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Education

- **BSc in Geography** Mytilini
University of the Aegean, Department of Geography 2011 - 2015
 - Undergraduate Dissertation Title: "Geostatistical analysis of the distribution of temperature for Greece, for the period 1971-2000. Study and construction of maps."
Supervisor: Professor Dr. Phaedon Kyriakidis
- **MSc in "Meteorology, Climatology and Atmospheric Environment"** Thessaloniki
Aristotle University of Thessaloniki, Department of Geology 2015 - 2017
 - Dissertation Title: "Impact of climate variability on mosquito occurrence and malaria transmission in Greece."
Supervisor: Assistant Professor Dr. Eleni Katragkou
- **PhD in Climatology** Thessaloniki
Aristotle University of Thessaloniki, Department of Geology 2018 - 2022
 - Dissertation Title: "Estimation of precipitation errors and uncertainty in climate simulations over southern Africa: investigation of physical processes."
Supervisor: Associate Professor Dr. Eleni Katragkou

Foreign Languages

- English (Certificate of Proficiency in English, The University of Michigan)
- German (Goethe-Zertificate B1, Goethe Institut)

Computer/ Software Knowledge

- Windows, Linux (Kubuntu, Ubuntu)
- Microsoft Office, LibreOffice, LaTeX
- R, Python
- CDO (Climate Data Operators)
- Weather Research and Forecasting (WRF) Model
- ArcGIS, Quantum GIS, GRASS GIS, DIVA-GIS

- ERDAS IMAGINE

Research Interests

- Regional scale atmospheric circulation over southern Africa
- Southern Africa rainfall climatology
- Regional climate modelling
- Impact of climate on Vector Borne Diseases
- Impact of climate on Human Health
- Climate services
- Geospatial analysis - Geostatistics
- Geographic Information Systems

Work Experience

- ERASMUS-Placement at the TAMSAT Research Group, University of Reading, Department of Meteorology, UK (01/07/2014-30/09/2014). Supervisor: Dr. Elena Tarnavsky
Project Title: Defining Zones of Homogeneous Precipitation over Africa for the Calibration of the TAMSAT Rainfall Algorithm.
- DAAD, The Mediterranean Hot-Spot: Challenges and Responses in a Changing Environment (2017-2019).
- EC, H2020, H2020-SFS-2016-2017, SFS-43-2017, Enhancing Food Security in African agricultural systems with the support of remote sensing, Africultures (2017-2022).
- State Scholarship Foundation (IKY) and German Academic Exchange Service (DAAD), Greece-Germany bilateral cooperation, Impact of Land Use Changes on regional and local climate in Europe: present and future climate projections (LUCE), IKYDA (2018-2020).
- NRSF 2014-2020, GSRT, Establishment of and Early Warning System for Mosquito-borne diseases and implementation of new vector control tools in the urban environment, EWSMD (2018-2021).
- ERASMUS-Placement at NORCE Climate, Bergen, Norway (01/02/2020-31/12/2020). Supervisor: Dr. Stefan Pieter Sobolowski
Project Title: Set-up of the Weather Research and Forecasting Model (WRF) for sensitivity experiments in km-scale regional climate simulations.
- Region of Central Macedonia, Digital Application for the prediction of nuisance for Mosquitoes (Mosquito Vision) (2022 - 2023).

- EC, H2020, LC-SFS-19-2018-2, Resilient farming by adaptive microclimate managements, STARGATE (2019 - 2023).

Summer Schools and Workshops

- Participation in the TAMSAT Development Workshop (18/08/2014 - 04/09/2014), University of Reading, Department of Meteorology, UK.
- Participation in the Autumn School 2016: Use of satellite data in nowcasting high impact weather, 12 - 16 September 2016, Thessaloniki, Neoi - Epivates, Greece. The workshop was a collaboration between the Aristotle University of Thessaloniki and EUMETSAT.
- Participation in the Workshop: "Mathematical Models of Climate Variability, Environmental Change and Infectious Diseases", 8 - 19 May 2017, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- WCRP Grand Challenge on Clouds, Circulation and Climate Sensitivity: 2nd Meeting on Monsoons and Tropical Rain Belts, 2 - 5 July 2018, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- Participation in the: 2nd ICTP Summer School on Theory, Mechanisms and Hierarchical Modelling of Climate Dynamics: Convective Organization and Climate Sensitivity, 1 - 12 July 2019, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- Participation in the: Indian Ocean Variability and Teleconnections, 15 - 17 March 2021, The Abdus Salam International Centre for Theoretical Physics (ICTP) (online attendance).
- Participation in the: ICTP-Africa Joint School on Rainfall and Water Resources Management — (smr 3724), 25 - 29 July 2022, The Abdus Salam International Centre for Theoretical Physics (ICTP) (online attendance).
- Participation in the: Advancing Subtropical Climate Dynamics: Diagonal Convergence Zones, Droughts, and Floods in Past, Present and Future Climates — (smr 3687), 1 - 5 August 2022, The Abdus Salam International Centre for Theoretical Physics (ICTP) (online attendance).

Presentations in Conferences/ Workshops/ Meetings

1. **Karypidou M. C.**, Mamara A., Anadranistakis M., Kyriakidis P., Spatial distribution of mean monthly temperature for Greece, using deterministic and geostatistical spatial interpolation methods, RMetS Student Conference 2015, 1-3 July, University of Birmingham, UK.
2. **Karypidou M.**, Katragkou E., Mazaris A., Mourelatos S., Gewehr S., Kalaitzopoulou S, Tompkins A., Impact of climate variability on mosquito activity over Greece and linkages to malaria incidence, Impact of Environmental Changes on Infectious Diseases 2017, 17-19 May, Trieste, Italy.
3. **Karypidou M. C.**, Katragkou E., Mazaris A., Mourelatos S., Gewehr S., Tompkins A. M., "Linkages between bioclimatic and environmental conditions and the distribution of the An. sacharovi mosquito over Greece", Joint Thematic Workshop between Justus Liebig University and the Aristotle University of Thessaloniki, 12th of October 2017, Thessaloniki, Greece.

4. **Karypidou M. C.**, Katragkou E., Mazaris A., Mourelatos S., Gewehr S., Tompkins A. M., Impacts of regional climate on mosquitoes and mosquito-borne diseases, Climatology, Climate Dynamics and Climate Change group, Department of Geography, Justus Liebig University hosted by Prof. Juerg Luterbacher, 6th of December 2017, Germany.
5. Sofiadis I., Katragkou E., Pavlidis V., Kartsios S., Tsigaridis K., **Karypidou M.**, Melas D., 2018: Assessing the temperature changes in the 21st century over Europe, using regional climate, Proc. 14th Protection and Restoration of the Environment Conference (PRE XIV2018), Thessaloniki, 3 - 6 July, Greece.
6. **Karypidou M. C.**, Katragkou E., Building data value chains: from climate data production to impacts. The example of climate-sensitive vector-borne diseases, MedCLIVAR 2018, 17 - 21 September, Belgrade, Serbia.
7. **Karypidou M. C.**, Katragkou E., Almpandou V., Mazaris A., Mourelatos S., Gewehr S., Climate-induced changes on the spatial distribution of *Anopheles sacharovi*: An investigation for current and future climate under RCP8.5 over Greece, COMECAP 2018, 15 - 17 October, Alexandroupolis, Greece.
8. **Karypidou M. C.**, Katragkou E., From ECMWF ERA-Interim to ERA5 global reanalysis: precipitation and temperature over Africa, COMECAP 2018, 15 - 17 October, Alexandroupolis, Greece.
9. Alexandridis T., Laneve G., Katragkou E., Cherif I., Ovakoglou G., Kasampalis D., **Karypidou M. C.**, Kartsios S., Pytharoulis I., Moshou D., Garca S. H., Nikulin G., Suarez Beltran J., Enhancing food security through the Africultures project: Design of crops, water and drought services, IGARSS 2019, 28 July - 2 August, Yokohama, Japan.
10. **Karypidou M. C.**, Katragkou E., Kartsios S., Kalaitzopoulou S., Gewehr S., Mourelatos S., An early-warning system of West Nile Virus risk in northern Greece, ESCAIDE 2019, 27 - 29 November Stockholm, Sweden.
*Travel grant awarded by the ESCAIDE Funding Initiative for young researchers
11. **Karypidou M. C.**, Katragkou E., Precipitation biases over southern Africa: examining the role of the Angola Low, EGU 2020, 4 - 8 May (online attendance).
12. Katragkou E., **Karypidou M. C.**, Kartsios S., Gewehr S., Mourelatos S., Building a climate service to support an early Warning System for the West Nile Virus disease in Greece, EGU 2020, 4 - 8 May (online attendance).
13. **Karypidou M. C.**, Katragkou E., Sobolowski S.P., Intercomparison of the spatiotemporal precipitation patterns in CORDEX-Africa, CMIP5, CMIP6, gauge-based and satellite products over southern Africa. 15 - 17 March 2021, The Abdus Salam International Centre for Theoretical Physics (ICTP), Online Seminar
14. **Karypidou M. C.**, Katragkou E., Convection sensitivity during rainy season over southern Africa: an investigation of the impact of the cumulus scheme on precipitation using WRF. 1 - 5 August 2022, The Abdus Salam International Centre for Theoretical Physics (ICTP), Online Seminar.
15. Gewehr, S., Iatrou, M., Kalaitzopoulou, S., Tseni, X., Pegiadis, I., Kartsios, S., **Karypidou M. C.**, Katragkou E., Mourelatos, S., Mosquito Vision: An interactive application for the prediction of mosquito nuisance for citizens, eSOVE Conference 2022, 11 - 14 October, Sofia, Bulgaria.

Publications in Peer-Reviewed Journals

Published:

1. **Karypidou, M. C.**, Almpanidou, V., Tompkins, A. M., Mazaris, A. D., Gewehr, S., Mourelatos, S., Katragkou, E., (2020): Projected shifts in the distribution of malaria vectors due to climate change. *Climatic Change*, <https://doi.org/10.1007/s10584-020-02926-9>
2. Domakinis, C., Mouratidis, A., Voudouris, K., Astaras, T., **Karypidou, M. C.** (2020): Flood susceptibility mapping in Erythropotamos river basin with the aid of Remote Sensing and GIS. *AUC Geographica* 55(2), <https://doi.org/10.14712/23361980.2020.11>
3. Alexandridis, T., Ovakoglou G., Cherif I., Gomez Gimenez M., Laneve G., Kasampalis D., Moshou D., Kartsios S., **Karypidou M. C.**, Katragkou E., Herrera Garcia S., Kganyago M., Mashiyyi N., Pattnayak K., Challinor A., Pritchard R., Brockington D., Kagoyire C., Suarez Beltran J., (2020): Designing AfriCultuReS services to support food security in Africa. *Transactions in GIS*, <https://doi.org/10.1111/tgis.12684>
4. **Karypidou, M. C.**, Katragkou, E., and Sobolowski, S. P.: Precipitation over southern Africa: is there consensus among global climate models (GCMs), regional climate models (RCMs) and observational data?, *Geosci. Model Dev.*, 15, 33873404, <https://doi.org/10.5194/gmd-15-3387-2022>, 2022.
5. Charitonidou, M., Kougioumoutzis, K., **Karypidou M. C.**, Halley, J. M.: Fly to a safer North: distributional shifts of the orchid *Ophrys insectifera* L. due to climate change, *Biology* 2022, 11, 497. (Editor's choice for monthly cover)
6. **Karypidou, M. C.**, Sobolowski, S. P., Sangelantoni, L., Nikulin, G. and Katragkou, E.: The impact of lateral boundary forcing in the CORDEX-Africa ensemble over southern Africa, *Geosci. Model Dev. Discuss.* [preprint], 2022. (accepted)

Under Review:

1. **Karypidou M. C.**, Katragkou, E., Pavlidis, V., Charitonidou, M.: Precipitation climate change signal over Greece: An investigation of the agreement among regional and global modelling systems. *International Journal of Climatology*, in review, 2022.
2. Pavlidis, V., Kganyago, M., Mukhawana, M., Alexandridis, T., Cherif, I., Laneve, G., Orsi, R., Kartsios, S., **Karypidou M. C.**, Sofiadis, I., Katragkou, E.: A drought monitoring and early warning service for food security in South Africa. *Climate Services*, in review, 2023.

In Preparation:

1. **Karypidou, M. C.**, Kartsios, S., Koseki S., Sobolowski, S. P., Tompkins, A., Katragkou, E.: Dynamical aspects of the rainy season climatology over southern Africa in the CORDEX-Africa ensemble.

2. **Karypidou, M. C.**, Kartsios, S., Pavlidis, V., Koseki S., Mooney, P., Sobolowski, S. P., Katragkou, E.,: Convection sensitivity during rainy season over southern Africa: an investigation of the impact of the cumulus scheme on precipitation using WRF.

Ph.D/M.Sc./B.Sc Dissertation/Thesis

1. Karypidou M. C., (2022), Assessment of precipitation errors and uncertainty in climate simulations over southern Africa: investigation of physical processes, Ph.D. Dissertation, Aristotle University of Thessaloniki, Thessaloniki, Greece.
Available here
2. Karypidou M. C., (2017), Impact of climate variability on mosquito occurrence and malaria transmission in Greece, M.Sc. Thesis, Aristotle University of Thessaloniki, Thessaloniki, Greece.
Available here
3. Karypidou M. C., (2015), Geostatistical analysis of the distribution of temperature for Greece, for the period 1971-2000. Study and construction of maps, B.Sc. Thesis, University of the Aegean, Mytilene, Greece.
Available here

Scholarships/Awards

- Erasmus Placement, 7-9/2014, Department of Meteorology, University of Reading, UK.
- Erasmus+ Placement, 2-12/2020, NORCE Norwegian Research Centre - the Bjerknes Centre for Climate Research, Norway.
- Hellenic Foundation for Research and Innovation, Scholarship for PhD research (2019-2022).

Reviewer in Academic Journals with Impact Factor

- Journal of Applied Meteorology and Climatology (IF: 3.557)
- Acta Geophysica (IF: 2.293)
- AUC GEOGRAPHICA (IF: N/A)
- Environmental Research: Climate (IF: N/A)