

KOTRONI Vassiliki

Personal Information

DATE - PLACE OF BIRTH: 20 November 1965 in Athens, Greece
PROFESSION: Research Director
PROFESSIONAL ADDRESS: National Observatory of Athens, Institute of
Environmental Research and Sustainable Development
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Academic Qualifications

1993: Ph. D. thesis in Meteorology, University of Clermont Ferrand, 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.

Scholarships

1990-1993: Scholarship from the French Ministry of Research and Technology for PhD
research.

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: Researcher Grade D, IERSD/National Observatory of Athens, Greece
- 1993-1999: Research Scientist, Laboratory of Meteorology, School of Physic,
University of Athens, Greece.

Areas of expertise

Dynamic meteorology, numerical weather prediction, lightning meteorology, climatology,
dynamics and societal impacts of severe weather phenomena.

Scientific coordinator of operational weather prediction at NOA based on MM5, WRF and
WRF-CHEM models and of the related activities.

Scientific coordinator of the ZEUS lightning detection network

Participation in International Committees

- National Delegate at the following COST (Cooperation Scientifique et Technique)
European Committees:
 - 1994-1998: COST 617: “Stationary sources of urban air pollutants”
 - 1995-1998: COST 75: “Advanced weather radar systems”
 - 1999-2002: COST 717: “Use of radar observations in hydrological and NWP models”
 - 2016-today: COST: “Atmospheric electricity: coupling with climate and other earth
system components” (deputy delegate)

- 2003-2004: Member of the National delegation to IPCC (Intergovernmental Panel for Climate Change).
- 2004-2006: Member of the European Grid Applications Advisory Board (EGAAP) of the EU.
- 2003-2014: Member of the national committee Hellasgrid (On Grid Computer Applications).
- Member of the Scientific Steering Committee of MEDEX project endorsed by the WMO World Weather Research Program (WWRP) for the study of high impact weather over the entire Mediterranean basin.
- Member of the Scientific Steering Committee of the Plinius Conferences on Mediterranean Storms
- Member of the International Scientific Steering Committee of the HYMEX (HYdrological cycle in Mediterranean EXperiment) project

Professional Experience

September 1999-today: Acting as a Researcher (Director of Research since 2011) at the National Observatory of Athens. Main fields of research: meteorology and numerical weather prediction, climatology, lightning, dynamics of severe weather phenomena and societal impacts of severe weather. These studies are based on the application of state-of-the-art regional scale atmospheric modelling systems (MM5, WRF, BOLAM) as well as of observational platforms (satellite, surface networks, lightning networks). Scientific Coordinator of the ZEUS, VLF lightning detection network deployed in Europe. Scientific Coordinator of the operational weather prediction based on MM5 and WRF models at NOA.

September 1993-August 1999: Acting as a research associate in the Laboratory of Meteorology, University of Athens. Main topics of research: meteorology and atmospheric modelling systems, severe weather phenomena, regional scale transport and transformation of air pollutants, urban air quality.

Other Activities

• Editor

2006: Guest Editor of the EGU journal *Advances in Geosciences*.

2010: Guest Editor of the journal "Earth Science Informatics", Special Issue entitled «Virtual organizations and application services for earth science on grids».

2014-now: Editor in *Annales Geophysicae*

2015-now: Editor in *Natural Hazard and Earth System Sciences*

• Reviewer (International Journals)

Advances in Geosciences

Applied Energy

Atmospheric Environment

Atmospheric Research

Atmospheric Measurement Techniques – Discussions

Bulletin of the American Meteorological Society

Climate Research

Global Nest

International Journal of Climatology

Journal of Applied Meteorology and Climatology

Journal of Atmospheric and Oceanic Technology
Journal of Climate
Journal of Geophysical Research
Journal of Lightning
Meteorologische Zeitschrift
Monthly Weather Review
Natural Hazards and Earth System Sciences
Physics and Chemistry of the Earth
Quarterly Journal of the Royal Meteorological Society
Theoretical and Applied Climatology

• **Reviewer of Scientific proposals**

2000: EU, 5th Framework Program
2004: EU, 6th Framework Program
2004-2006: Greek Secretariat for Research and Technology.
2006-2008: Cyprus Institute for Promotion of Research.
2009: EU, 7th Framework Program
2012-2013-2014-2015-2016: ANR, France
2017: State Scholarships Foundation.
2017: Israel Science Foundation, Israel

• **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: Convenor at the European Geophysical Union General Assembly
2001-σήμερα: Member of the Steering Committee of the EGU (Topical Conference) Plinius Conference on Mediterranean Storms.
2005: President of the Organising Committee of the "7th Plinius Conference on Mediterranean Storms", 5-7 October, Rethymno, Crete, Greece.
2010: Member of the Organising Committee of the "12th Plinius Conference on Mediterranean Storms", 1-4 September, Corfu, Greece.
2012, 2014: Member of the Scientific Committee of the 11th International Conference on Meteorology, Climatology and Atmospheric Physics, COMECAP 2012, Athens, 29 May – 1 June 2012.
2015: Chair of the Organising Committee of the "9th Hymex Workshop, 21-25 September, Mykonos, Greece

Publications in International Journals

1. Kotroni V., and C. Amory-Mazaudier, 1993: "Influence of orographic and canopy conditions on friction velocities observed during frontal events using Doppler sodar observations". *Journal of Applied Meteorology*, **32**, 506-521.
2. Beyrich F., and V. Kotroni, 1993: "Estimation of surface stress over a forest from sodar measurements and its use to parameterize the stable boundary layer height". *Boundary Layer Meteorology*, **66**, 93-103.
3. Bougeault P., A. Jansa Clar, J.L. Attie, I. Beau, B. Benech, R. Benoit, P. Bessemoulin, J.L. Caccia, B. Carissimo, J.L. Champeaux, M. Crochet, A. Druilhet, P. Durand, E. Elkhalfi, A. Genoves, M. Georgelin, K.P. Hoinka, V. Klaus, E. Koffi, V. Kotroni, C. Mazaudier, J. Pelon, M. Petitdidier, Y. Pointin, D. Puech, E. Richard, T. Satomura, J.

- Stein, and D. Tannhauser, 1993: "The atmospheric momentum budget over a major mountain range: First results of the PYREX field program". *Annales Geophysicae*, **11**, 395-418.
4. Kotroni V. and Lagouvardos K., 1993: "Low-level jet streams associated with atmospheric cold fronts - seven case studies from the FRONTS 87 experiment". *Geophysical Research Letters*, **20**, 1371-1374.
 5. Kotroni V., Y. Lemaitre, and M. Petitdidier, 1994: "Dynamics of a low-level jet observed during the FRONTS 87 experiment". *Quarterly Journal of Royal Meteorological Society*, **120**, 277-303.
 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 FRONTS 87". *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. Kassomenos P., Kotroni V. and Kallos G., 1995: "Analysis of the climatological and air quality observations from the Greater Athens Area". *Atmospheric Environment*, **29**, 3671-3688.
 11. 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.
 12. 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.
 13. 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.
 14. 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.
 15. 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.
 16. 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.
 17. 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.
 18. 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.
 19. 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.

20. 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.
21. 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.
22. Lagouvardos K. And V. Kotroni, 1999: "Aspects of the 25-26 March 1998 storm over Greece " *Weather*, **54**, 154-160.
23. 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.
24. 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.
25. 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.
26. 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.
27. 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. **28**, No 10, 1977-1980.
28. 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.
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**, **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. *Journal of Applied Meteorology*, **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**, art. no. L06116.
34. Kotroni V. and K. Lagouvardos, 2004: Evaluation of MM5 high-resolution real-time forecasts over the urban area of Athens, Greece. *Journal of Applied Meteorology*, **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. *International Journal of 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. *Journal of Applied Meteorology*, **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. 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.
47. 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. *Journal of Applied Meteorology*, **46**, 1901-1912.
48. 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.
49. 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.

50. 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.
51. 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.
52. 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 (NHESS)*, 8, 1249-1257
53. 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.
54. 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
55. Petrova S., R. Mitzeva, V. Kotroni, J. Latham and E. Peneva, 2009: Analyses of summer lightning activity and precipitation in the Central and Eastern Mediterranean. *Atmospheric Research*, 91, 453-458
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 (NHESS)*, 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 (NHESS)*, 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.
63. Williams E., W. Lyons, Y. Hobara, V. Mushtak, N. Asencio, R. Boldi, J. Bór, S. Cummer, E. Greenberg, M. Hayakawa, R. Holzworth, V. Kotroni, J. Li, C. Morales1, T. Nelson, C. Price, B. Russell, G. Satori, K. Shirahata, Y. Takahashi, K. Yamashita, 2010: Ground-based detection of sprites and their parent lightning flashes over

- Africa during the 2006 AMMA campaign. *Quarterly Journal of Royal Meteorological Society*, **136**, 257–271.
64. Lagouvardos K., E. Floros and V. Kotroni, 2010: A Grid-enabled Regional-scale Ensemble Forecasting System in the Mediterranean. *Journal of 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. Nicolaides, 2010: High-impact floods and flash floods in Mediterranean countries: the FLASH preliminary database. *Advances in Geosciences*, 23, 47-55
 66. Harats, N.; Ziv, B.; Kotroni, V.; Yair, Y.; Lynn, B.; Dayan, U., 2010: Lightning and rain dynamic indices as predictors for flash floods events in the Mediterranean, *Advances in Geosciences*, 23, 57-64.
 67. 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.
 68. 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. Nikolaides, 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.
 69. 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.
 70. 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*, 3, 209-218.
 71. 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.
 72. 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.
 73. 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.
 74. 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 – Fritch Convective Parameterization Scheme. *Natural Hazards and Earth System Science*,s 11, 1327-1339.
 75. 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, Kleantith Nicolaides, Keti Savvidou, Baruch Ziv, 2011: The FLASH Project: Using lightning data to better understand and predict flash floods. *Environmental Science & Policy*, 14, 898-911.
 76. 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. Nicolaides, 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.

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78. 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.
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, 881-889.
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. Pateraki, St., V D Assimakopoulos, Th Maggos, K M Fameli, V Kotroni, Ch Vasilakos, 2013: Particulate matter pollution over a Mediterranean urban area. *Science of the Total Environment*, 463–464, 508-524.
83. 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.
84. Fameli K.M., Assimakopoulos V.D., Kotroni V., Retalis A., 2013: "Effect of the land use change characteristics on the air pollution patterns above the greater Athens area (GAA) after 2004", *Global Nest Journal*, vol. 15, 2, 169-177.
85. Kotroni V., K. Lagouvardos, and S. Lykoudis, 2014: High-resolution model-based wind atlas for Greece, *Renewable & Sustainable Energy Reviews*, 30, 2014, 479–489.
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Coordination of projects

Title	Duration	Budget (Euros)
COORDINATION OF INTERNATIONAL PROJECTS		
1. «Drought and fire observatory and early warning system (DISARM)». Χρηματοδότηση: Transnational Cooperation Programme Interreg Balkan-Mediterranean 2014-2020	2017-2019	1.028.000 (EAA: 356.000)
INTERNATIONAL PROJECTS		
1. «EURORISK.PREVIEW». Programme Aeronautic & Space second call, area GMES	2005-2008	162858
2. «Weather Risk Reduction in the Central and Eastern Mediterranean - RISKMED». Financement: INTERREG III, STRAND B – ARCHIMED.	2006-2008	101100
3. «SEE-GRID eInfrastructure for Regional eScience». Financement: INFRA-2007-1.2.2, Integrating Activities – ICT-based e-Infrastructures.	2008-2010	48742
4. «Floods and Fire risk assessment and management - FLIRE». Financement: LIFE11 ENV/GR/975.	2012-2015	131117
5. «VRE for regional Interdisciplinary communities in Southeast Europe and the Eastern Mediterranean - VI-SEEM». Financement: H2020-EINFRA-2014-2015.	2015-2018	60000
6. «Cyclone processes leading to extreme rainfall in the Mediterranean region — ExMeCy» Χρηματοδότηση: H2020-MSCA-IF-2014.	2016-2018	152.000
COORDINATION OF NATIONAL PROJECTS		
1. “Improvement of prediction of meteorological and climate parameters in the Eastern Mediterranean”, Excellency in Greek Research Centres, Financement Greek Secretariat for Research and Technology	2002-2005	500000

2. "Rainfall estimation by satellites and combined use with numerical weather prediction models". Greek Secretariat for Research and Technology, Joint research and technology programs.	2002-2005	17500
3. "Improvement of forecasting of severe weather events in the Central and Easter Meditteranean".Financement: Committee on the Challenges of Modern Society/CCMS - NATO	2002-2005	16.000
4. «Precipitation observation, and estimation of the hydrological budget over the Mornos basin». Financement: Athens Water Supply and Sewerage Company (EYDAP SA).	2012-2013	105000
PARTNER IN NATIONAL PROJECTS		
1. "Hellas HPC", Financement Greek Secretariat for Research and Technology	2010	3000
PRIVATE SECTOR FUNDING		
1. "Weather Forecasting over the Greek Road Network", INTERAMERICAN	2012-2013	25000
2. "Weather forecasts for the private sector, weather related applications and info, www.meteo.gr.	2006-now	1.500.000