

Stavros NTAFIS (DAFIS)

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Nationality: Greek
Date of birth: 13/01/1991

Education

- 2014 - 2016** **Master 2: Atmospheric Sciences and Environment, Physics Department, University of Ioannina, Greece. Estimated Grade: 9.3/10 (Top of the class)**
Thesis: "Numerical simulations and observational study of a Mesoscale Convective System in France, during the HyMeX - SOP1 using the WRF model".
Advisors: K. Lagouvardos, V. Kotroni, A. Bartzokas
- 2009 - 2014** **License / Master 1: Physics, University of Ioannina, Greece. Grade 7.2/10 (Top 3%)**
Thesis: "The atmospheric circulation characteristics favoring snowfall in an area with complex relief in Northwestern Greece".

Additional Educational Programs:

- June 2015** **LMDZ Training course.**
Université Pierre et Marie Curie (Paris VI) - LMD Jussieu.
- June 2015** **European Severe Storm Laboratory's Testbed at the Training Center of Wiener Neustadt, Austria.**
Forecast training and evaluation of forecasting tools (numerical models, storm trackers).
- Online courses:** **Certificates from MetEd education program (UCAR), EUMETRAIN (courses provided by EUMETSAT) and Coursera.**

Working Experience

- Jun. 2016 - Nov. 2016** **Physics Engineer - Laboratory of Dynamic Meteorology, Ecole Polytechnique, CNRS, Palaiseau, Paris.**
Observational study of the deep moist convection occurrence during Medicanes by using satellite instruments. *Advisor: C. Claud*
- May. 2016 - present** **Weather forecaster - Stravon weather services, Kozani, Greece.**
Providing weather forecasts and warnings to farmers in North Greece.
- Mar. 2016 - present** **Research Associate - National Observatory of Athens (NOA-IERSD), Athens, Greece**
Weather forecasts and developing complex algorithms to manipulate station, model and satellite data in real time (www.meteo.gr). Responsible for NOA's social media accounts.
- 2012 - present** **Operational forecaster at the European Severe Storm Experiment (ESTOFEX).**
Weather outlooks and warnings for severe weather occurrence with verification methods.
Advisor: P. Groenemeijer
- Sep. 2015 - Feb. 2016** **Internship at LATMOS - Laboratoire Atmosphères, Milieux, Observations Spatiales, - IPSL, Guyancourt, Paris.**
Evaluation of MED-CORDEX WRF simulations (ice water content values) against space borne lidar CALIPSO and ground based lidar located at SIRTAs scientific site.
Advisor: S. Bastin

- June 2013** **Research Assistant at "Roberto Sarao" station for climate observations in Lampedusa, Italy (ENEA).**
Data acquisition and measurements from microwave radiometers (pyranometers, CIMEL, MFRSR, Microtops) in the frame of ChArMeX campaign.
- Feb. - June 2013** **Internship at ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Rome, Italy.**
Development of algorithms to calculate clear sky solar irradiances and to derive the cloud optical depth from microwave radiometer data.
Advisors: A. G. di Sarra, G. Pace, D. Meloni
- 2012 - 2015** **Research Assistant - National Observatory of Athens (NOA - IERSD).**
Installation of weather stations in Greece (more than 30 until Feb. 2016).

Awards and honors

- Complimentary for my oral presentation at the 13th International Conference for Meteorology and Climatology (COMECAP 2016).
- Price award for young scientists for the best poster presentation at the 12th International Conference for Meteorology and Climatology (COMECAP 2014).
- Full scholarship by the European Severe Storm Laboratory (ESSL) to attend the annual Testbed at the Training Center of Wiener Neustadt, Austria in June 2015.
- Honors for the best weather photo in Greece during 2016 by the Hellenic Meteorological Society.
- Honors for the best weather photo in Greece during 2014 by the Hellenic Meteorological Society.

Languages

- Greek - Native speaker
- English - Proficient user (C2)
- German - Independent user (B1)
- Italian - Basic User (A2)
- French - Basic User (A1)

Computer Skills

- Excellent skills in both Windows and Linux operating systems.
- Familiar with data processing in several data set formats: ascii, grib, netCDF, HRIT, SIGMET.
- Experience with the Weather Research and Forecasting model (WRF)
- Programming languages: NCL, IDL, Python and limited experience with Fortran, Grads, Matlab, Mathematica, ArcGIS, Vapor, HTML5.

Publications

Peer-Reviewed Publications:

Dafis S., Giannaros T. M., Lagouvardos K., Kotroni V., Fierro A., Mansell T., 2017: *Explicit numerical forecasting of lightning activity in Greece.* (under preparation)

Dafis S., C. Claud, J-F. Rysman, E. Flaounas, 2017: *Characterization of deep convection within a tropical-like cyclone over the Mediterranean Sea.* Atmospheric Science Letters (submitted)

Dafis S., Lagouvardos K., Kotroni V., Giannaros T. M., Bartzokas A., 2016: *Sensitivity of numerical simulations of a Mesoscale Convective System in France, during the HyMeX - SOP1 using the WRF model*. Atmospheric Research, DOI: 10.1016/j.atmosres.2016.12.001

Dafis S., Lolis J. C., Houssos E., Bartzokas A., 2015: *The atmospheric circulation characteristics favouring snowfall in an area with complex relief in Northwestern Greece*. International Journal of Climatology, DOI: 10.1002/joc.4576

Dafis S., Lagouvardos K., Kotroni V., Giannaros T. M., Bartzokas A., 2017: *Numerical Simulations and Observational Study of a Mesoscale Convective System in France, during the HyMeX - SOP1 using the WRF model*. Perspectives on Atmospheric Sciences, pp.41-47. DOI: 10.1007/978-3-319-35095-0_6

Lampiris A., **Dafis S.**, Papavasileiou G., 2017: *Observational and numerical study of a tornado outbreak in Attica and Euboea*. Perspectives on Atmospheric Sciences, pp.99-105. DOI: 10.1007/978-3-319-35095-0_15

International Conferences and Workshops:

Dafis S., C. Claud, J-F. Rysman, E. Flaounas, 2017: *Characterization of deep convection within a tropical-like cyclone over the Mediterranean Sea*. HyMeX Science Team Med-cyclones workshop March 2017, Paris (oral).

Dafis S., C. Claud, J-F. Rysman, E. Flaounas, 2016: *Deep moist convection characteristics of Medicane Rolf, November 2011*. HyMeX Science Team Lightning workshop October 2016, Toulouse (oral).

Lampiris A., **Dafis S.**, Papavasileiou G., 2016: *Observational and numerical study of a tornado outbreak in Attica and Euboea*. 13th International Conference for Meteorology and Climatology COMECAP 2016, Thessaloniki, Greece.

Dafis S., Lolis J. C., Bartzokas A., Gkousarov G., 2015: *The characteristics of a High-Precipitation Tornadoic-Supercell in a metropolitan area of Northwest Greece*. 9th HyMeX workshop, Mykonos, Greece (poster).

Sioutas M., **Dafis S.**, Papavasileiou G., Doe R.K., 2015: *Tornado occurrence in Greece: Influencing variables and spatio-temporal variations*. European Conference on Severe Storms 2015, Wiener Neustadt, Austria (poster).

Dafis S., Lagouvardos K., Kotroni V., Giannaros T. M., Bartzokas A., 2015: *Sensitivity of numerical simulations of a Mesoscale Convective System in France, during the HyMeX - SOP1 using the WRF model*. 9th HyMeX workshop, Mykonos, Greece (oral).

Dafis S., Hatzianastasiou N., Meloni D., Pace G., di Sarra A. G., 2015: *A climatology of cloud optical thickness in the central Mediterranean (Lampedusa) based on surface solar irradiance measurements*. IUGG 2015, Prague, Czech Republic (poster).

Dafis S., Hatzianastasiou N., Meloni D., Pace G., di Sarra A. G., di Biagio C., 2014: *Cloud-screening algorithm and determination of clear sky solar irradiance and cloud properties in the island of Lampedusa*. 12th International Conference for Meteorology and Climatology COMECAP 2014, Heraklion, Greece (poster).

Outreach activities

Since 2006 I am the owner of a website (<http://www.meteovolos.gr>) where I provide weather forecasts for my hometown, Volos. Since 2012 I am a volunteer forecaster at the ESTOFEX team (<http://www.estofex.org>), where I have gained experience in forecasting convective weather phenomena which helped me become responsible at the European Severe Weather Database (ESWD - <http://www.eswd.eu>) to evaluate severe weather events in Greece. Since March 2016, I am responsible for upgrading the weather forecast maps of National Observatory of Athens (<http://www.meteo.gr/meteomaps/>) as well as providing observational plots and new datasets. Moreover, I am a member of the Hellenic Meteorological Society and the Hellenic Polar Society (ELEPOZ).

My hobbies include extreme weather photography, long distance trail running and alpinism. I am a volunteer at the Mountaineering Club and Greek Rescue Team of Ioannina, Greece and I own a diploma from Greek Amateur Radio Community (ham). In the context of my outreach activities of the University of Ioannina, I have given speeches to Greek schools and Scout teams on weather and climate issues. In June 2017, I am an invited speaker at the European Severe Storms Laboratory Testbed in Wiener-Neustadt, Austria.