Sarah **Gillet**

Researcher (Transition to postdoc) · Human-Robot Interaction

KTH, Royal Institute of Technology, School of Electrical Engineering and Computer Science,
Division of Robotics, Perception and Learning, Lindstedtsvägen 24, 4th floor, 11428 Stockholm, Sweden

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My research utilizes multimodal communication between people and machines, i.e., robots, as a tool to support people and their interactions.

Employment

KTH, Royal Institute of Technology — *Stockholm, Sweden*

Postdoctoral Researcher — *09/2024 – PRESENT*

- Advisor: Prof Iolanda Leite and Prof Hedvig Kjellström

Corporate Research, KUKA Robotics — *Augsburg, Germany*

Software developer for mobile robotics — *07/2015 - 08/2018*

- Research projects:
  - RobDream and REFILLS projects funded under Horizon 2020 of the European Union
  - Hybr-IT funded by the German Federal Ministry of Education and Research (BMBF)

Education

KTH, Royal Institute of Technology — *Stockholm, Sweden*

Ph.D. in Computer Science — *09/2018 – 09/2024*

- Thesis title: Computational Approaches to Interaction-Shaping Robotics
- Supervisors: Prof Iolanda Leite and Prof Hedvig Kjellström

Yale University — *New Haven, USA*

Visiting Assistant in Research — *10/2021 – 05/2022*

- Advisor: Marynel Vázquez

TU Dortmund — *Dortmund, Germany*

BSc & MSc in Computer Science, Minor: Robotics — *10/2009 - 05/2015*

Scholarship & Awards

2024	**RSS Pioneers**, Selected to participate in the Robotics: Science and Systems (RSS) Pioneers, a highly selective workshop (15% acceptance rate) that brings together a cohort of the world's top early-career researchers.	*Delft, Netherlands*
2023	**Outstanding reviewer recognition**, ACM/IEEE International Conference on Human-Robot Interaction (HRI)	*Stockholm*
2022	**DAAD AInet fellow**, Selected to participate in the DAAD Postdoc-NeT-AI 3/2022 – AI and Robotics	
2021	**Best User Studies Paper Award**, The 16th ACM/IEEE International Conference on Human-Robot Interaction	*Boulder, Co, USA*
2021	**HRI Pioneers**, Selected to participate in the Human-Robot Interaction (HRI) Pioneers, a highly selective workshop to foster creativity, communication and collaboration between young researchers.	*Boulder, Co, USA*
2020	**Best Late Breaking Report Award, Honorable Mentions**, The 15th ACM/IEEE International Conference on Human-Robot Interaction	*Cambridge, United Kingdom*
2016	**Hans-Uhde Award for an excellent master thesis in engineering sciences, Hans-Uhde Foundation**, (Original title: Hans-Uhde-Preis für herausragende Abschlussarbeiten in den Ingenieurwissenschaften)	*Dortmund, Germany*
2013	**2013 Best Graduation Award, TU Dortmund**, (Original title: "Jahrgangsbestenpreis 2013 der Gesellschaft der Freunde der Technischen Universität Dortmund e.V. auf Vorschlag der Fakultät für Informatik")	*Dortmund, Germany*
2012 – 2014	**Scholarship**, German National Academic Foundation	
2010 – 2012	**Scholarship**, Industry-supported scholarship awarded yearly by the department of computer science (NRW Stipendium, Deutschlandstipendium)	

Awarded Grants

2024 **Travel grant**, Karl Engvers foundation, providing 24000SEK (~2400$) to attend HRI 2024

2022 **Travel grant**, Signeuls stiftelse, providing 25000SEK (~2500$) to attend CORL 2022

2022 **Travel grant**, Signeuls stiftelse, providing 12600SEK (~1500$) to attend RO-MAN 2022

Publications

Ph.D. thesis

Sarah Gillet (2024). "Computational Approaches to Interaction-Shaping Robotics". PhD thesis. KTH Royal Institute of Technology.

Book chapters

B-1: Multiparty Interaction Between Humans and Socially Interactive Agents
Sarah Gillet, Marynel Vázquez, Christopher Peters, Fangkai Yang, Iolanda Leite
The Handbook on Socially Interactive Agents: 20 Years of Research on Embodied Conversational Agents, Intelligent Virtual Agents, and Social Robotics Volume 2: Interactivity, Platforms, Application, 2022, New York, NY, USA

Journal Articles (peer-reviewed)

J-4: RoSI: A Model for Predicting Robot Social Influence
Hadas Erel, Marynel Vázquez, Sarah Sebo, Nicole Salomons, **Sarah Gillet**, Brian Scassellati
J. Hum.-Robot Interact. Association for Computing Machinery, 2024

J-3: Interaction-Shaping Robotics: Robots that Influence Interactions between Other Agents
Sarah Gillet, Marynel Vázquez, Sean Andrist, Iolanda Leite, Sarah Sebo
J. Hum.-Robot Interact. Association for Computing Machinery, 2024

J-2: Robot-Mediated Inclusive Processes in Groups of Children: From Gaze Aversion to Mutual Smiling Gaze
Sylvaine Tuncer, **Sarah Gillet**, Iolanda Leite
Frontiers in Robotics and AI 9. 2022

J-1: The impact of adding perspective-taking to spatial referencing during human–robot interaction
Fethiye Irmak Doğan, **Sarah Gillet**, Elizabeth J. Carter, Iolanda Leite
Robotics and Autonomous Systems 134 p. 103654. 2020

Conference Proceedings (peer-reviewed)

C-12: Shielding for socially appropriate robot listening behaviors
Sarah Gillet, Daniel Marta, Mohammed Akif, Iolanda Leite
2024 33rd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), 2024

C-11: Let's move on: Topic Change in Robot-Facilitated Group Discussions
Georgios Hadjiantonis, **Sarah Gillet**, Marynel Vázquez, Iolanda Leite, Fethiye Irmak Doğan
2024 33rd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), 2024

C-10: Verbally Soliciting Human Feedback in Continuous Human-Robot Collaboration: Effects of the Framing and Timing of Reminders
Kate Candon, Helen Zhou, **Sarah Gillet**, Marynel Vázquez
[Acceptance Rate: 25%]
Proceedings of the 2023 ACM/IEEE International Conference on Human-Robot Interaction, 2023, New York, NY, USA

C-9: Robot Duck Debugging: Can Attentive Listening Improve Problem Solving?
Maria Teresa Parreira, **Sarah Gillet**, Iolanda Leite
Proceedings of the 25th International Conference on Multimodal Interaction, 2023, Paris, France

C-8: How Did We Miss This? A Case Study on Unintended Biases in Robot Social Behavior
Maria Teresa Parreira, **Sarah Gillet**, Katie Winkle, Iolanda Leite
[Acceptance Rate: 18%]
Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction, 2023, New York, NY, USA

C-7: Learning Gaze Behaviors for Balancing Participation in Group Human-Robot Interactions
Sarah Gillet, Maria Teresa Parreira, Marynel Vázquez, Iolanda Leite
[Acceptance Rate: 22%]
Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction, 2022, Sapporo, Hokkaido, Japan

C-6: Ice-Breakers, Turn-Takers and Fun-Makers: Exploring Robots for Groups with Teenagers
Sarah Gillet, Katie Winkle, Giulia Belgiovine, Iolanda Leite
2022 31st IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), 2022

C-5: Autonomous Robot Behaviors for Shaping Group Dynamics
Sarah Gillet
[Acceptance Rate: 38%]
Companion of the 2021 ACM/IEEE International Conference on Human-Robot Interaction, 2021, Boulder, CO, USA

C-4: Robot Gaze Can Mediate Participation Imbalance in Groups with Different Skill Levels
Sarah Gillet*, Ronald Cumbal*, André Pereira, José Lopes, Olov Engwall, Iolanda Leite
[Best Paper Award][Acceptance Rate: 23%]
Proceedings of the 2021 ACM/IEEE International Conference on Human-Robot Interaction, 2021, New York, NY, USA

C-3: A Robot Mediated Music Mixing Activity for Promoting Collaboration among Children
Sarah Gillet, Iolanda Leite
[Best Late Breaking Report, Honorable Mention]
Companion of the 2020 ACM/IEEE International Conference on Human-Robot Interaction, 2020, Cambridge, United Kingdom

C-2: A social robot mediator to foster collaboration and inclusion among children
Sarah Gillet, Wouter van den Bos, Iolanda Leite
Proceedings of Robotics: Science and Systems, 2020, Corvalis, Oregon, USA

C-1: Recognition and 6D Pose Estimation of Large-scale Objects using 3D Semi-Global Descriptors
David Nospes, Kirill Safronov, **Sarah Gillet**, Klaus Brillowski, Uwe E. Zimmermann
2019 16th International Conference on Machine Vision Applications (MVA), 2019

Mentoring

2024	**Alexander Leszczynski**, Leveraging LLMs and behavior trees to understand user instructions	*Master Student, KTH*
2023	**Georgios Hadjiantonis**, Topic change in robot-moderated group discussions (Conference publication C-11)	*Master Student, KTH*
2023	**Mohammed Akif**, Safe Reinforcement Learning for Social Human-Robot Interaction (Conference publication C-12)	*Master Student, KTH*
2022	**Maria Teresa Parreira**, Robot Duck Debugging: Can Attentive Listening Improve Problem Solving? (Conference publications C-8 and C-9)	*Research Engineer, KTH*
2021	**Paul Gorgis**, Appropriate Robot Gaze for Mediating Confrontational Scenarios	*Master Student, KTH*
2021	**Ravi Bir**, Implementing Machine Learning Techniques to Improve the Performance of Socially Assistive Robots	*Master Student, KTH*
2020	**Ke Zhang**, Using Augmented-Reality for Visualizing a Social Robot's Internal State	*Master Student, KTH*
2017	**Simon Schlegel**, 2D object modeling for mobile robotics with LIDAR scanners	*Master student, KUKA*
2016	**David Nospes**, Recognition and 6D Pose Estimation of Large-scale Objects (Conference publication C-1)	*Bachelor Student, KUKA*

Teaching experience

Teaching Assistance
Stockholm, Sweden

Social Robotics Course, KTH Royal Institute of Technology — *10/2022 – 01/2023*

- Responsible for course organization
- Teaching robot tutorials and the lecture on learning in and from human-robot interactions

Guest lecturer
Stockholm, Sweden

Social Robotics Course, KTH Royal Institute of Technology — *11/2021*

- Responsible for the lecture on learning in and from human-robot interactions

Teaching Assistance
Stockholm, Sweden

Artificial Intelligence, KTH Royal Institute of Technology — *01/2019 – PRESENT*

- Responsible for giving tutorials and grading of oral presentations
- Creation of new exercises

Thesis and Project Supervision

Supervising master, bachelor and project students — *2015 – PRESENT*

- Supervising project and master thesis students at KTH
- Supervising students in joined projects with academic supervisors while at KUKA Roboter GmbH

Teaching Assistance
Dortmund, Germany

Data structures, Algorithms and Programming 1, Department of Computer Science, TU Dortmund — *2010 - 2014*

Invited talks

06/2021	**First Furhat Conference on Social Robots in Research**, Non-verbal robot behaviors for learning in groups	*Online*

Outreach

2022	**28 ready-to-go ideas for high school projects, KTH**, Proposal of the topic of social robotics with small research questions ready for high school students.	*KTH*
11/2021	**Demo Days, Code Haven**, Talk about personal path to computer science and robotics research as part of a computer science outreach event.	*Online*
2020, 2021	**Schnupperuni TU Dortmund**, Invited talk at a plenary about industry and academic work experience	*Online*
11/2019	**The Future Needs Giants**, Event for young students that identify as women and or non-binary and want to learn about technical education at KTH. Demonstrating a human-robot interaction scenario as part of the robot exhibition.	*Stockholm, Sweden*
09/2019	**"Upplev, upptäck, utforska – som en ingenjör" at Tekniska Museet**, Exhibiting a demonstration with the Pepper robot and answering questions about robots to students from different schools interested in engeneering subjects	*Stockholm, Sweden*
2016, 2017	**Introductory lecture to industrial robotics for children**, Leading the lectures and practical exercises with a small mobile industrial robot	*Augsburg, Germany*
2013, 2014	**Schnupperuni TU Dortmund**, Planning, coordination and execution of a get-to-know week in computer science targeted at young women	*Dortmund, Germany*

Academic service

Program Chair & General Chair

Pioneers Workshop at ACM/IEEE International Conference on Human-Robot Interaction (HRI) 2022

Workshop Organizer

Robots for Learning (R4L) Workshop at ACM/IEEE International Conference on Human-Robot Interaction 2023

Referee for Conference Proceedings

Robotics: Science and Systems (RSS), 2020
ACM/IEEE Int. Conference on Human-Robot Interaction (HRI), 2020–2024
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2017, 2021-2022, 2024
ACM CHI Conference on Human Factors in Computing Systems, 2022

Referee for Journal Articles

Paladyn. Journal of Behavioral Robotics
IEEE, Transactions on Interactive Intelligent Systems
ACM, Transactions on Human-Robot Interaction
Springer, International Journal of Social Robotics
IEEE, Transactions on Affective Computing

Student Volunteer

ACM/IEEE Int. Conference on Human-Robot Interaction (HRI), 2020