

BRIEF CURRICULUM VITAE

Elissavet Bossioli

Family Status: Married, 2 children

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Current position

Assistant Professor, Department of Physics, University of Athens

Previous positions

- 2014-June 2021: Laboratory Teaching Personnel, Department of Physics, National and Kapodistrian University of Athens
- 2001-2014: permanent University Staff Department of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens
- 2001: National Observatory of Athens, employee
- 1996-2001: Associate Researcher, Department of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens

Academic studies

- PhD 2007: Department of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens. Thesis title: '*Simulation of the effects of critical factors on ozone formation and accumulation in the greater Athens area*'
- MSc in Environmental Physics. 1996: Department of Physics/Section of Environmental Physics and Meteorology/National and Kapodistrian University of Athens
- B.Sc. in Physics 1993: Department of Physics, National and Kapodistrian University of Athens

Academic awards and fellowships:

- 1998-2001: General Secretariat of Research and Technology, scholarship
- 2008-2011: National representative of the COST Action ES0602 "Towards a European Network on Chemical Weather Forecasting and Information Systems"

Memberships

- 2021–present Member of the Forum for Air quality Modeling (FAIRMODE), joint response initiative of the European Environment Agency (EEA) and the European Commission Joint Research Centre (JRC)
- 2011–present Member of the European Facility for Airborne Research (EUFAR)

Research and projects

Research topics:

- Atmospheric Physics and Chemistry
- Radiation-cloud-aerosol interactions
- Atmospheric composition
- Atmospheric modelling (regional on-off-line models, box photochemical models - Chemical mechanisms)

Research projects:

- Associate researcher in the Group of Numerical Applications in the Atmosphere on several national and EC research projects (24) since 1996.
- Principal Investigator of the Service contract No. MOVE/C2/SER/2014-269/SI2.706115 for the development of a Public European Environmental Model Suite for Aviation (European Commission Directorate-General for Mobility and Transport).
- Co-PI Aegean Pollution: Gaseous and Aerosol airborne MEasurements (Aegean-GAME), EUFAR Integrating Activity, EC under FP7 (2011-2016).
- *Excellence Network*, Environmentally Compatible Air Transport System (ECATS), EC, (2004-2012).

Selected scientific publications (of 31, h-index Scopus/Google scholar 13/16, Scopus citations: 400)

- Bossioli E., Tombrou M., Karali A., Dandou A., Paronis D., Sofiev M. (2012) Ozone production from the interaction of wildfire and biogenic emissions: a case study in Russia during spring 2006, *Atmos. Chem. Phys.*, 12, 7931-7953
- Tombrou M., Bossioli E., Kalogiros J., Allan J., Bacak A., Biskos G., Coe H., Dandou A., Kouvarakis G., Mihalopoulos N., Percival C.J., Protonotariou A.P., Szabó-Takács B. (2015) Physical and chemical processes of air masses in the Aegean Sea during Etesians: Aegean-Game airborne campaign, *Sci. Total Environ.*, 506-507, 201-216
- Bossioli E., Tombrou M., Kalogiros J., Allan J., Bacak A., Bezantakos S., Biskos G., Coe,H., Jones B.T., Kouvarakis G., Mihalopoulos N., Percival C.J. (2016) Atmospheric composition in the Eastern Mediterranean: Influence of biomass burning during summertime using the WRF-Chem model, *Atmos. Environ.*, 132, 317-331
- Kalkavouras P., Bossioli E., Bezantakos S., Bougiatioti A., Kalivitis N., Stavroulas I., Kouvarakis G., Protonotariou A.P., Dandou A., Biskos G., Mihalopoulos N., Nenes A., Tombrou M. (2017), New particle formation in the southern Aegean Sea during the Etesians: importance for CCN production and cloud droplet number, *Atmos. Chem. Phys.*, 17, 175-192
- Dimitropoulou E., Assimakopoulos V.D., Faneli K.M., Flocas H.A., Kosmopoulos P., Kazadzis S., Lagouvardos K, Bossioli E., (2018) Estimating the Biogenic Non-Methane Hydrocarbon Emissions over Greece, *Atmosphere*, 9(1), 14.
- Sotiropoulou G., Bossioli E., M. Tombrou, (2019): Modeling extreme warm-air advection in the Arctic: the role of microphysical treatment of cloud droplet concentration, *J. Geophys. Res. – Atmosphere*; doi: 10.1029/2018JD029252.
- Methymaki G., E. Bossioli, Kalogiros J., Kouvarakis G., Mihalopoulos N., Nenes A., Tombrou M., (2020): Aerosol absorption over the Aegean Sea under northern summer winds, *Atmos. Environ.*, 231; doi.org/10.1016/j.atmosenv.2020.117533.
- Bossioli E., Sotiropoulou G., Methymaki G., Tombrou M. (2021) Modeling Extreme Warm-Air Advection in the Arctic During Summer: The Effect of Mid-Latitude Pollution Inflow on Cloud Properties, *Journal of Geophysical Research: Atmospheres*, 126(7), e2020JD033291.
- Karalis,M., Sotiropoulou G., Abel SJ, Bossioli E., Georgakaki P., Methymaki G., Nenes A., Tombrou M., (2022) Effects of secondary ice processes on a stratocumulus to cumulus transition during a cold-air outbreak, *Atmospheric Research*, 277.
- Methymaki, G., Bossioli, E., Boucouvala, D., Nenes, A., Tombrou, M., (2023), Brown carbon absorption in the Mediterranean basin from local and long-range transported biomass burning air masses, *Atmos. Environ.*, 306.
- Bessagnet, B., Cuvelier, K., de Meij, A. et al. (2023), Assessment of the sensitivity of model responses to urban emission changes in support of emission reduction strategies, *Air Quality, Atmosphere & Health*, 2023.

31 publications in conference proceedings, and 34 other publications (10 in books, and 24 technical reports)

Teaching activities

- 2022-present: 'Physics I' (undergraduate, Department of Physics, NKUA)
- 2022-present: 'Numerical methods – Applications to Geophysical Fluids' ('Environmental Physics' MSc course, Department of Physics, NKUA)
- 2021-present: 'Boundary - layer physics' (undergraduate, Department of Physics, NKUA)
2021-present: 'Models of Atmospheric Circulation' ('Environmental Physics' MSc course, Department of Physics, NKUA)
- 2021-present: 'Environmental Physics' (undergraduate Laboratory course, Department of Physics, NKUA)
- 2018-present: 'Methods of Data Analysis' ('Environmental Physics' MSc course, Department of Physics, NKUA)
- 2015-present: 'Atmospheric Physics and Chemistry' ('Environmental Physics' MSc course, Department of Physics, NKUA)
- 2001-2021: Laboratory courses in 'Physics' and 'Atmospheric Physics' (undergraduate, Department of Physics, NKUA)
- Supervision of 10 Undergraduate Students (Physics Department), Supervision of 3 Master Students ('Environmental Physics', Department of Physics, NKUA). In the Advisory committee of 3 ('Environmental Physics', Department of Physics, NKUA) and 1 (Inter-Institutional Postgraduate Course "Oceanography and Management of the Marine Environment") Master students. In the Advisory committee of 8 PhD students (Department of Physics, NKUA).