Virtual environments

JC Torres

Lab. Virtual Reality UGR,
University of Granada

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Presentation

Faculty

Faculty:

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tutorials: Tuesdays and Fridays from 9:30 to 12:30

Schedule

Máster en Ingeniería Informática
2º cuatrimestre

	Lunes	Martes	Miércoles	Jueves	Viernes
8:30-9:30					
9:30-10:30					
10:30-11:30					
11:30-12:30					
12:30-13:30					
13:30-14:30					
15:30-17:00	GIDM 1.6 / GIW -1.1	TVG 1.6 / SSBW 2.1	ASS 1.6 / IM -1.1	AMCA 1.6	DOM 1.6 / SC -1.1
17:00-18:30	GIDM -1.1 / GIW 1.6	TVG 3.5 / SSBW 1.6	ASS -1.1 / IM 1.6	AMCA -1.1	DOM -1.1 / SC 1.6
18:30-20:00	CC 1.6		EV 1.6	SIGE 1.6	
20:00-21:30	CC 2.4		EV 2.1	SIGE 2..1	

Topic 1: Introduction

Topic 2: Geometric modeling for virtual environments

Theme 3: Interaction techniques

Theme 4: Virtual reality

Item 5: increased and mixed reality

Item 6: Applications

	Practice	Home Delivery	
1	Blender	02/13/19	13/03/19
2	Designing 2/20/19 3/13/19 immersive system	3	Creating models
		13/03/19	03/27/19
4	Textures	03/27/19	10/04/19
5	Simulation	10/4/19	05/08/19
6	Interaction	05/08/19	22/05/19
7	Evaluation System	22/5/19	06/05/19

Software: Blender

Each practice two laboratory sessions except the second, which one is engaged (on 06/03/19) engaged.

Evaluation

Theory

- proposed theoretical exercises (final weight 10%).
- Examination final (final weight 40%).

Practices

- Practices performed during the course (final weight 50%).
- All exercises have a deadline.
- Students who have not attended at least 80% of classes (and those who want to upload your quali fi cation by continuous assessment) conducted a practical test that will create an interactive 3D application tool used in the course.

Quali fi cation fi nal: Weighted average theoretical exercises,
and practical final exam.

- To pass the course will need to obtain at least 4 in each part of the subject (theory and practical).

1. Introduction

1. Introduction.

1. Technologies
2. virtual environments
3. Immersive system structure
4. Senses
5. 3D models
6. Interaction techniques

1. Technologies

Virtual reality

Virtual reality introduces the user in a virtual world so that your senses are disconnected from their environment and receive encouragement from the virtual world. This effect is called immersion.

Need special devices (sight, interaction, location, movement, touch, ...)

https://www.youtube.com/watch?v=747OysQpTBs#t=6m18s

Augmented reality

Augmented reality adds layers of information to the real environment (can be text, images or 3D models). It can be implemented with a smartphone or tablet.

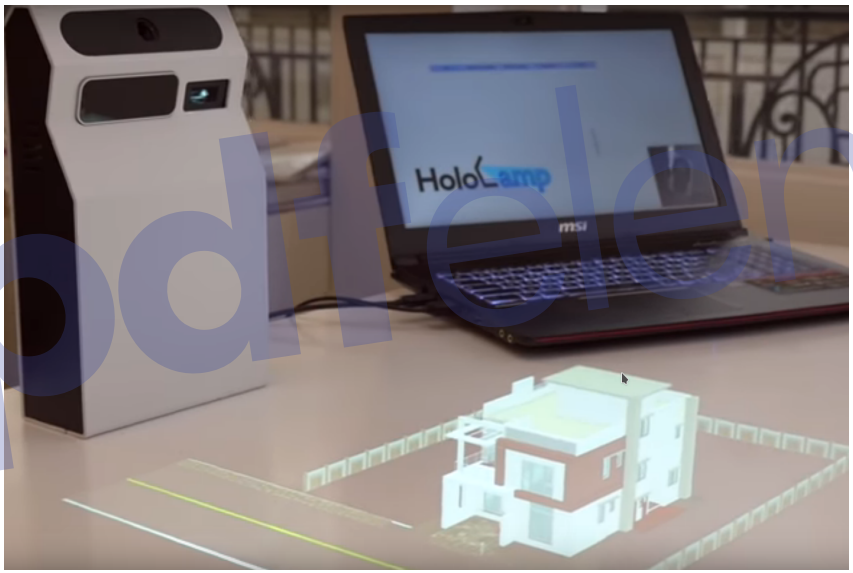
https://www.youtube.com/watch?v=EWVbDh8mDNU&feature=youtu.be

https://www.youtube.com/watch?v=-qb4YkhRO58#t=0m13s

Mixed reality

Mixed reality combines real-world environment with virtual elements "located" in the real environment.

You need special display devices and location.



http://hololamp.tech/

https://youtu.be/DgTclwhK5zg#t=0m4s

video 360

Video recorded with an omnidirectional camera, from which you can generate an image viewed from the point of fi lming in any direction. Do not allow interaction (except changing the direction of view).

You can be displayed on a screen or goggles RV.

https://www.youtube.com/watch?v=8lsB-P8nGSM

Display 3D scenes with the possibility of international action

Can be displayed on a screen,

interactions

nando sitivo dispo- any input.

https://www.simulanis.com/technologies.php

https:

//www.youtube.com/watch?v=8fe9RaEEGQU#t=0m56s