

Workshop title:	Human-Centered Robotics and Cognitive Abilities: Strategies, Reflections, and Design Tools
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Organizers (name, affiliation email)	- Ganix Lasa, Mondragon Unibertsitatea, glasa@mondragon.edu - Maitane Mazmela, Mondragon Unibertsitatea, mmazmela@mondragon.edu - Nagore Osa, Mondragon Unibertsitatea, nosa@mondragon.edu
Workshop duration	Half-day (2 hours and 30 minutes)
Full description, including objectives	This interactive workshop will explore the role of cognitive abilities in Human-Centered Robotics (HCR) through collaborative reflection and applied design methods. Building on recent advances in cognitive robotics and insights of the EU-funded <i>INVERSE</i> project, we merge two complementary viewpoints: • Human-Centered HRI – foregrounding user well-being, ethical responsibility, and inclusivity. • Cognitive-First HRI – analysing how perception, reasoning, prospection, and shared mental models shape collaboration. By fusing these perspectives, the workshop addresses emerging challenges, e.g., balancing authority with autonomy, measuring cognitive workload, and fostering transparent robot behaviour, while equipping participants with hands-on, template-based design tools that catalyse rigorous yet creative dialogue.
Format and agenda	• Welcome and Introduction (10 min): Framing the relevance of cognitive abilities in HCR; overview of workshop goals. • Interactive Presentation (30 min): Insights from the EU INVERSE project. • Hands on session (60min): Small-group use-case analysis with <i>Cognition-in-HRI</i> card sets and canvas templates; iterative mapping of human needs, robot capabilities, and KPI implications. • Group Reflection & Discussion (30min): Cross-perspective sharing between groups to compare strategies and outcomes. • Wrap-Up Panel (15min): Reflections on research, design, and technology transfer potentials.
Intended Audience and Participation Plan	This workshop targets a multidisciplinary audience of social robotics researchers, HRI designers, human factors experts, and cognitive scientists. It is especially suited for both academic and industrial

	stakeholders interested in applied and reflective methods for human-centered robotic design.
Topics of interest	• Human centred robotics & Social Interaction • Cognitive Ergonomics • Human and Robot Cognition • Applied Design Tools for HRI • Academia–Industry Collaboration
Participation Strategy	• Before the workshop: promotion via INVERSE network, academic mailing lists (e.g., HRI, CHI, RoboPHER), and LinkedIn • During the workshop: collaborative group work and cross-disciplinary pairings will encourage interaction, discussion, and exchange
Room equipment	- Projector and screen - Whiteboards or flipcharts - Tables for small group activities - Sticky notes, pens, and open space for movement
Additional Information	This workshop builds on the outcomes of a face-to-face workshop organized as part of the INVERSE EU Project (Grant No. 101136067). The methodology has been piloted and refined in an interdisciplinary consortium setting and is now ready to be tested in a broader academic community.