

Sarah Gillet

POSTDOCTORAL FELLOW · HUMAN-ROBOT INTERACTION

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My research investigates methods and algorithms for enabling autonomous robots to interact with (groups of) people, as a way to support human-robot and human-human interactions.

Employment

Massachusetts Institute of Technology

POSTDOCTORAL FELLOW

- Advisors: Prof. Cynthia Breazeal and Research Scientist Hae Won Park
- Funding: Marianne and Marcus Wallenberg Foundation

Cambridge, MA, US

11/2025 – PRESENT

KTH Royal Institute of Technology

POSTDOCTORAL RESEARCHER

- Advisor: Prof. Iolanda Leite

Stockholm, Sweden

09/2024 – 10/2025

Corporate Research, KUKA Robotics

SOFTWARE DEVELOPER FOR MOBILE ROBOTICS

- 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)

Augsburg, Germany

07/2015 – 08/2018

Education

KTH, Royal Institute of Technology

PH.D. IN COMPUTER SCIENCE

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

Stockholm, Sweden

09/2018 – 09/2024

Yale University

VISITING ASSISTANT IN RESEARCH

- Advisor: Marynel Vázquez

New Haven, USA

10/2021 – 05/2022

TU Dortmund

BSc & MSc IN COMPUTER SCIENCE, MINOR: ROBOTICS

Dortmund, Germany

10/2009 – 05/2015

Fellowships & Grants

- 2025 **WASP-HS Postdocotoral Fellowship**, Marianne and Marcus Wallenberg foundation, providing funding for a two-year postdoctoral fellowship at MIT
- 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

Awards & Honors

- 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 Alnet fellow**, Selected to participate in the DAAD Postdoc-NeT-AI 3/2022 – AI and Robotics Online
- 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,	Dortmund, Germany
2013	2013 Best Graduation Award, TU Dortmund, (Original title: "Jahrgangsbesterpreis 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 (Orig: Studienstiftung des Deutschen Volkes)	
2010 – 2012	Scholarship, Industry-supported scholarship awarded yearly by the department of computer science (NRW Stipendium, Deutschlandstipendium)	

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-15: Opportunities to Talk, Negotiate and Laugh: Robot Behaviors that Shape Repeated Interactions in Groups of Older Adults

Sarah Gillet, Yujing Zhang, Donald McMillan, Nicole Salomons, Iolanda Leite

Under review. 2025

C-14: BT-ACTION: A Test-Driven Approach for Modular Understanding of User Instruction Leveraging Behaviour Trees and LLMs

Alexander Leszczynski, **Sarah Gillet**, Iolanda Leite, Fethiye Irmak Doğan

2025 34th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), 2025

C-13: Templates and Graph Neural Networks for Social Robots Interacting in Small Groups of Varying Sizes

Sarah Gillet, Sydney Thompson, Iolanda Leite, Marynel Vázquez

[Acceptance Rate: 25%]

2025 20th ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2025

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: 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-9: 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-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: 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-4: 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-3: 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, Corvallis, Oregon, USA
- C-2: 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-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

2025	Yujing Zhang , Social robots for fostering social connections in groups of elderly (Conference paper C-15, under review)	Master Student, KTH
2025	Mengyu Liang , Group activity recognition through the eye of a lawnmower	Master Student, KTH
2025	Zhuocheng Wei , Exploring LLMs for robot-moderated group discussions	Master Student, KTH
2025	Jingwen Qin , Balancing teenagers' individual and combined teaching behavior for learning how robots can support group interactions.	Master Student, KTH
2025	Qiaolan Luo , How should I sound? - Using ML to find a voice for the Blossom robot	Master Student, KTH
2024	Alexander Leszczynski , Leveraging LLMs and behavior trees to understand user instructions (Conference publication C-14)	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
2016	David Nospes , Recognition and 6D Pose Estimation of Large-scale Objects (Conference publication C-1)	Bachelor Student, KUKA

Teaching experience

Teaching Assistance

SOCIAL ROBOTICS COURSE, KTH ROYAL INSTITUTE OF TECHNOLOGY (2 COURSE ROUNDS)

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

Stockholm, Sweden

10/2022 – 10/2025

Guest lecturer

SOCIAL ROBOTICS COURSE, KTH ROYAL INSTITUTE OF TECHNOLOGY

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

Stockholm, Sweden

11/2021

Teaching Assistance

ARTIFICIAL INTELLIGENCE, KTH ROYAL INSTITUTE OF TECHNOLOGY

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

Stockholm, Sweden

01/2019 – 01/2022

Thesis and Project Supervision

SUPERVISING MASTER, BACHELOR AND PROJECT STUDENTS

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

2015 – PRESENT

Teaching Assistance

DATA STRUCTURES, ALGORITHMS AND PROGRAMMING 1, DEPARTMENT OF COMPUTER SCIENCE, TU DORTMUND

Dortmund, Germany

2010 - 2014

Invited talks

6/2024	RSS 2024 Workshop GROUND , Invited talk "Computational Approaches to Interaction-Shaping Robotics"	Delft
12/2021	Yale University , Intelligent Machines Group, "Robots in Groups"	New Haven
10/2021	Chicago University , Invited talk on paper "Robot Gaze Can Mediate Participation Imbalance"	Online
06/2021	First Furhat Conference on Social Robots in Research , Non-verbal robot behaviors for learning in groups	Online

Outreach

2025	School visit , Hosting a school class and providing insight into the field of Human-Robot Interaction	KTH
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 engineering 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 Committee

IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION (2026), *Associate Editor*

Workshop Program Organizing Committee

RSS PIONEERS WORKSHOP AT RSS 2025, *General Co-Chair*

ROBOTS FOR LEARNING (R4L) WORKSHOP AT HRI 2023, *Co-Organizer*

PIONEERS WORKSHOP AT HRI 2022, *Program and General Co-Chair*

Referee for Conference Proceedings

ROBOTICS: SCIENCE AND SYSTEMS (RSS)

ACM/IEEE INT. CONFERENCE ON HUMAN-ROBOT INTERACTION (HRI)

IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS (IROS)

ACM CHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS

INTERNATIONAL CONFERENCE ON ROBOT AND HUMAN INTERACTIVE COMMUNICATION (RO-MAN)

IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION (ICRA)

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