

Curriculum Vitae

Name: Nikolaos Benas
Date of Birth: 16 May 1981
Place of Birth: Chios, Greece
Nationality: Greek
Work Address: Foundation for Research and Technology – Hellas,
Institute of Applied and Computational
Mathematics, N. Plastira 100, Vassilika Vouton,
GR-70013 Heraklion, Greece
Phone Number: +30-2810-391771
E-mail: benas@physics.uoc.gr, benas@iacm.forth.gr

Profile

1996 – 1999 2nd Lyceum of Chios
Grade: Excellent (19_{8/11}/20)

1999 – 2004 Physics Degree from the University of Crete, Greece
Grade: Very good (7.06/10)
Diploma Thesis: Global distribution of potential evaporation during
the period 1984 – 2000.
Supervisor: Prof. Ilias Vardavas

2005 – 2007 M.Sc. Degree from the Faculty of Medicine, University of
Crete, Greece
Grade: Very good (8.01/10)
Graduate Programme: Brain and Mind Sciences

2009 – 2013 Doctor of Philosophy Degree, Physics Department,
University of Crete, Greece
Dissertation title: A study of the impact of aerosols on the energy
budget of the atmosphere using satellite measurements of climatic
parameters and computer models.
Grade: Excellent
Supervisor: Prof. Ilias Vardavas

2014 Post Doctoral Research Scientist, Institute of Applied and
Computational Mathematics, Foundation for Research and
Technology – Hellas

Research Interests

- Atmospheric aerosol and cloud effects on regional and global scales
- Atmospheric radiation transfer modeling
- Satellite aerosol remote sensing

Research Experience

2003 – 2004	Environmental Research Laboratory, Foundation for Research and Technology – Hellas (FORTH, undergraduate scholarship).
2005 – 2006	Computational Vision and Robotics Laboratory, Foundation for Research and Technology – Hellas (FORTH, graduate laboratory training).
2007	Environmental Research Laboratory, Foundation for Research and Technology – Hellas (FORTH, graduate training and specialization scholarship).
2008	Environmental Chemical Processes Laboratory, Department of Chemistry, University of Crete, Greece.
2009 – 2013	Regional Analysis Division, Institute of Applied and Computational Mathematics, Foundation for Research and Technology – Hellas (FORTH, Research Assistant).
2014	Regional Analysis Division, Institute of Applied and Computational Mathematics, Foundation for Research and Technology – Hellas (FORTH, Post Doctoral Research Scientist).

Teaching Experience

2007 – 2008	Teaching Assistant: Analytical Chemistry Laboratory, Department of Chemistry, University of Crete, Greece. Teaching Assistant: Computational Environmental Chemistry, Department of Chemistry, University of Crete, Greece.
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- 2009 – 2011 Teaching Assistant: Introduction to Programming - FORTRAN, Department of Physics, University of Crete, Greece.
- 2009 – 2013 Teaching Assistant: Principles and Applications of Remote Sensing, Department of Physics, University of Crete, Greece.
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Publications in Refereed Journals

1. Matsoukas, C., **Benas, N.**, Hatzianastassiou, N., Pavlakis, K. G., Kanakidou, M., and Vardavas, I.: Potential evaporation trends over land between 1983–2008: driven by radiative fluxes or vapour-pressure deficit?, *Atmospheric Chemistry and Physics*, 11, 7601-7616, doi: 10.5194/acp-11-7601-2011, 2011.
 2. **Benas, N.**, Hatzianastassiou, N., Matsoukas, C., Fotiadi, A., Mihalopoulos, N., and Vardavas, I.: Aerosol shortwave direct radiative effect and forcing based on MODIS Level 2 data in the Eastern Mediterranean (Crete), *Atmospheric Chemistry and Physics*, 11, 12647-12662, doi: 10.5194/acp-11-12647-2011, 2011.
 3. **Benas, N.**, Mourtzanou, E., Kouvarakis, G., Bais, A., Mihalopoulos, N., and Vardavas, I.: Surface Ozone Photolysis Rate Trends in the Eastern Mediterranean: Modeling the Effects of Aerosols and Total Column Ozone based on Terra MODIS Data, *Atmospheric Environment*, 74, 1-9, doi: 10.1016/j.atmosenv.2013.03.019, 2013.
 4. **Benas, N.**, Chrysoulakis, N., and Giannakopoulou, G.: Validation of MERIS/AATSR synergy algorithm for aerosol retrieval against globally distributed AERONET observations and comparison with MODIS aerosol product, *Atmospheric Research*, 132-133, 102-113, doi: 10.1016/j.atmosres.2013.05.011, 2013.
 5. **Benas, N.**, Beloconi, A., and Chrysoulakis, N.: Estimation of urban PM10 concentration, based on MODIS and MERIS/AATSR synergistic observations, *Atmospheric Environment*, 79, 448-454, doi: 10.1016/j.atmosenv.2013.07.012, 2013.
 6. Cleridou, N., **Benas, N.**, Matsoukas, C., Croke, B., and Vardavas, I.: Water Resources of Cyprus under changing climatic conditions, *Environmental Modelling and Software*, under review.
 7. **Benas, N.**, Matsoukas, C., Fotiadi, A., Hatzianastassiou, N., Pavlakis, K. G., and Vardavas, I.: The aerosol effect on potential evaporation at the Athens main water supply reservoirs, *Environmental Modelling and Software*, in preparation.
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Conferences

1. Fotiadi, A., Hatzianastassiou, N., **Benas, N.**, Matsoukas, C., and Vardavas, I.: Aerosol solar radiative effect during fine and coarse aerosol events in the Eastern Mediterranean (Crete), European Aerosol Conference (EAC 2008), Thessaloniki, Greece, May 2008.
 2. **Benas, N.**, Matsoukas, C., Hatzianastassiou, N., Fotiadi, A., Mihalopoulos, N., Kanakidou, M., and Vardavas, I.: Aerosol Shortwave Daily Radiative Forcing Based on MODIS Level 2 data, “Climate change: causes and impacts” autumn school, The Cyprus Institute, Pafos, Cyprus, October 2008.
 3. **Benas, N.**, Cleridou, N., Papadimas, C., Fotiadi, A., Pavlakis, K., Matsoukas, C., Hatzianastassiou, N., and Vardavas, I.: Energy budget of the solar and terrestrial radiation at the Earth’s surface, 8th Environmental Conference of the Greek Physicists Union, Heraklion, Crete, Greece, March 2009.
 4. **Benas, N.**, Matsoukas, C., Hatzianastassiou, N., Fotiadi, A., Mihalopoulos, N., Kanakidou, M., and Vardavas, I.: Aerosol Shortwave Daily Radiative Effect Based on MODIS Level 2 data: Study of Saharan Dust Events in the Eastern Mediterranean (Crete), 6th International Workshop on Sand/Dust storms and associated dust fall, Athens, Greece, September 2011.
 5. **Benas, N.**, Beloconi, A., and Chrysoulakis, N.: Urban PM10 estimation based on MERIS/AATSR synergy derived AOT and MODIS Level-2 atmospheric parameters, Sentinel-3 OLCI/SLSTR and MERIS/(A)ATSR Workshop, ESA SP-711, Frascati, Italy, October 2012.
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Contributions to Chapters in Conference Books

1. “Scientific Guide for Bioclimatic Upgrades of Public Open Spaces”, Center for Renewable Energy Sources and Saving, Greece, 2011.
 2. **Benas, N.**, and Chrysoulakis, N.: “Comparative analysis of MERIS/AATSR synergy algorithm aerosol retrievals vs. MODIS aerosol product and validation against AERONET observations”, *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences 2013, pp. 911 – 916.
 3. **Benas, N.**, Hatzianastassiou, N., Matsoukas, C., Fotiadi, A., Mihalopoulos, N., and Vardavas, I.: “Aerosol shortwave direct radiative effect and forcing based on MODIS Level 2 data in the Eastern Mediterranean (Crete)”, *Advances in Meteorology, Climatology and Atmospheric Physics*, Springer Atmospheric Sciences 2013, pp. 917 – 922.
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Participation in Research Programs

2008	“Climate Change and Impact Research: the Mediterranean Environment” (EU/FP6 integrated project CIRCE, contract number 036961).
2008 – 2009	“The water resources in Greece under changing climatic conditions” (I. Latsis Foundation, Greece).
2010	“Urban Heat Islands and Urban Thermography” (ESA: ITT ESRIN/AO/1-5685/08/I-LG).
2011 – Present	“Modeling of Extreme Weather Events” (NSRF 2007-2013, GSRT, Greece).

Reviewer

- Atmospheric Environment
 - Atmospheric Research
 - Advances in Space Research
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Computer Skills

Languages	FORTRAN, MATLAB
Operating Systems	Windows, Linux (basic)
Software	Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Outlook, Origin, BEAM-VISAT, Latex

Languages

- Greek (native)
 - English (fluent)
 - Italian (basic)
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