Julia Guerrero Viu

PhD Candidate - Graphics and Imaging Lab, I3A, Universidad de Zaragoza (Spain)

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Education

PhD in Computer Graphics — *Zaragoza, Spain*

Universidad de Zaragoza — *2021 - Today*

- Material appearance and visual perception with deep learning
- Supervised by Prof. Belen Masia and Prof. Diego Gutierrez - Graphics and Imaging Lab

MSc in Computer Science — *Freiburg im Breisgau, Germany*

University of Freiburg, Albert-Ludwigs-Universität — *2019 - 2021*

- Specialization in Artificial Intelligence
- GPA: 1.0 out of 1.0 - Graduated with Honors
- Master Thesis: Improving Deep Feature Representations for Self-Supervised Training of Disparity Estimation

BSc in Computer Engineering — *Zaragoza, Spain*

Universidad de Zaragoza — *2015 - 2019*

- Specialization in Computer Science
- GPA: 9.78 out of 10.0 - Honorable Mention achieved in 30 out of 39 courses
- Ranked #1 - Extraordinary Degree Award
- Bachelor Thesis: Object Recognition on Panoramic Images

ERASMUS+ Exchange Semester — *Stockholm, Sweden*

KTH Royal Institute of Technology, Stockholm — *2017 - 2018*

Research Experience

Adobe Research — *London, UK*

Research Intern — *July 2024 - Sept 2024*

- Material selection in 2D images (3 months - full time), supervised by Dr. Valentin Deschaintre

Adobe Research — *San José, CA*

Research Intern — *June 2023 - Sept 2023*

- Diffusion-based textures editing (3 months - full time), supervised by Dr. Valentin Deschaintre

Graphics and Imaging Lab - I3A, Univ. Zaragoza — *Zaragoza, Spain*

Junior Research Intern — *Sept 2019 - Oct 2019*

- Denoising of physically based renders in challenging scenarios using Deep Neural Networks (210 h.)

Robotics, Computer Vision and Artificial Intelligence Group - I3A, Univ. Zaragoza — *Zaragoza, Spain*

Collaboration Research Scholarship — *Oct 2018 - June 2019*

- Use of indoor 3D layouts for object recognition on omnidirectional images (8 months - 15h./week)
- Funded by Spanish Ministry of Education (Competitive Scholarship)

Publications

TexSliders: Diffusion-Based Texture Editing in CLIP Space
J. Guerrero-Viu, M. Hasan, A. Roullier, M. Harikumar, Y. Hu, P. Guerrero, D. Gutierrez, B. Masia, V. Deschaintre
Proceedings of ACM SIGGRAPH, 2024

Predicting Perceived Gloss: Do Weak Labels Suffice?
J. Guerrero-Viu*, J.D. Subias*, A. Serrano, K.R. Storrs, R.W. Fleming, B. Masia, D. Gutierrez
Computer Graphics Forum (Proceedings of Eurographics), 2024

The Visual Language of Fabrics
V. Deschaintre*, J. Guerrero-Viu*, D. Gutierrez, T. Boubekeur, B. Masia
ACM Transactions on Graphics (Proceedings of ACM SIGGRAPH), 2023

Towards latent representations of gloss in complex stimuli using unsupervised learning
J. Guerrero-Viu, A. Serrano, B. Masia, D. Gutierrez
Journal of Vision - Abstract Issue (Vision Sciences Society Meeting), 2023

Bag of Baselines for Multi-objective Joint Neural Architecture Search and Hyperparameter Optimization
S. Izquierdo, J. Guerrero-Viu, S. Hauns, G. Miotto, S. Schrodi, A. Biedenkapp, T. Elsken, D. Deng, M. Lindauer, F. Hutter
Automated Machine Learning Workshop. International Conference on Machine Learning (ICML), 2021

Semi-Supervised Disparity Estimation with Deep Feature Reconstruction
J. Guerrero-Viu*, S. Izquierdo*, P. Schroeppel, T. Brox
WiCV Workshop. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021

What's in my Room? Object Recognition on Indoor Panoramic Images
J. Guerrero-Viu*, C. Fernandez-Labrador*, C. Demonceaux, J. J. Guerrero
IEEE International Conference on Robotics and Automation (ICRA), 2020

Patents

Robert Bosch GmbH - Method and device for determining network configurations of a neural network while fulfilling a plurality of secondary conditions — *Germany*

Patent Reference: DE 102021109756.8 - Filing Date: 19.04.2021 - Publication Date: 20.10.2022 — *2021*

Automated ML algorithm for multi-objective hyperparameter and neural architecture search, 'EMOASH'

Awards and Scholarships

Rising Stars - ACM WiGRAPH — *Los Angeles, USA*

International recognition for up-and-coming researchers in computer graphics. In 2023, seven PhD students were selected for a two-year program of mentorship and workshops in ACM SIGGRAPH — *2023 - 2024*

FPU National Fellowship — *Spain*

Competitive national fellowship to pursue a PhD funded by the Spanish Ministry of Universities — *2021 - 2025*

- Ranked #1 in Spain for the area of Computer Science

WONNOW Award - Microsoft & CaixaBank — *Spain*

National award for the female student in STEM with the best degrees — *2021*

- My profile was included in the "Científicas e innovadoras" online platform, a repository of Spanish female scientists considered influential to inspire young people

Postgraduate Fellowship - La Caixa Foundation — *Spain*

Competitive national fellowship to pursue postgraduate studies abroad in Europe — *2019 - 2021*

Google EMEA Women Techmakers Scholarship — *Europe, Middle East and Africa*

International award that recognizes twenty female Computer Science students across Europe, Middle East and Africa for their academic excellence, leadership and social impact — *2019*

Extraordinary Degree Award — *Zaragoza, Spain*

Ranked #1 from the Bachelor in Computer Engineering promotion — *2019*

Best University Student in Education and Values — *Zaragoza, Spain*

Award that recognizes the best students from University of Zaragoza for their academic and professional achievements, social commitment and international impact — *2019*

Mobility City Scholarship — *Zaragoza, Spain*

Grant for Bachelor Thesis related to the development of self-driving cars, funded by Cátedra Mobility City and University of Zaragoza — *2019*

Hash Code Online Qualification Round — *Virtual*

International team coding competition organized by Google — *2019 - 2022*

- Top 10 Spain (2019)
- Top 1 Zaragoza (2019, 2021, 2022)

Excellence Scholarship — *Zaragoza, Spain*

Best entrance record in the faculty of Engineering at University of Zaragoza and excellent records maintained for the whole Bachelor degree — *2015 - 2019*

Teaching and Supervision

Programming Fundamentals — *Universidad de Zaragoza, Spain*
Bachelor in Industrial Technologies Engineering (180h.) — *2022/23, 2023/24, 2024/25*

Optical illusions and deep learning models: Performance analysis and comparisons to human perception — *Universidad de Zaragoza, Spain*
Jorge Esteban Merino - BSc in Computer Engineering — *2024*
- BSc Thesis

Learning interpretable representations of material appearance — *Universidad de Zaragoza, Spain*
Santiago Jiménez Navarro - MSc in Robotics, Graphics and Computer Vision — *2023 - 2024*
- Internship - 225 hours & MSc Thesis

Prediction of perceived glossiness with supervised learning — *Universidad de Zaragoza, Spain*
Fernando Gómez Osta - BSc in Computer Engineering — *2022*
- Internship - 188 hours

Detection and segmentation of objects on panoramic images — *Universidad de Zaragoza, Spain*
Alejandro de Nova Guerrero - MSc in Industrial Engineering — *2021*
- MSc Thesis

Professional Service

Reviewer
- Transactions on Visualization and Computer Graphics (TVCG) 2024
- SIGGRAPH Asia 2024
- Scientific Reports 2024
- Computer Graphics Forum (CGF) 2023, 2024
- Pacific Graphics (PG) 2023
- Spanish Computer Graphics Conference (CEIG) 2022, 2023

Dissemination

AMIT-Aragon Committee — *Aragon, Spain*
Spanish Association of Women in Research and Technology — *2023 - Today*
- Joined the committee to organize and coordinate multiple initatives to promote the role of women in research (e.g. mentoring program)

Thesis in 3 Minutes — *Spain*
Finalist at the challenge ”Thesis in 3 Minutes” organized by Campus Iberus — *2024*

Una ingeniera en cada cole — *Aragon, Spain*
Dissemination initiative in regional primary schools (children aged 6-12) about engineering and science without gender stereotypes. Organized by AMIT-Aragon — *2016 - 2024*
- I have been organizing the talks and actively participating in them for eight years

Girls’ Day - Engineering and Architecture Week — *Zaragoza, Spain*
Dissemination initiative at Universidad de Zaragoza. High school students come to the labs to learn about science and research — *2017 - 2024*

11F - International Day of Women and Girls in Science — *Spain*
Dissemination initiative in high schools (teenagers aged 12-18) to celebrate the International Day of Women and Girls in Science — *2022 - 2024*

European Researchers’ Night — *Zaragoza, Spain*
Dissemination activity for children and families where we show our areas of research to the attendees — *2022*

ADA Program — *Spain*
Dissemination initiative in primary schools (children aged 6-12) about women in science, funded by Women’s Institute and Spanish Ministry of Equity — *2021*

Technovation Girls *Virtual*

International competition for teams of girls aged 10-18, in which they had to learn programming and create a mobile app to solve a problem in their community *2021*

- I mentored two teams of girls (ages 10-11 and 17-18) during four months
- Junior team was Aragon regional winner and both teams were international semi-finalists

Seminar Gender & Technology *Freiburg im Breisgau, Germany*

Interdisciplinary seminar (120 h.) at University of Freiburg about gender and all areas of technology (software design, robotics, media, ethical AI) *2020*

- Volunteer participant during five months
- Speaker. Name of the talk: 'AI Fairness 360 Open Source Toolkit'

Women Techmakers Zaragoza *Zaragoza, Spain*

Local tech conference to raise visibility to regional women in technology, partially funded by Google *2019*

- Speaker. Name of the talk: 'Ingredients to become a Woman Tech'
- Volunteer at the organization of the event

Invited talk at ETFA Forum *Zaragoza, Spain*

International conference on Emerging Technologies and Factory Automation 2019 (ETFA). Invited talk at the young professionals and students forum *2019*

- Speaker. Name of the talk: 'How to become a Google Woman Tech'

Mentor for incoming students *Zaragoza, Spain*

Mentoring program for first year Bachelor students in Computer Engineering at University of Zaragoza *2018 - 2019*

DevFest Zaragoza *Zaragoza, Spain*

Local tech conference for the general public, partially funded by Google *2018*

- Co-organizer of the event and in-charge of the workshops for children

Media *Spain*

Interviews in different national and regional media *2019 - 2022*

- RTVE - National TV, Program: 'Aquí hay trabajo: 11F' (02/2022)
- El Periódico de Aragón - Regional Newspaper (01/2022)
- Eldiario.es - National Newspaper (01/2022)
- Aragón Radio, OndaCero Zaragoza - Regional Radio, Program: 'Despierta Aragón' (01/2022)
- RNE - National Radio, Program: 'Tolerancia Cero' (02/2021)
- Aragón Radio - Regional Radio, Program: 'Escúchate' (05/2020, 06/2021)
- Aragón Televisión - Regional TV, Program: 'La primera mujer: mujeres científicas' (07/2020)
- Heraldo de Aragón - Regional Newspaper (06/2019, 11/2020)

Languages

Spanish Native
English Full Professional Proficiency - C1 (Cambridge CAE)
French Intermediate Proficiency - B2 (DELF)
German Basic Proficiency

Other Interests

Theater Amateur actress at Teatro de la Estación - Zaragoza, Spain (2016 - Today)
Free Time Monitor Volunteer free time activities monitor and coordinator for children and young teenagers (aged 7-17). Hiking and adventure activities at the Pyrenees, Spain (2015 - 2019)
Music - Piano Piano studies at Escuela Municipal de Música y Danza - Zaragoza, Spain (2005 - 2015)