**CURRICULUM VITAE**

**Personal details**

Name: Georgios Papangelis

Address: Granikou 67, Vironas 162 33. Athens, Greece

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**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).
* Mesoscale dust transport simulations (e.g., WRF-Chem 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 position**

* 2023- , Institute for Environmental Research & Sustainable Development, National Observatory of Athens, I. Metaxa & Vas. Pavlou, P. Penteli (Lofos Koufou), 15236 Athens, Greece. Research Fellow.

**Previous positions**

* 2020-2022, 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. Research Fellow.
* 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**

* Ph.D. 2021: Atmospheric Physics, Environmental Physics & Meteorology Division, Physics Department, NKUA, Athens, Greece. Supervisor: Maria Tombrou-Tzella, Thesis title: ‘Investigation of the physical processes in the development of turbulent flow inside the atmospheric boundary layer. A Large Eddy Simulation modelling study’
* M.Sc. 2009: Atmospheric Physics, Environmental Physics & Meteorology Division, Physics Department, NKUA, Athens, Greece. 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.: 2005, Atmospheric Physics, Environmental Physics & Meteorology Division, Physics Department, NKUA, Athens, Greece

**ARTICLES IN PEER REVIEWED JOURNALS**

1. Kiriakidis, P., Gkikas, A., Papangelis, G., Christoudias, T., Kushta, J., Proestakis, E., Kampouri, A., Marinou, E., Drakaki, E., Benedetti, A., Rennie, M., Retscher, C., Straume, A.G., Dandocsi, A., Sciare, J., Amiridis, V., 2023. The impact of using assimilated Aeolus wind data on regional WRF-Chem dust simulations. Atmospheric Chemistry and Physics 23, 4391–4417. <https://doi.org/10.5194/acp-23-4391-2023>
2. Varotsos, K.V., Dandou, A., Papangelis, G., Roukounakis, N., Kitsara, G., Tombrou, M., Giannakopoulos, C., 2022. Using a new local high resolution daily gridded dataset for Attica to statistically downscale climate projections. Clim Dyn. <https://doi.org/10.1007/s00382-022-06482-z>
3. Mallios, S.A., Papaioannou, A., Herbst, K., Papangelis, G., Hloupis, G., 2022. Study of the Ground Level Enhancements effect on atmospheric electric properties and mineral dust particle charging. Journal of Atmospheric and Solar-Terrestrial Physics 233–234, 105871. <https://doi.org/10.1016/j.jastp.2022.105871>
4. Dandou, A., Papangelis, G., Kontos, Τ., 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>
5. Mallios, S.A., Papangelis, G., Hloupis, G., Papaioannou, A., Daskalopoulou, V., Amiridis, V., 2021. Modeling of Spherical Dust Particle Charging due to Ion Attachment. Frontiers in Earth Science 9. <https://doi.org/10.3389/feart.2021.709890>
6. 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>
7. 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>
8. 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>
9. 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. 8.
10. 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. Landscape and Urban Planning 105, 174–183. <https://doi.org/10.1016/j.landurbplan.2011.12.014>

 **PARTICIPATION IN BOOK PUBLICATIONS**

1. 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

**WORKSHOPS – MEETINGS – WEBINAR PARTICIPATIONS**

1. Gkikas A., Papangelis G., Drakaki E., Proestakis E., Gialitaki A., Kampouri A., Marinou E., Tsichla M., Kushta J., Spyrou C., Benedetti A., Rennie M., Paschou P., Siomos N., Baars H., Straume A. G., Retscher C., Dandocsi A., Engelmann R., Skupin A., Althausen D., Wandinger U., Yin Z., Zenk C., Amiridis V., ASSESSING THE IMPACT OF AEOLUS WIND DATA ASSIMILATION ON THE NUMERICAL SIMULATIONS OF SAHARAN DUST OUTFLOWS TOWARDS THE TROPICAL ATLANTIC OCEAN. ESA - Aeolus 3rd Anniversary Conference, 04/2022
2. Gkikas A., Papangelis G., Drakaki E., Proestakis E., Gialitaki A., Kampouri A., Marinou E., Tsichla M., Kushta J., Spyrou C., Benedetti A., Rennie M., Paschou P., Siomos N., Baars H., Straume A. G., Retscher C., Dandocsi A., Engelmann R., Skupin A., Althausen D., Wandinger U., Yin Z., Zenk C., Amiridis V., ASSESSING THE IMPACT OF AEOLUS WIND DATA ASSIMILATION ON THE SAHARAN DUST SIMULATIONS IN THE FRAMEWORK OF THE JATAC CAMPAIGN. EGU General Assembly, Vienna 2022.
3. Kampouri A., Amiridis V., Gkikas A., Gialitaki A., Marinou E., Proestakis E., Benedetti A., Rennie M., Misios S., Papangelis G., Mona L., Scollo S., Vasardani O., Zanis P., Straume A. G., FIRST NUMERICAL EXPERIMENTS ASSESSING THE IMPACT OF AEOLUS WIND DATA ASSIMILATION ON VOLCANIC ASH DISPERSION. ESA - Aeolus 3rd Anniversary Conference, 04/2022
4. Kiriakidis P., Gkikas A., Papangelis G., Drakaki E., Proestakis E., Gialitaki A., Marinou E., Kushta J., Christoudias T., Spyrou C., Benedetti A., Rennie M., Kampouri A., Straume A. G., Retscher C., Dandocsi A., Sciare J. and Amiridis V., THE IMPACT OF ASSIMILATING AEOLUS WIND DATA ON REGIONAL AEOLIAN DUST MODEL SIMULATIONS USING WRF-CHEM. EGU General Assembly, Vienna 2022.
5. Kiriakidis P., Gkikas A., Papangelis G., Drakaki E., Proestakis E., Gialitaki A., Marinou E., Kushta J., Christoudias T., Spyrou C., Benedetti A., Rennie M., Kampouri A., Straume A. G., Retscher C., Dandocsi A., Sciare J. and Amiridis V., THE IMPACT OF ASSIMILATING AEOLUS WIND DATA ON REGIONAL AEOLIAN DUST MODEL SIMULATIONS USING WRF-CHEM. ESA - Aeolus 3rd Anniversary Conference, 04/2022
6. Gkikas A., Papangelis G., Drakaki E., Proestakis E., Spyrou C., Gialitaki A., Marinou E., Benedetti A., Rennie M., Straume A.G., Christoudias T., Kushta J., Sciare J. and Amiridis V. Improving dust forecasts through assimilation of ESA-Aeolus wind profiles: 15th International Conference on Meteorology, Climatology and Atmospheric Physics, COMECAP 2021, Ioannina, Greece.
7. Gkikas A., Papangelis G., Drakaki E., Proestakis E., Spyrou C., Gialitaki A., Marinou E. and Amiridis V., THE NEWTON PROJECT: ADVANCING REGIONAL DUST FORECASTS VIA AEOLUS WIND DATA ASSIMILATION: ATMOS 2021,25/11/2021
8. G.Papangelis, J.Kalogiros, D.Katsanos, A. Retalis. A 4D-Var radar reflectivity data assimilation study for improving regional extreme weather forecasting. 15th International Conference on Meteorology, Climatology and Atmospheric Physics, COMECAP 2021, Ioannina, Greece.
9. 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.
10. 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)
11. 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)
12. International Workshop: Land-Atmosphere Interactions at the Regional Scale. Madrid, Spain, 8–10 October 2012.
13. 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)
14. 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
15. 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.

ACADEMIC ACTIVITIES

* Erasmus program: 2002-2003, Department of Physics, University of Seville, Spain.

**Skills**

Languages:

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

Technical:

* Application of parallel computing (Fortran 90/95, C, C++)
* Matlab, NCL, Python, Shell scripting,
* OS: Linux, Windows