **S. Tulli** et al. (2020). Explainable Agency by Revealing Suboptimality in Child-Robot Learning. *International Conference on Social Robotics*. **Best Student Paper Award**. *Lead author; in-school deployment of an autonomous robot learning from children*.

Selected Publications — Computational Biology

- N. Perrin-Gilbert, N. Amjad, P. Fumeron, **S. Tulli**, J. Waterfall (2026). Yomix: An Interactive Tool for the Exploration of Low-Dimensional Embeddings in Omics Data. *Bioinformatics*, btag301.

Under Review

- Y. Klíkel, R. Mirsky, S. Sreedharan, P. Verma, S. L. Vasileiou, F. Meneguzzi, **S. Tulli** (2026). Scalable Querying for Implicit Subgoals Across Differing Task Models. *AAMAS 2027*.
- K. A. Mahi, **S. Tulli**, S. Sreedharan (2026). Online Explicable Behavior Generation. *AAMAS 2027*.

Leadership, Funding and Awards

- **Principal Investigator** of two HumanE-AI-Net micro-projects on interactive robot learning, European Union (2023–2024)
- **Marie Skłodowska-Curie Actions fellowship**, ANIMATAS European Training Network, grant 765955 (2018–2021)
- **Co-organiser**, [Dagstuhl Seminar 24372](#) on Explainable AI for Sequential Decision Making (2024)
- **Co-organiser**, Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM 2027)
- **Co-organiser**, workshop *Sim2Real and Classical Control: From Rigorous Theory to Data-Driven Robotics*, IROS 2026, Pittsburgh
- **Best Student Paper Award**, International Conference on Social Robotics (2020)

Supervision and Teaching

- **Supervision**: main supervisor of a Master’s thesis at Sorbonne Université on symbolic representations and foundation models for robotic planning (planning under partial observability with language models), leading to co-supervision of the resulting PhD. Earlier Master’s theses on imitation learning (CARLA simulator), explainability (Overcooked environment) and learning from human feedback (Gazebo/TurtleBot).
- **Teaching**: over 720 equivalent tutorial hours since 2021, Bachelor to Master level, at Polytech Sorbonne, Sciences Po Paris, ENSTA Paris and the University of Trento.

Service to the Scientific Community

- **Expert evaluator**, European Innovation Council Accelerator (2024–present): 91 artificial intelligence and robotics proposals reviewed
- **Reviewer and programme committee**: AAAI (several tracks), AAMAS, *Artificial Intelligence Journal*, *IEEE Transactions on Affective Computing*, *IEEE Robotics and Automation Letters*, ANR grant proposals (~35 full reviews, ~100 meta-reviews)
- **Invited talks**: Université Paris-Saclay, King’s College London, ETIS Cergy-Pontoise, Université de Picardie Jules Verne, Fédération Informatique de Lyon