Eirini Boleti, PhD
Curriculum Vitae

PERSONAL DETAILS

Address	Kallergi 16, 73100, Chania, Greece
Phone	+30 697 050 7259
E-mail	eirini.boleti@gmail.com
Birth date	21 June 1982

WORK EXPERIENCE

Research associate August 2022-now

Technical University of Crete - Atmospheric Environment & Climate Change Group

- Studying the effect of wildfires on atmospheric composition
- Characterization of high-latitude fires (AXA project)
- Analysis of satellite data describing wildfires
- Earth system modeling

Research associate July 2021-December 2021

Universität Bern — Mobiliar Lab for Natural Risks — Climate Impact Research Group

- Prediction of car loss damages from hail with statistical modelling
- Analysis of radar hail data
- Define parameters for prediction of insurance hail losses
- Implementation and communication of hail research (Mobiliar)

Natural Catastrophe analyst October 2020-March 2021

SCOR Zurich

Agriculture Pricing & Modeling

- Risk Modeling for estimation of natural catastrophes risk on agriculture
- Catastrophe models (AIR)
- Calculation of expected losses and premiums either for potential new clients or renewing existing contracts
- Restating of historical portfolio information
- Handling and analysing client data (losses, claims etc) as well as meteorological data

March 2020-September 2020

Natural Catastrophe Models R&D

- Impact of climate change on key Natural Catastrophe perils: literature review and report
- Design of scenarios for climate change effect on hazards
- Adjustment of models for climate change effect

Consultant November 2018-October 2019

TNO, the Netherlands Organisation for applied scientific research
Department of Climate, Air & Sustainability, Utrecht, the Netherlands

- Modeling studies for air quality assessments, forecasts, deposition and source apportionment
- Data analysis and visualization of model output and model validation
- Acquisition of new projects
- Compile and deliver project reports
- Represent the team in international conferences, forums and plenary meetings
- Provide stakeholders with research output as a guideline to derive strategies for improving air quality

Research Associate May 2015-October 2018

Empa, Air Pollution/Environmental Technology Laboratory, Dübendorf, Switzerland

- Application of machine learning techniques for air quality
- Analysis of long-term air pollutants data sets
- Development of statistical methods for long-term and seasonal patterns recognition
- Application of clustering techniques to identify similar measuring stations in Europe
- Investigating the effect of policy making decisions on air quality

Physics tutor Sept. 2010 - June 2013

Private, Switzerland

- Teaching physics and mathematics to Gymnasium students
- Teaching mathematics to university students

EDUCATION

PhD in Statistical Analysis of Air Pollutants Concentrations May 2015 - November 2019

Empa, Air Pollution/Environmental Technology Laboratory
EPFL, Air Particle Research Laboratory

- Long-term trends and seasonality of air pollutants concentrations
- Time scale decomposition of ozone concentrations time series
- Spatial and temporal analysis of large data sets
- Clustering techniques for identification of stations with similar behavior

MSc. Atmospheric and Climate Science Sept. 2013 - March 2015

ETH Zürich,Institute of Atmosphere and Climate

- Quantitative understanding of climate processes and their interactions
- In depth understanding of the climate system, aspects of the atmosphere and weather phenomena
- Training in numerical modeling of weather and climate

MSc. Computational Physics Sept. 2006 - Febr. 2009

Aristoteles University of Thessaloniki (Greece), Department of Physics

- Training in various programming languages
- Computer simulations of physical phenomena

Degree (Diploma) in Physics Sept. 2000 - Sept. 2006

Aristoteles University of Thessaloniki (Greece), Department of Physics

Specialization field: "Atmosphere and Environment Physics"

TECHNICAL SKILLS

Data analysis: R(advanced), PYTHON(intermediate)
Risk Modeling (Catastrophe models, Loss models)
Statistical modeling, Machine Learning
High-performance computing environments
Climate models, Chemistry-transport models
OS: LINUX and WINDOWS
Typesetting: LaTeX, WORD
Office suits: Open/Libre Office, Microsoft Office

PUBLICATIONS

Boleti, E., Hüglin, C., and Takahama, S. (2018). *Ozone time scale decomposition and trend assessment from surface observations in Switzerland* - Atmospheric Environment

Boleti, E., Hüglin, C., and Takahama, S. (2019). *Trends of ozone maximum concentrations in Switzerland based on meteorological adjustment during 1990-2015* - Atmospheric Environment

Boleti, E., Hüglin, C., and Takahama, S. (2020). *Temporal and spatial analysis of ozone concentrations in Europe based on time scale decomposition and a multi-clustering approach.* - Atmospheric Chemistry and Physics

Boleti, E.; Garas, A.; Kyriakou, A.; Lapatinas, A.(2021) Economic Complexity and Environmental Performance: Evidence from a World Sample - Environmental Modeling Assessment

Grange, S., Carslaw, D.C., Lewis, A.C., Boleti, E., Hueglin, C. (2018). Random forest meteorological normalisation models for Swiss PM10 trend analysis - Atmospheric Chemistry and Physics

PROJECTS

- "High-latitude Fires and the future of Earth's Climate", Technical University of Crete, AXA chair in the group "Atmospheric Environment & Climate Change Group"
- "Prediction of car loss damages from hail", Universität Bern - Oeschger Center & Mobiliar Lab for Natural Risks
- "Climate Change scenario impact study; A P&C study focusing on physical risks due to climate change"
- *Brightskies*, collaboration with Airbus Defense & Space for assimilation of satellite data in air quality model
- Source apportionment for quantifying contribution of sectors and countries on local concentrations of air pollutants (TOPAS, `https://topas.tno.nl/`)
- Nitrogen deposition in Germany (PINETI), study for the German government on deposition of nitrogen components over the last 10 years.

LANGUAGES

English (Professional level,C1)
German (Professional level,C1)
Greek (mother tongue)

REFERENCES

Prof. Dr. Olivia Romppainen-Martius (Professor at Climate Impact Research group in University of Bern, olivia.romppainen@giub.unibe.ch)
Junaid Seria (Head of R&D at SCOR, *JSERIA@scor.com*)
Prof. Dr. Martijn Schaap, (Professor at Freie Universität Berlin and Senior scientist at TNO, *martijn.schaap@tno.nl*)