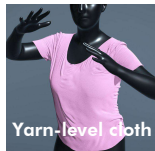


# Rosa María SÁNCHEZ BANDERAS

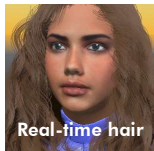


Researcher, Multimedia Engineer and Master in Computer Graphics. I was born in Valencia (Spain), but I am currently living in Madrid, where I work as a researcher in the Multimodal Simulation Lab at the Rey Juan Carlos University. My longstanding dream is to take part in the motion picture industry, researching and developing new VFX techniques for visually interesting phenomena.

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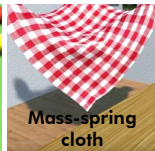
Yarn-level cloth



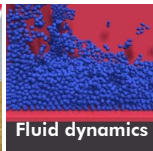
Real-time hair



Rigidbody dynamics



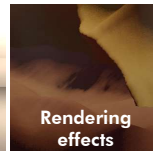
Mass-spring cloth



Fluid dynamics



Raytracing



Rendering effects



Game development

## WORK EXPERIENCE

### Researcher

#### Multimodal Simulation Lab

Rey Juan Carlos University, 2015 – Present

Research and development of novel techniques for cloth simulation at the yarn level. This work was partly supported by the ERC Starting Grant (ref. ERC-2011-SIG-280135, 2015-2016) and the FPI Fellowship Grant (ref. BES-2016-078365, 2016 onwards).

### Web Developer

#### Gamma Spectroscopy Group

Corpuscular Physics Institute (IFIC), 2013

Design and development of the Gamma Spectroscopy Group's website and its new corporate logo.

### Web Developer

#### Employment Service

Valencia's City Hall, 2013

Development of the future Employment Service's website and its new corporate logo.

## PHD

### Computer Science

Rey Juan Carlos University, 2016 – Present

Thesis focused on the area of computer graphics which aims to contribute to the development of innovative solutions for a wide variety of existing problems in the context of yarn level cloth simulation. Supported by the FPI fellowship grant (FPI-2016 BES-2016-078365).

## Master's Degree

### CG, Videogames and Virtual Reality

Rey Juan Carlos University, 2015 – 2016

The Master's Degree in Computer Graphics, Videogames and Virtual Reality provides a thorough understanding of computer graphics, rendering techniques, graphics processor architectures and physically-based simulations. It also addresses videogame creation and virtual reality.

## Bachelor's Degree

### Multimedia Engineering

University of Valencia, 2010 – 2015

The Bachelor Degree in Multimedia Engineering provides a multidisciplinary training in both computer engineering and audiovisual media, enabling the students to fulfill the needs of the information and communication technology (ICT) industries.

## EDUCATION

## PUBLICATIONS

### Strain Rate Dissipation for Elastic Deformations

Rosa M. Sanchez-Banderas, Miguel A. Otaduy

Symposium on Computer Animation, Computer Graphics Forum (2018)



### Dissipation Potentials for Yarn-Level Cloth

Rosa M. Sanchez-Banderas, Miguel A. Otaduy

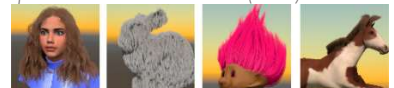
Congreso Español de Informática Gráfica (2017)



### Real-time Inextensible Hair with Volume and Shape

R.M. Sanchez-Banderas, H.Barreiro, I.Garcia-Fernandez, M.Perez

Congreso Español de Informática Gráfica (2015)



## COURSES

- English language course equivalent to B2 CEF, certified by Language Study Centres.
- English applied to engineering course (University of Valencia).
- Valencian language official certification, equivalent to C1 CEF.
- Collaboration with the Conèixer program (University of Valencia)
- Reading seminars of CG works as part of the PhD (University Rey Juan Carlos)

Spanish ★ ★ ★ ★ ★ Native

Valencian ★ ★ ★ ★ ★ Native/C1 CEF

English ★ ★ ★ ☆ ☆ B2 CEF

## LANGUAGES



C++ and C# coding



Real-time rendering (OpenGL/GLSL)



Physically-based animation



Game development (Unity)



Web development (HTML5, JS, CSS)



Augmented Reality



Team working



Self-learning

## SKILLS & ABILITIES

**Development** Visual Studio, VS Code, Qt Creator, Matlab  
**Game Engines** Unity  
**Image & Video** Adobe Photoshop, Adobe Premiere  
**Office** Microsoft Office suite, LaTeX

## TOOLS