

# GINÉS GARNÉS MORALES | Curriculum Vitae

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## EDUCATION

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| <b>COMPULSORY SECONDARY EDUCATION IN BILINGUAL MODALITY (SPANISH AND FRENCH)</b><br>IES Alfonso X El Sabio<br>Overall mark: 9.38/10                                                                                                  | <b>09/2011 - 06/2015</b><br>Murcia, Spain  |
| <b>BACCALAUREATE - BACHIBAC PROGRAM (SPANISH AND FRENCH DEGREES) IN SCIENCES</b><br>IES Alfonso X El Sabio<br>Final mark: 18.87/20, baccalaureate with distinction                                                                   | <b>09/2015 - 06/2017</b><br>Murcia, Spain  |
| <b>BACHELOR'S DEGREE IN PHYSICS</b><br>University of Murcia<br>Overall mark: 7.45/10<br>End of Degree Project: Determination of the circulation types over Europe and their variations in simulations with interactive aerosols      | <b>07/2017 - 06/2022</b><br>Murcia, Spain  |
| <b>MASTER'S DEGREE IN GEOPHYSICS AND METEOROLOGY</b><br>University of Granada<br>Overall mark: 9.29/10<br>Master's Thesis: Radio occultation techniques for the characterization of the atmospheric boundary layer: COSMIC-2 mission | <b>07/2022 - 09/2023</b><br>Granada, Spain |

## RESEARCH EXPERIENCE

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| <b>ERASMUS+ TRAINEESHIP</b><br>Institute of Coastal Systems - Analysing and Modeling, Helmholtz-Zentrum Hereon<br>Prediction of atmospheric ozone at the Earth's surface applying machine learning methods                                                                                                                                                               | <b>02/2022 - 04/2022</b><br>Geesthacht, Germany |
| <b>INTERNSHIP STUDENT</b><br>Andalusian Institute for Earth System Research (IISTA-CEAMA), University of Granada<br>Atmospheric boundary layer detection through radio-occultation measurements from COSMIC-2 mission                                                                                                                                                    | <b>04/2023 - 09/2023</b><br>Granada, Spain      |
| <b>ATMO-ACCESS TRANS-NATIONAL ACCESS</b><br>Evora Atmospheric Sciences Observatory (EVASO), University of Évora<br>Project title: Improvement of the atmospheric boundary layer height estimation from COSMIC-2 data by using microwave radiometry and radiosondes                                                                                                       | <b>09/2023</b><br>Évora, Portugal               |
| <b>POSTGRADUATE RESEARCHER</b><br>Regional Atmospheric Modeling Group, Department of Physics, University of Murcia<br>Collaborator in the ONFIRE Project: Evolution of fires on a global and regional scale, and at different time scales according to climate forcing                                                                                                   | <b>10/2023 - 03/2024</b><br>Murcia, Spain       |
| <b>POSTGRADUATE RESEARCHER</b><br>Regional Atmospheric Modeling Group, Department of Physics, University of Murcia<br>Collaborator in the ECCE Project: Effects of meteorological and climatic compound events on atmospheric pollution over the Mediterranean                                                                                                           | <b>03/2024 - 05/2025</b><br>Murcia, Spain       |
| <b>MARIE CURIE DOCTORAL RESEARCHER</b><br>Department of Meteorology, University of Reading<br>Doctoral candidate belonging to the Dust Doctoral Network (Dust-DN). Double degree between the University of Reading (first year) and the University of Évora (second and third years). PhD project title: Enhancing the Understanding of the Dust Direct Radiative Effect | <b>09/2025 - Present</b><br>Reading, UK         |

## SKILLS

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### PROGRAMMING FRAMEWORKS & TOOLS LANGUAGES

Python, R, bash, shell script, Fortran, MATLAB

Windows, Linux | Microsoft Office, LaTeX | gnuplot | Climate Data Operators

**Spanish** Native language

**English** Certificate in Advanced English from Cambridge Assessment English (Council of Europe Level C1)

**French** DELF B2 (Council of Europe Level B2)

## PUBLICATIONS

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Garnés-Morales, G., Montávez, J. P., Halifa-Marín, A., & Jiménez-Guerrero, P. (2023). Role of aerosols on atmospheric circulation in regional climate Experiments over Europe. *Atmosphere*, 14(3), 491. <https://doi.org/10.3390/atmos14030491>.

Garnés-Morales, G., Costa, M. J., Bravo-Aranda, J. A., Granados-Muñoz, M. J., Salgueiro, V., Abril-Gago, J., ... & Guerrero-Rascado, J. L. (2024). Four Years of Atmospheric Boundary Layer Height Retrievals Using COSMIC-2 Satellite Data. *Remote Sensing*, 16(9), 1632. <https://doi.org/10.3390/rs16091632>.

Cataldi, M., Galves, V. L. V., Sphaier, L. A., Garnés-Morales, G., Gallardo, V., Párraga, L. M., ... & Jimenez-Guerrero, P. (2024). Development of a New Generalizable, Multivariate, and Physical-Body-Response-Based Extreme Heatwave Index. *Atmosphere*, 15(12), 1541. <https://doi.org/10.3390/atmos15121541>.

Matteo, A., Garnés-Morales, G., Moreno, A., Ribeiro, A. F., Azorin-Molina, C., Bedia, J., ... & Turco, M. (2025). Challenges in assessing Fire Weather changes in a warming climate. *npj Climate and Atmospheric Science*, 8(1), 284. <https://doi.org/10.1038/s41612-025-01163-0>.

## CONFERENCES

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XXXVIII Biennial of Physics of the Spanish Royal Society. Murcia (Spain). 2022. On the role of Aerosols on Atmospheric Circulation in Regional Climate Experiments. Garnés-Morales, G.; Montávez, J. P.; Halifa-Marín, A.; Jiménez-Guerrero, P. Oral presentation.

I Jornadas de Jóvenes Investigadores del Clima de la Asociación Española de Climatología. Valencia (Spain). 2023. Burned Area Trends over Western Mediterranean Europe. Garnés-Morales, G.; Gincheva, A.; Torres-Vázquez, M. Á.; Turco, M. Oral presentation and poster.

XII Workshop on Lidar Measurements in Latin America. São Paulo (Brazil). 2024. Four Years of Atmospheric Boundary Layer Height Retrievals Using COSMIC-2 Satellite Data. Garnés-Morales, G.; Costa, M.J.; Bravo-Aranda, J.A.; Granados-Muñoz, M.J.; Salgueiro, V.; Abril-Gago, J.; ... ; Guerrero-Rascado, J. L. Oral presentation.

ACTRIS Science Conference. Rennes (France). 2024. COSMIC-2 satellite mission for atmospheric boundary layer worldwide monitoring: calibration by ground-based remote sensors and radiosondes. Garnés-Morales, G.; Costa, M.J.; Bravo-Aranda, J.A.; Granados-Muñoz, M.J.; Salgueiro, V.; Abril-Gago, J.; ... ; Guerrero-Rascado, J. L. Poster.

III International Congress on Fire in the Earth System. Cáceres (Spain). 2024. Evaluating Fire Weather Index Approximations Using ERA5 Reanalysis: Global Trends and Implications for Fire Danger Assessment (1980-2020). Turco, M.; Matteo, A.; Garnés-Morales, G.; Gincheva, A.; Torres-Vázquez, M. Á. Oral presentation.

III International Congress on Fire in the Earth System. Cáceres (Spain). 2024. Increasing trends of burned area in Western Mediterranean Europe? A comparative trend analysis of different burned area products. Gincheva, A.; Garnés-Morales, G.; Torres-Vázquez, M. Á.; Tourigny, E.; Turco, M. Oral presentation.

18th Plinius Conference on Mediterranean Risks. Chania (Greece). 2024. Influence of Temperature and Air Pollution on Provincial Mortality in Spain: A Seasonal AI Approach. Montávez, J. P.; Garnés-Morales, G.; Tortosa, J.; Gil-Guirado, S.; García-Fernández, E.; Cataldi, M.; Segado-Moreno, L.; Raluy, E.; Gallardo, V.; Jiménez-Guerrero, P. Oral presentation. [doi.org/10.5194/egusphere-plinius18-49](https://doi.org/10.5194/egusphere-plinius18-49).

4th International Conference on Embedded & Distributed Systems. Béchar (Algeria). 2024. Evaluation of the Evolution of Heatwave Occurrences in Algiers Over the Last Decades Using a Multivariate Heatwave Index. Cataldi, M.; Victalino Galves, V. L.; Garnés-Morales, G.; Gallardo, V.; Montávez, J. P.; Jiménez-Guerrero, P. Oral presentation. [10.1109/EDIS63605.2024.10783378](https://doi.org/10.1109/EDIS63605.2024.10783378).

XIII Congreso de la Asociación Española de Climatología. San Lorenzo de El Escorial (Spain). 2025. Recent Trends in Burned Area over the Western Mediterranean. Gincheva, A.; Garnés-Morales, G.; Torres-Vázquez, M. Á.; Tourigny, E.; Turco, M. Oral presentation.

XIII Congreso de la Asociación Española de Climatología. San Lorenzo de El Escorial (Spain). 2025. Assessing the Compounded Impacts of Extreme Temperature and Air Pollution on Mortality Rates over Spain. Garnés-Morales, G.; Jiménez-Guerrero, P.; Gil-Guirado, S.; García-Fernández, E.; Raluy-López, E.; Segado-Moreno, L.; Montávez, J. P. Oral presentation.

EGU General Assembly. Vienna (Austria). 2025. Overestimating Fire Weather Trends: Challenges in Using Daily Climate Data. Moreno, A.; Matteo, A.; Herrera, S.; Azorin-Molina, C.; Bedia, J.; Provenzale, A.; Dunn, R. J. H.; Garnés-Morales, G.; Quilcaille, Y.; Torres-Vázquez, M. Á.; Di Giuseppe, F.; Turco, M. Oral presentation. [doi.org/10.5194/egusphere-egu25-6292](https://doi.org/10.5194/egusphere-egu25-6292).

EGU General Assembly. Vienna (Austria). 2025. Quantifying the Escalation of Heatwave Events in Spain: A Study Based on the new XHW Index. Cataldi, M.; Victalino Galves, V. L.; Sphaier, L. A.; Garnés-Morales, G. Oral presentation. [doi.org/10.5194/egusphere-egu25-12585](https://doi.org/10.5194/egusphere-egu25-12585).

EGU General Assembly. Vienna (Austria). 2025. Meteorological Drivers of Compound Atmospheric Events Associated with High Mortality Rates in Spain. Garnés-Morales, G.; Jiménez-Guerrero, P.; Gil-Guirado, S.; García-Fernández, E.; Segado-Moreno, L.; Raluy-López, E.; Montávez, J. P. Oral presentation. [doi.org/10.5194/egusphere-egu25-18288](https://doi.org/10.5194/egusphere-egu25-18288).

EGU General Assembly. Vienna (Austria). 2025. Understanding Drivers of Extreme Ozone Events: A Sensitivity Study with WRF-Chem. Segado-Moreno, L.; Montávez, J. P.; Garnés-Morales, G.; Raluy-López, E.; Jiménez-Guerrero, P. (2025). Oral presentation. [doi.org/10.5194/egusphere-egu25-20017](https://doi.org/10.5194/egusphere-egu25-20017).

10th International Conference on Meteorology and Climatology of the Mediterranean. Toulouse (France). 2025. Atmospheric Drivers of Compound Events Related to Excess Mortality in Spain. Garnés-Morales, G.; Jiménez-Guerrero, P.; Gil-Guirado, S.; García-Fernández, E.; Segado-Moreno, L.; Raluy-López, E.; Montávez, J. P. Oral presentation.

12th International Conference on Urban Climate. Rotterdam (Netherlands). 2025. Assessing Aerosol-Induced Modifications of the Urban Heat Island in WRF Simulations for Paris: Findings from the WCRP CORDEX FPS URB-RCC STAGE-0. Raluy-López, E.; Segado-Moreno, L. C.; Garnés-Morales, G.; García-Fernández, E.; Gil-Guirado, S.; Jiménez-Guerrero, P.; Montávez, J. P. Oral presentation. [doi.org/10.5194/icuc12-716](https://doi.org/10.5194/icuc12-716).

## COURSES & WORKSHOPS

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### CLIMATE MODELS

Asociación Española de Climatología

4-hour workshop during the I Jornadas de Jóvenes Investigadores del Clima

12/2023

Valencia, Spain

### INTERNATIONAL NETWORKS HORIZONS EUROPE COST AND EUNIWEILL ACTIONS

International Doctoral School, University of Murcia

Number of hours of the activity: 8

01/2025

Murcia, Spain

### ERASMUS+ BLENDED INTENSIVE PROGRAMME

EUniWell. Host Institution: University of Florence

LIVE COP29 - Towards as EUniWell UNFCCC Delegation

Virtual: 11/2024-12/2024; Physical: 02/2025

Florence, Italy

## AWARDS AND DISTINCTION

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### YOUNG RESEARCHERS AWARD

XIII Congreso de la Asociación Española de Climatología

Assessing the Compounded Impacts of Extreme Temperature and Pollution on Mortality

Rates over Spain

San Lorenzo de El Escorial, Spain

01/2025

### BEST ORAL AWARD

10th International Conference on Meteorology and Climatology of the Mediterranean

Atmospheric Drivers of Compound Events Related to Excess Mortality in Spain

Toulouse, France

05/2025

## ADDITIONAL INFORMATION

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