

Marina Astitha, PhD

Assistant Professor

Department of Civil and Environmental Engineering

University of Connecticut

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EDUCATION

Post-Doctoral Fellow The Cyprus Institute- Energy, Environment and Water Research Center	2009-2012
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Ph.D. in Environmental Physics <i>University of Athens, Department Of Physics</i> Dissertation: "Characteristic scales of transport and transformation of air pollutants – Impacts on climate". Advisor: Prof. G. Kallos Honors: Dissertation passed "with Distinction"	2007
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M.Sc. in Environmental Physics <i>University of Athens, Department of Physics</i> Thesis: "Source-Receptor relationship: A modern technique for analysis of environmental measurements". Advisor: Prof. G. Kallos Honors: Highest ranked student in the program	2002
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B.Sc. in Physics <i>University of Athens, Department of Physics</i>	1999
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PROFESSIONAL EXPERIENCE

Assistant Professor University of Connecticut - Department of Civil and Environmental Engineering	08/2013-present
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Senior Research Associate University of Athens (Department of Physics, Division of Environmental Physics-Meteorology) – Atmospheric Modeling and Weather Forecasting Group (AM&WFG)	10/2012-07/2013
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Post-Doctoral Fellow The Cyprus Institute – Energy, Environment and Water Research Center (http://eewrc.cyi.ac.cy) Development of an online physical parameterization scheme for mineral dust emissions in the atmospheric chemistry general circulation model EMAC (ECHAM5/MESSy Atmospheric Chemistry, Max Planck Institute for Chemistry, Mainz, Germany)	01/2009-09/2012
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Researcher University of Athens (Department of Physics, Division of Environmental Physics-Meteorology) – Atmospheric Modeling and Weather Forecasting Group (AM&WFG)	2002-2008
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AWARDS

2017	Best reviewer award by the Journal of the Air and Waste Management Association
2016, 2017	C.R. Klewin, Inc. Excellence in Teaching Award bestowed by the 2015-16 and 2016-17 senior students of the Civil & Environmental Engineering Department, Univ. of Connecticut
2007	Young researchers EURASAP award for the paper entitled: "Heterogeneous chemical processes and their role on particulate matter formation in the Mediterranean Region" presented at the 29 th NATO/CCMS International Technical Meeting on Air Pollution Modeling and its Applications, Sep 2007, Portugal.

TEACHING EXPERIENCE

University Of Connecticut, Department of Civil and Environmental Engineering

GRADUATE PROGRAM

Major Advisor

PhD student Jaemo Yang (graduated)	08/2013-08/2018
PhD student Huiying Luo	08/2014-pres
PhD students Christina Feng Chang, Michael Walters	08/2017-pres
MS student Ghezae Fisseha (graduated)	08/2015-05/2018
MS student Alexander Samalot (graduated)	08/2014-05/2017
<u>Associate advisor</u> (3 MS and 9 PhD students)	2014-pres

Course Instructor: Hydrometeorology (ENVE5810) F15, F16, F17

UNDERGRADUATE PROGRAM 2014-present

ENVE Thesis advisor (2014-present; 15 students)

Course Instructor: Environmental Modeling (ENVE4310), Air Pollution Control (ENVE3230), Environmental Engineering Fundamentals (ENVE2310)

Teaching Evaluations

Scores (out of 5)	<u>Instructor</u>	<u>Dept</u>	<u>School</u>
Spring 2018	5.0	4.0	3.6
Fall 2017	5.0	4.4	4.1
Spring 2017	5.0	3.6	3.9
Spring 2017	5.0	4.0	4.3
Fall 2016	5.0	4.6	4.0
Spring 2016	5.0	3.3	4.0
Fall 2015	4.5	4.2	4.0
Spring 2015	4.0	3.3	3.9

Fall 2014	5.0	4.2	4.1
Spring 2014	3.0	3.3	3.9

The Cyprus Institute – Energy, Environment and Water Research Center

Mentor for PhD student Mohamed Abdel Kader. Advisor: Prof. J. Lelieveld. (International Max Planck Research School-IMPRS and Cyprus Institute) 2011-2012

University Of Athens, Department Of Physics, Division of Environmental Physics-Meteorology

Co-Supervisor of MS student Serafim Kontos. Advisor: Prof. G. Kallos 2012
Co-Supervisor of PhD student J. Kushta. Advisor: Prof. G. Kallos. 2007-2014
Teacher/Tutor - in Master Degree on Pollutant Dispersion Modeling (project MADEPODIM). 2005-2007

RESEARCH INTERESTS-ACTIVITIES

- Atmospheric Physics, Dynamics and Chemistry (Regional and Global Modeling)
- Extreme weather events-prediction and anthropogenic influences
- Integration of multi-media modeling systems
- Real-time weather and air quality forecasting
- Uncertainties in atmospheric and air quality modeling systems

PUBLICATIONS IN PREPARATION (Graduate Students Underlined)

1. C. Feng-Chang, C. Nowakowski, V. Garcia, P. Vlahos, E. Cooter, C. Tang, D. Wanik, **M. Astitha***, 2018: Harmful Algal Blooms in Lake Erie from the perspective of integrating model data and measurements. Manuscript in preparation for submission to *Journal of Geophysical Research*.
2. H. Luo, **M. Astitha***, C. Hogrefe, R. Mathur, ST Rao, 2018: Dynamic evaluation of WRF-CMAQ PM2.5 simulation over the Contiguous United States for the period 2000-2010. Manuscript in preparation.
3. Michael S. Walters, Jaemo Yang, Marika Koukoula, Gregory Thompson and **Marina Astitha***: Evaluation of Winter Weather Prediction During Extreme Snowfall Events for the NE US. Manuscript in preparation.

PUBLICATIONS (JOURNAL PEER-REVIEWED)

(Graduate students underlined, corresponding author denoted with an asterisk *)

1. Yang J., **M. Astitha***, C. Schwartz, 2018: Bayesian regression and dynamic ensemble towards improving storm predictions for NE US. *Journal of Geophysical Research-Atmospheres*, under revision 10/30/2018.
 2. Samalot, **M. Astitha***, J. Yang, G. Galanis, 2018: A combination of Kriging and Kalman filtering applied to wind speed prediction of storms for NE U.S. *Weather and Forecasting*. Minor revision, 1/22/2019.
 3. Huiying Luo, **Marina Astitha***, S. Trivikrama Rao, Christian Hogrefe, Rohit Mathur, 2018. A New Method for Probabilistic Assessment of the Efficacy of Emission Control Strategies in Meeting the Ambient Ozone Standard. *Atmospheric Environment*, 199, 233-243, <https://doi.org/10.1016/j.atmosenv.2018.11.010>.
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4. Zefan Tang, Peng Zhang*, Kunihiro Muto, Martial Sawasawa, Marissa Simonelli, Christopher Gutierrez, Jaemo Yang, **Marina Astitha**, Robert Manning, James Mader, 2018: Extreme Photovoltaic Power Analytics for Electric Utilities. *IEEE Transactions on Sustainable Energy*, accepted 11/24/18.
 5. Yang, J., **M. Astitha***, L. Delle Monache, and S. Alessandrini, 2018: An Analog Technique to Improve Storm Wind Speed Prediction Using a Dual NWP Model Approach. *Mon. Wea. Rev.*, 146, 4057–4077, <https://doi.org/10.1175/MWR-D-17-0198.1>.
 6. **Astitha, M.***, Kioutsoukakis, I., Fisseha, G. A., Bianconi, R., Bieser, J., Christensen, J. H., Cooper, O. R., Galmarini, S., Hogrefe, C., Im, U., Johnson, B., Liu, P., Nopmongkol, U., Petropavlovskikh, I., Solazzo, E., Tarasick, D. W., and Yarwood, G.: Seasonal ozone vertical profiles over North America using the AQMEII3 group of air quality models: model inter-comparison and stratospheric intrusions, *Atmos. Chem. Phys.*, 18, 13925–13945, <https://doi.org/10.5194/acp-18-13925-2018>, 2018.
 7. Wanik, D.*, E. Anagnostou, **M. Astitha**, B. Hartman, G. Lackmann, J. Yang, D. Cerrai, J. He, and M. Frediani, 2017: A Case Study on Power Outage Impacts from Future Hurricane Sandy Scenarios. *J. Appl. Meteor. Climatol.*, 57, 51–79, <https://doi.org/10.1175/JAMC-D-16-0408.1>.
 8. **Astitha*, M.**, Luo, H., Rao, S.T., Hogrefe, C., Mathur, R., Kumar, N., Dynamic evaluation of two decades of WRF-CMAQ ozone simulations over the contiguous United States, *Atmospheric Environment*, 164 (2017) 102–116, <https://doi.org/10.1016/j.atmosenv.2017.05.020>.
 9. J. Yang, **M. Astitha***, E. Anagnostou, B. Hartman, 2017: Using a Bayesian regression approach on dual-model weather simulations to improve wind speed prediction. *Journal of Applied Meteorology and Climatology*, Vol 56, 1155–1174, <https://doi.org/10.1175/JAMC-D-16-0206.1>.
 10. He, J., D. W. Wanik, B. M. Hartman, E. N. Anagnostou*, **M. Astitha**, M. Frediani, 2016: Nonparametric Tree-based Predictive Modeling of Storm Damage on an Electric Distribution Network. *Risk Analysis*. DOI: 10.1111/risa.12652.
 11. Karydis*, V. A., Tsimpidi, A. P., Pozzer, A., **Astitha, M.**, and Lelieveld, J.: Effects of mineral dust on global atmospheric nitrate concentrations, *Atmos. Chem. Phys.*, 16, 1491–1509, doi:10.5194/acp-16-1491-2016, 2016.
 12. M. Abdelkader*, S. Metzger*, R. E. Mamouri, **M. Astitha**, L. Barrie, Z. Levin, and J. Lelieveld*, 2015: Dust-Air Pollution Dynamics over the Eastern Mediterranean. *Atmos. Chem. Phys.*, 15, 9173–9189, 2015.doi:10.5194/acp-15-9173-2015.
 13. Wanik, D.W., E. Anagnostou*, B.M. Hartman, M.E. Frediani, **M. Astitha**, 2015: Storm outage modeling for an electric distribution network in Northeastern USA. *Natural Hazards*, 79(2), 1359–1384, doi 10.1007/s11069-015-1908-2.
 14. Pozzer*, A., de Meij, A., Yoon, J., Tost, H., Georgoulas, A. K., and Astitha, M.: AOD trends during 2001–2010 from observations and model simulations, *Atmos. Chem. Phys.*, doi: 10.5194/acp-15-5521-2015, 2015.
 15. J. Kushta, G. Kallos*, **M. Astitha**, S. Solomos, C. Spyrou, C. Mitsakou, J. Lelieveld, 2014: Impact of natural aerosols on atmospheric radiation and consequent feedbacks with the meteorological and photochemical state of atmosphere. *Journal of Geophysical Research: Atmospheres*, 119, 3, Pages: 1463–1491, DOI: 10.1002/2013JD020714.
 16. **Astitha*, M.**, Lelieveld, J., Abdel Kader, M., Pozzer, A., and de Meij, A.: Parameterization of dust emissions in the global atmospheric chemistry-climate model
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- EMAC: impact of nudging and soil properties, *Atmos. Chem. Phys.*, 12, 11057-11083, doi:10.5194/acp-12-11057-2012, 2012.
17. Kukkonen, J., Olsson, T., Schultz, D. M., Baklanov, A., Klein, T., Miranda, A. I., Monteiro, A., Hirtl, M., Tarvainen, V., Boy, M., Peuch, V.-H., Poupkou, A., Kioutsioukis, I., Finardi, S., Sofiev, M., Sokhi, R., Lehtinen, K. E. J., Karatzas, K., San José, R., **Astitha, M.**, Kallos, G., Schaap, M., Reimer, E., Jakobs, H., and Eben, K., 2012: A review of operational, regional-scale, chemical weather forecasting models in Europe, *Atmos. Chem. Phys.*, 12, 1-87, doi:10.5194/acp-12-1-2012.
 18. Solomos, S., Kallos, G., Kushta, J., **Astitha, M.**, Tremback, C., Nenes, A., and Levin, Z., 2011: An integrated modeling study on the effects of mineral dust and sea salt particles on clouds and precipitation, *Atmos. Chem. Phys.*, 11, 873-892, doi:10.5194/acp-11-873-2011, 2011.
 19. **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. *Atmos. Chem. Phys.*, 10, 5797-5822, 2010.
 20. Kallos G., C. Spyrou, **M. Astitha**, C. Mitsakou, S. Solomos, J. Kushta, I. Pytharoulis, P. Katsafados, E. Mavromatidis, N. Papantoniou. "Ten-year operational dust forecasting - Recent model development and future plans". IOP Conf. Ser.: Earth Environ. Sci. 7 (2009) 012012, doi:10.1088/1755-1307/7/1/012012.
 21. **M. Astitha** and G. Kallos, 2009: "Gas-phase and aerosol chemistry interactions in South Europe and the Mediterranean Region". *Environmental Fluid Mechanics*, Vol. 9, Number 1, February 2009. DOI: 10.1007/s10652-008-9110-7.
 22. 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. *Atmos. Chem. Phys.*, 8, 7181–7192, 2008.
 23. **M. Astitha**, G. Kallos and P. Katsafados, 2008: "Air Pollution Modeling in the Mediterranean Region: From Analysis of Episodes to Forecasting". *Atmospheric Research*, 89 (2008) 358–364, <http://dx.doi.org/10.1016/j.atmosres.2008.03.006>.
 24. G. Kallos, **M. Astitha**, P. Katsafados and C. Spyrou, 2007: "Long-Range Transport of Anthropogenically and Naturally Produced Particulate Matter in the Mediterranean and North Atlantic: Current State of Knowledge". *Journal of Applied Meteorology and Climatology*, Vol. 46, Issue 8, August 2007, pp. 1230–1251.
 25. M. Lazaridis, K. Eleftheriadis, J. Smolik, I. Colbeck, G. Kallos, Y. Drossinos, V. Zdimal, Z. Vecera, N. Mihalopoulos, P. Mikuska, C. Bryant, C. Housiadas, A. Spyridaki, **M. Astitha**, V. Havranek, 2006: "Dynamics of fine particles and photo-oxidants in the Eastern Mediterranean (SUB-AERO)". *Atmospheric Environment*, Volume 40, Issue 32, October 2006, pp. 6214-6228.
 26. **Astitha M.**, Kallos G., Mihalopoulos N., 2005: "Analysis of air quality observations with the aid of the source–receptor relationship approach". *Journal of the Air and Waste Management Association*, Vol. 55, pp. 523-535.
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SUMMARY TABLE

Citations: 534, h-index=12 (Source: Scopus, May 2018)

Citations: 850, h-index=14 (Source: Google Scholar, Nov 2018)

Table of Journals and Impact Factors (Source Clarivate Analytics, 2017)

JOURNAL	#PAPERS	IMPACT FACTOR
Journal of Geophysical Research-Atmospheres	2	3.380
Weather and Forecasting	1	2.276
Monthly Weather Review	1	3.247
IEEE Transactions on Sustainable Energy	1	6.235
Journal of the Air and Waste Management Association	1	1.742
Atmospheric Environment	3	3.708
Journal of Applied Meteorology and Climatology	3	2.236
Atmospheric Research	1	3.817
Atmospheric Chemistry and Physics	9	5.509
Environmental Fluid Mechanics	1	1.846
Natural Hazards	1	1.901
Risk Analysis	1	2.898

Reviewer and editorial services

1. Guest editor for the special issue "Weather Forecasting and Modeling by Using Satellite Data" to be published in Remote Sensing (ISSN 2072-4292, IF2017 3.406).
2. Member of the Editorial Review Board (ERB) for the Journal of the Air and Waste Management Association (JA&WMA), April 2016-pres.
3. Guest Editor for the Special Issue "Dust Storms Impacting on Urban Environments" published in the journal Atmosphere (ISSN 2073-4433; Impact Factor=1.704 (2017), 6 papers published). <http://www.mdpi.com/journal/atmosphere>; Impact Factor: 1.132). Apr-Dec 2016.
4. Journal Reviewer: Atmospheric Chemistry and Physics, Journal of Geophysical Research, Atmospheric Environment, Journal of Air & Waste Management Association, Atmospheric Research, International Journal of Climatology, Atmospheric Pollution Research.
5. Reviewer for federal agencies (NSF, NASA postdoctoral program).
6. Review committee co-chair for the 2017-2018 Research Excellence Program, Office of the Vice President for Research, University of Connecticut.

PUBLICATIONS (BOOKS)

1. J. Lelieveld, M. Abdelkader, **M. Astitha**, V.A. Karydis, K. Klingmüller: "Modeling air pollution by atmospheric desert dust". Book chapter, to be published.
2. 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 4: "Mechanisms of climate variability, air quality and impacts of atmospheric constituents in the Mediterranean Region. A. Navarra and L. Tubiana (eds.), *Regional Assessment of Climate Change in the Mediterranean*, Advances in Global Change Research 50, DOI 10.1007/978-94-007-5781-3_4, © Springer Science+Business Media Dordrecht 2013.

INVITED TALKS

1. **Marina Astitha**, 2015: Atmospheric composition and dynamics: aerosol influence on cloud/precipitation formation and prediction of extreme weather events. Invited seminar at the Department of Marine Sciences, University of Connecticut, Avery Point, Groton, CT, March 20th, 2015.
2. **Astitha M.**, 2014: "Links and Feedbacks between Atmospheric Dynamics and Atmospheric Composition: modelling the impact of natural aerosols". Invited Seminar at NASA/GISS, May 23rd, 2014, NY.
3. **Astitha M.**, 2014: "Atmospheric Composition and Dynamics: Understanding Aerosols as Players and Moderators". Invited lecture at the Department of Natural Resources and the Environment, UConn, October 3rd, 2014, Storrs, CT, USA.
4. **M. Astitha**, J. Lelieveld, A. Pozzer, H. Tost and L. Smoydzin, 2009: Air quality in the Mediterranean Region. *Workshop on the Impacts of Mediterranean Climate Change on Human Health*, 19-21 October 2009, Pafos, Cyprus.
5. **M. Astitha**, 2009: Long-range transport of Air Pollution to and from North Africa (including Saharan dust and industrial emissions). *Sub-Regional Workshop: Better Air Quality in North Africa*, 23-25 November 2009, Tunis (UNEP, IUAPPA, GAPP, SEI).

PUBLICATIONS (CONFERENCE PROCEEDINGS)

(Graduate students underlined)

1. M. Astitha, H. Luo, C. Hogrefe, R. Mathur, and S.T. Rao. Quantifying the influence of boundary conditions and anthropogenic emissions to ozone concentrations towards estimating the modelled controllable portion of the ozone burden in continental United States, 17th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 22-24 Oct 2018 (oral presentation).
2. H. Luo, M. Astitha, C. Hogrefe, R. Mathur, and S.T. Rao. Dynamic evaluation of WRF-CMAQ PM2.5 simulations over the Contiguous United States for the period 2000-2010. 17th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 22-24 Oct 2018 (oral presentation).
3. Christina Feng Chang, Catherine Nowakowski, Marina Astitha, Valerie Garcia, Ellen Cooter, Chunling Tang, Penny Vlahos, David Wanik. Updates on Using Multi-media Modeling to Investigate Conditions Leading to Harmful Algal Blooms. . 17th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 22-24 Oct 2018 (poster award).
4. P. Zhang, Z. Tang, X. Liu, J. Yang, K. Muto, J. Yan, **M. Astitha**, J.N. Debs, D.A. Ferrante, D. Marcaurele, I.M. Hazlewood, D. Hedman, 2018: PV extreme capacity factor analysis. IEEE Power and Energy Society General meeting, Aug 5-10, 2018, Portland, OR.

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5. H. Luo, **M. Astitha**, S.T. Rao, C. Hogrefe, R. Mathur: Probabilistic assessment of emission control scenarios in meeting the ozone standard. 36th International Technical Meeting on Air Pollution Modelling and its Application, 14-18 May 2018, Ottawa, Canada. Oral presentation.
 6. **M. Astitha**, I. Kioutsoukis, G. Araya Fisseha, R. Bianconi, J. Bieser, J. H. Christensen, O. Cooper, S. Galmarini, C. Hogrefe, U. Im, B. Johnson, P. Liu, U. Nopmongkol, I. Petropavlovskikh, E. Solazzo, D. W. Tarasick, G. Yarwood, 2018: Seasonal ozone vertical profiles over North America using the AQMEII group of air quality models. 36th International Technical Meeting on Air Pollution Modelling and its Application, 14-18 May 2018, Ottawa, Canada. Oral presentation.
 7. J. Yang, **M. Astitha** and C. S. Schwartz, 2018: Gridded Bayesian Linear Regression to Improve Storm Forecasts Using NCAR's Real-Time Prediction System for Northeast United States. 98th Annual Meeting of the American Meteorological Society, 25th Conference on Probability and Statistics, Jan 8-11, 2018, Austin, TX, USA. Oral presentation.
 8. V. Garcia, C. Nowakowski, **M. Astitha**, P. Vlahos, E. Cooter, C. Tang, 2017: Using Multi-media Modeling to Investigate Conditions Leading to Harmful Algal Blooms. American Geophysical Union (AGU) Fall 2017 Meeting, New Orleans. 11-15 December 2017. Oral presentation.
 9. J. Yang, **M. Astitha** and C. S. Schwartz, 2017: Improvement of Storm Forecasts Using Gridded Bayesian Linear Regression for Northeast United States. AGU Fall Meeting 2017, NG001: Advances in Data Assimilation, Predictability and Uncertainty Quantification, New Orleans, 11-15 December 2017. Oral presentation.
 10. D. Cerrai, E.N. Anagnostou, J. Yang, **M. Astitha**, 2017: Predicting Power Outages Using Multi-Model Ensemble Forecasts. American Geophysical Union (AGU) Fall 2017 Meeting, New Orleans. 11-15 December 2017. Poster presentation.
 11. **M. Astitha**, H. Luo, C. Hogrefe, R. Mathur, S. T. Rao, 2017: Predicting Future-Year Ozone Concentrations: Integrated Observational-Modeling Approach for Probabilistic Evaluation of the Efficacy of Emission Control strategies. 16th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 23-25 Oct 2017 (oral presentation).
 12. H. Luo, **M. Astitha**, S.T. Rao, C. Hogrefe, R. Mathur, and N. Kumar, 2017: Dynamic evaluation of two decades of WRF-CMAQ ozone simulations over the contiguous United States. 16th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 23-25 Oct 2017 (poster presentation).
 13. **M. Astitha**, H. Luo, S. T. Rao, C. Hogrefe, R. Mathur, and N. Kumar, 2017: Dynamic Evaluation of Two Decades of WRF-CMAQ Ozone Simulations over the Contiguous United States. Meteorology And Climate - Modeling for Air Quality (MAC-MAQ) Conference, Sep 13-15, 2017, UC Davis, Davis, CA. (oral presentation)
 14. H. Luo, **M. Astitha**, S. T. Rao, C. Hogrefe, R. Mathur, 2017: Estimating the confidence bounds for projected ozone design values under different emissions control options. Meteorology And Climate - Modeling for Air Quality (MAC-MAQ) Conference, Sep 13-15, 2017, UC Davis, Davis, CA. (oral presentation)
 15. J. Yang, **M. Astitha**, L. Delle Monache, and S. Alessandrini, 2017: Improvement of wind speed prediction using statistical and analog techniques for NE U.S. 97th Annual Meeting of the American Meteorological Society, 22–26 January, 2017 Washington State Convention Center, Seattle, Washington. Poster presentation.
 16. J. Yang, **M. Astitha**, L. Delle Monache, and S. Alessandrini, 2016: Analog ensemble and Bayesian regression techniques to improve the wind speed prediction during extreme storms in the NE U.S. American Geophysical Union Fall 2016 Meeting, Dec 12-16, 2016, San Francisco, CA. Poster presentation.
 17. J. Yang, **M. Astitha** and L. Delle Monache, 2016: Improvement of the numerical prediction of extreme weather events using Analog ensemble and Bayesian regression techniques in NE U.S. 3rd Annual New England Graduate Student Water Symposium (NEGSWS), September 9-11, 2016, University of Massachusetts Amherst, MA. Poster presentation.
 18. **M. Astitha**, H. Luo, S.T. Rao, C. Hogrefe, R. Mathur, N. Kumar, 2016: Dynamic evaluation of two decades of CMAQ simulations over the continental U.S. 35th NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application, 3-7 Oct, 2016, Chania, Greece. Oral presentation.
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19. S.T. Rao, H. Luo, **M. Astitha**, C. Hogrefe, R. Mathur, N. Kumar, 2016: On regional modelling support for air quality policies. 35th International Technical Meeting on Air Pollution Modelling and its Application, 3-7 Oct, 2016, Chania, Greece. Oral presentation.
 20. **M. Astitha**, H. Luo, S.T. Rao, C. Hogrefe, R. Mathur, N. Kumar, 2016: Two Decades of WRF/CMAQ simulations over the continental U.S.: New approaches for performing dynamic model evaluation and determining confidence limits for ozone exceedances. 15th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 24-26 Oct 2016 (oral presentation).
 21. C. Nowakowski, **M. Astitha**, V. Garcia, P. Vlahos, E. Cooter, C. Tang, B. Hinckley, 2016: Prediction of harmful water quality parameters combining weather, air quality and ecosystem models with in-situ measurements. 15th Annual Community Modeling and Analysis System (CMAS) Conference, University of North Carolina at Chapel Hill's Friday Center, NC, 24-26 Oct 2016 (poster presentation).
 22. S.T. Rao, H. Luo, **M. Astitha**, C. Hogrefe, and R. Mathur, 2016: Scale Issues in Regional Air Quality Modeling for Policy Support. 10th International Conference on Air Quality - Science and Application, March 2016, Milan, Italy.
 23. D. W. Wanik, E. N. Anagnostou, B. M. Hartman, **M. Astitha**, and M. E. B. Frediani, 2016: Forecasting Storm-Related Power Outages in Connecticut and Massachusetts, AMS 96th Annual Meeting, New Orleans, LA, January 13, 2016.
 24. Yang, J., **M. Astitha**, E.N. Anagnostou, B. Hartman, G. Kallos, 2015: Predictability of extreme weather events for NE U.S.: improvement of the numerical prediction using a Bayesian regression approach. American Geophysical Union Fall 2015 Meeting, Dec 14-18, 2015, San Francisco, CA.
 25. Anagnostou, E.N, D. Wanik, **M. Astitha**, M. Frediani, G. Lackmann, J. He, J. Yang, 2015: Evaluation of power outages in Connecticut during hypothetical future Hurricane Sandy scenarios. American Geophysical Union Fall 2015 Meeting, Dec 14-18, 2015, San Francisco, CA.
 26. Wanik, D., E.N. Anagnostou, B. Hartman, M. Frediani, **M. Astitha**, 2015: Using Predictive Analytics to Predict Storm Outages at Electric Distribution Utilities. American Geophysical Union Fall 2015 Meeting, Dec 14-18, 2015, San Francisco, CA.
 27. Cifuentes-Lorenze, A., M. Howard-Strobel, T. Flake, G. McCardell, J. O'Donnell, **M. Astitha**, 2015: Modeling Waves and Coastal Flooding along the Connecticut Coast. American Geophysical Union Fall 2015 Meeting, Dec 14-18, 2015, San Francisco, CA.
 28. **M. Astitha**, ST Rao, J. Yang and H. Luo, 2015: Inherent uncertainty in the prediction of ozone and particulate matter for NE US. 14th Annual CMAS (Community Modeling and Analysis System) Conference, October 5-8, 2015, UNC-Chapel Hill, NC.
 29. **M. Astitha**, ST Rao, J. Yang and H. Luo, 2015: Quantifying inherent uncertainty in the prediction of atmospheric pollutant concentrations: variability stemming from the initial state. Meteorology and Climate-Modeling Air Quality conference (MAC-MAQ), Sep 6-8, 2015, Sacramento, CA.
 30. **Marina Astitha**, Jaemo Yang, Huiying Luo, S.T. Rao, 2015: Inherent uncertainties in atmospheric modeling: weather and air pollution. 34th International Technical Meeting on Air Pollution Modelling and its Application 4-8 May, 2015, Montpellier, France. Oral presentation.
 31. **M. Astitha**, S.T. Rao, J. Yang, H. Luo, 2015: Discussion on inherent uncertainties in atmospheric modeling: altering the initial state. Symposium on Coupled Chemistry-Meteorology/Climate Modelling, WMO Headquarters, Geneva, Switzerland 23-25 February 2015. Oral presentation.
 32. X. Zhang, E. N Anagnostou, **M. Astitha**, H. Vergara, J. Gourley, E. Hong Yang, 2014: Adjusting Satellite Rainfall Error in Mountainous Areas for Flood Modeling Applications, 2014 AGU Fall Meeting, San Francisco, CA, USA.
 33. **M. Astitha**, E. Anagnostou, J. Yang, X. Zhang, 2014: Natural aerosol feedback effects during extreme weather events for North East U.S. AGU 2014 Fall Meeting (American Geophysical Union) (Dec 15-19, 2014, San Francisco, CA).
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34. Karydis, V., Tsimpidi, A., **M. Astitha**, and J. Lelieveld, 2014: Effects of mineral dust on global atmospheric nitrate concentrations. *European Geosciences Union General Assembly 2014, Vienna, Austria (oral present.)*.
 35. **Astitha M.**, 2014: "Aerosol-Cloud-Precipitation Interactions". Guest lecture at the course Air Pollution and Atmospheric Chemistry (Prof. K. Wagstrom), Department of Chemical and Biomolecular Engineering, October 22nd, 2014, Storrs, CT, USA.
 36. **M. Astitha**, E. Anagnostou, J. Yang, X. Zhang, M. Frediani, 2014: Forecast of extreme weather events in Northeast and Mid-Atlantic U.S. – effects of natural particles in predicting precipitation and wind speed. 13th Annual CMAS (Community Modeling and Analysis System) Conference (October 27-29, 2014, UNC-Chapel Hill, NC). Poster presentation.
 37. Kushta, J., **M. Astitha** and G. Kallos, 2014: Natural aerosols and atmospheric radiation: Impacts and consequent feedbacks on meteorology and photochemistry. *European Geosciences Union General Assembly 2014, Vienna, Austria (oral present.)*.
 38. Kushta, J., **M. Astitha**, S. Solomos, G. Kallos, 2013: Chemical Weather Forecasting using the online fully integrated modeling system RAMS/ICLAMS – Comparison with the offline approach. *European Geosciences Union General Assembly 2013, Vienna, Austria (oral present.)*.
 39. Abdel Kader, M., Zittis, G., **Astitha, M.**, Lelieveld, J., 2013: Simulation of a dust episode over Eastern Mediterranean using a high-resolution atmospheric chemistry general circulation model. *European Geosciences Union General Assembly 2013, Vienna, Austria (poster present.)*.
 40. **Astitha, M.**, 2013: Links and Feedbacks between Atmospheric Composition and Dynamics Implications on Hazardous Weather. *Environmental Engineering Colloquium Series, Environmental Engineering Program, Department of Civil and Environmental Engineering, School of Engineering, Univ. of Connecticut, Feb 2013, USA*.
 41. **Astitha, M.**, 2013: Improving the global emissions of desert dust by using region specific input parameters for N-Africa and NE-Asia. 3rd Annual EMAC Symposium, June 12-14, 2013, KIT, Karlsruhe, Germany. (oral presentation)
 42. J. Kushta, **M. Astitha**, S. Solomos, G. Kallos, 2013: Integrated approach in air quality modeling: comparison of an online and an offline model for Europe and GMR. *33rd International Technical Meeting on Air Pollution Modelling and its Application*, 26 - 30 August, 2013, Miami, Florida, USA (oral present., proceedings).
 43. **Astitha M.**, C. Spyrou, S. Kontos, G. Kallos and J. Lelieveld, 2013: Investigating the coherence between a global and a limited area model for dust particle production and distribution in N-Africa. *33rd International Technical Meeting on Air Pollution Modelling and its Application*, 26 - 30 August, 2013, Miami, Florida, USA (oral present., proceedings).
 44. **M. Astitha**, 2012: Recent progress on the modeling of desert dust emissions in the ECHAM5/MESSy2-Implementation of different parameterization schemes, evaluation and recommendations. 2nd Annual EMAC Symposium, Max Planck Institute for Chemistry, 14-16 February 2012, Mainz, Germany. (oral presentation)
 45. J. Kukkonen , T. Olsson, D. M. Schultz, A. Baklanov , T. Klein , A. I. Miranda, A. Monteiro, M. Hirtl, V. Tarvainen, M. Boy, V.-H. Peuch, A. Poupkou, I. Kioutsioukis, S. Finardi, M. Sofiev, R. Sokhi, K. E. J. Lehtinen, K. Karatzas, R. San José, **M. Astitha**, G. Kallos, M. Schaap, E. Reimer, H. Jakobs, and K. Eben: OPERATIONAL CHEMICAL WEATHER FORECASTING MODELS ON A REGIONAL SCALE IN EUROPE. *8th International Conference on Air Quality - Science and Application*, 19-23 March 2012, Athens, Greece. (oral presentation, proceedings).
 46. **M. Astitha**, M. Abdel Kader, A. Pozzer, J. Lelieveld, 2012: Assessment of two physical parameterization schemes for desert dust emissions in an atmospheric chemistry general circulation model. *European Geosciences Union General Assembly 2012, Vienna, Austria*, 22 – 27 April 2012 (oral presentation).
 47. M. Abdel Kader, **M. Astitha**, J. Lelieveld, 2012: Evaluation of a mineral dust simulation in the atmospheric chemistry general circulation model EMAC. *European Geosciences Union General Assembly 2012, Vienna, Austria*, 22 – 27 April 2012 (poster present.).
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48. **M. Astitha**, J. Lelieveld, A. de Meij, A. Kerkweg, M. Abdel Kader, A. Pozzer and G. Gläser, 2012: Impact of different physical parameterizations on the global modeling of desert dust – importance of the initialization fields. *32nd NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application*, 7 - 11 May, 2012, Utrecht, The Netherlands (oral present., proceedings).
 49. J. Kushta, S.Solomos, **M. Astitha**, C. Mitsakou and G. Kallos, 2012: An Online Coupled Two-Way Interactive Modeling Study of Air Pollution over Europe and Mediterranean. *32nd NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application*, 7 - 11 May, 2012, Utrecht, The Netherlands (oral present., proceedings).
 50. **M. Astitha** and J. Lelieveld, 2011: Development of a new dust module in the EMAC model – preliminary results. *1st Annual EMAC Symposium*, DLR Operpfaffenhofen, Germany, 25-27 January 2011. (Oral Presentation).
 51. **M. Astitha** and J. Lelieveld, 2011: Global modelling of desert dust emissions – sources and parameterization schemes. *6th International Workshop on Sand/Duststorms and associated Dustfall*. 7-9 September 2011, Athens, Greece. (oral presentation)
 52. G. Kallos, S. Solomos, J. Kushta, C. Spyrou, C. Kalogeri, C. Mitsakou, **M. Astitha**, 2010: Modeling aerosol-radiation-cloud and precipitation processes. King Abdullah University of Science and Technology, 15-16 April 2010, Invited Seminar. (Oral Presentation).
 53. **M. Astitha**, J. Lelieveld, A. Pozzer, A. de Meij, 2010: Global circulation of dust using the EMAC model. *10th International Conference on Meteorology, Climatology and Atmospheric Physics*, 25-28 May 2010, University of Patras, Greece. (Oral Presentation-Proceedings).
 54. **M. Astitha**, A. De Meij, J. Lelieveld and A. Pozzer, 2010: Desert dust particle distribution – From global to regional scales. *31st NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application*, 27 Sept - 01 Oct, 2010, Torino, Italy. (Oral Presentation).
 55. J. Kukkonen, T. Balk, D. M. Schultz, A. Baklanov, T. Klein, A. I. Miranda, A. Monteiro, M. Hirtl, K. Lehtinen, K. Karatzas, R. San José, **M. Astitha**, G. Kallos, M. Schaap, E. Reimer, H. Jakobs, V. Tarvainen, M. Boy, V.-H. Peuch, A. Poupkou, I. Kioutsioukis, S. Finardi, M. Sofiev, K. Eben and R. Sokhi, 2010: Operational chemical weather forecasting models on a regional scale in Europe. *31st NATO/SPS International Technical Meeting on Air Pollution Modelling and its Application*, 27 Sept - 01 Oct, 2010, Torino, Italy. (Oral Presentation-Proceedings).
 56. **M. Astitha**, 2009: Air Pollution in the Eastern Mediterranean Region. *Joint workshop between EEWRC (The Cyprus Institute) and Max Planck Institute for Chemistry*, 25-30 March 2009, Cyprus.
 57. **M. Astitha**, C. Spyrou, G. Kallos, H.A.C. Denier van der Gon, A.J.H. Visschedijk and J. Lelieveld, 2009: Chemical composition change of aerosols along long-range transport paths. *30th NATO/CCMS International Technical Meeting on Air Pollution Modeling and its Applications*, May 2009, San Francisco, USA. (Oral Presentation-Proceedings).
 58. G. Kallos, S. Solomos, J. Kushta, **M. Astitha**, C. Spyrou, C. Mitsakou, Modeling aerosol-radiation-cloud and precipitation processes in the Mediterranean region on an integrated approach. *International workshop on Atmospheric Composition Changes: Climate-Chemistry Interactions*, Lecce, Italy - November 2-4, 2009.
 59. S. Solomos, G. Kallos, J. Kushta, **M. Astitha**, C. Spyrou, C. Mitsakou, 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.
 60. **M. Astitha**, 2009: Parameterization of the dust production in the EMAC model - Status and Future Plans. *Max Planck Institute for Chemistry and DLR Institute for Physics of the Atmosphere EMAC Symposium*, Mainz, Germany, 10 December 2009. (Oral Presentation).
 61. C. Mitsakou, G. Kallos, N. Papantoniou, C. Spyrou, S. Solomos, **M. Astitha**, C. Housiadas, 2008: Lung Dose From Mineral Saharan Dust To Greek Residents. *Society of Environmental*
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- Geochemistry and Health, 26th European Conference - SEGH2008, Athens, 31 March- 2 April 2008. (Oral presentation).*
62. G. Kallos, Spyrou C., **Astitha M.**, Mitsakou C., Solomos S., Kushta I., Mavromatidis E., 2008: Recent SKIRON dust model development and future plans. *European Geosciences Union Assembly 2008*, Vienna, Austria, 13-18 April 2008. (Poster presentation).
 63. **M. Astitha** and G. Kallos, 2008: Modelling the interactions between particulate matter and gases in the Euro-Mediterranean Region. *European Geosciences Union Assembly 2008*, Vienna, Austria, 13-18 April 2008. (Oral presentation).
 64. G. Kallos, **M. Astitha**, C. Spyrou, S. Solomos, J. Kushta, E. Mavromatidis, C. Mitsakou, 2008: Saharan Dust and Anthropogenic Aerosols – Regional Characteristics. *First International Conference: From Deserts to Monsoons*, Crete, Greece, June 1-6, 2008. (Oral presentation).
 65. G. Kallos, S. Solomos, I. Kushta, C. Spyrou, E. Mavromatidis, **M. Astitha**, C. Mitsakou, 2008: The Integrated Community Limited Area Modeling System – ICLAMS. *3rd International Workshop on Mineral Dust*, Leipzig, Germany, September 15-17, 2008. (Poster presentation).
 66. G. Kallos, S. Solomos, I. Kushta, E. Mavromatidis, **M. Astitha**, 2008: Natural sources of PM and their impact on cloud and precipitation. *10th Plinius Conference on Mediterranean Storms (EGU Topical Conference Series)*, Nicosia, Cyprus, September 22-24, 2008. (Oral presentation).
 67. G. Kallos, S. Solomos, I. Kushta, **M. Astitha**, 2008: Key processes in Regional Atmospheric Modeling in the Mediterranean Region. *ESF-MedCLIVAR Workshop on Climate Change Modeling for the Mediterranean Region*, Trieste, Italy, 13-15 October, 2008. (Oral presentation).
 68. G. Kallos and **M. Astitha**, 2007: Modeling of heterogeneous chemical processes in CAMx air quality model. *European Geosciences Union General Assembly 2007*, Vienna, Austria, 15 – 20 April 2007. (Oral Presentation-Proceedings)
 69. **M. Astitha**, G. Kallos, P. Katsafados, 2007: Impacts of desert dust on photochemical processes. *IUGG 2007 Perugia - XXIV IUGG General Assembly*, 2-13 July 2007, Perugia, Italy. (Poster Presentation)
 70. 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 IUGG General Assembly*, 2-13 July 2007, Perugia, Italy.
 71. **M. Astitha**, G. Kallos, P. Katsafados, and E. Mavromatidis, 2007: Heterogeneous chemical processes and their role on particulate matter formation in the Mediterranean Region. *29th NATO/CCMS International Technical Meeting on Air Pollution Modeling and its Applications*, September 2007, Aveiro, Portugal. (Oral Presentation-Proceedings)
 72. **M. Astitha** and G. Kallos, 2007: Gas-phase and aerosol chemistry interactions in South Europe and the Mediterranean Region. *6th Annual CMAS Conference*, Chapel Hill, NC, October 1-3, 2007.
 73. C. Spyrou, P. Katsafados, A. Papadopoulos, G. Kallos and **M. Astitha**, 2007: A model to simulate the atmospheric dust cycle-Sensitivity studies. *8th Pan-Hellenic Geographical Conference of the Greek Geographical Society*, Faculty of Geology & Geoenvironment, 4-7 October 2007, Athens, Greece. (Oral presentation – Proceedings).
 74. E. Mavromatidis, G. Kallos, P. Katsafados and **M. Astitha**, 2007: Study of a summer storm in Northern Greece with the aid of a regional atmospheric modeling system. *8th Pan-Hellenic Geographical Conference of the Greek Geographical Society*, Faculty of Geology & Geoenvironment, 4-7 October 2007, Athens, Greece. (Oral presentation – Proceedings).
 75. 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*, 7-9 November 2007, Barcelona, Spain. (Oral presentation).
 76. **M. Astitha**, G. Kallos, P. Katsafados, I. Pytharoulis and N. Mihalopoulos, 2006: Radiative effects of natural PMs on photochemical processes in the Mediterranean Region. *28th NATO/CCMS International Technical Meeting on Air Pollution Modeling and its Applications*, May 2006,
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- Leipzig, Germany, Oral Presentation-Proceedings, pp. 548-559, Elsevier pub. (Ed.: C. Borrego and E. Renner), ISBN: 978-0-444-52987-9.
77. G. Kallos, **M. Astitha**, P. Katsafados and C. Spyrou, 2006: Sources, paths and scales of transport and transformation of PM in the Mediterranean and North Atlantic. *AGU Fall Meeting*, 11–15 December 2006, Moscone Center West, 800 Howard Street, San Francisco, CA, USA.
78. G. Kallos, **M. Astitha**, P. Katsafados and F. Gofa, 2005: PM and O₃ patterns in South Europe and Mediterranean: From Mesoscale to Regional. *1st International Conference on Air Pollution and Combustion – CAPAC*, 22-25 June 2005, Ankara, Turkey. (Oral Presentation-Proceedings)
79. 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. (Oral Presentation-Proceedings)
80. G. Kallos, **M. Astitha** and P. Katsafados, 2005: Long-Range Transport of Anthropogenically and Naturally Produced PM in the Mediterranean and North Atlantic: Present Status of Knowledge. *NOAA/EPA Golden Jubilee Symposium on Air Quality Modeling and Its Applications*, 20–21 September 2005, *Sheraton Imperial Hotel*, Durham, North Carolina. (Oral Presentation)
81. G. Kallos, **M. Astitha** and P. Katsafados, 2005: Air Pollution Modeling in the Mediterranean Region: From Analysis of Episodes to Forecasting. *3rd International Symposium on Air Quality Management at Urban, Regional and Global Scales (AQM) and 14th IUAPPA Regional Conference*. 26-30 September 2005, Istanbul, Turkey. (Oral Presentation-Proceedings)
82. **M. Astitha**, P. Katsafados and G. Kallos, 2005: Air Quality Degradation in Mediterranean Urban Regions from Anthropogenic and Natural Particulate Matter”. *10th International Conference on Harmonization within Atmospheric Dispersion Modeling for Regulatory Purposes*. 17-20 October 2005, Sissi, Crete, Greece. Oral Presentation-Proceedings, pp.213-217, ISBN: 960-233-166-6.
83. Kallos G., **Astitha M.**, Gofa F., Varinou M., and O'Connor M., 2004: Tropospheric Ozone Production and Transport in the Mediterranean Region. *Proceedings of the XX Quadrennial Ozone Symposium*, 1-8 June, 2004, Kos, Greece, Poster presentation, Proceedings, pp. 763-764, (Ed.: C. Zerefos). ISBN: 960-630-103-6, 960-630-105-2.
84. Kallos G., **Astitha M.**, Katsafados P., Pytharoulis I., 2004: Production and Transformation of Anthropogenic and Natural Aerosols in the Mediterranean Region. *13th World Clean Air and Environmental Protection*, August 2004, London, UK. (Oral Presentation-Proceedings).
85. Kallos G., **Astitha M.**, Gofa F., O'Connor M., Mihalopoulos N., Zlatev Z., 2004: Transport and Deposition Patterns of Ozone and Aerosols in the Mediterranean Region. *27th NATO/CCMS International Technical Meeting on Air Pollution Modeling and its Applications*, October 2004, Banff, Canada, Oral Presentation-Proceedings, pp. 187-196, Springer pub. (Edit: C. Borrego and A. Norman), ISBN: 987-0-387-28255-8.
86. Kallos G., Gofa F., Varinou M., O'Connor M., Mavromatidis E., **Astitha M.**, Tsiligiridis G., 2002: Photo-oxidation Processes in the Eastern Mediterranean Region. *8th Conference on Chemistry and the Environment*, Athens, Greece. (Oral Presentation-Proceedings)
87. Kallos G., Varinou M., Gofa F., **Astitha M.**, O'Connor M., Mavromatidis E., Voudouri A., 2002: Multi-Scale Transport and Transformation of Air Pollutants in the Mediterranean Region and North Africa. *5th RAMS Workshop*, Santorini, Greece. (Oral Presentation-Proceedings)
88. Kallos G., **Astitha M.**, Gofa F., Voudouri A., Varinou M., 2002: A Source-receptor relationship approach for definition of paths and scales of air pollution transport in the Mediterranean. *IGAC/CACGP Atmospheric Chemistry within the Earth System*, Crete, Greece. (Poster Presentation-Proceedings)
89. Kallos G., Gofa F., Varinou M., O'Connor M., **Astitha M.**, Mavromatidis E., 2002: A spatial and temporal scales of transport and photo-oxidation over the Eastern Mediterranean Region. *IGAC/CACGP Atmospheric Chemistry within the Earth System*, Crete, Greece (Poster Presentation Proceedings).
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RESEARCH PROJECTS

Total Funding Share since joining UConn: \$ 1,536,466

CURRENT PROJECTS

1. Understanding the information embedded in observations and regional air quality model outputs and using models for regulatory assessments. Funding agency: Electric Power Research Institute (EPRI). PI: M. Astitha, co-PI: ST Rao (NCSU and UConn). Award: \$220,398. 12/2/2015-06/30/2018.
2. Enhancing Predictability of Power Outages from a new Representation of Weather and Vegetation Impacts in UConn's Outage Prediction Model. E.N. Anagnostou (PI), Marina Astitha (co-PI). 01/01/2018-12/31/2019. Award: \$1,411,000 (20% contribution)
3. Department of Education's Graduate Assistantships in Areas of National Need (GAANN) project: Environmental engineering at the forefront of water policy and education. T. Vadas (PI), G. Wang (project director), C. Kirchhoff, M. Astitha, E. Anagnostou, J. Mellor. 2015-2019. Award: \$738,195. (16% contribution)
4. Expanding the UCONN Predictive Storm & Outage Model into Eversource MA and NH. E.N. Anagnostou (PI), David Wanik, Marina Astitha. Eversource Energy (\$330,000) 09/01/2016-12/31/2018.
5. Grid-side System enhancements to integrate distributed energy resources (Phase-II). PI: Peng Zhang, co-PI: Marina Astitha, Efthymios Nikolopoulos. Eversource Energy Center. 01/01/2018-12/31/2019. Award: \$200,000. (20% contribution)
6. Next Generation United Illuminating Predictive Storm Damage Modeling Enhancements for Preparedness and Emergency Response Support. E.N. Anagnostou (PI), Marina Astitha, and David Wanik. United Illuminating (\$275,000) 05/01/2016-01/31/2019.

FINISHED PROJECTS

1. Predictive Storm & Damage Modeling for Preparedness and Emergency Response Support. E.N. Anagnostou (PI), David Wanik, Marina Astitha. Eversource Energy (\$2,348,284) 07/01/2015-12/31/2017. (20% contribution)
 2. Grid-scale Systems enhancements to integrate distributed energy resources. PI: Peng Zhang, co-PI: Marina Astitha. Award: \$82,300. Eversource Energy Center. 10/01/2016-12/31/2017.
 3. Establishing a Dominion/UCONN Carbon Dioxide time series in Long Island Sound, Award: \$24,500. PI: Vlahos, co-PI: Astitha, Dominion Foundation. 09/2016 to 08/2017.
 4. Damage Modeling and Forecasting System of the NU Center Bridge-Funding. Northeast Utilities and Department of Civil and Environmental Engineering, School of Engineering, University of Connecticut. Principal Investigator: Prof. E. Anagnostou (\$1.150.000). 04/15/2013-05/31/2015. (15% contribution, co-PI).
 5. The United Illuminating Company (UI) participation in the damage prediction modeling and vegetation management. Department of Civil and Environmental Engineering, School of Engineering, University of Connecticut. Principal Investigator: Prof. E. Anagnostou. (\$513,000).02/01/2014-01/31/2016. (20% contribution, co-PI)
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6. The Importance of Vegetation Management Information on Storm Damage Prediction funded by The Energy and Power Research Institute (EPRI). PI: Prof. E. Anagnostou (\$50,000). 04/01/2014-04/01/2015. (20% contribution, co-PI)
 7. Consistent computation of the chemistry-cloud continuum and climate change in Cyprus-C8. European Research Council - FP7. Coordinator: Cyl/EEWRC, Prof. J. Lelieveld. (2.200.000€). 2008-2013. (~30% contribution)
 8. CIRCE 2008 Integrated Project - Climate Change and Impact Research: the Mediterranean Environment. Supported by the European Commission's Sixth Framework Program, Sustainable Development, Global Change and Ecosystems. (total 10.000.000€ for the AM&WFG 320.000€). 2007-2010. (~30% contribution)
 9. PYTHAGORAS II- Aid of research teams in Universities. Title of Research: "Study of particles of anthropogenic and natural origin and assessment of the effects in the climate of Greece". The project is co-funded by the European Social Fund and National Resources – (EPEAEK II). (50.000€). 2005-2006. (~20% contribution)
 10. MADEPODIM (Master Degree on Pollutant Dispersion Modelling) (Action TEMPUS Programme CD_JEP-31062-2003). (total 500.000€ for the AM&WFG 85.000€). 2005-2007. (~25% contribution)
 11. Data Integration System for Eutrophication Assessment in Coastal Waters (INSEA). Supported by EU DG (FP6 STREP SSA Aeronautics and Space Contract # 12336). (total 2.528.000€ for the AM&WFG 144.000€). 2006-2008. (~10% contribution)
 12. Prediction of Waves, Wakes and Offshore Wind (POWWOW). Supported by EU DG-General (FP6, SES6-019898). (total 1.000.000€ for the AMWFG 85.000€). 2006-2008. (~10% contribution)
 13. An enhanced operational system for wave monitoring and prediction with Applications in Hellenic navigation system (ESPEN). Funded by EU and the Greek Government. (total 1.000.000 €, for the AM&WFG 154.000€) 2005-2007. (~5% contribution)
 14. An Integrated Approach to Assess the Mercury Cycling in the Mediterranean Basin (MERCYMS). Supported by DG-Research of EU FP6 (EVK3-CT-2002-00070). (total 2.490.631€, for IASA 155.280€). 2002-2006. (~5% contribution)
 15. Grid-enabled Remote Instrumentation with Distributed Control and Computation (GRIDCC). Supported by EU DG-General (FP6 STREP IST Contract # 511382. (80.000€). 2004-2007. (~5% contribution)
 16. Project PENED2003-Program for the Support of Researchers for training young researchers, funded by the General Secretariat of Research and Technology in the framework of the Operational Program Competitiveness. (PhD grant). Title of research: "Characteristic scales of transport and transformation of air pollutants – Impacts on climate"). (66.000€, 100%). 2004-2007.
 17. Development of a Next Generation Wind Resource Forecasting System for the Large-Scale Integration of Onshore and Offshore Wind Farms (ANEMOS). Supported by DG-Research of EU (ENK5-CT-2002-00665). (total 4.281.968€, for IASA 228.840€). 2002-2006. (~5% contribution)
 18. Mediterranean ocean Forecasting System: Toward Environmental Predictions (MFSTEP). Supported by DG-Environment (Contract #EVK3-2001-00174). (total 7.204.000€, for IASA 242.000€) 2003-2005. (~10% contribution)
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19. Support of Athens 2004 Olympics by providing weather, wave and air quality forecasts for the Hellenic National Meteorological Service (HNMS). Trilateral Cooperation between the Hellenic National Meteorological Service (HNMS), Ministry of Culture and IASA. (180.000€). (~20% contribution)
20. Development and Application of Validated Geophysical Ocean Wave Products from ENVISAT ASAR and RA-2 Instruments (ENVIWAVE). Supported by DG-Research of EU (Contract # EVG2-2001-00017). (total 2.2281.691€, for IASA 362.000€) 2002-2005. (~5% contribution)
21. Automated fire and flood hazard protection system (AUTO-HAZARD PRO): Supported by DG-Research of EU (Contract # EVG1-CT-2001-00057) (1.199.997€). 2002-2004. (~5% contribution)
22. Atmospheric Deposition and Impact of Pollutants, Key Elements and Nutrients on the Mediterranean Sea (ADIOS). Supported by DG-XII of EU (Contract # EVK3-CT-2000-00035) (2.351.801€). 2001-2003. (~10% contribution)
23. Kallos G., Voudouri A., Pytharoulis I., Kakaliagou O., Astitha M., 2002, "Atmospheric Transport and Fate of Mercury and its Impact on New York State", NYSERDA-SUBAWARD#01-9, RFPTAEO#1015266-20439-1. (50.000 USD). (~5% contribution)
24. Subgrid-scale Investigation of Factors Determining the Occurrence of Ozone and Fine Particles (SUB-AERO). Supported by DG-XII of EU (Contract # EVK2-1999-00052). (800.000€). 2000-2002. (~5% contribution)

OTHER RELEVANT ACTIVITIES

1. Appointed Associate Director of the Environmental Engineering program (2018-2020; 2-yr term).
2. Appointed Team Leader of the "Forecasting" Thematic Area for the Eversource Energy Center at the University of Connecticut (2017-2019. 2-yr term). In this role, I am steering new Center initiatives and coordinate efforts of Center investigators pursuing funding opportunities in this thematic area.
3. Primary convener and chair of the AGU 2018 session "Extreme weather events: forecast skill, uncertainty quantification and impact modeling", Dec 10-15, Washington, DC.
4. Member of the Environmental Literacy subcommittee (UConn), 2018-2019.
5. Chair of the graduate admissions committee for the Environmental Engineering program (2016-2017).
6. Participation in the Air Quality Model Evaluation International Initiative (AQMEII) phase 3. Prepare a two-continent (EU and North America) air quality model evaluation in collaboration with HTAP (Task Force on Hemispheric Transport of Air Pollution). Conference abstract and peer-review manuscript.
7. Member of the 2015 CMAQ model external scientific peer review panel being organized by EPA-ORD/CMAS. June 17-19, 2015, Research Triangle Park, NC.
8. Member of the Atmospheric Sciences Group (ASG) seminar committee, University of Connecticut (2015-present).

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9. Member of the Environmental Engineering program seminar committee (2014-2015).
 10. Reviewer for the Environmental Engineering Graduate Program applications (continuous, CEE, UConn).
 11. Participation in faculty search committees:
 - a. Assistant/Associate Professor – International Water Resources Development- CEE/UConn- Dec 2013
 - b. Department of Natural Resources and the Environment, UConn, Dec 2014-Mar 2015.
 12. Participation in the Joy of Teaching (by P. Filene) book group. Organized by the Institute for Teaching and Learning. September-October 2013. Storrs campus, UConn, CT, USA.
 13. Member of the scientific steering committee for the 6th International Workshop on Sand/ Duststorms and Associated Dustfall, 7-9 September 2011, Athens, Greece.

COMPUTER KNOWLEDGE – MODELING SYSTEMS

- Fortran 77, Fortran 90, 95, Intel and Portland Group Fortran Compilers, Dos, Unix, Linux, MS Windows, Word, Excel, Linux shell scripting, NCAR graphics (Linux), Vis5d (Linux), Ferret (Data Visualization and Analysis), GRIB, NETCDF3/4, MATLAB, ArcGIS.
- CAMx air quality model, RAMS/ICLAMS modeling system, HYPACT dispersion model, MDMS dispersion model, SKIRON/Eta modeling system, CMAQ Community Multiscale Air Quality Modeling System, Weather Research and Forecasting Model (WRF).
- EMAC (ECHAM5/MESSy) atmospheric chemistry general circulation model.

MEMBERSHIPS

- American Geophysical Union (AGU) Life Member
- European Geosciences Union (EGU) Life Member
- American Meteorological Society (AMS) Member
- Association of Environmental Engineers and Science Professors (AEESP)
- Air and Waste Management Association (A&WMA) Member
- American Association of University Professors (AAUP) Member