

CURRICULUM VITAE

PERSONAL DETAILS:

Surname: ELEFThERIADIS
First name: KONSTANTINOS
Date of Birth: 30/4/1964
Nationality: Greek
Sex: Male
Occupation: Researcher A', N.C.S.R. "Demokritos", Greece

ADDRESS: Environmental Radioactivity Laboratory
Institute of Nuclear Technology and Radiation Protection
N.C.S.R. DEMOKRITOS
15310 Ag. Paraskevi, Attiki, Greece
Tel: 01 6503008
Fax: 01 6519180
e-mail: elefther@ipta.demokritos.gr

EDUCATION

1982-1986 Aristotle University of Thessaloniki, Degree **in Physics**
1987-1988 University of Essex, **M.Sc. in Aerosol Science & Engineering**
1988-1993 University of Essex, **Ph.D. in Chemistry**

EXPERTISE AND QUALIFICATIONS

- Aerosol sampling methodology, QA/QC
- Aerosol physical and chemical properties.
- Development of sampling and particle size selective instrumentation
- Physicochemical properties of atmospheric aerosol,
- Source apportionment methods, CMB, PMF, PCA, PSCF,
- Air mass transport by Back trajectory analysis
- Alpha and gamma spectrometry on air filters.

PROFESSIONAL EXPERIENCE

1991-1992 Research Officer

Department of Chemistry, University of Essex.

"Marine deposition of Nitrogen compounds over the North Sea"

1992-1993 Consultancy work

i) Colchester Borough council

Monitoring of the NO₂ ambient concentration around the town of Colchester.

ii) Environmental Advisory Unit, Liverpool

Air pollution modelling for stack emissions

1994 MEDCAPHOT-TRACE (E.U. contract)

Associated researcher for work on the characterisation of gaseous and aerosol species around the Metropolitan area of Athens

1996 – N.C.S.R. "Demokritos"

Permanent position at the Environmental Radioactivity Laboratory.

Main duties involve research in the area of aerosol technology and applications in the field of radioactivity, atmospheric aerosol properties, instrumentation development, design of large-scale field experiments, project management, external services to industry and other organisations. Supervision of the existing Radioactivity Control Network operated by E.R.L. Ambient levels of radioactivity in the atmosphere at 12 locations in Greece are monitored by total beta radiation measurements of T.S.P. filter samples. Data are reported to the Creek Atomic Energy Commission. Organisation of aerosol measurement campaigns and access to research infrastructures for field studies in the context of aerosol properties, source apportionment and pollutant characterization.

Research:

Research is directed towards the physicochemical properties of atmospheric aerosol, and the study of radioactive aerosol tracers is in progress.

Project leader for the following projects:

1.

E.U. 4th Framework programme

TMR - Access to Large Scale Facilities

1. Scientific Training and Access to Aircraft for Atmospheric Research Throughout Europe (STAAARTE 98)

Title: Distribution of trace metal aerosol concentrations in the lower troposphere

Funding: Cover of expenses

2. Ny-Alesund Atmospheric Air Research Facility of the Norwegian Polar Institute (NP) / Norwegian Institute for Air Research (NILU)

Title: Long range transport of aerosol species in the Arctic

Funding: Cover of expenses

Bilateral exchange agreement Greece-Slovakia

Greek Secretariat for Research & Technology

Title: Size distribution of atmospheric aerosol in Greece and Slovakia by a new optical instrument.

Funding: 7500 Euros

N.C.S.R. "Demokritos"

Title: Size distribution of Po210 in tobacco smoke

Internal funding: 12000 Euros

P.I. for INT-RP/NCSR "Demokritos" participation in the following projects:

E.U. Commission 5th Framework programme

1. Properties of tropospheric aerosols - A case study: the Nitrogen Cycle and Effects on the oxidation of atmospheric trace species (NICE)

Key Action 2; Global Change

2000-2001, Full cost (50%), : 80.100 Euro

2. Subgrid Scale Investigations of Factors Determining the Occurrence of Ozone and Fine Particles (SUB-AERO)

Key Action 2; Global Change

2000-2002, Full cost (50%) : 250.000 Euro

also participating in the following projects

3. EVK4-CT-2000-00018:

Indoor/Outdoor Particulate Matter Chemical Characteristics and Source-to-Inhaled Dose Relationships (URBAN AEROSOL)

4. EVK4-CT-2002-00090:

Integrated Exposure Management Tool Characterizing Air pollution-relevant Human Exposure in Urban Environment (URBAN EXPOSURE)

5. Greek Research Secretariat.

Research on Indoor Particulate Matter Pollution in Industrial Facilities. Period 2003-2006 (Total 750,000 Euro)

IAEA Projects

RER/8/009 (2005-2008) Air Pollution Monitoring in the Mediterranean Region

Participating scientist invited by the Greek Atomic Energy Commission

RER/2/005 (2009-) Characterizing Seasonal Variations in Elemental Particulate Matter Concentrations in European Urban and Rural Areas under Different Climatic Conditions

Participating as National Counterpart for Greece

Co-ordinator

6. GSRT: Regional operational programme for Attika:

“Development of a fine particulate matter mapping system over the Athens urban area and the estimation of public exposure in Attica” (2006-2008) (Total 986000 €)

GSRT: Upgrade of Environmental Technology Services from the Institute of Nuclear Technology & Radiation Protection “AKMON” 2005-2008 (Total 275359€)

Services

Calibration and validation of aerosol/particulate matter measurement infrastructure according to EN12341 standard for fine and coarse aerosol mass fraction measurement (PM₁₀ PM_{2.5} PM₁)

Isokinetic sampling of aerosol and gases in industrial stacks

SCIENTIFIC IMPACT AND RECOGNITION

- Reviewer at the Academic journals:

Atmospheric Chemistry and Physics

Journal of Aerosol Science

Water Air and Soil Pollution,

Water Air and Soil Pollution Focus

Chemosphere

- Invited reviewer and evaluator for project proposals by the Czech Academy of Sciences
- National Contact Point for the IPY project OASIS (Ocean Atmosphere Sea Ice Snowpack) (<http://www.oasishome.net/>).
- Member of the Scientific/Organizing Committee at the International conferences
 - 1 European Aerosol Conference Thessaloniki, 24-29 Aug. 2008
 - 2 12th INTERNATIONAL SYMPOSIUM ON TOXICITY ASSESSMENT", Skiathos 12-17/6/2005
 - 3 First Conference on Environmental Management, Engineering, Planning and Economics (CE-MEPE) 24-28 Jun. 2008

- Member of the Organizing Committee at the Environmental Radioactivity Conference at NCSR Demokritos Athens Nov 2001
- Member of the National Emergency Action Plan “Xenokratis”

Academic Publications

International Peer Review Journals:	48
Book Chapters:	1
Conference Abstracts:	61
CITATIONS	252
Excluding self citations	194

ADDITIONAL INFORMATION

Member of the GAeF (Aerosol Professional Group in Germany).

Founding member of the Hellenic Association for Aerosol Research (HAAR)

Fluent in English, some knowledge of French and Norwegian

Publications

1. Karanasiou A.A., Siskos P.A., Eleftheriadis K., (2009), Assessment of source apportionment by Positive Matrix Factorization analysis on fine and coarse urban aerosol size fractions *Atmos. Environ.*, Vol 43, pp 3385-3395
2. Eleftheriadis, K., S. Vratolis, and S. Nyeki (2009), Aerosol black carbon in the European Arctic: Measurements at Zeppelin station, Ny-Ålesund, Svalbard from 1998–2007, *Geophys. Res. Lett.*, 36, L02809, doi:10.1029/2008GL035741
3. Lazaridis M, Aleksandropoulou V, Hanssen JE, Dye C, Eleftheriadis K., Katsivela E., (2008) “Inorganic and carbonaceous components in indoor/outdoor particulate matter in two residential houses in Oslo, Norway” *J. of the Air & Waste Manag. Assoc.* 58, 3 Pages: 346-356
4. Lazaridis M, Dzumbova L, Kopanakis I, Ondracek J, Glytsos T, Aleksandropoulou V., Voulgarakis A, Katsivela E., Mihalopoulos N, Eleftheriadis, K. (2008) PM10 and PM2.5 levels in the eastern Mediterranean (Akrotiri research station, Crete, Greece) *Water air and soil poll.* 189 Pages: 85-101
5. Karanasiou A.A., Sitaras, I.E., Siskos P.A., K. Eleftheriadis (2007), “Size distribution and sources of trace metals and n-alkanes in the Athens urban aerosol during summer” *Atmos Environ* Vol 41, pp 2368-2381
6. K. Eleftheriadis, I. Colbeck, C. Housiadas, M. Lazaridis, N. Mihalopoulos, C. Mitsakou, J. Smolik and V. Ždímal, (2006), “Size distribution, composition and origin of the submicron aerosol in the marine boundary layer during the Eastern Mediterranean “SUB-AERO” experiment”, *Atmos. Environ.*, 40, 6245-6260
7. C. Bryant, K. Eleftheriadis, J. Smolik, V. Zdímal, N. Mihalopoulos and I. Colbeck (2006) Optical properties of aerosols over the eastern Mediterranean. *Atmos. Environ.*, 40, 6229-6244
8. M. Lazaridis, K. Eleftheriadis, J. Smolik, I. Colbeck, G. Kallos, Y. Drossinos, V. Zdímal, Z. Vecera, N. Mihalopoulos, P. Mikuska, C. Bryant, C. Housiadas, A. Spiridaki, V. Havranek, (2006) “Dynamics of fine particles and photo-oxidants in the Eastern Mediterranean”, *Atmos. Environ.*, 40, 6214-6228
9. A. Spyridaki, M. Lazaridis, K. Eleftheriadis, J. Smolik, N. Mihalopoulos and V. Aleksandropoulou (2006) “Modelling and evaluation of size-resolved aerosol characteristics in the Eastern Mediterranean during the SUB-AERO project” *Atmos. Environ.* 40, 6261-6275
10. Savidou A, Kehagia K, Eleftheriadis K., (2006) “Concentration levels of Pb-210 and Po-210 in dry tobacco leaves in Greece” *J Environ Radioactivity* 85 (1): 94-102
11. Kalogerakis N, Paschali D, Lekaditis V, Pantidou A, Eleftheriadis K, Lazaridis M, (2005), “Indoor air quality - bioaerosol measurements in domestic and office premises” *J. Aerosol Sci.*, Vol 36 (5-6): 751-761
12. Lazaridis M, Spyridaki A, Solberg S, J. Smolik, V. Zdímal, K. Eleftheriadis, V. Aleksandropoulou, O. Hov and P. G. Georgopoulos, (2005), Mesoscale modeling of combined aerosol and photo-oxidant processes in the Eastern Mediterranean, *Atmos Chem Phys.*, 5: 927-940

13. Karanasiou AA, Thomaidis NS, Eleftheriadis K, Siskos P.A.(2005) “Comparative study of pretreatment methods for the determination of metals in atmospheric aerosol by electrothermal atomic absorption spectrometry” *Talanta* 65 (5): 1196-1202
14. S. Nyeki, G. Coulson, I. Colbeck, K. Eleftheriadis, U. Baltensperger, H. J. Beine (2005) “Overview of Aerosol Microphysics during Arctic Sunrise: Measurements during the NICE Renoxification Study”, *Tellus B* 57 (1), 40-50
15. K. Eleftheriadis, S. Nyeki, Psomiadou C and I. Colbeck, (2004) “Background aerosol properties in the European Arctic” *Water Air and Soil Poll. Focus*, 4, 23-30
16. M. Lazaridis, A. Spiridaki, S. Solberg, G. Kallos, T. Svendby, F. Flatøy, I. Drossinos, C. Housiadas, J. Smolik, I. Colbeck, M. Varinou, F. Gofa, K. Eleftheriadis, V. Zdimal and P.G. Georgopoulos, (2004), “Modeling of combined aerosol and photooxidant processes in the Mediterranean area”, *Water Air Soil Poll. Focus*, 4, 3-21, 2004.
17. Halios, C.H., Helmis, C. G., Assimakopoulos, V. D., Hermansen, O., Eleftheriadis, K., Flocas, H. A, (2004). Indoor black carbon and aerosol precursors in three typical residential apartments in Athens, Greece *J. Aerosol Sci*, 35, pp745-746
18. Karanasiou, A., Siskos, P.A., Eleftheriadis, K. (2004), "Trace element concentrations and source identification of PM10 aerosol in Athens", *J. Aerosol Sci*, 35, pp 855 –856
19. Coulson, G., Nyeki, S., Eleftheriadis, K., Colbeck, I.(2004), “Aerosol optical properties at Ny-Alesund during the NICE campaign», *J. Aerosol Sci*, 35, pp383-384
20. Eleftheriadis K., S. Vratolis, C. Mitsakou, I. Colbeck, C. Housiadas and M. Lazaridis (2004) Impact of indoor household activities on the size distribution of Fine aerosol number concentration and case specific calculated Inhaled dose, *J. Aerosol Sci*, 35, pp849-850
21. Bardouki. H., Laikakou H., Economou C., Sciare J., Smolik J., Zdimal V., Eleftheriadis K., Lazaridis M., Mihalopoulos N., (2003) “Chemical composition of size resolved atmospheric aerosols in the eastern Mediterranean during summer and winter”, *Atmos. Environ.* 37 (2): 195-208.
22. Mitsakou, C., Eleftheriadis K., Housiadas, C. and Lazaridis M. (2003) “Modelling of the dispersion of Depleted Uranium aerosol” *Health Physics*, 84 (4): 538-544.
23. J. Smolik, V. Ždimal, J. Schwarz, M. Lazaridis, V. Havránek, K. Eleftheriadis, N. Mihalopoulos, C. Bryant, I. Colbeck (2003) “Size resolved mass concentration and elemental composition of atmospheric aerosols over the Eastern Mediterranean area”, *Atmos.Chem. and Phys.*, Vol. 3, pp 2207-2216.
24. Coulson, G., Nyeki, S., Eleftheriadis, K., Beine, H., Colbeck, I., Ianniello, A., Sparapani, R, (2003), Aerosol measurements at Ny-Ålesund 1998 to 2001, *J. Aerosol Sci.*, ppS17-S18.
25. Halios, C. H., Helmis, C. G., Flocas, H. A., Assimakopoulos, V. D., Eleftheriadis, K., (2003), “A statistical analysis of aerosol precursors and black carbon in indoor and outdoor environments at a typical residential apartment”, *J. Aerosol Sci.*, pp S385-S386.
26. Eleftheriadis, K., Halios, C. H., Petrakis, M, (2003) “Evaluation of indoor/outdoor aerosol and trace gas concentrations measured in the urban environment”, *J. Aerosol Sci.*, ppS1361-S1362
27. Nyeki, S., K. Eleftheriadis, U. Baltensperger, I. Colbeck, M. Fiebig, A. Fix, C. Kiemle, M. Lazaridis and A. Petzold, (2002), “Airborne Lidar and in-situ Aerosol Observations of an Elevated Layer, Leeward of the European Alps and Apennines”, *Geophys. Res. Lett.*, 29 (17): art. no. 1852
28. Colbeck, I., Meng-Chen Chung and Eleftheriadis K. (2002) “Formation and transport of atmospheric aerosol over Athens, Greece” *Water Air and Soil Poll. Focus*, 2, pp223-235
29. Eleftheriadis, K. Nyeki S., Tørseth K., and Colbeck I., (2001), Black Carbon and Ionic species in the Arctic aerosol, *Memoirs of National Inst. of Polar Res.* No 54, pp 91-99
30. Eleftheriadis K. and Colbeck I. (2001) “Coarse atmospheric aerosol: Size distributions of trace elements” *Atmos. Environment* Vol 35, pp 5321-5330
31. M. Lazaridis, D. N. Assimakopoulos, M. Branis, I. Colbeck, I. Drossinos, C. Dye, K. Eleftheriadis, H. Flocas, C. Helmis, W. Hollander, C. Housiadas, J. Hovonka, N. Kalogerakis, J. Smolik, F. Stordal, T. Svendby and V. Zdimal, (2001), “Characterisation of urban air quality indoor/outdoor particulate matter chemical characteristics and source-to-inhaled dose relationships (Urban-Aerosol)” *J. Aerosol Sci.*, 32, pp.S1075-S1076.
32. M. Lazaridis, I. Colbeck, I. Drossinos, K. Eleftheriadis, V. Havranek, C. Housiadas, G. Kallos, N. Mihalopoulos, P. Mikuska, J. Smolik, S. Solberg, A. Spiridaki, E. Stefanou, F. Stordal, T. Svendby, Z. Vecera and V. Zdimal, “Subgrid scale investigations of factors determining the occurrence of ozone and fine particles (SUB-AERO)” *J. Aerosol Sci.*, 32 (2001) pp.S119-S120.
33. M. Lazaridis, G. Kallos, A. Spiridaki, S. Solberg, T. Svendby, I. Drossinos, C. Housiadas, J. Smolik, I. Colbeck,

- K. Eleftheriadis, V. Gekas and F. Stordal, 'Modelling of combined aerosol and photooxidant processes in the Mediterranean Area' *J. Aerosol Sci.*, 32 (2001) pp.S725-S726.
34. Colbeck, I. C. Bryant, S. Nyeki, K. Eleftheriadis, J. Smolik, V. Ždímal, M. Lazaridis and N Mihalopoulos, 'Optical properties of atmospheric aerosol at Finokalia (Greece)' *J. Aerosol Sci.*, 32 (2001) pp.S445-S446.
 35. Smolik, J., Zdímal, Eleftheriadis, K., Havranek, V., Lazaridis, M., Colbeck, I. and Schwarz, J. (2001) "Mass and elemental size distributions of atmospheric aerosol in the Mediterranean area" *J. Aerosol Sci.*, Vol 32, pp. S147-S148
 36. Smolik, J., Zdímal, V., Wagner, Z., Eleftheriadis, K., Lazaridis, M. and Colbeck, I. (2001), "Submicrometer particle number size distributions of atmospheric aerosol in the Mediterranean area" *J. Aerosol Sci.*, Vol 32, pp. S145-S146
 37. Eleftheriadis, K. and Kritidis, P. (2001), "Attachment coefficient of ^{211}Pb on polydisperse aerosol", *J. Aerosol Sci.* 32, S583-S584.
 38. Lazaridis M., Hov \emptyset and Eleftheriadis K. (2000), "The effect of surface roughness on the activation process of atmospheric aerosols" *Atmos. Res.* Vol. 55, pp103-113
 39. Eleftheriadis K. and Colbeck I. (2000) "The fractionation of atmospheric coarse aerosol by a tunnel sampler employing single stage impactors" *J. Aerosol Sci.*, Vol 31, pp. 321-334
 40. Eleftheriadis K., Nyeki S., Lazaridis M., Fiebig M., Kiemle C., Petzold A. and Uhlemann G. (2000), "Airborne lidar and aerosol studies over the Adriatic Sea: I. Characterisation of the MBL", *J. Aerosol Sci.*, Vol 31, pp. S293-S294
 41. Nyeki S., Eleftheriadis K., Baltensperger U., Colbeck I., Fiebig M., Kiemle C., Lazaridis M. and Petzold A. (2000), "Airborne lidar and aerosol studies over the Adriatic Sea: II. Aerosol volatility studies", *J. Aerosol Sci.*, Vol 31, pp. S586-S587
 42. Nyeki S., Baltensperger U., Colbeck I., Eleftheriadis K., Krivácsy Z. and Weingartner E. (2000), "Aerosol volatility measurements at the GAW stations Jungfraujoch and Ny Aalesund", *J. Aerosol Sci.*, Vol 31, pp. S366-S367
 43. Krivácsy Z, Hoffer A, Molnár Á, Sárvári ZS, Temesi D, Baltensberger U, Nyeki S, Weingartner E, Kleefeld S, Jennings SG, Eleftheriadis K, Colbeck I (2000) Organic and black carbon in background atmospheric aerosols. *J. Aerosol Sci.* Vol 31, pp S178-S179.
 44. Eleftheriadis, K., Nyeki S., Beine H., Weingartner E., Colbeck I. and Baltensperger U. (1999) "Arctic Black Carbon measurements at Ny Ålesund, Svalbard", *J. Aerosol Sci.*, Vol. 30, pp S843-S844
 45. Eleftheriadis K., Karydas K., Nyeki S., Weingartner E., and Baltensperger U. (1999) "Composition profile of a Saharan dust event over central Europe" *J. Aerosol Sci.*, Vol 30, pp. S167-S168
 46. Eleftheriadis K., Balis D., Ziomas I., Colbeck I. and Manalis N. (1998), "Atmospheric aerosol and gaseous species in Athens, Greece", *Atmos. Environment* Vol. 32, No 12, pp 2183-2191
 47. Eleftheriadis K., Meng-Chen Chung and Colbeck, I. (1998) "Atmospheric aerosol formation over Athens", *J. Aerosol Sci.*, Vol. 29, pp. S25-S26
 48. Colbeck I. and Eleftheriadis K., (1996) "Influence of Wind Direction on Atmospheric Aerosol and Gaseous Species in Athens, Greece" *J. Aerosol Sci.*, Vol. 27, pp S107-S108.
 49. Colbeck I. and Eleftheriadis K., (1994), "Metal aerosol concentrations at a refuse site", *J. Aerosol Sci.*, Vol. 25, pp S49-S50.
 50. Eleftheriadis K. and Colbeck I., (1993), "Intercomparison between measurements by PIXE and Ion Chromatography on atmospheric aerosol samples", *J. Aerosol Sci.*, Vol. 24, pp. S417-S418
 51. Eleftheriadis K. and Colbeck I., (1992), "The particle collection efficiency of rectangular strips by inertial impaction", *J. Aerosol Sci.*, Vol. 23, pp 35-38
 52. Eleftheriadis K., Colbeck I. and Harrison R.M., (1991), "Size distributions of atmospheric coarse aerosol species by a tunnel sampler employing single stage impactors", *J. Aerosol Sci.*, Vol. 22, pp 321-324.
 53. Colbeck I., Eleftheriadis K. and Simons S., (1989), "The dynamics and structure of smoke aerosols", *J. Aerosol Sci.*, Vol. 20, pp 875-878.

Over 60 papers in Proceedings and Conference presentations.