

# Carlos Rodríguez - Pardo

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CV UPDATED AT: June 16, 2025

## SUMMARY

I am a postdoctoral researcher at Politecnico di Milano and EIEE, working on deep learning for climate change mitigation. Previously, I was a postdoctoral researcher at [MSLab](#), working at the intersection of deep learning, computer graphics and vision, and worked as a research engineer at [SEDDI](#), on machine learning and computer vision for the fashion and textile industries. While at SEDDI, I completed an industrial PhD. My work is part of award-winning commercial products, like [Textura.ai](#). I also served as an associate lecturer at a MSc in Computer Science. Before that, I worked as a researcher at the [Applied Artificial Intelligence Group](#).

## EXPERIENCE

03/2024 - Milan, Italy	<b>Postdoctoral Research Fellow</b> at <a href="#">Politecnico di Milano</a> (Associated with <a href="#">EIEE</a> ) Deep Learning for climate change impact mitigation. Machine learning for decision making under uncertainty. Generative models for climate and socioeconomic predictions. Part of the <a href="#">EUNICE ERC project</a> .
07/2023 - 02/2024 Madrid, Spain	<b>Postdoctoral Researcher</b> at <a href="#">MSLab</a> , Universidad Rey Juan Carlos Research on image synthesis, deep learning, generative models.
01/2023 - 07/2023 Madrid, Spain	<b>Associate Lecturer</b> at Universidad Carlos III <i>Intelligent Data Analysis</i> course at the <a href="#">MSc in Computer Engineering</a> . I designed the contents of the course, taught and graded the students. I received a Teaching Excellence Achievement Recognition. Supervision of BSc theses.
09/2018 - 06/2023 Madrid, Spain	<b>Machine Learning Research Engineer</b> at <a href="#">SEDDI</a> Research and development of computer vision and machine learning algorithms. Project planning. Intern supervision. Writing of patents and scientific publications. Design, implementation and testing of AI models behind products, notably <a href="#">Textura.ai</a> .
06/2016 - 08/2017 Madrid, Spain	<b>Research Assistant</b> at Universidad Carlos III Data science for smart tourism. <a href="#">ETUR 2020 EU Industrial Project</a> in <a href="#">GIAA</a> .
05 - 11/2014 Madrid, Spain	<b>Research Assistant</b> at Universidad Carlos III Research on Augmented Reality for educational purposes. In <a href="#">GIAA</a> .

## EDUCATION

12/2019 - 07/2023 Madrid, Spain	<b>PhD Computer Science</b> , Universidad Rey Juan Carlos <i>Cum Laude (Top grade awarded by the university)</i> . Outstanding thesis award (premio extraordinario de doctorado). CEIG 2024 best PhD award. FBBVA/SCIE award. Thesis: <a href="#">Neural Networks for Digital Materials and Radiance Encoding</a> . Advisor: <a href="#">Dr. Elena Garcés</a> . Industrial Doctorate programme. Fully funded by SEDDI. <a href="#">Coverage in Computer Vision News</a> .
09/2017 - 08/2018 Edinburgh, UK	<b>MSc Artificial Intelligence</b> , University of Edinburgh <i>Graduated with distinction (Top grade awarded by the university)</i> . Thesis: <a href="#">Personalised aesthetics assessment in photography using deep learning</a> , selected as <a href="#">Outstanding Thesis</a> . Advisor: <a href="#">Dr. Hakan Bilen</a> .
09/2012 - 07/2017 Madrid, Spain	<b>BSc Computer Science &amp; BSc Business Administration</b> , Universidad Carlos III <a href="#">Double Bachelor Degree Program</a> . Minor in computation. 1 year spent as an Exchange Student at the University of Waterloo, Canada. Honours in final thesis. 5th best academic record in 55 students. Advisor: <a href="#">Dr. Miguel Ángel Patricio</a> .

## AWARDS & OTHER MERITS

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- 2025 Outstanding Reviewer - [CVPR 2025](#).  
Best Reviewer - [AISTATS 2025](#).  
Top read article in [Computer Graphics Forum](#).  
Outstanding Reviewer - [WACV 2025](#).
- 2024 Young Researcher Award - [SCIE – Fundación BBVA](#).  
Best PhD thesis, from [CEIG 2024](#) - Eurographics Spain. Sponsored by SEI and Adobe.  
Outstanding Reviewer at [CVPR 2024](#).  
Outstanding thesis award (premio extraordinario) from Universidad Rey Juan Carlos.
- 2023 [Runner-Up \(Accésit\) for best PhD thesis in the URJC Young Researcher Awards](#).  
[Alumni Award of Excellence from Universidad Carlos III](#).  
[Teaching Excellence Achievement Recognition](#).
- 2022 Outstanding Reviewer at [ECCV 2022](#) and [NeurIPS 2022](#).
- 2018 [Outstanding Thesis](#) and MSc with Distinction at the University of Edinburgh.
- 2017 Honours in BSc Thesis, Universidad Carlos III, Madrid, Spain.
- 2015 - 2016 Exchange Student at University of Waterloo, Canada.
- 2010 - 2012 International Baccalaureate, IES Ramiro de Maeztu, Madrid, Spain.

## SELECTED COMPLEMENTARY EDUCATION

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- 2023 [Climate Change AI summer school](#) (Virtual).
- 2022 [ELLIS Doctoral Symposium](#) (Alicante, Spain).  
[Oxford Machine Learning Summer School \(ML for Health\)](#), (Virtual).  
[Bayesian Learning & Reasoning Workshop](#), Ruhr-Universität Bochum (Virtual).  
2021 [Researcher Management and Leadership Training](#), University of Colorado (Virtual).  
[Full Stack Deep Learning](#), UC Berkeley (Virtual).  
[Project Management & Other Tools Specialization](#), UC Irvine (Virtual).  
[Mind and Machine Specialization](#), University of Colorado (Virtual).  
2020 [Mathematics for Machine Learning Specialization](#), Imperial College London (Virtual).  
[Philosophy of Science](#), University of Pennsylvania (Virtual).

## LANGUAGES

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SPANISH	Native.
ENGLISH	Fluent. <i>Certificate of Proficiency in English (C2)</i> , 8.0 in <i>IELTS</i> .
FRENCH	Intermediate Knowledge (B2).
ITALIAN	Intermediate Knowledge (B2).

## COMPUTER SKILLS

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PROFICIENT	Python, PyTorch, OpenCV, Numpy, $\LaTeX$ , WandB, Keras, Linux, Scikit-Learn, Kornia.
ADVANCED	Scipy, Streamlit, Matlab, Java, Git, Kornia, PyTorch3D, Unix Scripting.
BASIC	PyTest, Android Development, SQL, HTML, Tensorflow, JAXLib.

## RESEARCH ACTIVITIES AND PROFESSIONAL SERVICES

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### Event Organization

- Organizer of [Artificial Intelligence for Carbon](#) Workshop, Como, Italy, July 2025

### Peer-Reviewed Publications and Patents

- Author of 10 journal and 5 conference papers, and 2 book chapters. ([Full list](#)). 3 papers currently under review.
- 2 Patent Applications with SEDDI.

### Teaching and Supervision

- Successful supervision of several M.Sc. and B.Sc. students. Currently supervising 2 PhD students.
- Taught *Advanced Data Analysis* course at the M.Sc. in Computer Science at Universidad Carlos III (2022-2023).

## Presentations and Media Coverage

- Talks in: *AI and big-data approaches in climate change mitigation and adaptation* Special Session, SISC2025 (2025) (Salerno, Italy), *Artificial Intelligence for Carbon* Workshop, Como, Italy, 2025, Exploring new Generative AI methods for understanding dynamic complex social and socio-ecological systems Research Retreat (2025) (Brussels, Belgium), *CEIG 2024* (Coruña, Spain), *Eurographics 2023* (Saarbrücken, Germany), *MLT (2022)* (Online), *I3D (2022)* (Online), *IbPRIA (2019)* (Madrid, Spain), *IWINAC (2015)* (Elche, Spain).
- Poster Presentations: *EGU 2025*, *CV4E(ECCV 2024)*, *LSDLES 2024*, *CVPR 2023*, *EDS (2022)*, *AI4CC (CVPR2022)*.
- Press Coverage: *SCIE (2024)*, *EIEE (2024)*, *CMCC (2024)*, *URJC (2024)*, *Fundacion BBVA (2024)*, *Computer Vision News 2023 and 2022*, *Radio 3 (2015)*.

## Reviewer in Journals

- Computers & Graphics (C&G) - 2024
- Computer Graphics Forum (CGF) - 2023
- Computer Vision and Image Understanding (CVIA) - 2024
- Engineering Applications of Artificial Intelligence (EAAI) - 2024
- Machine Vision and Applications (MVA) - 2025
- Neural Networks - 2024
- Transactions on Graphics (TOG) - 2024, 2025
- Transactions on Image Processing (TIP) - 2024
- The Visual Computer Journal (TVCJ) - 2021, 2022, 2023

## Reviewer / Program Committee in Conferences

- *Annual AAAI Conference on Artificial Intelligence (AAAI)* - 2025
- *Artificial Intelligence and Statistics (AISTATS)* - 2025 (Best Reviewer)
- *Asian Conference on Computer Vision (ACCV)* - 2024
- *British Machine Vision Conference (BMVC)* - 2020, 2024, 2025
- *Computer Vision and Pattern Recognition Conference (CVPR)* - 2020, 2022, 2023, 2024 (Outstanding Reviewer), 2025 (Outstanding Reviewer)
- *Congreso Español de Informática Gráfica (CEIG)* - 2025
- *European Conference on Computer Vision (ECCV)* - 2022 (Outstanding Reviewer), 2024
- *European Conference on Artificial Intelligence (ECAI)* - 2025
- *Eurographics* - 2024
- *Conference on Geometric Modeling and Processing (GMP)* - 2024
- *International Conference on Artificial Intelligence and Statistics (AISTATS)* - 2025 (Best Reviewer)
- *International Conference on Computer Vision (ICCV)* - 2021, 2023
- *International Conference on Machine Learning (ICML)* - 2023, 2024, 2025
- *International Conference on Learning Representations (ICLR)* - 2023, 2024, 2025
- *Neural Information Processing Systems (NeurIPS)* - 2022 (Top Reviewer), 2023, 2024
- *SIGGRAPH Asia Technical Papers* - 2024
- *SIGGRAPH Posters* - 2025
- *SIGGRAPH Technical Papers* - 2025
- *Winter Conference on Applications of Computer Vision (WACV)* - 2024, 2025 (Outstanding Reviewer)

## Reviewer in Workshops

- *AI for Visual Arts (AI4VA)* - 2024
- *Unlearning and Model Editing Workshop* - 2024
- *Latinx in Computer Vision Workshop (LXCV)* - 2023, 2024
- *Out-of-Distribution Generalization in Computer Vision (OODCV)* - 2024
- *Women in Computer Vision Workshop (WiCV)* - 2022, 2023, 2024, 2025

## Other Collaborations and Memberships

- 2024-present: Member of [SCIE](#).
- 2023-present: Member of [Climate Change AI](#) and [GENAIA](#).
- 2022-present: Member of [Eurographics](#), [SIGGRAPH](#) & [LXAI](#).
- 2020-present: University of Edinburgh [Alumni Ambassador](#). Member of [OdiselA](#).
- 2019-present: Member of AERFAI and AEPIA.

## PUBLICATIONS

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### Journal Papers

- **Rodríguez-Pardo, C.**, Pascual-Hernandez, D., Rodríguez-Vazquez, J., Lopez-Moreno, J., and Garces, E., 2025. *Single-image Reflectance and Transmittance Estimation from Any Flatbed Scanner* *Computers & Graphics* (Citations: 2)
- Garces, E., Arellano, V., **Rodríguez-Pardo, C.**, Pascual, D., Suja, S., and Lopez-Moreno, J., 2023. *Towards Material Digitization with a Dual-scale Optical System*. *ACM Transactions on Graphics* (Proceedings of SIGGRAPH) (Citations: 10)
- **Rodríguez-Pardo, C.**, Fabre, J., Garces, E., and Lopez-Moreno, J., 2023. *NEnv: Neural Environment Maps for Global Illumination* *Computer Graphics Forum* (Proceedings of EGSR) (Citations: 5). Top read article [in Computer Graphics Forum](#).
- **Rodríguez-Pardo, C.**, Kazatzis, K., Lopez-Moreno, J., and Garces, E., 2023. *NeuBTF: Neural fields for BTF encoding and transfer* *Computers & Graphics* (Citations: 8)
- **Rodríguez-Pardo, C.**, Prieto-Martin, M., Casas, D., and Garces, E., 2023. *How Will It Drape Like? Capturing Fabric Mechanics from Depth Images*. *Computer Graphics Forum* (Proceedings of Eurographics) (Citations: 15)
- Garces, E., **Rodríguez-Pardo, C.**, Casas, D. and Lopez-Moreno, J., 2022. *A Survey on Intrinsic Images: Delving Deep into Lambert and Beyond*. *International Journal of Computer Vision*, 130(3), pp.836-868. (Citations: 57)
- **Rodríguez-Pardo, C.** and Garces, E., 2022. *SeamlessGAN: Self-Supervised Synthesis of Tileable Texture Maps*. *IEEE Transactions on Visualization & Computer Graphics*. (Citations: 30)
- **Rodríguez-Pardo, C.** and Garces, E., 2021. *Neural Photometry-guided Visual Attribute Transfer*. *IEEE Transactions on Visualization & Computer Graphics*. (Citations: 12)
- **Rodríguez-Pardo, C.**, Suja, S., Pascual, D., Lopez-Moreno, J. and Garces, E., 2019. *Automatic extraction and synthesis of regular repeatable patterns*. *Computers & Graphics*, 83, pp.33-41. (Citations: 32)
- **Rodríguez-Pardo, C.**, Segura, A., Zamorano-León, J.J., Martínez-Santos, C., Martínez, D., Collado-Yurrita, L., Giner, M., García-García, J.M., Rodríguez-Pardo, J.M. and López-Farre, A., 2019. *Decision tree learning to predict overweight/obesity based on body mass index and gene polymorphisms*. *Gene*, 699, pp.88-93. (Citations: 29)

### Conference Papers

- Chiani, L., Daumas, L., **Rodríguez-Pardo, C.**, Tavoni, M., 2025. *Ambiguity and model misspecification with potentially disruptive mitigation options*. *Annual Conference of the European Association of Environmental and Resource Economists (EAERE 2025)* (Citations: 0)

- **Rodríguez-Pardo, C.**, Casas, D., Garces, E., and Lopez-Moreno, J., 2024. *TexTile: A Differentiable Metric for Texture Tileability*. *IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR 2024)* (Citations: 7)
- **Rodríguez-Pardo, C.**, Dominguez, H., Pascual, D., and Garces, E., 2023. *UMat: Uncertainty-Aware Single Image High Resolution Material Capture*. *IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR 2023)* (Citations: 23)
- **Rodríguez-Pardo, C.** and Bilen, H., 2019, July. *Personalised Aesthetics with Residual Adapters*. In *Pattern Recognition and Image Analysis: 9th Iberian Conference, IbPRIA 2019, Madrid, Spain, July 1–4, 2019, Proceedings, Part I* (pp. 508-520). (Citations: 5)
- **Rodríguez-Pardo, C.**, Patricio, M.A., Berlanga, A. and Molina, J.M., 2017, June. *Market trends and customer segmentation for data of electronic retail store*. In *International Conference on Hybrid Artificial Intelligence Systems* (pp. 519-530). Springer, Cham. (Citations: 1)
- **Rodríguez-Pardo, C.**, Hernandez, S., Patricio, M.A., Berlanga, A. and Molina, J.M., 2015, June. *An augmented reality application for learning anatomy*. In *International Work-Conference on the Interplay Between Natural and Artificial Computation* (pp. 359-368). Springer, Cham. (Citations: 15)

## Patents

- Garces, **Rodríguez-Pardo, C.**. 2024. *Neural Synthesis of Tileable Texture Maps* (US Patent Application 18/277,105) (Citations: 1)
- Garces, **Rodríguez-Pardo, C.**. 2023. *Generating a material property map of a computer model of a material based on a set of micro-scale images* (US Patent Application 17/917,599) (Citations: 5)

## Book Chapters

- **Rodríguez-Pardo, C.** *Inteligencia Artificial para la acción climática*. Envejecimiento en tiempos de cambio climático, 2025, ISBN 978-84-09-54405-9 (Citations: 0)
- **Rodríguez-Pardo, C.**, Patricio, M.A., Berlanga, A. and Molina, J.M., 2020. *Machine learning for smart tourism and retail*. In *Handbook of Research on Big Data Clustering and Machine Learning* (pp. 311-333). IGI Global. (Citations: 6)

## Dissertations

- **Rodríguez-Pardo, C.**, *Neural Networks for Digital Materials and Radiance Encoding*. PhD Thesis. 2023. Universidad Rey Juan Carlos. Cum Laude. Recognised with 4 awards. (Citations: 0)
- **Rodríguez-Pardo, C.**, *Personalized aesthetics assessment in photography using deep learning*. MSc Thesis. 2018. University of Edinburgh. Selected as Outstanding Master Thesis. (Citations: 1)
- **Rodríguez-Pardo, C.**, *Análisis de datos para el perfilado de usuarios de retail en ambientes de comercio electrónico*. BSc Thesis. 2017. Universidad Carlos III. Honours in BSc thesis. (Citations: 0)

## Preprints

- **Rodríguez-Pardo, C.**, Chiani, L., Borgonovo, E., Tavoni, M.; *Neural Conditional Transport Maps*. 2025. (Citations: 0)
- **Rodríguez-Pardo, C.**, Daumas, L., Chiani, L., Tavoni, M.; *Net-Zero: A Comparative Study on Neural Network Design for Climate-Economic PDEs Under Uncertainty*. 2025. (Citations: 0)

## Other Publications and Presentations

- Spinoni, J., Mastropietro, M., Cammalleri, C., Dosio, A., Falchetta, G., **Rodríguez-Pardo, C.**, Tavoni, M., *Global age-dependent population exposure to multiple future climate extremes*, EMS 2025.
- Spinoni, J., Mastropietro, M., **Rodríguez-Pardo, C.**, Cammalleri, C., Dosio, A., Tavoni, M., *Population and land-use exposure to future unprecedented climate extremes over Southern Europe*, SISC 2025.

- Spinoni, J., Mastropietro, M., **Rodríguez-Pardo, C.**, Tavoni, M., *Human and land exposure to future recurrent unprecedented extremes*, EGU 2025.
- **Rodríguez-Pardo, C.**, Mastropietro, M., Spinoni, J., Tavoni, M. *Probabilistic prediction of climate extreme events with deep learning*, EGU 2025.
- Renna, S., **Rodríguez-Pardo, C.**, Aleluia Reis, L. *Enhancing Global Air Quality Monitoring Using High-Resolution Land Cover Data and Advanced Machine Learning Techniques*, AGU 2024.
- Renna, S., **Rodríguez-Pardo, C.**, Aleluia Reis, L. *Fine-tuning Vision Transformers with Land Cover Data for Global Air Quality Monitoring*, Computer Vision for Ecology Workshop @ ECCV 2024.
- Mastropietro, M., Chiani, L., Ghirri, J, **Rodríguez-Pardo, C.**, Spinoni, J., Tavoni, M. *Evaluating the role of time lag between climate extremes and socioeconomic impacts*, EMS 2024.