SARA MONGILE

Post Doc Researcher in Cognitive Architecture for Collaborative Technologies

She, her | 25 May 1996 | Italian
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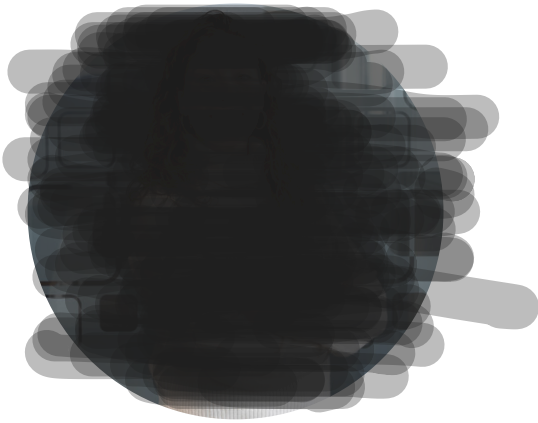

PROFESSIONAL EXPERIENCE

Post-doc Fellow

Italian Institute of Technology (IIT)

April 2025 – Ongoing | Genoa, Italy

- The research is conducted in the "Brain and Machines" Flagship Program of the IIT and the European Union-NextGenerationEU.
- My research contributes to the "RAISE – Robotics and AI for Socio-economic Empowerment" project (ECS00000035), funded by the European Union – NextGenerationEU and the Italian Ministry of University and Research (MUR), under the National Recovery and Resilience Plan (NRRP), Mission 4, Component 2, Investment 1.5.

PhD Student Fellow

Italian Institute of Technology

November 2024 – March 2025 | Genoa, Italy

PhD Researcher

DIBRIS, University of Genoa & CONTACT, Italian Institute of Technology

November 2021 – October 2024 | Genoa, Italy

- Working on cognitive architecture and internal motivation system to improve robots' adaptive behavior
- Studying group dynamics in mixed robot-human in stressful scenarios

Visiting Scholar

iLab, Heriot-Watt University & National Robotarium

March 2024 – June 2024 | Edinburgh, UK

- Visiting research period to investigate how a comfort-based motivation drives robots' behavior in a collaborative task.
- Focusing on how internal motivation affects a human collaborator's perception of the robot and their decisions.

Internship

CONTACT, Italian Institute of Technology

March 2021 – October 2021 | Genoa, Italy

- Researching on trust and adaptation in social interaction, existing approaches to computationally modeling social processes, and existing experimental research in social adaptation.

Authorization to practise as Information Engineer (Section A)

2021 | Italy

RESEARCH

Different people have different inclinations in how they interact with others, which are also reflected in their interactions with robots!

In my research, I work on enabling robots to assess whether their behavior aligns with their partner's preferences and **adapt** accordingly. With this approach, I aim to achieve **effective Human-Robot Interaction**.

EDUCATION

Doctorate in Bioengineering and Robotics

University of Genoa & Italian Institute of Technology (IIT), Italy

Nov 2021 – Oct 2024

Master in Bioengineering

University of Genoa, Italy

Sept 2018 – March 2021

Bachelor in Biomedical Engineering

University of Genoa, Italy

Sept 2014 – March 2018

PROGRAMMING

C,C++
Python
Matlab
YARP
ROS
Jamovi
Latex

STRENGTHS

- Problem Solving
- Project Management
- Team-Working Oriented
- Public speaking
- Practical and manual activities
- Research

PROJECTS

Comfort-Driven Cognitive Architecture

Design and development of **a cognitive architecture** to endow robots with basic cognitive functionalities such as perception, decision-making, action, and motivation based on *comfort*.

Social Exclusion in Group-Robot Interaction

Development of a conversational turn-taking game inspired by the Cyberball game to study Social Exclusion in a group robot scenario. This research aims to study how robot behavior affects group dynamics to enable robots to recognize and adapt to human discomfort signals, enhancing their social competence.

AWARDS

Human-Robot Interaction Pioneer at the ACM/IEEE International Conference on Human-Robot Interaction 2025

2025 Melbourne, Australia

Student Volunteer at the ACM/IEEE International Conference on Human-Robot Interaction 2025

2025 Melbourne, Australia

Winner for the call "Trustworthy Artificial Intelligence – Short Stay Exchange Program for Researchers Italy-UK" promoted by FAIR and Alan Turing University

2024 Italy, UK

Finalist for Best Late Breaking Report at the ACM/IEEE International Conference on Human-Robot Interaction 2023

2023 Stockholm, Sweden

INVITED TALK

"Towards Adaptive Human Robot Interaction"

Human Media Interaction Lab at University of Twente

2025 Enschede, Netherlands

"Towards Adaptive HRI: A Comfort-Driven Framework for Social Robots"

Creative Robotics Lab at Sydney University

2025 Sydney, Australia

"A Comfort-Driven Framework for Social Robots"

Neuro-Robotic Touch Laboratory at Sant'Anna School of Advanced Studies

2025 Pisa, Italy

"Development of a Cognitive Architecture for Social and Adaptive Robots"

Interaction Lab

2024 Edinburgh, UK

"CONTACT Unit Scientific Highlights"

workshop "IIT CONTACT meets the IIT Soft Lab"

2024 Genoa, Italy

LANGUAGES

Italian
English

TEACHING AND TUTORING

Teaching Assistance in "Fondamenti di Informatica"

Informatic Engineering

2024–2025 University of Genoa, Italy

Educational Tutor in "Progetto Inglese"

for Freshmen

2024–ongoing University of Genoa, Italy

Educational Tutor in "Progetto Matricole" for Mathematical Analysis

for Freshmen in Engineering

2022–2024 University of Genoa, Italy

Introduction to Human-Robot Interaction

Course of "Robots and Social Psychology"

2024 Genoa, Italy

PUBLIC EVENT

Organizer of GROUND workshop

IAS 19, Conference

2025 Genoa, Italy

"AI al *femminile*" - Short talk to introduce AI, its potentiality and risks

Unlock Women in Industry

2025 Genoa, Italy

"A Curious Head" - Presentation of demo and scientific activities of CONTACT Unit

SHARPER Night

2024 Genoa, Italy

"Il robot che vorrei" - Organization of laboratories and activities for children

Città dei bambini e dei ragazzi

2022-2024 Genoa, Italy

"Nella mente di un Robot" and "Storia a bivi di una giornata di un robot" - Presentation and organization of demo activities for adults and children

Festival della Scienza

2021, 2023 Genoa, Italy

PUBLICATIONS

Conference Proceedings

- S. Mongile, “Towards adaptive human-robot interaction: A comfort-driven framework for social robots,” in *Companion of the 2025 ACM/IEEE International Conference on Human-Robot Interaction*, IEEE, 2025.
- S. Mongile, A. Tanevska, F. Rea, and A. Sciutti, “Can my comfort reflect your preferences? an exploratory study on comfort-driven architecture in human-robot interaction,” in *2025 IEEE International Conference on Development and Learning (ICDL*, IEEE, 2025.
- S. Mongile, A. Tanevska, F. Rea, and A. Sciutti, “In the comfort zone: How social robots learn to adapt,” in *2025 International Conference on Social Robotics + AI*, 2025.
- S. Mongile, G. Pusceddu, F. Cocchella, *et al.*, “What if a social robot excluded you? using a conversational game to study social exclusion in teen-robot mixed groups,” in *Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction*, 2023, pp. 208–212.
- S. Mongile, A. Tanevska, F. Rea, and A. Sciutti, “Are robots that assess their partner’s attachment style better at autonomous adaptive behaviour?” In *2022 17th ACM/IEEE International Conference on Human-Robot Interaction (HRI)*, IEEE, 2022, pp. 922–926.
- S. Mongile, A. Tanevska, F. Rea, and A. Sciutti, “Validating a cortisol-inspired framework for human-robot interaction with a replication of the still face paradigm,” in *2022 IEEE International Conference on Development and Learning (ICDL)*, IEEE, 2022, pp. 190–196.