

EMMANOUIL George

Personal Information

DATE - PLACE OF BIRTH: 17 May 1973 in Athens, Greece
PROFESSION: Researcher
PROFESSIONAL ADDRESS: National Observatory of Athens, Institute of
Environmental Research and Sustainable Development
Lofos Koufou, P. Penteli, 15236, Athens, Greece
Tel : 30 210 8103236
E-mail: emmanouil@noa.gr

Academic Qualifications

2010: Ph. D. thesis in Meteorology, National University of Athens, Greece.
2000: M.o.S. in Environmental Physics-Meteorology, National University of Athens, Greece.
1997: B. Sc in Physical Sciences. National University of Athens, Greece.

Professional Experience

- 2021 – today: Research Associate IERSD/National Observatory of Athens, Greece
- 7/2016-12/2019: Meteorological support at Alpha TV, daily bulletins and studio presentation.
- 02/2013-07/2020: Researcher at the National Centre of Scientific Research “Demokritos”, on climate change and extreme weather events studies (Synergasia, ENTEC, SIEMENS, ECLISEA and WINDSURFER projects).
- 09/2012 – 09/2015: Post-doc researcher at the Greek Naval Academy under the GSRT project by the title “Development and application of new mathematical and physical models for MOnitoring the wind and Sea wave Energy Potential”.
- 10/2004 – 08/2012: Senior weather and marine forecaster at the Hellenic National Meteorological Service
- 2/2003 – 9/2004: Operational weather and marine forecaster at the Hellenic National Meteorological Service, Weather support for the Athens Olympics 2004
- 10/2002 - 3/2003, 09/2004- 07/2012: Associate Professor at the Laboratory of Computer programming courses at the Technological Educational Institute of Piraeus
- 9/1998 – 3/2000, 9/2001 – 08/2012 : Scientific researcher in meteorological and marine sciences in the Department of Physics at the Environmental Physics Sector of the Athens University, Atmospheric Modeling and Weather Forecasting Group. (<http://forecast.uoa.gr/oldproj.php>).

Areas of expertise

Dynamic meteorology, numerical weather prediction, weather monitoring, climatology, weather and climate services development.

Conferences

1. Seasonal forecasting for Eastern Mediterranean region with the atmospheric model WRF and the sea waves model WAM, Emmanouil G., Vlachogiannis D., Sfetsos A., ECCA 2019, Lisbon, May 2019

2. The simulation of cyclone Cleopatra over Greece: WRF model sensitivity tests and evaluation, Emmanouil G., Vlachogiannis D., Sfetsos A., EGU 2017, Vienna, April 2017
3. A study of an extreme hot weather event in Greece with the WRF-ARW atmospheric model, Emmanouil G.*, Vlachogiannis D., Sfetsos A., Karozis S., Tasopoulou A., COMECAP 2016, Thessaloniki, September 2016.
4. The CYCOFOS new forecasting systems at regional and sub-regional scales for supporting the marine safety George Zodiatis, Hari Radhakrishnan, George Galanis, Andreas Nikolaidis, George Emmanouil, Georgios Nikolaidis, Robin Lardner, Sarantis Sofianos, Stavros Stylianou and Marios Nikolaidis, EGU 2016, Vienna, April 2016
5. An evaluation study of WRF-ARW model with observations during a usual low pressure system over eastern Mediterranean area (Greece) and comparison of the results with an extreme weather event, Emmanouil G., Vlachogiannis D., Sfetsos A., Karozis S., Tasopoulou A., EGU 2016, Vienna, April 2016
6. Climate change and extreme weather events in Mediterranean Sea: studies with WRF atmospheric model, George Emmanouil, Diamando Vlachogiannis, Athanasios Sfetsos, Stylianos N. Karozis, Int. Conference: Our Common Future Under Climate Change 2015 – Paris – 07-10 July 2015
7. 2nd INTERNATIONAL CONFERENCE “Applications of Mathematics and Informatics in Military Science”, Hellenic Military Academy on April 11-12, 2013
8. EGU 2013 Conference at Vienna (8-12 April, 2013), Estimation and Monitoring of Wind/Wave energy potential in the Eastern Mediterranean Sea, poster presentation, George Zodiatis, George Galanis, George Emmanouil, Dan Hayes, Andreas Nikolaidis, Georgios Georgiou, Christina Kalogeri and George Kallos
9. AGU Fall Meeting 2013 (9-13 December 2013) at San Francisco, USA, Estimation and Monitoring of Wind-Wave Energy Potential over the Greek Seas, poster presentation, George Emmanouil, George Galanis, George, Zodiatis and Christina Kalogeri
10. World Renewable Energy Congress, WREC XIII, held in Kingston University, London, UK, August 2014, Wind-Wave energy monitoring and forecasting in the Eastern Mediterranean Sea: A multiparametric approach, George Galanis, George Emmanouil, Christina Kalogeri and George Kallos.
11. AGU Fall Meeting 2014 (15-19 December 2014), at San Francisco, USA, A New High Resolution Wave Modeling System for Renewable Energy Applications in California and the Mediterranean Sea, poster presentation, George Galanis, George Emmanouil, Nikolaos Hatzopoulos, Menas Kafatos, Peter Chu and George Kallos.
12. EWEA OFFSHORE 2015 in Copenhagen-Denmark on March 10-12, 2015, Wind-Wave energy potential over the Greek seas, poster presentation, George Emmanouil, George Galanis, George Kallos, George Zodiatis, Christina Kalogeri.
13. Joint Assembly 2015, held in Montreal-Canada on May 3-7, 2015, Wind and sea waves analysis for the Greek area with application to renewable energy, oral presentation, George Emmanouil, Galanis G., Kallos G., Zodiatis G.
14. Air-Sea interaction processes during extreme weather events in the Mediterranean region, Pytharoulis I., Katsafados P., Koutsoulis K., Galanis G., Emmanouil G., and G. Kallos, EGU conference (session AS2.02: Air-Sea Interaction), April 2005, Vienna
15. Wave assimilation methods based on Kalman filtering. Operational and research developments, Emmanouil G., Galanis G., and G. Kallos, Fourth WMO International Symposium on Assimilation of Observations in Meteorology and Oceanography, April 2005, Prague

16. Wave assimilation methods based on Kalman filtering. Operational and research developments, Emmanouil G., Galanis G., and G. Kallos, 4th EuroGOOS Conference, June 2005, Brest
17. Development and Application of Validated Geophysical Ocean Wave Products from Envisat ASAR and RA-2 Instruments – EnviWave, Johnsen H., Engen G., Kallos G., Emmanouil G., Galanis G., Morales G., Carretero J.C., Barstow S., Athanassoulis G.A., Stefanakos C.N., Gerostathis T.P., Belibassakis K.A., Krogstad H.E., Heiberg H., Queffeuilou P., Croize-Fillon D., Chapron B., WAVES 2005, July 2005, Madrid, Spain

Publications in International Journals

1. Galanaki Elisavet, George Emmanouil, Konstantinos Lagouvardos, Vasiliki Kotroni, 2021: Climatology of surface solar radiation downwards over the Euro - Mediterranean region. *Atmosphere*, 12, 1431. <https://doi.org/10.3390/atmos12111431>.
2. A 30-year high resolution Mediterranean Sea Wave Database: wave climate analysis, Emmanouil G., Vlachogiannis D., Sfetsos A., Nadia Politi, Iason Markantonis, *Ocean Modelling*, submitted (07/2020)
3. Exploring the ability of the WRF-ARW atmospheric model to simulate different meteorological conditions in Greece, Emmanouil G., Vlachogiannis D., Sfetsos A., *Atmospheric Research*, 247, 2020
4. 10-year high resolution study of wind, sea waves and wave energy assessment in the Greek offshore areas, George Emmanouil, George Galanis, Christina Kalogeri, George Zodiatis and George Kallos, *Renewable Energy*, Volume 90C, 2016, Pages 399-419
5. Combination of statistical Kalman filters and data assimilation for improving ocean waves analysis and forecasting, G. Emmanouil, G. Galanis and G. Kallos, *Ocean Modeling*, 2012, DOI: 10.1016/j.ocemod.2012.09.004
6. A new methodology for using buoy measurements in sea wave data assimilation, Emmanouil, G., G. Galanis and G. Kallos, *Ocean Dynamics*, Vol.60, Num.5, 1205-1218, DOI: 10.1007/s10236-010-0328-9, 2010
7. A new methodology for the extension of the impact of data assimilation on ocean wave prediction, Galanis G., Emmanouil G., Kallos G., Chu P., *Ocean Dynamics: Volume 59, Issue3 (2009)*, Page 523
8. Weather and Sea State Conditions in Piraeus and the Saronic Gulf on 14-15 February 2005, Kallos G., Emmanouil G., Pytharoulis I., Technical Report for Law office.
9. Statistical methods for the prediction of night time cooling and minimum temperature, Emmanouil G., Galanis G., and G. Kallos, *Journal of Meteorological Applications*, 13, 169-178, 2006, DOI: 10.1017/S1350482706002076
10. Assimilation of radar altimeter data in numerical wave models: An impact study in two different wave climate regions, Emmanouil G., Galanis G., and Kallos G., *Ann. Geophys.*, 25, 581-595, 2007
11. Meteorological and wave conditions study at the Western Mediterranean Sea at the period from 28/1/2003 to 3/2/2003, Kallos G., Emmanouil G., Pytharoulis I., Katsafados P., Technical Report for Law office.
12. Frost study in the area of Central Macedonia, Greece, Kallos G., Emmanouil G., Mavromatides H., Report for the Greek Ministry of Agriculture.
13. Meteorological and wave conditions study in the area of Aegean Sea at the period the 14/12/1998, Kallos G., Emmanouil G., Technical Report for Law office.
14. Study of the development mechanisms of thunderstorms over Northern Greece in the summertime with numerical models, Emmanouil G., Master of Science study.

15. New methodologies for analyzing and forecasting sea waves with numerical models, data assimilation and statistical filters, 2010, PhD, University of Athens, Department of Physics.