



**UPO** UNIVERSITÀ DEL PIEMONTE ORIENTALE  
DIPARTIMENTO DI SCIENZE E INNOVAZIONE TECNOLOGICA

## EVENTI DiSIT

Seminario | Seminar

12-07-2023

12:00-13:00

Sala Seminari Informatica C192

# Bridging The Gap Between Target Detection and Socially-Aware Behavior Analysis

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Automated behavior analysis methods encompass various aspects, such as detection, tracking, and pose estimation of multiple targets, as well as the detection of their actions and intentions. Advancing further, there is a need to infuse these methods with the ability to interpret behavior in socially meaningful terms. These research topics can be addressed through the utilization of Computer Vision, Multimedia, and Machine and Deep Learning technologies. In this presentation, I will provide a summary of human and fish behavior analysis-related projects in which I have been involved. These projects aim to achieve pose rectification, action recognition, the anticipation of human-object interactions, emotion recognition, and analysis of social interactions in terms of social roles, relations, and personality. I will highlight the main contributions and the impacts of the proposed methods, and discuss potential funding opportunities. Finally, I will be focusing on automated human gaze target detection, which is performed directly by processing the images without any need of other sensors' data.

#### BIO OF THE SPEAKER

Bio: Cigdem Beyan is currently an Assistant Professor in the Department of Information Engineering and Computer Science at the University of Trento, Italy. Her research interests primarily revolve around computer vision, machine/deep learning, social signal processing, and affective computing. Previously, she held a postdoctoral research position at the Pattern Analysis and Computer Vision research line at the Istituto Italiano di Tecnologia in Genoa from 2015 to 2021. In 2015, she received her Ph.D. from the University of Edinburgh, where her research focused on underwater video analysis, anomaly detection, imbalanced data classification, active learning, and big data analysis. Cigdem (h-index: 18 in Google Scholar) has co-authored over 50 scientific publications, regularly publishing in top-tier journals and conferences in computer vision, multimedia, multimodal interaction, and affective computing. She serves as a reviewer for various journals and conferences, including IEEE Trans. PAMI, IEEE Trans. Multimedia, IEEE Trans. Affective Computing, Pattern Recognition, CVPR, ICCV, and ACM Multimedia, among others. She has also served as a Guest Co-Editor for the International Journal of Social Robotics and Frontiers in Robotics and AI. Additionally, since September 2018, she has been a

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member of the Editorial Board of the ICES Journal of Marine Science, focusing on applications of computer vision and machine learning in marine science. Cigdem has been an Area Chair for BMVC in 2021, 2022, and 2023, as well as ACM ICMI in 2022. She took on the role of main organizer for the Social and Cognitive Interactions for Assistive Robotics (SCIAR) Workshop at IROS 2022 and has co-organized the Applications of Egocentric Vision Workshops in BMVC 2019 and in ICPR 2020. She is a member of ELLIS, IEEE, and ACM, and has been an Associate Fellow of the UK Higher Education Academy since 2014.

EVENTO APERTO A:

Docenti | Teachers, Borsisti | Research Fellows, Assegnisti | Postdoctoral researcher, Dottorandi | PhD students, Studenti | Students

SEMINARIO IN LINGUA: ENGLISH

