

# CURRICULUM VITAE

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**Name:** Christos Spyrou  
**Date and place of birth:** 2-4-1979, Athens  
**Organization of primary employment:** University of Athens  
Department of Physics,  
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**Title of primary employment:** Researcher

## EDUCATION

- Ph.D, University of Athens, Department of Physics, 2011
- M.Sc, University of Athens, Department of Physics, Environmental Physics, 2004
- B.Sc., University of Athens, Department of Physics, 2002

## FOREIGN LANGUAGES

- English (Certificate of Proficiency in English, University of Cambridge, Certificate of Proficiency in English, University of Michigan, 1998)
- French (Diplôme D'Études Francaises ,Sorbonne 2em Degré, 1996)

## FIELDS OF SCIENTIFIC ACTIVITIES

- Atmospheric Modeling and Weather Forecasting
- Air Pollution Modeling (Dispersion, Diffusion)
- Radiation studies
- Climate Studies

## COMPUTER SKILLS

- Unix
- Linux
- Visualization Tools (NCAR,NCL,IDV,GRADS)
- Programming Languages: FORTRAN, Bash
- Microsoft Office (Word, EXCEL, PowerPoint, Front Page)

## PUBLICATIONS IN SCIENTIFIC JOURNALS

- C. Spyrou, G. Kallos, C. Mitsakou, P. Athanasiadis, C. Kalogeri and M. J. Iacono, 2013: Modeling the radiative effects of desert dust on weather and regional climate. *Atmos. Chem. Phys.*, **13**, 5489–5504, doi:10.5194/acp-13-5489-2013, 2013

- C. Spyrou, C. Mitsakou, G. Kallos, P. Louka, and G. Vlastou, 2010: An improved limited area model for describing the dust cycle in the atmosphere. *Journal Of Geophysical Research*, **115**, D17211, doi:10.1029/2009JD013682, 2010.
- M. Astitha, G. Kallos, C. Spyrou, W. O’Hirok, J. Lelieveld and H. A. C. Denier van der Gon, 2010: Modelling the chemically aged and mixed aerosols over the eastern central Atlantic Ocean – potential impacts. *Atm. Chem. Phys.*, **10**, 5797–5822, 2010, doi: 10.5194/acp-10-5797-2010.
- G Kallos, C Spyrou, M Astitha, C Mitsakou, S Solomos, J Kushta, I Pytharoulis, P Katsafados, E Mavromatidis, N Papantoniou and G Vlastou, 2009: Ten-year operational dust forecasting - Recent model development and future plans. *IOP Conf.Series: Earth and Environmental Science* **7** (2009), doi:10.1088/1755-1307/7/1/012012.
- Mitsakou C., G. Kallos, N. Papantoniou, C. Spyrou, S. Solomos, M. Astitha and C. Housiadas, 2008: Saharan dust levels in Greece and received inhalation doses. *Atm. Chem. Phys.*, **8** , 7181–7192, 2008, doi:10.5194/acp-8-7181-2008.
- G. Kallos, M. Astitha, P. Katsafados and C. Spyrou, 2007: “Long-Range Transport of Anthropogenically and Naturally Produced PM in the Mediterranean and North Atlantic: Present Status of Knowledge”. *Journal of Applied Meteorology and Climatology*, **46** , 1230-1251, doi: 10.1175/JAM2530.1.
- P. Kishcha, P. Alpert, A. Shtivelman, S. O. Krichak, J. H. Joseph, G. Kallos, P. Katsafados, C. Spyrou, G. P. Gobbi, F. Barnaba, S. Nickovic, C. Perez, and J. M. Baldasano, 2007: “Forecast errors in dust vertical distributions over Rome (Italy): Multiple particle size representation and cloud contributions”. *Journal of Geophysical Research*, **112**(D15205), doi: 10.1029/2006JD007427 .
- D.K. Pissimanis, V.A. Notaridou, C.K. Spyrou, 2005: “On the main characteristics of the synoptic weather conditions associated with thunderstorm activities in the months of July and August in the city of Thessaloniki (Northern Greece)”. *Theoretical and Applied Climatology* doi:10.1007/s00704-005-0136-1.

## PUBLICATIONS IN CONFERENCE PROCEEDINGS

- G. Kallos, S. Solomos, J. Kushta, C. Spyrou, C. Kalogeri, 2012: Natural And Anthropogenic Aerosols in the Mediterranean Region and Middle East: Patterns and Impacts, *Air Quality Management at Urban, Regional and Global Scales 4th International Symposium and IUAPPA Regional Conference*, 10 – 13 September 2012, Istanbul Technical University, Istanbul – Turkey.
- C. Spyrou, G. Kallos, C. Mitsakou, P. Athanasiadis, and C. Kalogeri, 2012: The Effects of Naturally Produced Dust Particles on Radiative Transfer, *11th International Conference on Meteorology, Climatology and Atmospheric Physics (COMECAP)*, Athens, Greece, 29 May – 1 June 2012.
- S. Solomos, J. Kushta, C. Spyrou, C. Mitsakou , G. Kallos, 2010: A Modeling Study On The Effects Of Aerosol On Cloud Processes And Precipitation, *10th International Conference on Meteorology, Climatology and Atmospheric Physics (COMECAP)*, Patra, Greece, 25 – 28 May 2010.

- G.Kallos, S.Solomos, J.Kushta, C.Spyrou, C.Kalogeri, C.Mitsakou, 2010: Modeling Aerosol-Radiation-Cloud And Precipitation Processes, *The 6th Specialty Conference And Exhibition On Environmental Progress In The Petroleum & Petrochemical Industries*, Enviro Arabia 2010, 18-21 April 2010.
- M.Astitha, C.Spyrou, G. Kallos, H.A.C.Denier Van Der Gon and A.J.H.Visschedijk, 2009: Chemical Composition Of Aerosols Along The Long-Range Transport Paths, *30th Nato/Sps International Technical Meeting On Air Pollution Modelling And Its Application*, 18 - 22 May, 2009, San Francisco, Usa.
- Kallos G, C. Spyrou, C. Mitsakou, 2009: Short and Long Wave Radiative Forcing from Desert Dust and Impacts on Weather and Climate, *European Geosciences Union General Assembly 2009* , EGU2009-8867, Vienna, Austria, 19 – 24 April 2009.
- Kallos G., Astitha M., Spyrou C., Solomos S., Kushta J., Mavromatidis E. and Mitsakou C., 2008: “Saharan Dust and Anthropogenic Aerosols – Regional Characteristics”, First International Conference: From Deserts to Monsoons, Aldemar Knossos Royal Village Conference Center, 1-6 June 2008, Crete, Greece
- Mitsakou, C., Kallos, G., Papantoniou, N., Spyrou, C., Solomos, S., Astitha, M., Housiadas, C. “Lung dose from mineral Saharan dust to Greek residents”, 2008: Society of Environmental Geochemistry and Health 26<sup>th</sup> European Conference SEGH 2008, Athens, Greece, 31/3-2/4, 2008.
- Papantoniou, N., Mitsakou, C., Solomos, S., Kousta, I., Mavromatidis, E., Spyrou, C., Astitha, M., Pytharoulis, I., Katsafados, P., Kallos, G., 2008: “Modelling in meteorological and climate applications”, 1st HellasGrid User Forum, Athens, Greece, January 10-11, 2008.
- G. Kallos, C. Spyrou, M. Astitha, C. Mitsakou, S. Solomos, J. Kushta, I. Pytharoulis, P. Katsafados, E. Mavromatidis, N. Papantoniou, 2007: Ten-year operational dust forecasting – Recent model development and future plans. WMO/GEO Expert Meeting on “an International Sand and Dust Storm Warning System”, Barcelona, Spain, November 7-9, 2007.
- P. Katsafados, G. Kallos, C. Spyrou and A. Papadopoulos, 2007: Geographical distribution of seasonal and annual amounts of Saharan dust deposition over Mediterranean and Europe. 8th Pan-Hellenic Geographical Conference, 4 – 7 October 2007, Athens, Greece.
- C. Spyrou, P. Katsafados, M. Astitha, A. Papadopoulos and G. Kallos, 2007: A model to simulate the atmospheric dust cycle: sensitivity tests. 8th Pan-Hellenic Geographical Conference, 4 – 7 October 2007, Athens, Greece.
- G. Kallos, M. Astitha, P. Katsafados, C. Spyrou and E. Mavromatidis, 2007: Saharan dust transport and its impact on air quality, ecosystems and regional climate. IUGG 2007 Perugia-XXIV General Assembly, 2-13 June 2007, Perugia, Italy, ISBN 978-88-95852-25-4.
- G. Kallos, P. Katsafados, M. Astitha, A. Papadopoulos and C. Spyrou, 2005: “Saharan dust transport towards the Euro-Mediterranean Region and its implications to air quality, ecosystems and climate”. International Association of Meteorology and Atmospheric Sciences (IAMAS) 2005 Scientific Assembly,

Beijing, China, August 2-11.

- Kallos G., Katsafados P., Spyrou C., Papadopoulos A.: Desert dust deposition over the Mediterranean Sea estimated with the SKIRON/Eta - System validation, *4th EuroGOOS Conference – Brest – France – June 2005* .

## WORKSHOPS

- C. Mitsakou, G. Kallos and C. Spyrou, 2011: Saharan dust levels in Greece: Impacts on urban environment and human health, *6th International Workshop On Sand/Duststorms And Associated Dustfall, 7-9 September 2011, Athens, Greece*.
- C. Spyrou, G. Kallos, C. Mitsakou and C. Kalogeri, 2011: Radiative effects of desert dust on weather and climate, *6th International Workshop On Sand/Duststorms And Associated Dustfall, 7-9 September 2011, Athens, Greece*.
- Kallos, G., Solomos, S., Kushta, I., Spyrou, C., Mavromatidis, E., Astitha, M., Mitsakou, C., 2008: ‘The Integrated Community Limited Area Modeling System – ICLAMS’, 3rd International Workshop on Mineral Dust, Leipzig, Germany, 15-17/9/2008.

## POSTER PRESENTATIONS

- G. Kallos, G. Galanis, S. Sofianos, C. Mitsakou, C. Spyrou, C. Kalogeri, N. Bartsotas, J. Athanaselis, V. Vervatis, S. Solomos, P. Axaopoulos, J.A. Qahtani, D.W. Beard, I. Alexiou, E. Alaa, 2013: An integrated weather and sea state forecasting system for the Arabian Peninsula (WASSF), *EGU General Assembly 2013, AS1.1, Vienna, Austria, 07 – 12 April, 2013*.
- L. Cradden, C. Kalogeri , C. Spyrou, A. Adam, C. Stathopoulos, G. Galanis, S. Sofianos, D. Ingram, G. Kallos, A. Papapostolou, P. Axaopoulos, 2012: A combined resource atlas for marine energy, *4th International Conference on Ocean Energy (ICOE) 2012, Dublin 17 – 19 October 2012*.
- A. Adam, C. Kalogeri, C. Spyrou, J. Athanaselis, S. Sofianos, G. Galanis and G. Kallos, 2012: Offshore Energy Mapping for Northeast Atlantic and Mediterranean: MARINA PLATFORM project, *EGU General Assembly 2012, ERE1.2, Vienna, Austria, 22 – 27 April, 2012*.
- G. Kallos, G. Galanis, C. Mitsakou, P. Athanasiadis, C. Spyrou, S., Sofianos, and C. Kalogeri, 2011: Energy resource mapping at the framework of MARINA PLATFORM project, *EGU General Assembly 2011, OS4.6, Vienna, Austria, 3 – 8 April, 2011*.
- C. Spyrou, C. Mitsakou, P. Athanasiadis, G.Kallos, and C. Kalogeri, 2011: Study of the radiative effects of desert dust on weather and climate, *EGU General Assembly 2011, CL1.24/AS4.1, Vienna, Austria, 3 – 8 April, 2011*.
- S.Solomos, G.Kallos, J.Kushta, M.Astitha, C.Spyrou, C.Mitsakou, 2009: A modeling study on the effects of aerosol concentration and chemical composition on precipitation amounts and distribution, *International workshop on: Atmospheric Composition Changes: Climate-Chemistry Interactions, Lecce, Italy, November 2-4, 2009*.

- Kallos, G., C. Spyrou, C. Mitsakou, G. Vlastou and C. Kalogeri, 2008: The new surface and radiative transfer parameterization in the SKIRON/Dust modelling System, Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract A43A-0268. 15 – 19 December 2008, San Francisco.
- Kallos, G., Spyrou, C., Astitha, M., Mitsakou, C., Solomos, S., Kushta, I., Mavromatidis, E., 2008: ‘Recent SKIRON dust model development and future plans’, EGU General Assembly 2008, Vienna, Austria, 13-18/4/2008.

#### **REVIEWER FOR:**

- Atmospheric Chemistry and Physics
- Scientific Research and Essays
- Atmospheric Environment
- Meteorology and Atmospheric Physics
- Journal Of Geophysical Research
- International Journal Of Climatology
- Environmental and Fluid Mechanics
- Journal of Aerosol Science

#### **TECHNICAL REPORTS**

- G. Kallos, P. Katsafados, C. Spyrou, 2008: The Weather Forecasting System POSEIDON II: Operational Manual And Description Of The Model. University of Athens, Department of Applied Physics, Athens, 2008
- G. Kallos, C. Spyrou, N.Papantoniou, C. Mitsakou, M. Astitha, S. Solomos and P. Katsafados, 2007 : Analysis of the Particulate Matter Exceedances in Greece. Period 2001-2004. *Final Report Prepared for the Ministry of Environment City Planning and Public Work*, June 2007.
- G. Kallos, C. Spyrou, S. Solomos, P. Katsafados and M. Astitha, 2006 : Analysis of the Particulate Matter Exceedances in Greece During the Period 2001-2004. *Technical Report Prepared for the Ministry of Environment City Planning and Public Work*, June 2006.
- G. Kallos, P. Katsafados, C. Spyrou, 2006: Evaluation of atmospheric and wave models. *Deliverable 3.8 for the project ESPEN (An Enhanced operational System for wave monitoring and Prediction with Applications in Hellenic Navigation)*.

## BOOK CHAPTERS

- George Kallos, Petros Katsafados and Christos Spyrou: Part II – Chapter 5: “Desert dust uptake-transport and deposition mechanisms – impacts of dust on radiation, clouds and precipitation” of Gualtieri C. and D.T. Mihailovic, (eds.) 2012: “Fluid Mechanics of Environmental Interfaces”, Second Edition. Taylor & Francis Ltd (ISBN 978-0-415-62156-4), pp.107.
- Development Of Algorithms For The Calculation Of The Feedback Of Naturally Produced Particles Of Radiative Transfer And Energy Balance, 2011, University of Athens, PhD dissertation. Available at:  
<http://phdtheses.ekt.gr/eadd/handle/10442/26160?locale=en>
- George Kallos, Christina Mitsakou, Andres Alastuey, John van Ardenne, Marina Astitha, Michael Cusack, Ulrike Doering, Evangelos Gerasopoulos, Nikolaos Hatzianastassiou, Maria Kanakidou, Jonilda Kushta, Jos Lelieveld, Zev Levin, Nikolaos Mihalopoulos, Millán Millán, José L. Palau, N. Perez, Jorge Pey, Xavier Querol, Stavros Solomos, Christos Spyrou, Chris Theodosi, Christos Zerefos: Part I - Chapter 3: “Mechanisms of climate variability, air quality and impacts of atmospheric constituents in the Mediterranean Region, Regional Assessment Climate Change in the Mediterranean (RACCM) report”, 2011.