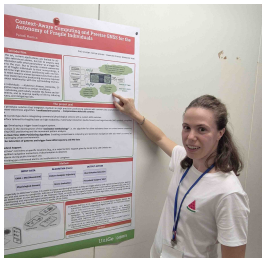
CS PhD Seminar Series

July 14th | 14:30-15:00 | Room 214

GNSS and Wandering Detection for Fragile People

Wandering is one of the most significant issues in people with dementia. It acts as both a warning sign for disease progression and a trigger for other potential difficulties, such as spatial and cognitive disorientation, getting lost, or an increased risk of accidents like falls. Furthermore, it is a situation that requires immediate caregiver intervention and frequently leads to the need for constant care. This explains why its accurate and timely detection and monitoring are of crucial importance. Today's presentation aims to provide an overview of wandering detection techniques based on GNSS data analysis.



Speaker: **Monica Parodi**

Monica Parodi is an industrial PhD student in Computer Science at the University of Genoa in collaboration with Gter company. She is supervised by Professor Giorgio Delzanno, Professor Davide Ancona and Tiziano Cosso and she is working on a context-aware assistance application for fragile individuals. She obtained her MSc degree in Bioengineering at the University of Genoa with a thesis on a birth simulator.

What Do You Regret Most? Learning from Regret with BDI agents

Regret can shape people and change their paths; regret serves as a powerful feedback loop that fundamentally shapes how we behave and make decisions. We explore the intersection of human psychology and computer science by examining how regret helps us adapt to complex social situations, especially when learning how to deal with exploitative people. To model this, we introduce symbolic BDI (Belief-Desire-Intention) agents that can reason logically about their choices, and we combine their reasoning with Counterfactual Regret Minimization (CFR), a machine learning algorithm used to optimize strategies in games with hidden information, such as poker. Just as CFR algorithms minimize regret to find the best possible strategies, both humans and BDI agents can utilize regret to adjust their behaviors, protect themselves from being taken advantage of, and turn negative past experiences into constructive guidelines for better future decision-making and social adaptability.

Speaker: **Zahra Daoui**

Zahra Daoui is a second-year PhD student in Computer Science at the University of Genoa, exploring the integration of symbolic reasoning with sub-symbolic learning in autonomous agents. We focus on leveraging core research interests in multi-agent systems, cognitive architectures, and the intersection of symbolic reasoning with neural learning approaches to create more adaptable and explainable autonomous systems.