

CURRICULUM VITAE

Personal details

Name: Georgios Papangelis

Date of birth: 11/05/1979

Research topics

- Atmospheric boundary layer (ABL) physics.
- Land – atmosphere interactions.
- Large Eddy Simulation (LES) of the atmospheric boundary layer over heterogeneous surfaces.
- Mesoscale atmospheric simulations (e.g. WRF model).
- Data assimilation (3D-Var, 4D-Var).
- Application of the WRF model and optimizing the representation of urban surface characteristics – urban microclimate and urban planning.

Current positions

- Research Fellow, Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS), National Observatory of Athens, I. Metaxa & Vas. Pavlou, P. Penteli (Lofos Koufou), 15236 Athens, Greece.
Tel: (+30) 210 810 9221, email: gpapaggelis@noa.gr
- PhD candidate, Faculty of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens, Athens. Group of Numerical Applications in the Atmosphere.
Tel: (+30) 210 727 6746; fax: (+30) 210 729 5281, email: gpapaggelis@phys.uoa.gr

Previous positions

- 2018-2020, Institute for Environmental Research & Sustainable Development, National Observatory of Athens, I. Metaxa & Vas. Pavlou, P. Penteli (Lofos Koufou), 15236 Athens, Greece. Research Fellow.
- 2012-2018, Faculty of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens, Athens, Contracted Researcher.
- 2009-2011, Faculty of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens, Athens, Contracted Researcher.
- 2005, Meteorological Center of Seville, Spain. 6-month internship in the frame of the European Union ‘Leonardo Da Vinci’ program. Researcher.

Academic studies

- M.Sc: 2009, Faculty of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens, Athens, Supervisor: Maria Tombrou-Tzella, Thesis title: ‘Study of the atmospheric boundary layer over Attiki, Greece, using a mesoscale weather prediction model’
- B.Sc in Physics.: 2004, Department of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens, Athens.
- Erasmus program: 2002-2003, Department of Physics, University of Seville, Spain.

Scientific publications/activities

- G. Papangelis, M. Tombrou, A. Dandou, T. Kontos and N. Soulakellis, “Implementation of the WRF-URBAN canopy model over the greater Athens area (Greece)”, 10th International Conference on Meteorology, Climatology and Atmospheric Physics, 25-28 of May 2010, University of Patras Conference Centre
- G. Papangelis, M. Tombrou, A. Dandou, T. Kontos and N. Soulakellis, “Implementation of the WRF-URBAN canopy model over the greater Athens area (Greece)”, 11th WRF Users' Workshop 21 - 25 of June 2010, NCAR's Center Green Campus, Boulder, Colorado. (Poster Session)
- International Workshop on Mesoscale Modelling for Air Pollution Applications - Achievements and Challenges WMO Secretariat, Geneva, 25-26 February 2010
- Organizers: COST 728, WMO/GURME and MEGAPOLI.
- International Workshop: Land-Atmosphere Interactions at the Regional Scale. Madrid, Spain, 8–10 October 2012.
- Papangelis, G., Tombrou, M., Dandou, A., Kontos, T. (2012) An urban “green planning” approach utilizing the Weather Research and Forecasting (WRF) modeling system. A case study of Athens, Greece, *Landsc. Urban Plan.*, 105, 174-183.
- Papangelis G., Tombrou M., Kalogiros J. Surface heterogeneity on the vertical structure of the Saharan convective boundary layer using large eddy simulation. 21st Symposium on Boundary Layers and Turbulence 9-13 June 2014, Leeds, United Kingdom. (Oral Presentation)
- Papangelis G., Tombrou M., Kalogiros J. The Effect of Surface Heterogeneity on the Vertical Structure of the Saharan Convective Boundary Layer. 13th International Conference on Meteorology, Climatology and Atmospheric Physics COMECAP 2016 (Oral Presentation)
- Athanasopoulou E., A. Protonotariou, G. Papangelis, M. Tombrou, N. Mihalopoulos, E. Gerasopoulos, Long-range transport of Saharan dust and chemical transformations over the Eastern Mediterranean, *Atmospheric Environment*, Volume 140, September 2016, Pages 592-604, ISSN 1352-2310, <http://dx.doi.org/10.1016/j.atmosenv.2016.06.041>, 2016.
- Papangelis G., Tombrou M., Kalogiros J. (2017) The Effect of Surface Heterogeneity on the Vertical Structure of the Saharan Convective Boundary Layer. In: Karacostas T., Bais A.,

Nastos P. (eds) Perspectives on Atmospheric Sciences. Springer Atmospheric Sciences. Springer, Cham

- Anagnostou M.N., Kalogiros J., Spyrou C., Varlas G., Papangelis G., Retalis A., Mentzafou A., Katsanos D., Katsafados P., Papadopoulos A., Chaskos D., Houssos E., Lolis C., Bartzokas A. (2019) A low-cost multi-platform system for early warning of extreme hydrometeorological events. SafeCorfu 2019 – 6th International Conference on Civil Protection & New Technologies 6-9 November, Ionian Academy – Corfu, Greece.
- Santamouris, M., Paolini, R., Haddad, S., Synnefa, A., Garshasbi, S., Hatvani-Kovacs, G., Gobakis, K., Yenneti, K., Vasilakopoulou, K., Feng, J., Gao, K., Papangelis, G., Dandou, A., Methymaki, G., Portalakis, P., Tombrou, M., 2020. Heat Mitigation Technologies Can Improve Sustainability In Cities An Holistic Experimental And Numerical Impact Assessment Of Urban Overheating And Related Heat Mitigation Strategies On Energy Consumption, Indoor Comfort, Vulnerability And Heat-Related Mortality And Morbidity In Cities. Energy and Buildings 110002. <https://doi.org/10.1016/j.enbuild.2020.110002>
- Garshasbi, S., Haddad, S., Paolini, R., Santamouris, M., Papangelis, G., Dandou, A., Methymaki, G., Portalakis, P., Tombrou, M., 2020. Urban mitigation and building adaptation to minimize the future cooling energy needs. Solar Energy 204, 708–719. <https://doi.org/10.1016/j.solener.2020.04.089>
- Papangelis, G., Tombrou, M., Kalogiros, J., 2020. The Saharan convective boundary layer structure over large scale surface heterogeneity: A large eddy simulation study. Atmospheric Res. 105250. <https://doi.org/10.1016/j.atmosres.2020.105250>
- Dandou, A., Papangelis, G., Kontos, T., Santamouris, M., Tombrou, M., 2021. On the cooling potential of urban heating mitigation technologies in a coastal temperate city. Landscape and Urban Planning 212, 104106. <https://doi.org/10.1016/j.landurbplan.2021.104106>

Ongoing work:

- G.Papangelis, J.Kalogiros, D.Katsanos, A. Retalis (2020) A 4D-Var radar reflectivity data assimilation study for improving regional extreme weather forecasting. 15th International Conference on Meteorology, Climatology and Atmospheric Physics (COMECAP September 27-30, 2020). (Submitted abstract)
- A.Gkikas, G.Papangelis, A.Gialitaki, C.Spyrou, E.Proestakis, E.Marinou and V.Amiridis (2020) Improving dust forecasts through assimilation of ESA-Aeolus wind profiles 15th International Conference on Meteorology, Climatology and Atmospheric Physics (COMECAP September 27-30, 2020). (Submitted abstract)

Skills

Languages:

- Greek (native speaker)
- English (fluent)
- Spanish (fluent)

Technical:

- Fortran 90/95, C, C++, Shell scripting, Parallel computing
- Matlab, NCL
- OS: Linux, Windows