



Research Centre for Visualization, Virtual  
Reality and Graphics Interaction  
Girona & Barcelona

<http://www.virvig.eu/>

# ViRVIG: Research Centre for Visualization, Virtual Reality and Graphics Interaction

- Scientific goals
- Facilities
- Staff
- Application Areas, Know-How and Collaborations
- Publications



# Scientific goals

**ViRVIG** is a joint Research Center involving both UdG (Girona) and UPC (Barcelona).

Its main objective is to generate knowledge and produce scientific research results in Virtual Reality, Visualisation and Advanced Interactive Graphics Systems.

ViRVIG is also aiming to respond to the needs of the industrial and public sectors resulting in advanced, problem-oriented solutions.



# Research Areas

## **ViRVIG Research Areas include:**

- Management and Visualization of Very Complex 3D Models
- Geometry Processing and Geometric Modelling
- Visualisation and Modelling of Volume Data
- Deformable Systems and Physically Based Animation
- Virtual Reality, Augmented Reality and Advanced Interaction
- Capture and Acquisition of Complex Geometric Models
- Procedural Modelling
- Realistic and Interactive Rendering
- Light Transport Simulation
- Expressive Rendering and Computational Aesthetics
- Computational Geometry

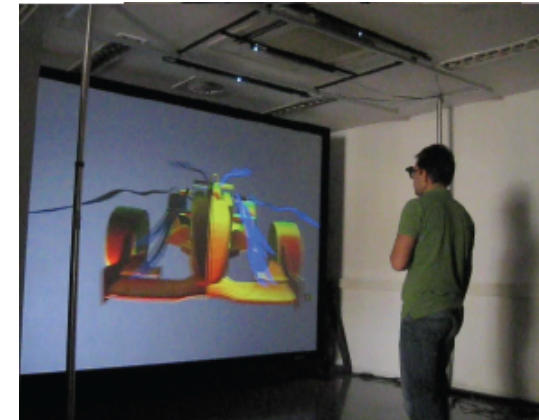


# Facilities

ViRVIG Labs are located in the UdG Scientific Parc and in the UPC Barcelona Campus.

Present facilities include several VR Systems:

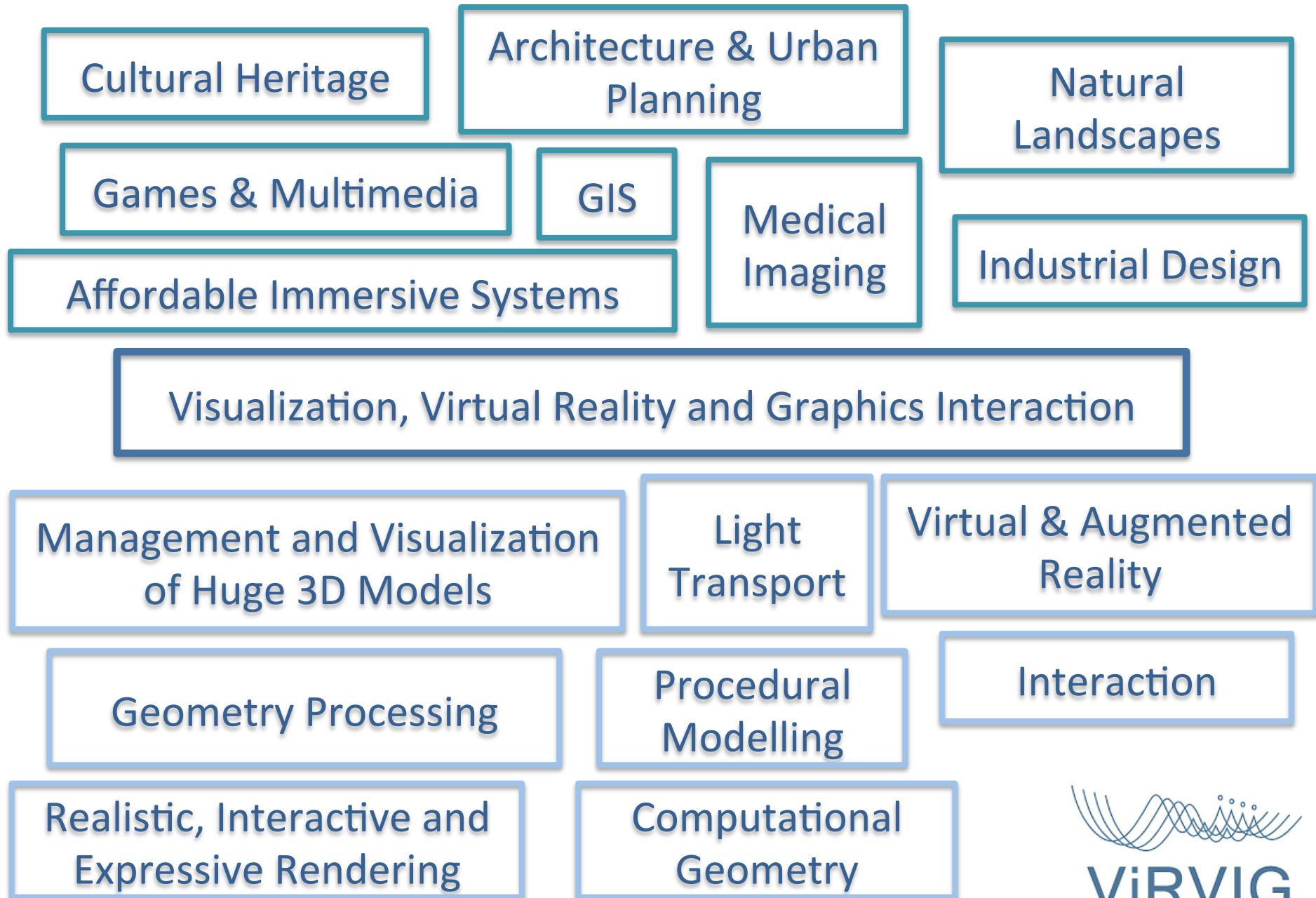
- One Four-wall Cave
- One PowerWall
- Several portable VR Systems.



ViRVIG VR Systems have been designed and assembled in ViRVIG Labs.

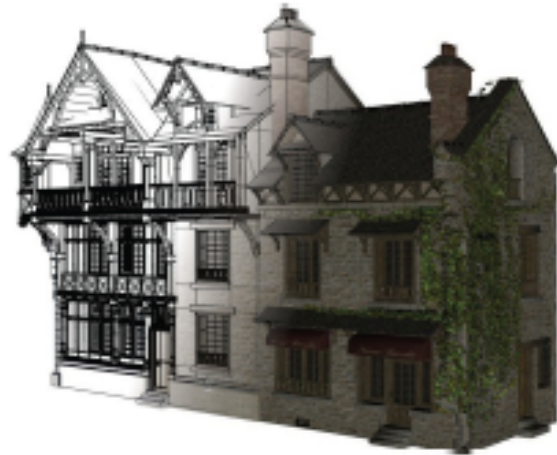
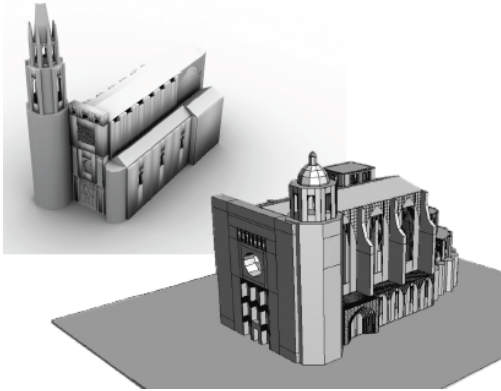
ViRVIG facilities also include haptic robots and laser scanners

# Application Areas and Know-How

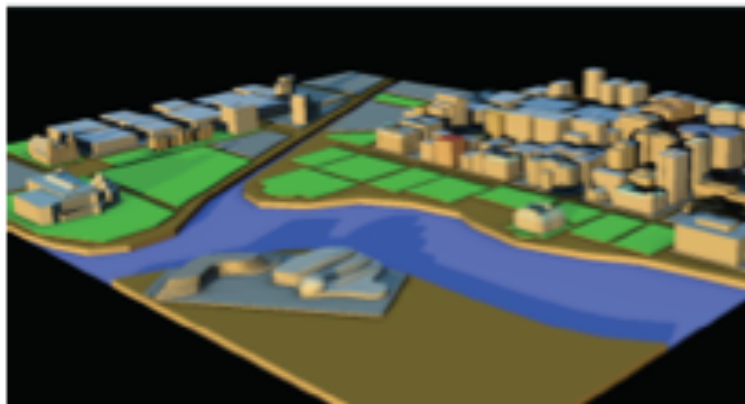


# Application Areas and Know-How (2)

Procedural  
modelling

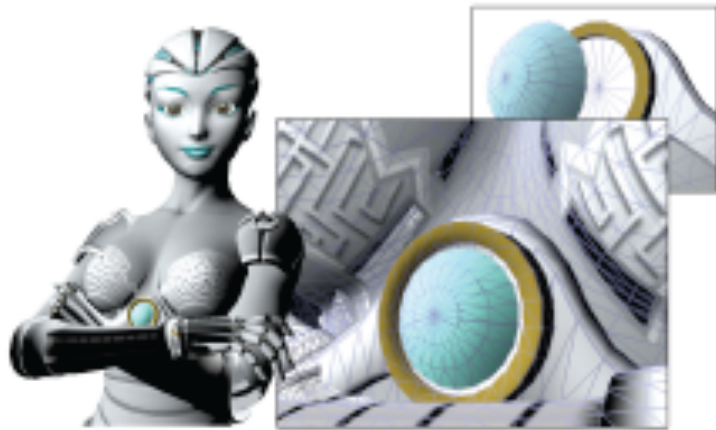


Natural Phenomena  
and Aging



Procedural  
urban  
modelling

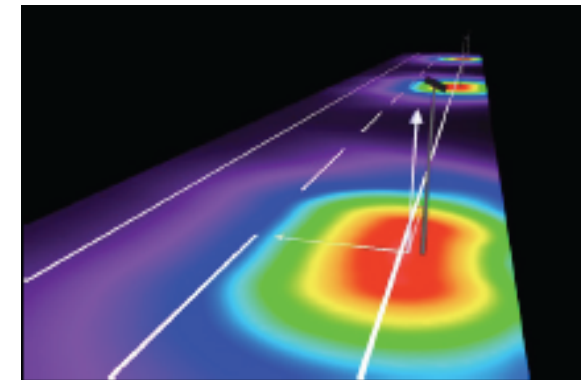
# Application Areas and Know-How (3)



Natural light simulation



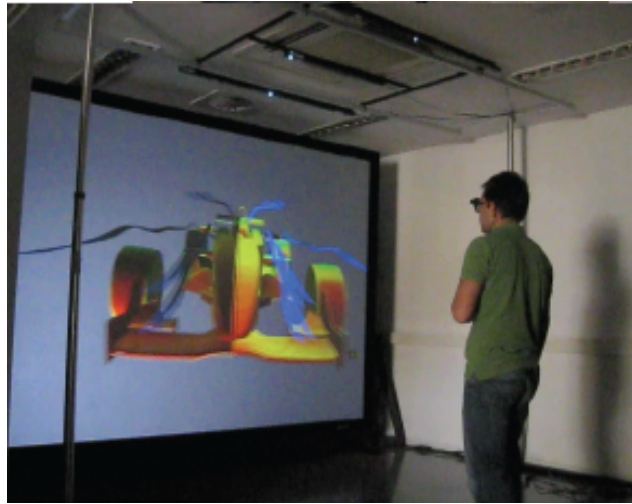
Realistic Rendering, Virtual Scenarios and Videogames



Sustainable lighting



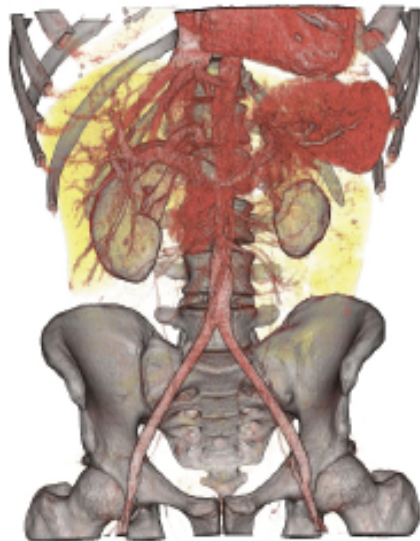
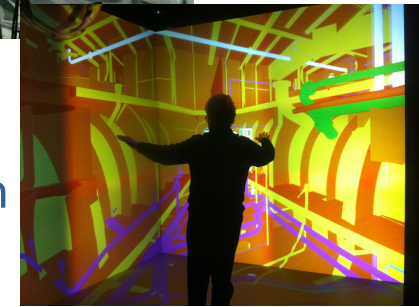
# Application Areas and Know-How (4)



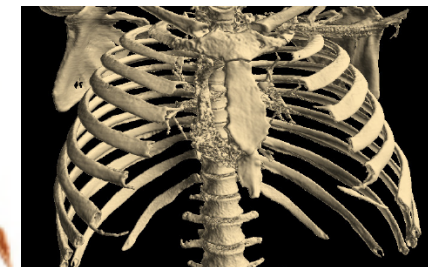
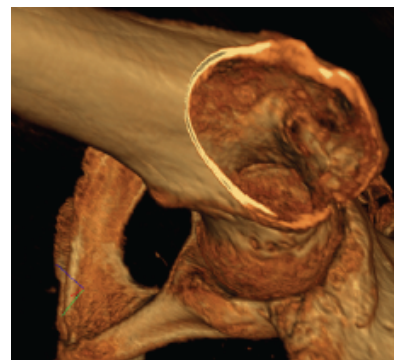
Affordable  
VR Systems



Advanced  
Interaction



Medical  
Applications



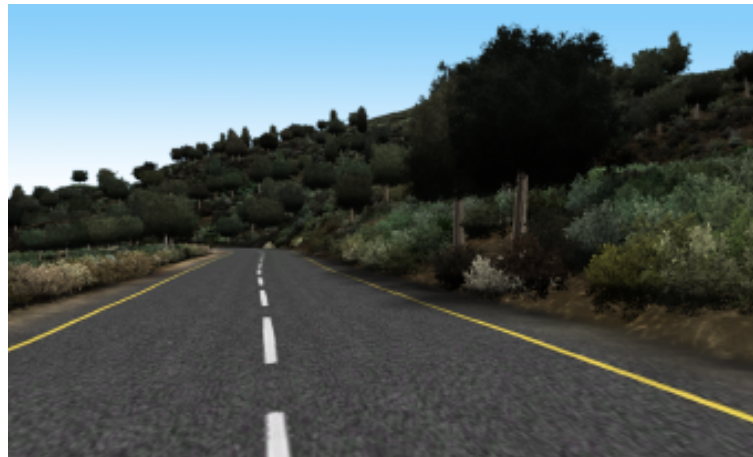
# Application Areas and Know-How (5)

## Cultural Heritage and Big Data



Urban planning and urban models

Plausible landscape models



# Staff

Head of the Lab: Prof. Xavier Pueyo

Senior researchers:

Prof. Carlos Andújar

Dr. Carles Bosch

Prof. Antoni Chica

Prof. Marta Fairen

Prof. Ignacio Martín

Prof. Núria Pelechano

Prof. Antoni Sellarés

Prof. Antoni Susín

Prof. Alvar Vinacua

Prof. Gonzalo Besuievsky

Dr. Pere Brunet

Prof. Narcís Coll

Dr. Marta Fort

Prof. Isabel Navazo

Prof. Xavier Pueyo

Prof. Gustavo A. Patow

Prof. Pere P. Vázquez



ViRVIG Publications page:

<http://www.virvig.eu/publications.php>

