

# CLARA PEÑALVA CARBONELL

Multimedia and Computer Graphics Engineer



- ✉ [clarapenyalva@gmail.com](mailto:clarapenyalva@gmail.com)
- 🌐 [clarapenyalva.com](http://clarapenyalva.com)
- 🌐 [linkedin.com/in/clara-penyalva/en](https://www.linkedin.com/in/clara-penyalva/en)

## PROFESSIONAL EXPERIENCE

---

### Research Assistant

11/2018 – 7/2019 (9 months)

MSTLab Research Group, King Juan Carlos University, Madrid

Research in clothing simulation methods. Mainly, my study was focused on modern physics solvers Projective Dynamics to accelerate the calculation of deformations.

Python, C++, Matlab.

### Junior R&D Software Engineer

11/2017 – 7/2018 (9 months)

Laboratory of Simulation and Modelling (LSyM), IRTIC, Valencia

Development of advanced technologies for simulation of port machinery. Improving the physics engine collision system and introducing new vehicles and their training activities in the simulation application. Maintenance of the commercialized software.

C++, OpenGL/GLSL, company graphics engine.

### Student Research Assistant

9/2017 – 12/2017 (3 months)

School of Engineering, University of Valencia, Valencia

Study of the viscosity in simulated fluids using the SPH model. Animation of non-Newtonian fluids. Task related to the Final Degree Project.

C++, Java, Python, Blender.

### Intern Student

6/2016 – 12/2016 (7 months)

LISITT Research Group, University of Valencia, Valencia

Research and development of e-nquest Mote application that uses RSSI Wi-Fi signal to position a device in a closed environment. Testing with Wi-Fi antennas and programming the final user application. (product in commercialization)

Java, Python, HTML5, CSS3, JavaScript.

### Web Developer

9/2014 – 3/2015 (7 months)

Swimming Club La Costera, Canals

Creation of the website attending to the client's needs. Including a virtual store, photo gallery, a space for news and a private area for member athletes. (*now in disuse*).

Joomla, HTML y CSS.

## STUDIES

---

**Master's Degree in Computer Graphics, Games and Virtual Reality** (avg grade: 8,95/10) 2018 – 2020

King Juan Carlos University, Madrid

Master Thesis: “*Solvers de Elasticidad y Restricciones en Simulación*”, directed by Miguel Ángel Otaduy Tristán, with the qualification of 9 outstanding.

**Bachelor of Science: Degree in Multimedia Engineering** (avg grade: 9,05/10) 2013 – 2017

University of Valencia, Valencia

Final Degree Project: “*Viscosidad para la simulación de fluidos no-Newtonianos en animación*”, directed by Ignacio García Fernández, with the qualification of 10 with Honors.

## AWARDS

---

**Best Render of the Advanced Rendering course at the Master's Degree on Computer Graphics, Games and Virtual Reality** granted by Adrián Jarabo in 2019. Jury: Marcos Fajardo (Solid Angle/Autodesk), Matt Chiang (Walt Disney Animation Studios) and Jorge Jiménez (Activision Blizzard).

**Master Studies Scholarship for Academic Excellence**, Comunitat Valenciana Educational Department. Awarded in 2018.

**Extraordinary Degree Award**, University of Valencia. Awarded in the 2016/2017 term.

**Rotary Club Valencia-Center prize for the Best Final Degree Project** of the Higher Technical School of Engineering (ETSE-UV) in Multimedia Engineering. Awarded in 2017.

**Introduction to Research Scholarship**, University of Valencia. Awarded in the 2016/2017 term.

## COMPETENCES

---

### Programming languages

C++, C#	6 years (4 studying)
Python, MatLab, Java, HTML5, CSS3	4 years (3 studying)
OpenGL/GLSL, JavaScript, SQL	(4 studying)

### Technical Software

Git, MatLab, Gimp	2 years
Unity3D, Adobe Premiere	1 year

### Introductory knowledge

CUDA, C, Blender, Path Tracing Engines (Nori),  
Adobe After Effects.

## LANGUAGES

---

Spanish (mother tongue)

Catalan (mother tongue): C2 (EOI)

English: B2 (EOI)

## PUBLICATIONS

---

Poster “Interaction between physics engine and Position-Based Dynamics system” in the CEIG – Spanish Congress of Computer Graphics (2018).

## OTHER INFORMATION

---

I have participated in the organization of the Expociència 2016 and 2018 of the University of Valencia's Science Park. First, as a volunteer and second, developing and giving the workshops from IRTIC-UV.

During my undergraduate studies, I participated in the "Entre Iguals" program of the University of Valencia as a Mentor of first grade students in Multimedia and Computer Engineering.