

Demo 1

Artificial Perception, Natural Driving

Hocine YAKOUBI & Sofiane AHMED ALI

Abstract

Join us in this demonstration to explore how an autonomous vehicle perceives and navigates its environment without a human driver.

Equipped with advanced sensors—cameras, radar, and lidar—the vehicle captures a detailed view of its surroundings, detecting pedestrians, lanes, other vehicles, and traffic signs.

Yet sensing is just the beginning. The true intelligence lies in its artificial brain: a sophisticated AI system that processes these inputs in real time to perceive, interpret, and respond with precision.

This is artificial perception—empowering a machine to understand the world with near-human insight.

Watch as the AI transforms raw sensor data into intelligent decisions, enabling the vehicle to drive safely, smoothly, and autonomously with remarkable finesse.

Demo 2

CESAAR-AVC and ARROW projects

Frédéric DAVESNE

Abstact

The IRA2 team (Interaction, Virtual & Augmented Reality, Ambient Robotics) at the IBISC laboratory focuses on research in E-Health applications.

We showcase two innovative projects centered on computer-assisted rehabilitation through exergames:

- The CESAAR-AVC project develops an exergame that enables stroke survivors to train their upper limbs in hospitals or at home, independently of a physiotherapist.
- The ARROW project leverages Augmented Reality headsets to offer engaging training for children with cerebral palsy.

Join us to experience these projects firsthand!

Demo 3

SEHA Project and KALYSTA Startup

Maya SLEIMAN & Maysoon GHANDOUR

Abstract

The IRA2 team (Interaction, Virtual & Augmented Reality, Ambient Robotics) at the IBISC laboratory conducts research on innovative robotic systems, advanced actuation technologies, and assistive devices for human-centered applications.

We showcase the SEHA research project and its technology-transfer pathway through the startup KALYSTA.

- The SEHA project develops an innovative electro-hydraulic actuation technology designed for compact, energy-efficient, powerful and safe robotic systems. It targets applications such as assistive robotics, rehabilitation devices, exoskeletons and collaborative robots.
- The KALYSTA startup, hosted within the IBISC ecosystem, transfers and industrializes the technologies developed through SEHA. It builds high-performance actuation solutions for robotics and mechatronic systems, bridging academic research and industrial applications.

Join us to discover the SEHA technology and KALYSTA's innovative robotic solutions!