ELINA GIANNAKAKI PHD.

LECTURER

FACULTY OF PHYSICS

DEPARTMENT OF ENVIRONMENTAL PHYSICS AND METEOROLOGY

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

ATHENS, GREECE

PERSONAL DETAILS

Date of birth:	16th of October, 1979
Gender:	Female
Marital status:	Married, 1 child
Citizenship:	Hellenic
Work address:	National and Kapodistrian University of Athens, Faculty of Physics, Department of Environmental Physics and Meteorology, Panepistimioupoli, PHYS IV, GR-15784, Athens, Greece
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UNDERGRADUATE AND GRADUATE STUDIES

2002	BA in Physics, Physics Department, A.U.Th., Greece (*Degree:7.7*)
2004	Master Degree in Environmental and Atmospheric Physics, A.U.Th. Greece (*Degree:9.2*)
2009	Ph.D. in Atmospheric Physics, A.U.Th. Greece (*Degree:10*)

WORKING EXPERIENCE - PARTICIPATION IN RESEARCH PROJECTS

10/2015-Today	Lecturer, Physics Department National and Kapodistrian University of Athens
02/2012-09/2015	Post Doctoral Research Associate, FMI, Kuopio Unit, Finnish Academy project: *Quantification of the aerosol impact on the radiation budget using the synergy of active and passive remote sensors*
01/2011-01/2015	Post Doctoral Research Associate, LAP, A.U.Th., Project: *Aerosols, Clouds, and Trace gases Research InfraStructure Network (ACTRIS)*, European Commission
01/2011-01/2013	Post Doctoral Research Associate, LAP, A.U.Th., Project: LIVAS - Lidar Climatology of Vertical Aerosol Structure for Space-Based Lidar Simulation Studies", European Space Agency
03/2011-03/2012	Post Doctoral Research Associate, LAP, A.U.Th., Project: Promote Air Quality Services integrating Observations- Development of Basic Localized Information for Europe (PASODOBLE), European Commission
02/2011-02/2012	Post Doctoral Research Associate, LAP, A.U.Th., Project: *The effect of aerosols in the climatology of Thessaloniki*, State Scholarship Foundation

03/2010-10/2011	Post Doctoral Research Associate, IFT, Germany, Project: *Vertical Resolved Aerosol Model for Europe from a Synergy of EARLINET and AERONET data (VRAME)*, ESA
06/2008-12/2008 & 03/2009-09/2009 & 03/2010-02/2011	Research Scientist, LAP, A.U.Th., Project: *European Aerosol Research Lidar Network - Advanced Sustainable Observation System (EARLINET-ASOS)*, European Commission
10/2009-01/2010	Research Scientist, LAP, A.U.Th., Project: *Aerosols and clouds*, ESA
01/2007-01/2009	Research Scientist, LAP, A.U.Th., Project: *EARLINET's space borne-lidar-related activity during the CALIPSO mission*, ESA
06/2005-05/2008	Research Scientist, LAP, A.U.Th., Project: *Study of atmospheric transport processes of aerosols with the combined use of satellite and ground measurements and models,* Ministry of education, lifelong learning and religious affairs, General Secretariat for research and technology
01/2003-01/2007	Research Scientist, LAP, A.U.Th., Project: *On the extended development and implementation of certain activities of a EUMETSAT Satellite application facility on ozone monitoring,* EUMETSAT
10/2004-11/2004	Research Scientist, LAP, A.U.Th., Project: *New ozone algorithm for GOME and reprocessing,* ESA
04/2007-12/2005	Research Scientist, LAP, A.U.Th., Project: *On the extended development and implementation of certain activities of a EUMETSAT Satellite application facility on ozone monitoring,* EUMETSAT
12/2004	Research Scientist, LAP, A.U.Th., Project: *PHOENICS - Particles of human origin extinguishing natural solar radiation in climate systems,* E.U.
03/2003-12/2003	Research Scientist, LHTEE, A.U.Th., Project: *Photocatalytic Innovative Coverings Applications for Depollution*, CEC, GROWTH Measurements & Testing, Infrastructures

SCHOLARSHIPS – AWARDS

2002-2003	Greek Scholarship Institute for MSc studies
2005-2008	General Secretariat for research and technology for PhD studies (PENED)
2008	Mariolopoulos Kanaginis Foundation for the Environmental Sciences in recognition of study entitled *Optical and geometrical characteristics of cirrus clouds over a middle latitude lidar station* (Atmos. Chem. and Phys., 7, 5519-5530, 2007)
2010-2011	State Scholarship Foundation, Greece. Scholarship award for the Post-Doc Research: *The effect of aerosols in the climatology of Thessaloniki*
June 2012	Best poster presentation at 26th International Laser Radar Conference, 2012 for the study: *The synergy of EARLINET and AERONET observations for ocean color retrievals*

LANGUAGES

Greek: native
English: Excellent (*Proficiency of Michigan*)

PROGRAMMING SKILLS –MATHEMATICAL TOOLS

Windows and Linux operating system
Interactive Data Language (IDL)
Fortran
Microsoft office
Radiative Transfer modelling (LibRadtran)
Inversion algorithim for microphysical properties retrieval

MEASUREMENTS & TECHNIQUES

Operation, quality assurance and quality control of lidar measurements
Lidar hardware development
Lidar signal processing algorithm development

PARTICIPATION IN FIELD CAMPAIGNS

SCOUT Aerosol Campaign, Thessaloniki, 12-25 July, 2006, SCOUT project
OMI UV and aerosol campaign Thessaloniki, 1-30 October,2007
THERMOPOLIS 2009 Campaign, European Space Agency, 2009-2010
ACEMED, Evaluation of CALIPSO's aerosol classification scheme over Eastern Mediterranean, EUFAR, 2011
HygrA-CD, From Hygroscopic Aerosols to Cloud Droplets, ITaRS, Marie Curie Initial Training Network, May- June 2014
CHARADMexp, Characterization of Aerosol mixtures of Dust And Marine origin, June – July 2014
JRA1 Aerosol absorption measurement campaign, 15 December 2015 – 29 February 2016, Athens

SCIENTIFIC VISITS – COLLABORATIONS

2008-2010	Leibniz Institute for Tropospheric Research, Leipzig, Germany
2011-Today	National observatory of Athens, Greece
2012-Today	Finnish Meteorological Institute, Kuopio Unit, Finland

PROFESSIONAL ACTIVITIES

Member of the Organization Committee of the 26th International Laser Radar Conference, 25-29 June 2012, Porto Heli, Greece (http://ilrc26-2012.gr/mdlcms/index.php?option=118&client=1&langid=2)

Reviewer in 6 scientific journals (Atmospheric Chemistry and Physics, Atmospheric Measurement Techniques, Annales Geophysicae, Geophysical Research Letters, Atmospheric Environment, Journal of the Air & Waste Management Association)

TEACHING EXPERIENCE

2005-2010	Environmental Physics, MSc, Aristotle University of Thessaloniki, Course: **Field Measurements I**
2005-2010	Environmental Physics, MSc, Aristotle University of Thessaloniki, Course: **Field Measurements II**
2010-2011	Environmental Physics, MSc, Aristotle University of Thessaloniki, Course: **Techniques for measuring atmospheric parameters**

2010-2011	Technological Education Institution of Serres, Civil Engineering, Course: **Computer programming**
02/2016-07/2016	Environmental Physics and Meteorology, MSc, University of Athens, Course: **Cloud Microphysics**
02/2016-07/2016	Environmental Physics and Meteorology, MSc, University of Athens, Course: **Ocean-Atmosphere Interaction**
09/2016-12/2016	Technological Education Institution of Serres, Civil Engineering, Course: **Methods and Instruments of Environmental Measurements**
09/2016-12/2016	Technological Education Institution of Serres, Civil Engineering, Course: **Solar and Earth Radiation**

MONOGRAPHS

Giannakaki E., Study of optical and physical properties of aerosols using laser remote sensing techniques, *Ph.D. thesis*, Aristotle University of Thessaloniki, Physics Department, 2009.

Giannakaki E., Geometrical and optical properties of cirrus clouds at Thessaloniki, Greece, using laser remote sensing techniques, *Diploma thesis*, Aristotle University of Thessaloniki, Physics Department, 2004.

PUBLICATIONS IN JOURNALS

1. Amiridis, V., D. S. Balis, S. Kazadzis, A. Bais, E. Giannakaki, A. Papayannis, and C. Zerefos, Four-year aerosol observations with a Raman lidar at Thessaloniki, Greece, in the framework of European Aerosol Research Lidar Network (EARLINET), *Journal of Geophysical Research*, 110, D21203, doi:10.1029/2005JD006190, 2005. [84]
2. Giannakaki, E., D.S. Balis, V. Amiridis, and S. Kazadzis, Optical and geometrical characteristics of cirrus clouds over a Southern European lidar station, *Atmospheric Chemistry and Physics*, 7, 5519-5530, 2007. [25]
3. Amiridis, V., D. Melas, D. S. Balis, A. Papayannis, D. Founda, E. Katragkou, E. Giannakaki, R. E. Mamouri, E. Gerasopoulos, and C. Zerefos, Aerosol lidar observations and model calculations of the planetary boundary layer evolution over Greece, during the March 2006 total solar eclipse, *Atmospheric Chemistry and Physics*, 7, 6181-6189, 2007. [27]
4. Müller D., B. Heinold, M. Tesche, I. Tegen, D. Althausen, L. Alados Arboledas, V. Amiridis, A. Amodeo, A. Ansmann, D. Balis, A. Comeron, G. D'Amico, E. Gerasopoulos, J. L. Guerrero-Rascado, V. Freudenthaler, E. Giannakaki, B. Heese, M. Iarlori, P. Knippertz, R. E. Mamouri, L. Mona, A. Papayannis, G. Pappalardo, R.-M. Perrone, G. Pisani, V. Rizi, M. Sicard, N. Spinelli, A. Tafuro and M. Wiegner, EARLINET Observations of the 14–22-May Long-Range Dust Transport Event During SAMUM 2006: Validation of Results from Dust Transport Modelling, *Tellus*, 61B, 325-339, 2009. [24]
5. Amiridis, V., D. S. Balis, E. Giannakaki, A. Stohl, S. Kazadzis, M. E. Koukouli, and P. Zanis, Optical characteristics of biomass burning aerosols over Southeastern Europe determined from UV-Raman lidar measurements, *Atmospheric Chemistry and Physics,* 9, 2431-2440, 2009. [52]
6. Kazadzis, S., A. Bais, D. Balis, N. Kouremeti, M. Zempila, A. Arola, E. Giannakaki, V. Amiridis and A. Kazantzidis, Spatial and temporal UV irradiance and aerosol variability within the area of an OMI satellite pixel, *Atmospheric Chemistry and Physics*, 9, 4593-4601, 2009. [22]
7. Amiridis, V., M. Kafatos, C. Perez, S. Kazadzis, E. Gerasopoulos, R.E. Mamouri, A. Papayannis, P. Kokkalis, E. Giannakaki, S. Basart, I. Daglis and C. Zerefos, The potential of the synergistic use of passive and active remote sensing measurements for the validation of a regional dust model, *Annales Geophysicae*, 27, 3155-3164, 2009. [25]

8. Mamouri, R. E., V. Amiridis, A. Papayannis, E. Giannakaki, G. Tsaknakis and D. Balis, Validation of CALIPSO space-borne derived attenuated backscatter coefficient profiles using a ground-based lidar in Athens, Greece, *Atmospheric Measurements Techniques,* 2, 513-522, 2009. [37]

9. Pappalardo, G., U. Wandinger, L. Mona, A. Hiebsch, I. Mattis, A. Amodeo, A. Ansmann, P. Seifert, H. Linné, A. Apituley, A. L. Arboledas, D. Balis, A. Chaikovsky, G. D' Amico, F. De Tomasi, V. Freudenthaler, E. Giannakaki, A. Giunta, I. Grigorov, M. Iarlori, F. Madonna, R-E. Mamouri, L. Nasti, A. Papayannis, A. Pietruczuk, M. Pujadas, V. Rizi, F. Rocadenbosch, F. Russo, F. Schnell, N. Spinelli, X. Wang and M. Wiegner, EARLINET correlative measurements for CALIPSO: First intercomparison results, *Journal of Geophysical Research*, 115, D00H19, doi: 10.1029/2009JD012147, 2010. [75]

10. Balis D., E. Giannakaki, D. Müller, V. Amiridis, K. Kelektsoglou, S. Rapsomanikis and A. Bais, Estimation of the microphysical aerosol properties over Thessaloniki, Greece, during the SCOUT-O_3 campaign with the synergy of Raman lidar and Sun photometer data, *Journal of Geophysical Research*, 115, D08202, doi: 10.1029/2009JD013088, 2010. [9]

11. Giannakaki E., D.S. Balis, V. Amiridis and C. Zerefos, Optical properties of different aerosol types: Seven years of combined Raman-elastic backscatter lidar measurements in Thessaloniki,Greece, *Atmospheric Measurements Techniques*, 3, 569-578, 2010. [29]

12. Amiridis, V., E. Giannakaki, D. Balis, E. Gerasopoulos, I. Pytharoulis, P. Zanis, S. Kazadzis, D. Melas and C. Zerefos, Smoke injection heights from agricultural burning in Eastern Europe as seen by CALIPSO, *Atmospheric Chemistry and Physics*, 10, 11567-11576, 2010. [27]

13. Amiridis, V., D. Balis, E. Giannakaki, S. Kazadzis, A. Arola, and E. Gerasopoulos, Characterization of the aerosol type using simultaneous measurements of the lidar ratio and estimations of the single scattering albedo, *Atmospheric Research*, 101, 46-53, 2011. [4]

14. Actis M., Agnetta G., Aharonian F., Akhperjanian A., Aleksić J., Aliu E., Allan D., Allekotte I., Antico F., Antonelli L. A., Antoranz P., et al. (2011). Design concepts for the Cherenkov Telescope Array CTA: An advanced facility for ground-based high-energy gamma-ray astronomy. Experimental Astronomy, 32, 193-316. [127]

15. Papayannis, A., R. E. Mamouri, P. Kokkalis, V. Amiridis, N. I. Kristiansen, A. Stohl, D Balis, E. Giannakaki, D. Nicolae, G. Tsaknakis, L. Belegante, A. Nemuc, I. Veselovskii, M. Korenskiy, K. Allakhverdiev, M. Huseyinoglu and T. Baykara, Optical properties and vertical extension of ash layers over the Eastern Mediterranean as observed by Raman lidars during the Eyjafjallajökull eruption (May 2010), *Atmospheric Environment*, 48, 56-65, 2012. [18]

16. Amiridis, V., C. Zerefos, S. Kazadzis, E. Gerasopoulos, K. Eleftheratos, I. Keramitsoglou, E. Kostopoulou, M. Vrekoussis, C. Kontoes, A. Stohl, C. Giannakopoulos, V. Kotroni, K. Lagouvardos, A. Richter, J.P. Burrows, E. Marinou, E. Giannakaki and K. Eleftheriadis, Impact of the 2009 Attica wild fires on the air quality of the Athens urban environment, *Atmospheric Environment*, 46, 536-544, 2012. [15]

17. Amiridis, V., Wandinger, U., Marinou, E., Giannakaki, E., Tsekeri, A., Basart, S., Kazadzis, S., Gkikas, A., Taylor, M., Baldasano, J., and Ansmann, A.: Optimizing CALIPSO Saharan dust

retrievals, Atmos. Chem. Phys., 13, 12089-12106, doi:10.5194/acp-13-12089-2013, 2013. [20]

18. Pappalardo, G., Mona, L., D'Amico, G., Wandinger, U., Adam, M., Amodeo, A., Ansmann, A., Apituley, A., Alados Arboledas, L., Balis, D., Boselli, A., Bravo-Aranda, J. A., Chaikovsky, A., Comeron, A., Cuesta, J., De Tomasi, F., Freudenthaler, V., Gausa, M., Giannakaki, E., Giehl, H., Giunta, A., Grigorov, I., Groß, S., Haeffelin, M., Hiebsch, A., Iarlori, M., Lange, D., Linné, H., Madonna, F., Mattis, I., Mamouri, R.-E., McAuliffe, M. A. P., Mitev, V., Molero, F., Navas-Guzman, F., Nicolae, D., Papayannis, A., Perrone, M. R., Pietras, C., Pietruczuk, A., Pisani, G., Preißler, J., Pujadas, M., Rizi, V., Ruth, A. A., Schmidt, J., Schnell, F., Seifert, P., Serikov, I., Sicard, M., Simeonov, V., Spinelli, N., Stebel, K., Tesche, M., Trickl, T., Wang, X., Wagner, F., Wiegner, M., and Wilson, K. M.: Four-dimensional distribution of the 2010 Eyjafjallajökull volcanic cloud over Europe observed by EARLINET, Atmos. Chem. Phys., 13, 4429-4450, doi:10.5194/acp-13-4429-2013, 2013. [17]

19. Leventidou E, Zanis P, Balis D, Giannakaki E, Pytharoulis I, Amiridis V, Factors affecting the comparisons of planetary boundary layer height retrievals from CALIPSO, ECMWF and radiosondes over Thessaloniki, Greece, Atmospheric Environment, Vol. 74 p. 360-366. doi: 10.1016/j.atmosenv.2013.04.007, 2013. [6]

20. Ioannidou A, Giannakaki E, Manolopoulou M, Stoulos S, Vagena E, Papastefanou C, Gini L, Manenti S, Groppi F, An air-mass trajectory study of the transport of radioactivity from Fukushima to Thessaloniki, Greece and Milan, Italy, Atmospheric Environment, Vol. 75 p. 163-170. doi: 10.1016/j.atmosenv.2013.04.008, 2013. [5]

21. Hirsikko A, O'Connor E, Komppula M, Korhonen K,Pfüller A, Giannakaki E, Wood C.R., Bauer-Pfundstein M, Poikonen A, Karppinen T, Lonka H,Kurri M, Heinonen J, Asmi E, Lihavainen H,Laaksonen A, Lehtinen K, Laurila T, Petäjä T, Kulmala M, Viisanen Y, Observing aerosol particles, clouds and boundary layer wind: a new remote sensing network in Finland, Atmo. Meas. Tech., 7, 1351-1375, 2014. [11]

22. Korhonen K, Giannakaki E, Mielonen T, Pfuller A,Laakso L, Vakkari V, Baars H, Engelmann R, Beukes P, Zyl P.G, Ramandh A, Ntsangwane L, Josipovic M, Tiitta P, Fourie G, Ngwana I, Chiloane K, Komppula M, Atmospheric boundary layer top height in South Africa
Atmos. Chem. Phys., Vol. 14 p. 4263-4278. doi: 10.5194/acp-14-4263-2014, 2014. [14]

23. Giannakaki E, Pfuller A, Korhonen K, Mielonen T,Laakso L, Vakkari V, Baars H, Engelmann R, Beukes J.P, Zyl P.G, Josipovic M, Tiitta P, Chiloane K, Piketh S, Lihavainen H, Lehtinen K.E, Komppula M, One year of Raman lidar observations of free-tropospheric aerosol layers over South Africa,
Atmos. Chem. Phys., Vol. 15 p. 5429-5442. doi: 10.5194/acp-15-5429-2015, 2015. [4]

24. Amiridis V, Marinou E, Tsekeri A, Wandinger U, Schwarz A, Giannakaki E, Mamouri R, Kokkalis P, Binietoglou I, Solomos S, Herekakis T, Kazadzis S, Gerasopoulos E, Proestakis E, Kottas M, Balis D, Papayannis A, Kontoes C, Kourtidis K, Papagiannopoulos N, Mona L, Pappalardo G, Rille O, Ansmann A, LIVAS: a 3-D multi-wavelength aerosol/cloud database based on CALIPSO and EARLINET, Atmos. Chem. Phys., Vol. 15 p. 7127-7153. doi: 10.5194/acp-15-7127-2015, 2015. [3]

25. Baars, H., Kanitz, T., Engelmann, R., Althausen, D., Heese, B., Komppula, M., Preißler, J., Tesche, M., Ansmann, A., Wandinger, U., Lim, J.-H., Ahn, J. Y., Stachlewska, I. S., Amiridis,

V., Marinou, E., Seifert, P., Hofer, J., Skupin, A., Schneider, F., Bohlmann, S., Foth, A., Bley, S., Pfüller, A., Giannakaki, E., Lihavainen, H., Viisanen, Y., Hooda, R. K., Pereira, S. N., Bortoli, D., Wagner, F., Mattis, I., Janicka, L., Markowicz, K. M., Achtert, P., Artaxo, P., Pauliquevis, T., Souza, R. A. F., Sharma, V. P., van Zyl, P. G., Beukes, J. P., Sun, J., Rohwer, E. G., Deng, R., Mamouri, R.-E., and Zamorano, F.: An overview of the first decade of PollyNET: an emerging network of automated Raman polarization lidars for continuous aerosol profiling, Atmos. Chem. Phys., 16, 5111-5137, doi:10.5194/acp-16- 5111-2016, 2016. [2]

26. Giannakaki E., P. G. van Zyl, D. Müller, D. Balis and M. Komppula (2016), Optical and microphysical characterization of aerosol layers over South Africa by means of multi-wavelength depolarization and Raman lidar measurements, Atmos. Chem. Phys., 16, 8109-8123, doi:10.5194/acp-16-8109-2016. [0]

27. Papayannis A., A. Argyrouli, A. Bougiatioti, E. Remoundaki, S. Vratolis, A. Nenes, S. Solomos , M. Komppula, E. Giannakaki, I. Kalogiros, R. Banks, K. Eleftheriadis, I. Mantas, E. Diapouli, C. G. Tzanis, S. Kazadzis, I. Binietoglou, L. Labzovskii, J. Vande Hey, and C. S. Zerefos (2016), From hygroscopic aerosols to cloud droplets: the HygrA-CD Campaign in the Athens basin - An overview, accepted to Science of the Total Environment. [0]

Elina Giannakaki has more than 100 publications in conference proceedings