

Konstantinos LAGOUVARDOS

PERSONAL INFORMATION

DATE - PLACE OF BIRTH: 22 May 1964 in Athens, Greece
PROFESSION: Research Director
PROFESSIONAL ADDRESS: National Observatory of Athens
Institute of Environmental Research Lofos Koufou,
Palaia Pendeli, 15236, Athens, Greece
Tel : 30 210 8109127 Fax : 30 210 8103236
E-mail:lagouvar@noa.gr

ACADEMIC QUALIFICATIONS

- 2001: Graduate, National School of Public Administration, Department of General Administration.
- 1992: Ph. D. thesis in Meteorology, entitled: 'Dynamics of active precipitating systems observed during the European field experiment FRONTS 87'. University Pierre et Marie Curie, Paris France.
- 1989: DEA in Meteorology and Oceanography. University Pierre et Marie Curie, Paris France.
- 1988: B. Sc in Physical Sciences. National University of Athens, Greece.

PROFESSIONAL EXPERIENCE

- 2011 – today: Director of Research IERSD/National Observatory of Athens, Greece
- 2006 – 2011: Associate Researcher IERSD/National Observatory of Athens, Greece
- 2002 – 2006: Assistant Researcher IERSD/National Observatory of Athens, Greece
- 1999 – 2002: Research Associate, IERSD/National Observatory of Athens, Greece
- 2001 – 2002: General Secretariat for Research and Technology, Scientific Administrator, Division of International Affairs (CERN, ESA)
- 1998-1999: Coordinator of the Organization of the MSc “Science and Technology of Water Resources” of the National Technical University of Athens.
- 1993-1999: Research Scientist, Laboratory of Meteorology, School of Physics, University of Athens, Greece.
- 1992-1993: Post-doctoral research (funded by ESA) in CRPE/CNRS, France.

AREAS OF EXPERTISE

- Dynamic meteorology, numerical weather prediction, lightning meteorology, climatology and dynamics of severe weather phenomena, weather monitoring networks.
- Scientific coordinator of operational weather prediction at NOA based on BOLAM model and of related activities
 - Scientific coordinator of the National Observatory of Athens Automated Network of surface weather stations (NOAAN, 375 stations by November 2018)
 - Scientific coordinator of the content of www.meteo.gr

HONORS / FELLOWSHIPS / OTHER RELEVANT EXPERIENCE

- French Ministry of Research and Development Fellowship, 1989-1992.
- National Representative in the following EU COST Actions: COST 76 “Development of VHF/UHF wind profilers and vertical sounders for use in European observing systems”, COST 78 “Development of nowcasting techniques”, COST 710 “Harmonisation in the pre-processing of meteorological data for dispersion model”.

- Member of the WG of the General Secretariat for Research and Technology of the collaboration of Greece with ESA (2002-2003).
- Member of the French, American and Royal Meteorological Societies.
- Member of the scientific Committee of the «MEDITERRANEAN SCHOOL ON MESOSCALE METEOROLOGY», Sardinia, Italy, 2004.
- Coordinator of Working Group 4 on “Intense sea-atmosphere interactions” of “HYdrological cycle in the Mediterranean Experiment – HyMeX” international project. 2010-2015.
- Coordinator of the Science Team–Lightning” of HyMeX international project (www.hymex.org), 2010-today.
- 2018-today: President of the Sectorial Scientific Council on the Environment of the National Council for Research & Technology (<http://www.esek.org.gr>)

OTHER ACTIVITIES

Editor

- Guest Editor of the EGU journal *Advances in Geosciences*, 2006.
- Guest Editor of the “*Natural Hazards and Earth System Sciences*”, 2010.
- Associate Editor of the journal “*Atmospheric Research*”, since 2014.

Reviewer of Scientific proposals

GSRT, EU (5th, 6th, Framework Program), Cyprus (Institute for Promotion of Research).
2017: Member of the committee on the “Environment”, ELIDEK-PostDoc Call.

Organisation of International Conferences

1997: Member of the Organising Committee of the international Symposium "Symposium on Regional Weather Prediction on Parallel Computer Environments", 15-17 October 1997, Athens.

2000, 2004: Convenor at the European Geophysical Union General Assembly

2005: Co-chair of the Organising Committee of the “7th Plinius Conference on Mediterranean Storms”, 5-7 October, Rethymno, Crete, Greece.

2010: Co-chair of the Organising Committee of the “12th Plinius Conference on Mediterranean Storms”, 1-4 September, Corfu, Greece.

2012, 2014, 2016, 2018: Member of the Scientific Committee of the International Conference on Meteorology, Climatology and Atmospheric Physics, COMECAP 2012 (Athens, 29 May – 1 June 2012), COMECAP 2014 (Heraklion, 28-31 May 2014), COMECAP 2016 (Thessaloniki, 19-21 September 2016), COMECAP 2018 (Alexandroupoli, 15-17 October 2018)

2015: Chair of the Scientific Committee of the “9th Hymex Workshop, 21-25 September, Mykonos, Greece.

2016: Member of the Scientific & Programme Committee of the 15th Plinius Conference on Mediterranean Risks, Taormina, 8-11 June 2016.

Supervision of early careers of researchers

Supervisor of post-doc researchers

- Dr. Ioannis Koletsis (2011-now): Research Associate at NOA
- Dr. Nikos Mazarakis (2010-2015): Research Associate at NOA, now at the Private Sector (STORM-GEO Greel Offices)
- Dr. Theodore Giannaros (2014-2015, 2017-now): Research Associate at NOA
- Dr. Athanasios Karagiannidis (2014-2017): Research Associate at NOA

Supervision of PhD thesis

- 2003-2007: Dr. D. Katsanos, Dept. of Physics, University of Patras, now Research Scientist Grade B IERSD/NOA
- 2007-2010: Dr. I. Koletsis, Dept. of Physics, University of Ioannina, now Post-Doc at IERSD/NOA
- 2014-2018: Elisavet Galanaki, Dept. of Physics, University of Patras

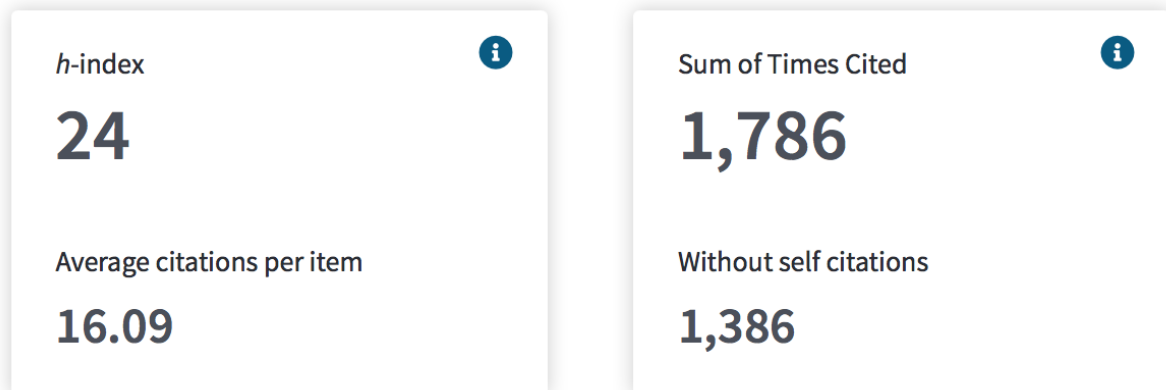
Co-supervision of PhD thesis (Member of advisory committee)

- 2013-2017: P. Kosmopoulos, Dept. of Physics, Aristotle University of Thessaloniki
- 2014-2018: E. Proestakis, University of Patras
- 2017-now: S. Dafis, Ecole Polytechnique, France

Examinator/reviewer of PhD thesis (Member of examining committee)

- 2005: Catherine Heyraud, «Impacts des tempêtes des moyennes latitudes sur l'environnement», Université des Versailles, France.
- 2008: Luis Fita, «Numerical study of intense cyclogenesis events in the Mediterranean basin», Universitat de les Illes Balears, Spain (reviewer).
- 2011: Emilie Bresson, «Mécanismes de formation des systèmes convectifs quasi-stationnaires en Méditerranée nord-occidentale. Application au cas du 15 juin 2010 sur le Var », Université de Toulouse, France.
- 2015: Francois Ribaud «Etude tridimensionnelle de l'activité électrique, microphysique et dynamique d'une ligne de grain observée pendant la campagne HYMEX », Université de Toulouse

CITATION REPORT (WEB OF SCIENCE, 13/11/2018)



PUBLICATIONS IN INTERNATIONAL JOURNALS

1. Lagouvardos K. Lemaitre Y. and Scialom G, 1992: "Mesoscale ageostrophic circulations of two fronts observed during the FRONTS 87 experiment. Diagnosis and interpretation". *Meteorology and Atmospheric Physics*, **48**, 293-307.
2. Lagouvardos K. Lemaitre Y. and Scialom G, 1993: "Dynamical structure of a wide cold frontal cloudband observed during the FRONTS 87 experiment". *Quarterly Journal of Royal Meteorological Society*, **119**, 1291-1319.
3. Lagouvardos K. Lemaitre Y. and Scialom G, 1993: "Importance of diabatic processes on ageostrophic circulations observed during the FRONTS 87 experiment". *Quarterly Journal of Royal Meteorological Society*, **119**, 1321-1345.
4. Kotroni V. and Lagouvardos K., 1993: "Low-level jet streams associated with atmospheric cold fronts - seven case studies from the FRONTS87 experiment". *Geophysical Research Letters*, **20**, 1371-1374.

5. Lagouvardos K., Lemaitre Y., 1994: "Influence of strong wind and humidity gradients on frontal ageostrophic circulations". *Quarterly Journal of Royal Meteorological Society*, **120**, 1513-1533.
6. Kotroni V., C. Amory-Mazaudier, and K. Lagouvardos, 1994: "Doppler sodar observations of a cold front during the PYREX experiment: orographic effects". *International Journal of Remote Sensing*, **15**, 489-497.
7. Kotroni V. and Lagouvardos K., 1994: "Dynamic structure and evolution of a prefrontal boundary layer: Three case studies of FRONTS87". *Atmospheric Research*, **35**, 55-70.
8. Lagouvardos K. and Kotroni V., 1995: "Upper-level frontogenesis: two case-studies from the FRONTS 87 experiment". *Monthly Weather Review*, **123**, 1197-1206.
9. Kotroni V., Lagouvardos K. and Petitdidier M., 1995: "A comparison of wind profiler and sounding observations during a frontal event". *International Journal of Remote Sensing*, **16**, 1685-1695.
10. Lagouvardos K., Kotroni V., Dobricic S., Nickovic S. and Kallos G., 1996: "On the storm of 21-22 October 1994 over Greece: Observations and model results". *Journal of Geophysical Research*, **101** (D21), 26217-26226.
11. Lagouvardos K., Kotroni V., and Kallos G., 1996: "Exploring the effects of different types of model initialisation: simulation of a severe air-pollution episode in Athens, Greece". *Meteorological Applications*, **3**, 147-155.
12. Kotroni V., Kallos G., and Lagouvardos K., 1997: "Convergence zones over the Greek Peninsula and associated thunderstorm activity". *Quarterly Journal of Royal Meteorological Society*, **123**, 1961-1984.
13. Peleg, M., M. Luria, G. Sharf, A. Vanger, G. Kallos, V. Kotroni, K. Lagouvardos, and M. Varinou, 1997: "Observational Evidence of an Ozone Episode over the Greater Athens Area". *Atmospheric Environment*, **31**, 3969-3983.
14. Kallos G., V. Kotroni, K. Lagouvardos, and A. Papadopoulos, 1998: "On the long-range transport of air pollutants from Europe to Africa". *Geophysical Research Letters*, **25**, No 5, 619-622.
15. Kotroni V., Lagouvardos K., G. Kallos and Y. Lemaitre, 1998: "Modelling study of the IOP2 cold front of FRONTS 87 Experiment". *Meteorological Applications*, **5**, 297-306.
16. Lagouvardos K., V. Kotroni, and G. Kallos, 1998: "An extreme cold surge over the Greek Peninsula". *Quarterly Journal of Royal Meteorological Society*, **124**, 2299-2328.
17. Kotroni V., G. Kallos, K. Lagouvardos, M. Varinou, and R. Walko, 1999: "Numerical simulations of the meteorological and dispersion conditions during an air pollution episode over Athens, Greece". *Journal of Applied Meteorology*, **38**, 432-447.
18. Kotroni V., K. Lagouvardos, G. Kallos, and D. Ziakopoulos, 1999: "Severe flooding over central and southern Greece associated with pre-cold frontal orographic lifting". *Quarterly Journal of Royal Meteorological Society*, **125**, 967-991.
19. Kotroni V., K. Lagouvardos and G. Kallos, 1999: "Model investigation of a cloud band associated with a cold front over Eastern Mediterranean". *Physics and Chemistry of the Earth, Vol. 24*, **6**, 633-636.
20. Lagouvardos K., V. Kotroni, S. Nickovic, D. Jovic, and G. Kallos, 1999: "Observations and model simulations of a winter sub-synoptic vortex over the Central Mediterranean". *Meteorological Applications*, **6**, 371-383.
21. Lagouvardos K. And V. Kotroni, 1999: "Aspects of the 25-26 March 1998 storm over Greece " *Weather*, **54**, 154-160.

22. Lagouvardos, K., V. Kotroni., G. Kallos, and S.T. Rao, 2000: "An analysis of the meteorological and air quality conditions during an extreme ozone episode over the Northeastern USA". *Intenational Journal of Environment and Pollution*, **14**, 364-373.
23. Varinou M., G. Kallos, V. Kotroni, and K. Lagouvardos, 2000: "The influence of the lateral boundaries and background concentrations on limited area photochemical model simulations". *Intenational Journal of Environment and Pollution*, **14**, 354-363.
24. Lagouvardos K., and Kotroni V., 2000: "Use of METEOSAT Water-Vapour images for the diagnosis of a vigorous stratospheric intrusion over Central Mediterranean". *Meteorological Applications*, **7**, 205-210.
25. Wanger A., Peleg M., Sharf G., Mahrer Y., Dayan U., Kallos G., Kotroni V., Lagouvardos K., Varinou M., Papadopoulos A., and Luria M., 2000: "Some observational and modelling evidence of long range transport of air pollutants from Europe towards the Israeli coast". *Journal of Geophysical Research*, Vol **105**, No D6, 7177-7186.
26. Kotroni V. and K. Lagouvardos, 2001: Precipitation forecast skill of different convective parameterization and microphysical schemes: application for the cold season over Greece. *Geophysical Research Letters*, Vol. **108**, No 10, 1977-1980.
27. Kotroni V., K. Lagouvardos and D. Lalas, 2001: The effect of Crete island on the Etesian winds over the Aegean Sea. *Quarterly Journal of Royal Meteorological Society*, **127**, 1917-1938.
28. Feidas C., C. Cartalis, K. Lagouvardos, 2002: Temporal simulation of diurnal temperature and relative humidity evolution at a forested mountainous site in Attica, Greece. *Int. J. of Wildland Fire*, **11**, 1-12.
29. Anadranistakis M., K. Lagouvardos, V. Kotroni and K. Skouras, 2002: Combination of Kalman filter and an empirical method for the correction of near-surface temperature forecasts: application over Greece. *Geophysical Research Letters*, Vol.29, No. **16**, 1776-1779.
30. Koussis A., K. Lagouvardos, K. Mazi, V. Kotroni, D. Sitzmann, J. Lang, H. Zaiss, A. Buzzi, and P. Malguzzi, 2003: Flood forecasts for an urban basin with an integrated hydro-meteorological model. *Journal of Hydrological Engineering*, **8**, 1-11.
31. Lagouvardos K., V. Kotroni, A. Koussis, C. Feidas, A. Buzzi, P. Malguzzi, 2003: The meteorological model BOLAM at the National Observatory of Athens: assessment of two-year operational use. *J. Appl. Meteor.*, **42**, 1667-1678.
32. Anadranistakis M., K. Lagouvardos, V. Kotroni, H. Eleftheriadis, 2004: Correcting temperature and humidity forecasts using kalman filtering: potential for agricultural protection in Northern Greece. *Atmospheric Research*, **71 (3)**, 115-125.
33. Katsanos D., K. Lagouvardos, V. Kotroni and G.J. Huffmann, 2004: Statistical evaluation of MPA-RT high-resolution precipitation estimates from satellite platforms over the Central and Eastern Mediterranean. *Geophysical Research Letters*, **31**, L06116.
34. Kotroni V. and K. Lagouvardos, 2004: Evaluation of MM5 high-resolution real-time forecasts over the urban area of Athens, Greece. *J. Appl. Meteor.*, **43**, 1666-1678.
35. Medaglia C. M., C. Adamo, F. Baordo, S. Dietrich, S. Di Michele, V. Kotroni, K. Lagouvardos, A. Mugnai, S. Pinori, E. A. Smith, G. J. Tripoli, 2005: Comparing microphysical/dynamical outputs by different cloud resolving models: impact on passive microwave precipitation retrieval from satellite. *Advances in Geosciences*, **2**, 195-199.
36. Lagouvardos K. and V. Kotroni, 2005: Improvement of high resolution weather forecasts through humidity adjustment, based on satellite data. *Quarterly Journal of Royal Meteorological Society*, **131**, 2695-2712.

37. Feidas, H., K. Lagouvardos, V. Kotroni, and C. Cartalis, 2005: Application of two satellite infrared techniques in support of precipitation forecasts of a NWP model. *Int. J. Remote Sensing*, **26**, 5393-5417.
38. Defer E., K. Lagouvardos, and V. Kotroni, 2005: Lightning Activity in Eastern Mediterranean Region” *JGR-Atmospheres*, **110**, D24210.
39. Kotroni V., K. Lagouvardos, E. Defer, S. Dietrich, F. Porcù, C.M. Medaglia, and M. Demirtas, 2005: The Antalya 5 December 2002 storm: Observations and model analysis. *J. Appl. Meteor.*, **45**, 576-590.
40. Lagouvardos K., V. Kotroni, E. Defer, 2006: Synoptic environment related to rapid cyclogenesis in the Eastern Mediterranean, *Advances in Geosciences*, **7**, 115-119.
41. Mazarakis, N., V. Kotroni, K. Lagouvardos, S. Music, S. Nickovic, 2006: Impact of the assimilation of conventional data on the quantitative precipitation forecasts in the Eastern Mediterranean, *Advances in Geosciences*, **7**, 237-242.
42. Katsanos, D., N. Viltard, K. Lagouvardos, V. Kotroni, 2006: Performance of a rain retrieval algorithm using TRMM data in the Eastern Mediterranean, *Advances in Geosciences*, **7**, 321-325.
43. Katsanos D., K. Lagouvardos, V. Kotroni and A. Argiriou, 2007: Combined analysis of rainfall and lightning data produced by mesoscale systems in the Central and Eastern Mediterranean, *Atmospheric Research*, **83**, 55-63
44. Akylas E., V. Kotroni and K. Lagouvardos, 2007: Sensitivity of high resolution operational weather forecasts to the choice of the planetary boundary layer scheme, *Atmospheric Research*, **84**, 49-57.
45. Mirasgedis S., Y. Sarafidis, E. Georgopoulou, V. Kotroni, K. Lagouvardos, and D. P. Lalas, 2007: Modeling framework for estimating impacts of climate change on electricity demand at regional level: Case of Greece *Energy Conversion and Management* **48**, 1737-1750.
46. Feidas H., T. Kontos, N. Soulakellis, K. Lagouvardos, 2007: A GIS tool for the evaluation of the precipitation forecasts of a numerical weather prediction model using satellite data. *Computers and Geosciences*, **33** (8), pp. 989-1007.
47. Lagouvardos K., and V. Kotroni, 2007: TRMM and lightning observations of a low-pressure system over the Eastern Mediterranean. *Bulletin of the American Meteorological Society*, **88**, 1363–1367.
48. Katsanos D., Lagouvardos K., Kotroni V. and Argiriou A., 2007: Relationship of lightning activity with microwave brightness temperatures and spaceborne radar reflectivity profiles in the Central and Eastern Mediterranean. *J. Appl. Meteor.*, **46**, 1901-1912.
49. Lagouvardos K., V. Kotroni and E. Defer, 2007: The 21-22 January 2004 explosive cyclogenesis over the Aegean Sea: observations and model analysis. *Quarterly Journal of Royal Meteorological Society*, **133**, 1519-1531.
50. Mugnai A., Eric A. Smith, Gregory J. Tripoli, Stefano Dietrich, Vassiliki Kotroni, Kostas Lagouvardos, and Carlo M. Medaglia, 2008: Explaining discrepancies in passive microwave cloud-radiation databases in microphysical context from two different cloud-resolving models *Meteorology and Atmospheric Physics*, **101**, 127-145.
51. Kotroni V., Lykoudis S, Lagouvardos K., and Lalas D, 2008: A fine resolution regional climate change experiment for the Eastern Mediterranean: analysis of the present climate simulations. *Global and Planetary Change*, **64**, 93-104.
52. Kotroni V., and K. Lagouvardos, 2008: Lightning occurrence in relation with elevation, terrain slope and vegetation cover over the Mediterranean. *JGR-Atmospheres*, **113**, D21118, doi:10.1029/2008JD010605.

53. Bloom A, V. Kotroni and K. Lagouvardos, 2008: Climate change impact of wind energy availability in the Eastern Mediterranean using the regional climate model PRECIS *Natural Hazards and Earth System Sciences* (NHES), 8, 1249-1257
54. Mazarakis N., V. Kotroni, K. Lagouvardos and A.A. Argiriou, 2008: Storms and Lightning Activity in Greece during the Warm Periods of 2003-2006. *Journal of Applied Meteorology and Climatology*, 47, 3089–3098.
55. Vincendon B., V. Ducrocq , S. Dierer, V Kotroni , M.Lelay , M. Milelli, A. Quesney, G-M. Saulnier, D. Rabuffetti, L. Bouilloud, K. Chancibault, S. Anquetin, K. Lagouvardos, P. Steiner, 2009: Flash Flood Forecasting Within The Preview Project : Value Of High- Resolution Hydrometeorological Coupled Forecast, *Meteorology and Atmospheric Physics*, 103 (1-4), pp. 115-125
56. Mazarakis, N., V. Kotroni, K. Lagouvardos and A.A. Argiriou, 2009: The sensitivity of numerical forecasts to convective parameterization during the warm period and the use of lightning data as an indicator for convective occurrence. *Atmospheric Research* 94 (4), pp. 704-714.
57. Koletsis I., K. Lagouvardos, V. Kotroni, and A. Bartzokas, 2009: Numerical study of a downslope windstorm in Northwestern Greece. *Atmospheric Research* 94 (2), pp. 178-193.
58. Katsanos D.K., K. Lagouvardos and V. Kotroni, 2009: Relationship between lightning and model simulated microphysical parameters over the central and eastern Mediterranean, *Natural Hazards and Earth System Sciences* (NHES), 9, 1719-1726.
59. Lagouvardos K., V. Kotroni, H-D Betz and K. Schmidt, 2009: A comparison of lightning data provided by ZEUS and LINET networks over Western Europe. *Natural Hazards and Earth System Sciences*, 9, 1713-1717.
60. Koletsis I., K. Lagouvardos, V. Kotroni and A. Bartzokas, 2009: The interaction of northern wind flow with the complex topography of Crete Island – Part I: Observational study, *Natural Hazards and Earth System Sciences*, 9, 1845-1855
61. Yoav Yair, Barry Lynn, Colin Price, Vassiliki Kotroni, Konstantinos Lagouvardos, Efrat Morin, Alberto Mugnai and Maria-Carmen Llasat, 2010: Predicting the potential for lightning activity in Mediterranean storms based on the Weather Research and Forecasting (WRF) model dynamic and microphysical fields. *JGR-Atmospheres*, 115, D04205, doi:10.1029/2008JD010868.
62. Bartzokas A., V. Kotroni, K. Lagouvardos, C.J. Lolis, A. Gkikas, and M.I. Tsirogianni, 2010: Weather forecast in north-western Greece: RISKMED warnings and verification of MM5 model. *Natural Hazards and Earth System Sciences*, 10, 1–12, 2010
63. Delitala A. , Gallino S. , Villa L., Lagouvardos K. and Drago. A. 2010: Weather-routing in long-distance Mediterranean routes. *Theoretical and Applied Climatology*, DOI 10.1007/s00704-009-0238-2
64. Lagouvardos K., E. Floros and V. Kotroni, 2010: A Grid-enabled Regional-scale Ensemble Forecasting System in the Mediterranean. *J Grid Computing*, 8:181–197.
65. Llasat, M.C., M. Llasat-Botija, M.A. Prat, F. Porcú, C Price, A. Mugnai, K. Lagouvardos, V.Kotroni, D. Katsanos, S. Michaelides, Y. Yair, K. Savvidou, K. Nicolaidis, 2010: High-impact floods and flash floods in Mediterranean countries: the FLASH preliminary database. *Advances in Geosciences*, 23, 47-55.
66. Savvidou K., K. Lagouvardos, S. Michaelides, V. Kotroni, and P. Constantinides, 2010: Verification of the BOLAM weather prediction model over the area of Cyprus, *Advances in Geosciences*, 23, 93–100, 2010.
67. Bartzokas A., J. Azzopardi, L. Bertotti, A. Buzzi, L. Cavaleri, D. Conte, S. Davolio, S. Dietrich, A. Drago, O. Drofa, A. Gkikas, V. Kotroni, K. Lagouvardos, C.J. Lolis, S. Michaelides, M. Miglietta, A. Mugnai, S. Music, K. Nikolaidis, F. Porcù, K.

- Savvidou, and M.I. Tsirogianni, 2010: The RISKMED project: Philosophy, methods and products. *Natural Hazards and Earth System Sciences*, 10, 1393-1401.
68. Koletsis I., K. Lagouvardos, V. Kotroni and A. Bartzokas, 2010: The interaction of northern wind flow with the complex topography of Crete Island – Part II: Numerical study, *Natural Hazards and Earth System Sciences*, 10, 1115-1127.
 69. Kotroni V., E. Floros, K. Lagouvardos, G. Pejanovic, L. Ilic, and M. Zivkovic, 2010: Multi-model multi-analysis ensemble weather forecasting on the Grid for the South Eastern Mediterranean Region, *Earth Science Informatics*, DOI: 10.1007/s12145-010-0071-2.
 70. Retalis A., D. Paronis, K. Lagouvardos and V. Kotroni, 2010: The heat wave of June 2007 in Athens, Greece - Part 1: Study of satellite derived land surface temperature. *Atmospheric Research*, 98, 458-46.
 71. Kotroni V., K. Lagouvardos, and A. Retalis, 2011: The heat wave of June 2007 in Athens, Greece - Part 2: Modelling study and sensitivity experiments. *Atmospheric Research*, 100, 1-11.
 72. Kohn M., E. Galanti, C. Price, K. Lagouvardos and V. Kotroni, 2011: Now-Casting Thunderstorms in the Mediterranean Region using Lightning Data. *Atmospheric Research*, 100, 489-502.
 73. Mazarakis, N., V. Kotroni, K. Lagouvardos, A.A. Argiriou, and C.J. Anderson, 2011: The sensitivity of warm period precipitation forecasts to various modifications of the Kain – Fritsch Convective Parameterization Scheme. *Natural Hazards and Earth System Science*, 11, 1327-1339.
 74. Price C., Yoav Yair, Alberto Mugnai, Kostas Lagouvardos, Maria Carmen Llasat, Silas Michaelides, Stefano Dietrich, Eli Galanti, Luis Garrote, Dimitris Katsanos, Vasso Kotroni, Montserrat Llasat-Botija, Luis Mediero, Efrat Morin, Kleantlis Nicolaidis, Keti Savvidou, Baruch Ziv, 2011: The FLASH Project: Using lightning data to better understand and predict flash floods. *Environmental Science & Policy*, 14, 898-911.
 75. Price C., Y. Yair, A. Mugnai, K. Lagouvardos, M. C. Llasat, S. Michaelides, U. Dayan, S. Dietrich, F. Di Paola, E. Galanti, L. Garrote, N. Harats, D. Katsanos, M. Kohn, V. Kotroni, M. Llasat-Botija, B. Lynn, L. Mediero, E. Morin, K. Nicolaidis, S. Rozalis, K. Savvidou, and B. Ziv, 2011: Using lightning data to better understand and predict flash floods in the Mediterranean. *Surveys in Geophysics* 32 (6), pp. 733-751.
 76. Amiridis V., C. Zerefos, S. Kazadzis, E. Gerasopoulos, K. Eleftheratos, M. Vrekoussis, A. Stohl, R.E. Mamouri, P. Kokkalis, A. Papayannis, K. Eleftheriadis, E. Diapouli, I. Keramitsoglou, C. Kontoes, V. Kotroni, K. Lagouvardos, E. Marinou, E. Giannakaki, E. Kostopoulou, C. Giannakopoulos, A. Richter, J.P. Burrows, N. Mihalopoulos, 2012: Impact of the 2009 Attica wild fires on the air quality in urban Athens, *Atmospheric Environment* 46, pp. 536-544.
 77. Sindosi O. A., A. Bartzokas, V. Kotroni and K. Lagouvardos, 2012: Verification of precipitation forecasts of MM5 model over Epirus, NW Greece, for various convective parameterization schemes, *Natural Hazards and Earth System Sciences*, 12, 1393-1405.
 78. Lolis C. J., A. Bartzokas, K. Lagouvardos and D. A. Metaxas, 2012: Intra-annual variation of atmospheric static stability in the Mediterranean region: a 60-year climatology. *Theoretical and Applied Climatology*.
 79. Koutroulis A. G., M. G. Grillakis, I. K. Tsanis, V. Kotroni and K. Lagouvardos, 2012: Lightning activity, rainfall and flash flooding. Occasional or interrelated events? A case study in the island of Crete, *Natural Hazards and Earth System Sciences*, 12, 881-89, DOI: 10.5194/nhess-12-881-2012.
 80. Mazarakis, N., V. Kotroni, K. Lagouvardos, L. Bertotti, 2012: High resolution wave

- model validation over the Greek maritime areas, *Natural Hazards and Earth System Sciences*, 12, 3433–3440.
81. Papagiannaki K., K. Lagouvardos, and V. Kotroni, 2013: A database of high-impact weather events in Greece: a descriptive impact analysis for the period 2001–2011, *Natural Hazards and Earth System Sciences*, 13, 727–736.
 82. Mazarakis, N., V. Kotroni, K. Lagouvardos, L. Bertotti, 2012 : High resolution wave model validation over the Greek maritime areas, *Natural Hazards and Earth System Sciences*, 12, 3433–3440.
 83. Papagiannaki K., K. Lagouvardos, and V. Kotroni, 2013: A database of high-impact weather events in Greece: a descriptive impact analysis for the period 2001–2011, *Natural Hazards and Earth System Sciences*, 13, 727–736.
 84. Lagouvardos, K., V. Kotroni, E. Defer and O. Bousquet, 2013: Study of a heavy precipitation event over southern France, in the frame of HYMEX project: Observational analysis and model results using assimilation of lightning. *Atmospheric Research, Volume 134, 1 December 2013, Pages 45-55.*
 85. Kotroni V., K. Lagouvardos, and S. Lykoudis, 2013: High-resolution model-based wind atlas for Greece, *Renewable & Sustainable Energy Reviews* 10.1016/j.rser.2013.10.016.
 86. Drobinski, P., V. Ducrocq, J.T. Allen, P. Alpert, E. Anagnostou, K. Béranger, M. Borga, I. Braud, A. Chanzy, S. Davolio, G. Delrieu, A. Dömbrack, C. Estournel, N. Filali Boubrahmi, J. Font, M. Gacic, V. Grubisic, E. Grunfest, S. Gualdi, H. Hoff, B. Ivancan-Picek, C. Kottmeier, V. Kotroni, K. Lagouvardos, P. Lionello, M.C. Llasat, W. Ludwig, C. Lutoff, A. Mariotti, A. Montanari, E. Ozoy, C. Prigent, E. Richard, R. Romero, R. Rotunno, I. Ruin, V.H. Santaner, 9 D. Sauri, S. Somot, I. Taupier-Letage, R. Therrien, J. Tintore, R. Uijlenhoet, and H. Wernli, 2014: HyMeX, a 10-year multidisciplinary program on the Mediterranean water cycle. *Bull. Amer. Meteor. Soc.*, **95**, 1063–1082.
 87. Koletsis I., V. Kotroni and K. Lagouvardos, 2014: A model-based study of the wind regime over Corinthian Gulf in Greece. *Natural Hazards and Earth System Sciences*, 14, 459-472.
 88. Flaounas, E., V. Kotroni, K. Lagouvardos, and I. Flaounas, 2014: Identifying and tracking cyclones based on relative vorticity patterns and evolution: Application on Atlantic and Mediterranean cyclones. *Geoscientific Model Development*, 7, 1841–1853.
 89. Papagiannaki, K., K. Lagouvardos, V. Kotroni, and G. Papagiannakis, 2014: Agricultural losses related to frost events: use of the 850 hPa level temperature as an explanatory variable of the damage cost. *Natural Hazards and Earth System Sciences*, 14, 2375-2386.
 90. Sindosi O., A. Bartzokas, V. Kotroni and K. Lagouvardos, 2015: Influence of orography on precipitation amount and distribution in NW Greece; a case study. *Atmospheric Research*, 2015, 105-122.
 91. Giannaros, Th, V. Kotroni, K. Lagouvardos, 2015: Predicting Lightning Activity in Greece with the Weather Research and Forecasting (WRF) Model. *Atmospheric Research*, 156, 1-13.
 92. Defer, E., Pinty, J.-P., Coquillat, S., Martin, J.-M., Prieur, S., Soula, S., Richard, E., Rison, W., Krehbiel, P., Thomas, R., Rodeheffer, D., Vergeiner, C., Malaterre, F., Pedeboy, S., Schulz, W., Farges, T., Gallin, L.-J., Ortéga, P., Ribaud, J.-F., Anderson, G., Betz, H.-D., Meneux, B., Kotroni, V., Lagouvardos, K., Roos, S., Ducrocq, V., Roussot, O., Labatut, L., and Molinié, G., 2015: An overview of the lightning and atmospheric electricity observations collected in southern France during

- the HYdrological cycle in Mediterranean EXperiment (HyMeX), Special Observation Period 1, *Atmos. Meas. Tech.*, 8, 649-669, doi:10.5194/amt-8-649-2015.
93. Flaounas E., Vassiliki Kotroni, Kostas Lagouvardos, Stelios Kazadzis, Antonis Gkikas, Nikolaos Hatzianastassiou, 2015: Cyclones contribution to dust transport over the Mediterranean region, *Atmospheric Science Letters*, DOI: 10.1002/asl.584.
 94. Galanaki V., Vassiliki Kotroni, Konstantinos Lagouvardos, and Athanassios Argiriou, 2015: A ten-year analysis of lightning activity over the Eastern Mediterranean. *Atmospheric Research*, 166, 213-222.
 95. Papagiannaki K., K. Lagouvardos, V. Kotroni, and A. Bezes, 2015: Flash flood occurrence and relation to the rainfall hazard in a highly urbanized area. *NHESS*, doi:10.5194/nhess-15-1859-2015.
 96. Kosmopoulos, P., Stelios Kazadzis, Kostas Lagouvardos, Vassiliki Kotroni, Alkiviadis Bais, 2015: Solar Energy prediction and verification using operational model forecasts and ground-based solar measurements, *Energy*, 93, 1918-1930.
 97. Karagiannidis A., K. Lagouvardos, V. Kotroni, 2016: The use of lightning data and Meteosat Infrared imagery for the nowcasting of lightning activity. *Atmospheric Research*, 168 (2016) 57–69, doi: 10.1016/j.atmosres.2015.08.011.
 98. Flaounas E., Lagouvardos Konstantinos, Kotroni Vassiliki1 Claud Chantal, Delanoe Julien, Flamant Cyrille, Madonna Erica, Wernli Heini, 2015: Processes leading to heavy precipitation associated with two Mediterranean cyclones observed during the HyMeX SOP1. *Quarterly Journal of the Royal Meteorological Society*. DOI:10.1002/qj.2618.
 99. Giannaros, Th, V. Kotroni, K. Lagouvardos, 2016: WRF-LTNGDA: A Lightning Data Assimilation Technique Implemented In The Wrf Model For Improving Precipitation Prediction. *Environmental Modelling & Software*, 76, 54-68.
 100. Proestakis, E., Stelios Kazadzis, Konstantinos Lagouvardos, Vassiliki Kotroni, Andreas Kazantzidis, 2016: Lightning activity and aerosols in the Mediterranean region. *Atmospheric Research*, 170, 66-75.
 101. Koletsis I., T. M. Giannaros, K. Lagouvardos, and V. Kotroni, 2016: Observational and numerical study of the Vardaris wind regime in Northern Greece. *Atmospheric Research*, 171, 107–120.
 102. Koletsis I., V. Kotroni, K. Lagouvardos, T. Soukissian, 2016: Assessment of offshore wind speed and power potential over the Mediterranean and the Black Seas under future climate changes, *Renewable & Sustainable Energy Reviews*, 60, 234–245.
 103. Kotroni V. and K. Lagouvardos, 2016: Lightning in the Mediterranean and its relation with sea-surface temperature. *Environmental Research Letters*, 11, 034006.
 104. Caralis, George, Panagiotis Chaviaropoulos, Virginia Ruiz Albacete, Danae Diakoulaki, Vassiliki Kotroni, Konstantinos Lagouvardos, Zhiqiu Gao, Arthouros Zervos, Kostas Rados, 2016: Lessons learnt from the evaluation of the feed-in tariff scheme for offshore wind farms in Greece using a Monte Carlo approach. *J. Wind Eng. Ind. Aerodyn.*, 157, 63–75
 105. Galanaki E, E. Flaounas, V. Kotroni, K. Lagouvardos and A. Argiriou, 2016: Lightning activity in the Mediterranean: Quantification of cyclones contribution and relation to their intensity. *Atmospheric Science Letters*, 17, 519-516.
 106. Proestakis, E., Stelios Kazadzis, Konstantinos Lagouvardos, Vassiliki Kotroni, Vassilis Amiridis, Eleni Marinou, Colin Price and Andreas Kazantzidis, 2016: Aerosols and lightning activity: the effect of vertical profile and aerosol type. *Atmospheric Research*, 182, 243-255.
 107. Karagiannidis A., K. Lagouvardos, V. Kotroni, and N. Mazarakis, 2016: Investigation of single-cell thunderstorms lightning activity using METEOSAT rapid scan infrared

- imagery. *International Journal of Remote Sensing*, 37:20, 5001-5020.
108. Kochilakis G., D. Poursanidis, N. Chrysoulakis, V. Varella, V. Kotroni, G. Eftychidis, K. Lagouvardos, C. Papathanasiou, G. Karavokyros, M. Aivazoglou, C. Makropoulos, M. Mimikou, 2016: A web based DSS for the management of floods and wildfires (FLIRE) in urban and periurban areas, *Environmental Modelling & Software*, 86, 111-115.
 109. Dafis S., K. Lagouvardos, V. Kotroni, Th. M Giannaros, A. Bartzokas, 2017: Observational and modelling study of a mesoscale convective system during the hymex - sop1. *Atmospheric Research*, 187, 1–15.
 110. Giannaros M. Th., K. Lagouvardos, and V. Kotroni, 2017: Performance evaluation of an operational lightning forecasting system in Europe. *Natural Hazards*, 85, 1-18.
 111. Lagouvardos K., V. Kotroni, A. Bezes, I. Koletsis, T. Kopania, S. Lykoudis, N. Mazarakis, K. Papagiannaki, and S. Vougioukas, 2016: The Automatic Weather Stations Network of the National Observatory of Athens: Operation and Database. *Geoscience Data Journal*, doi: 10.1002/gdj3.44.
 112. Papagiannaki Katerina, Vassiliki Kotroni, Kostas Lagouvardos, Isabelle Ruin, Antonis Bezes, 2017: Urban areas response to flash flood-triggering rainfall, featuring human behavioural factors: The case of 22 October, 2015, in Attica, Greece. *Weather, Climate and Society*, 9,621-638.
 113. Flaounas E., V. Kotroni, K. Lagouvardos, M. Klose, C. Flamant, and T. Giannaros, 2017: Sensitivity of the WRF-Chem model to different dust emission parametrisation: Assessment in the broader Mediterranean region. *Geoscientific Model Development*, 10, 2925-2945.
 114. Feidas Haralambos, Federico Porcu, Silvia PucaAngelo Rinollo, Constantinos Lagouvardos, Vasiliki Kotroni, 2018: Validation of the H-SAF precipitation product H03 over Greece using rain gauge data. *Theoretical and Applied Climatology*, 131, 377-398, doi:10.1007/s00704-016-1981-9.
 115. Giannaros, Theodore, Vassiliki Kotroni, Konstantinos Lagouvardos, Ioannis Liabotis, Gavriil Mavrelis, Panagiotis Symeonidis, Theodoros Vakkas, 2018: Ultra-high-resolution wind forecasting for the Sailing Events at the Rio de Janeiro 2016 Summer Olympic Games. *Meteorological Applications*, 25, 86–93.
 116. Flaounas Emmanouil, Ph.D.; Vassiliki Kotroni; Konstantinos Lagouvardos; Suzanne Gray; Jean-François Rysman; Chantal Claud, 2017: Heavy rainfall in Mediterranean cyclones, Part I: Contribution of deep convection and warm conveyor belt. *Climate Dynamics*, DOI 10.1007/s00382-017-3783-x.
 117. Dimitropoulou, E, Assimakopoulos, VD, Fameli, KM , Flocas, HA, Kosmopoulos, P, Kazadzis, S, Lagouvardos, K, Bossioli, E, 2018: Estimating the Biogenic Non-Methane Hydrocarbon Emissions over Greece, *Atmosphere*, 9, 10.3390/atmos9010014.
 118. Galanaki E, K. Lagouvardos, V. Kotroni, E. Flaounas, and A. Argiriou, 2018: Thunderstorm climatology in the Mediterranean using cloud-to-ground lightning observations. *Atmospheric Research*, *Atmospheric Research*, 207, 136-144.
 119. Michaelides Silas, Theodore Karacostas, Jose Luis Sánchez, Adrianos Retalis, Ioannis Pytharoulis, Víctor Homar, Romualdo Romero, Prodromos Zanis, Christos Giannakopoulos, Johannes Bühl, Albert Ansmann, Andrés Merino, Pablo Melcón, Konstantinos Lagouvardos, Vassiliki Kotroni, Adriana Bruggeman, Juan Ignacio López-Moreno, Claude Berthet, Eleni Katragkou, Filippos Tymvios, Diofantos G. Hadjimitsis, Rodanthi-Elisavet Mamouri, Argyro Nisantzi, 2018: Reviews and perspectives of high impact atmospheric processes in the Mediterranean, *Atmospheric Research*, 208, 4-44.

120. Gatidis Ch., Ch. Lolis, K. Lagouvardos, V. Kotroni, A. Bartzokas, 2018: On the seasonal variability and the spatial distribution of lightning activity over the broader Greek area and their connection to atmospheric circulation. *Atmos. Research*, 208, 180-190.
121. Giannaros, Theodore, Vassiliki Kotroni, Konstantinos Lagouvardos, and Matzarakis Andreas, 2018: Climatology and trends of the Mediterranean thermal bioclimate. *International Journal of Climatology*, DOI: 10.1002/joc.5501.
122. Dafis S., Fierro A., Giannaros Th. M, Lagouvardos K., Kotroni V., Mansell E, 2018: Exploring the skill of explicit lightning forecasting. *JGR*, <https://doi.org/10.1029/2017JD027930>.
123. Giannaros, Theodore, Vassiliki Kotroni, Konstantinos Lagouvardos, and Matzarakis Andreas, 2018: Operational forecasting of human-biometeorological conditions. *International Journal of Biometeorology*. (in press). Giannaros, Theodore, Vassiliki Kotroni, Konstantinos Lagouvardos, and Matzarakis Andreas, 2018: Operational forecasting of human-biometeorological conditions. *International Journal of Biometeorology*. (in press).

COORDINATION/PARTNERSHIP OF PROJECTS

| Title | Duration | Budget (Euros) |
|---|-----------|----------------|
| PARTNER IN INTERNATIONAL PROJECTS | | |
| 1. « WERMED- Weatherrouting dans la Méditerranée». Interreg IIIb | 2005-2007 | 350000 |
| 2. «FLASH-Observations, Analysis and Modeling of Lightning Activity in Thunderstorms, for use in Short Term Forecasting of Flash Floods» FP6 | 2006-2010 | 464000 |
| 3. «Network for supporting Marine Affairs in the Mediterranean - NETMARIMED». INTERREG-ARCHIMED | 2008 | 45000 |
| 4. «Efficient Irrigation Management Tools for Agricultural Cultivations and Urban Landscapes-“IRMA”». INTERREG-GREECE-ITALY | 2014-2015 | 17000 |
| 5. «BalkanMed real time severe weather service (BeRTISS)» Transnational Cooperation Programme Interreg Balkan-Mediterranean 2014-2020 | 2017-2019 | 156645 |
| COORDINATOR OF NATIONAL PROJECTS | | |
| 1. «Thunder and Lightning Observing and forecasting System – TALOS», Funding: GSRT, ARISTEIA II | 2014-2015 | 253.000 |
| 2. « Study of the solar energy availability in Greece». Funding: Independent Power Transmission Operator | 2011-2016 | 36.000 |
| 3. « Sever weather events in the Ioanian and the Saronic Seas». Funding: OCEAN RIG | 2018 | 8.900 |
| 4. « Strengthening of the surface network of Meteorological station in Attica and of the related System for Forest Fires Spread Forecasting». Funding: ELPE | 2018-2020 | 186.000 |

| | | |
|--|-----------|------------|
| 5. «Correlation of food consumption with weather conditions in Greece ». Funding: Unilever | 2018-2019 | 30380 |
| SPONSORSHIPS | | |
| 1. «Extension of the operational network of surface meteorological stations». Funding: STAVROS NIARCHOS FOUNDATION | 2008 | 30000 |
| 2. «Extension of the operational network of surface meteorological stations». Funding: OPAP | 2008 | 30000 |
| 3. «Support of the operational network of surface meteorological stations». Funding: SNF | 2017-2018 | 30000 |
| EXPLOITATION OF R&D RESULTS | | |
| «Weather forecasting products and services». Funding: Private sector | 2002-2018 | ~2.000.000 |
| TOTAL FUNDING: 3.637.000 | | |