



Virtual and Augmented Reality

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Course objectives

To provide an overview of the opportunities and the main issues related to designing and developing VR/AR systems architectures, both in local and in distributed (even web-based) contexts, and to the development of VR/AR applications with a multimodal perspective and approach.



Structure

The course will provide a general introduction of Virtual and Augmented Environments followed by an analysis of features, requirement and issues in real-life applications.

The course will include practical exercises aiming to design and develop a simple 3D real-time interactive applications exemplificative of real-life contexts.



Topics

Virtual Reality:

- 3D Graphics
- Real-time rendering
- Interaction
- 3D Audio
- Devices
- Networking
- VR application development



facebook

htc VIVE



Microsoft
HoloLens

SONY
PlayStation.VR



SAMSUNG
Gear VR

Augmented Reality:

- Tracking
- Computer vision
- Devices
- AR application development

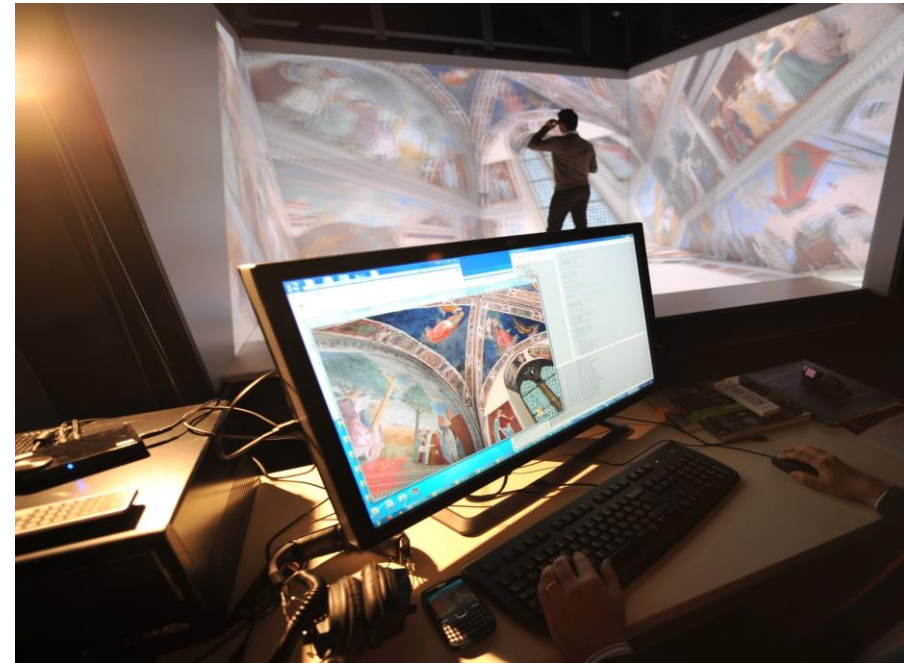


Exam

Test + Project

Thesis opportunities

- VR/AR basic technologies
 - Tracking
 - Immersive visualization
 - Interaction
- VR/AR applications
 - Industry
 - Cultural Heritage



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