



University of Pavia

Ph.D. School of Electronics, Computer Science and Electrical Engineering
Seminar

***Eye Tracking in Medical Applications: Operator
Monitoring and Neurodegenerative Disease Diagnostics***

Prof. Roman Bednarik

School of Computing, University of Eastern Finland

July 23rd, 2026 – 14:30

Room 'Aula Seminari Magenta' (D floor)

Department of Electrical, Computer and Biomedical Engineering

Abstract: The seminar discusses recent work on the application of eye tracking and complementary sensing modalities to a range of medical and healthcare applications. One line of research focuses on eye-hand coordination, visual attention, and cognitive workload in demanding clinical environments, including surgical operating rooms. By combining gaze data with measures of manual performance and, where appropriate, physiological signals, the aim is to better understand how clinicians perceive information, coordinate their actions, and respond to increasing task demands. A second research direction examines eye movements and related behavioural and physiological measures as potential biomarkers for Alzheimer's disease and mild cognitive impairment, focusing on their translation into reliable diagnostic tools and personalised healthcare applications.

Bio: Roman Bednarik is Professor of Interactive Technologies at the University of Eastern Finland, where he leads research on eye tracking, human-computer interaction, and multimodal user behaviour. His work focuses on understanding visual attention, human performance, and new interaction methods using technologies such as gaze tracking and EEG. He has supervised doctoral and master's research, led international research projects, and collaborated widely across academia and industry. He is also CEO and co-founder of *SeeTrue Technologies*, a university spin-off developing compact and energy-efficient eye-tracking solutions.

Organizer

Prof. Marco Porta

Ph.D. Coordinator

Prof. Ilaria Cristiani

The seminar will be held in English

Zoom link: <https://unipv-it.zoom.us/j/93417326425>

For more information: marco.porta@unipv.it