Seminar announcement

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Microsoft Teams (https://bit.ly/37hi9CM)

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Designing a Socially Assistive Robot for adaptive and personalized assistance to patients with dementia

Abstract: The increasing demand for caregivers in response to the growth of the older population envisages that, in the next few years, there is likely to be a shortage of care personnel.

Socially Assistive Robots can help to bridge this gap and be employed for enhancing caregivers' effectiveness in repetitive tasks such as cognitive therapies. However, their contribution has generally been limited as domain experts have not been fully employed in the entire pipeline of the design process as well as in the automatisation of the robot's socially assistive behaviour.

In this talk, I will give an overview of my research that I've carried out during my PhD on robot adaptivity and personalisation. In particular, I will focus on recent work, presenting a framework, called CARESSER, that actively learns robotic assistive behaviour by leveraging the therapist's expertise and their demonstrations.

By employing that hybrid approach, the presented method enables fast learning, in a fully autonomous fashion, of personalised user-specific policies. A summary of the results of a user-study conducted in a daily-care facility with older adults affected by dementia will conclude the presentation.

Lecturer short bio: Antonio Andriella is a Ph.D. candidate at IRI in the Perception and Manipulation Group advised by Dr. Guillem Alenyà and Prof. Carme Torras. He holds a Marie Skłodowska-Curie Fellowship as part of an Innovative Training Network (ITN) called SOCRATES. The ITN focuses on Quality of Interaction in Eldercare. His research interests are in the

areas of human-robot interaction (HRI) and human-centered design technologies for older adults with cognitive impairments. My work focuses on designing, developing, and evaluating interactive social systems that personalize and adapt to their users over short-term and long-term interaction, based on individual needs and goals. I believe in the future, robotic systems will be able to take over repetitive tasks such as cognitive and physical training, leaving time for therapists to focus on activities that better leverage their medical skills.

For information: Prof. Silvia Rossi (DIETI, UniNA) – silrossi@unina.it *(organizer)*