CS PhD Seminar Series

May 13th | 14:30-15:00 | Room 217

Exploring the Impact of Virtual Reality in Assessing Spatial Abilities

Spatial abilities—including spatial perception, visualization, and mental rotation—are fundamental cognitive skills critical across various domains, particularly in STEM fields. These abilities enable individuals to perceive spatial relationships and mentally manipulate objects. Traditional assessment methods have primarily relied on two-dimensional representations, potentially limiting ecological validity. This seminar examines the nature and importance of spatial abilities, with a focus on mental rotation, and explores how emerging technologies such as Virtual Reality (VR) may provide more intuitive and effective assessment environments. Preliminary insights from a within-subject study comparing 2D and VR-based mental rotation tests will be presented, revealing performance differences between formats.



Speaker: Lorenzo Gerini

Lorenzo Gerini is a second-year PhD student in Computer Science at the University of Genoa, where he also earned his M.Sc. in Bioengineering. Under the supervision of Prof. Chessa, Prof. Solari, Prof. Delzanno, and Prof. Guerrini, he explores innovative ways to blend virtual and physical elements, combining extended reality and gamification, to enrich learning experiences in computational thinking and coding.



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