

# Curriculum Vitae: Kyriakoula Papachristopoulou

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## Personal Information

Date of birth: 01 / 07 / 1988  
Nationality: Greek  
Marital Status: Married  
Home address: Lisimaxou 41, Pagrati, 11632,  
Athens (Greece)  
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## Education 12/2019 – present, PhD Candidate

Laboratory of Climatology and Atmospheric Environment (LACAE), Department of Geography and Climatology, Faculty of Geology and Geoenvironment, School of Science of National and Kapodistrian University of Athens, Athens (Greece)  
titled: “**Solar radiation/energy forecasting and measurements applications: the role of clouds and aerosols**”

**2011 – 2014, Master of Science in Environmental Physics** (grade 9.53/10)  
Faculty of Physics, School of Science of National and Kapodistrian University of Athens, Athens (Greece)  
Master thesis was conducted in the Laboratory of Climatology and Atmospheric Environment (LACAE), titled: “**Estimation of waterspout parent cloud brightness temperature using satellite data over south Aegean Sea**”

**2006 – 2011, Bachelor of Science in Physics** (grade 7.89/10)  
Faculty of Physics, School of Science of University of Patras, Patras (Greece)  
Undergraduate thesis was conducted in the Laboratory of Atmospheric Physics Department: Applied Physics, titled: “**Generation of Cressman Objective Analysis function in R and implementation examples**”

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## Research experience

**2020 – today,**  
**Research Associate** of Institute of Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS), National Observatory of Athens (NOA) in the framework of the research program:  
**EUROGEOSS Showcases**: Applications powered by Europe (**E-SHAPE**), where solar radiation and solar energy nowcasting and forecasting and its relationship with aerosol and clouds is investigated. Funded by: H2020-EU

**2019**  
**Research Associate** of Institute for Environmental Research and Sustainable Development (IERSD), National Observatory of Athens (NOA) in the framework of the research program:  
**SOCLIMPACT-DownScaling CLImate ImpACTs** and decarbonisation pathways in EU islands, and enhancing socioeconomic and non-market evaluation of Climate Change for Europe, for 2050 and Beyond. Funded by: H2020-EU.3.5.1. Fighting and adapting to climate change

**2013 – today,**  
**Research Associate** of Laboratory of Climatology and Atmospheric Environment (LACAE), Department of Geography and Climatology, Faculty of Geology and Geoenvironment, School of Science of National and Kapodistrian University of Athens, Athens (Greece)

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**Academic teaching experience** 2012 – 2013,  
Tutoring and Supervising Undergraduate students in Laboratory exercises  
Faculty of Physics, National and Kapodistrian University of Athens, Athens  
(Greece)

- Physics I Basic Laboratory: Introductory Laboratory (1<sup>st</sup> semester)
- Physics II Basic Laboratory: Mechanics (2<sup>nd</sup> semester)
- Physics IV Basic Laboratory: Electromagnetism and Modern Physics (4<sup>nd</sup> semester)
- Environmental Physics Laboratory (7<sup>th</sup> semester)

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**Work experience** 2018 – 2019, Othisi private educational institution  
2017 – 2018, Alfavita private educational institution  
2014 – 2016, Iordanakeion private school  
2010 – 2011, Office work (customer service)  
Hellenic Telecommunications Organization (OTE), Patras (Greece)  
2007 – 2008, Office work (customer service)  
Hellenic Telecommunications Organization (OTE), Patras (Greece)

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**Scholarships** 11/2011 – 10/2013  
**Postgraduate studies** were co-funded by the Action “**State Scholarships Foundation (SSF/IKY)** program with an individualized evaluation process of the academic year 2011-2012” from resources of the operational program “Education and Lifelong Learning” of the European Social Fund (ESF) and of the National Strategic Reference Framework (NSRF), 2007 -2013. **ID 2011-1-280**

09/2006 – 09/2010  
**Undergraduate studies** were funded by a **scholarship** granted from the “Sotiriou Papazafeiropoulou” bequest.

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**Research related skills**

- Time series analysis (GLM, GAM) and spatial interpolation analysis
- Radiative transfer modeling (RTM)
- Short term solar radiation/energy forecasting using satellite observations and assessment using ground-based measurements
- Impact of aerosols (especially dust) and their profiles on solar radiation budget using satellite data, model’s reanalysis data and surface data.

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**Computing skills**

- **Operating systems:** Windows, Linux
- **Programming languages:** PYTHON, IDL, FORTRAN  
C++  
MATLAB  
R (Statistical Language)  
HTML5, CSS3
- **Software:** GIS  
SPSS, SAS  
ORIGIN, Orcad PSPICE AD Lite  
ANSYS Fluid Structural Interaction 12.1  
Microsoft Office (ECDL Core Certificate) (2008)

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**Languages**

- **Greek:** Mother tongue
- **English:** Level **B2**
- **French:** Level **A2**

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**Organisational / managerial skills** Support Committee of International conference MedClivar2016, September 2016, Athens, Greece

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**Dissemination  
activities / public  
outreach**

Participation in 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Athens Science Festival held in Athens in 2015, 2016 and 2017 with LACAE

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**Publications in  
peer reviewed  
journals**

Fountoulakis, I.; Kosmopoulos, P.; **Papachristopoulou, K.**; Raptis, I.-P.; Mamouri, R.-E.; Nisantzi, A.; Gkikas, A.; Witthuhn, J.; Bley, S.; Moustaka, A.; Buehl, J.; Seifert, P.; Hadjimitsis, D.G.; Kontoes, C.; Kazadzis, S. Effects of Aerosols and Clouds on the Levels of Surface Solar Radiation and Solar Energy in Cyprus. *Remote Sens.* 2021, 13, 2319. <https://doi.org/10.3390/rs13122319>

Raptis, I.-P.; Eleftheratos, K.; Kazadzis, S.; Kosmopoulos, P.; **Papachristopoulou, K.**; Solomos, S. The Combined Effect of Ozone and Aerosols on Erythemal Irradiance in an Extremely Low Ozone Event during May 2020. *Atmosphere* 2021, 12, 145. <https://doi.org/10.3390/atmos12020145>

Kosmopoulos, P.; Kouroutsidis, D.; **Papachristopoulou, K.**; Raptis, P.I.; Masoom, A.; Saint-Drenan, Y.-M.; Blanc, P.; Kontoes, C.; Kazadzis, S. Short-Term Forecasting of Large-Scale Clouds Impact on Downwelling Surface Solar Irradiation. *Energies* 2020, 13, 6555. <https://doi.org/10.3390/en13246555>

Matsangouras, I. T., Nastos, P. T., Bluestein, H. B., Pytharoulis, I., **Papachristopoulou, K.**, & Miglietta, M. M. (2017). Analysis of waterspout environmental conditions and of parent-storm behavior based on satellite data over the southern Aegean Sea of Greece. *International Journal of Climatology*, 37(2), 1022-1039. <http://doi.org/10.1002/joc.4757>

**Papachristopoulou, K.**, Matsangouras, I. T., & Nastos, P. T. (2015). Waterspout cloud top detection using MSG SEVIRI infrared brightness temperature over the northern Ionian Sea, Greece. *Advances in Science and Research*, 12(1), 45–49. <http://doi.org/10.5194/asr-12-45-2015>

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**Full papers in  
International  
Conference  
Proceedings**

**Papachristopoulou K.**, Matsangouras, I.T. and Nastos, P.T., 2014. Waterspout cloud top detection using MSG SEVIRI Infrared brightness temperature over south Aegean Sea. In book: COMECAP2014 - Book of e-contributions- vol.3. Proceedings 12th International Conference of Meteorology, Climatology and Physics of the Atmosphere, Editors: M Kanakidou, N Mihalopoulos, P Nastos, pp.26-30, ISBN: 978-960-524-430-9.

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**Extended  
abstracts in  
International  
Conferences**

**Papachristopoulou K.**, Fountoulakis I., Kosmopoulos P., Kouroutsidis D., Raptis P.I., Kontoes C., Hatzaki M. and Kazadzis S.: Assessment of a newly developed short-term forecasting system (nextSENSE) of Downwelling Surface Solar Irradiance (DSSI) and validation with ground-based measurements, EGU General Assembly 2021, Online, 19–30 April 2021, EGU21-7218, 2021

Fountoulakis I., **Papachristopoulou K.**, Proestakis E., Gkikas A., Raptis P.I., Siomos N., Kontoes C. and Kazadzis S.: Effect of aerosol vertical distribution on the transfer of solar radiation through the atmosphere, EGU General Assembly 2021, Online, 19–30 April 2021, EGU21-6111, 2021

Bleta A., Nastos, P.T., **Papachristopoulou K.**, Dietze V., " Effects of particulate matter from 2.5µm to 80µm on emergency hospital admissions for respiratory diseases: a time-series analysis in Heraklion, Crete Island, Greece", EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2018, Budapest, Hungary, 3-7 September 2018 (Poster Presentation)

**Papachristopoulou K.**, Nastos, P.T., Prezerakos N.G., "Consecutive cold waves over Greece during winter time 2017", EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2017, Dublin, Ireland, 4-8 September 2017 (Poster Presentation)

Bleta A., Nastos, P.T., **Papachristopoulou K.**, Dietze V., "Cardiovascular admissions related to particulate matter from 2.5µm to 80µm in Heraklion, Crete Island, Greece", EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2017, Dublin, Ireland, 4-8 September 2017 (Poster Presentation)

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**Papachristopoulou K.**, Matsangouras, I.T., Nastos, P.T., “Waterspout parent cloud attributes based on MSG SEVIRI RSS Infrared brightness temperature over Greece”, MedCLIVAR 2016 Conference, Athens, Greece 26 – 30 September 2016 (Poster Presentation)

**Papachristopoulou K.**, Matsangouras, I.T., Nastos, P.T., “Waterspout cloud top detection using MSG SEVIRI infrared brightness temperature over the northern Ionian Sea”, 14<sup>th</sup> EMS Annual Meeting & 10<sup>th</sup> ECAC, Prague, Czech Republic, 6 – 10 October 2014 (Poster Presentation)

**Papachristopoulou K.**, Matsangouras, I.T., Nastos, P.T., “Waterspout cloud top detection using MSG SEVIRI Infrared brightness temperature over south Aegean Sea”, 12<sup>th</sup> International Conference on Meteorology, Climatology and Atmospheric Physics, Heraklion, Crete, 28-31 May 2014 (Poster Presentation)

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