

CURRICULUM VITAE

Name: Sarantis Sofianos
Current occupation: Lecturer, Department of Physics, University of Athens
Date of birth: February 22, 1962
Place of birth: Corfu, Greece

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Work Address: University of Athens
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Studies

June 1979: High school graduation (Corfu, Greece)
June 1994: Diploma in Physics (University of Athens, Greece)
June 2000: PhD in Meteorology and Physical Oceanography (University of Miami, USA)

Membership in International Executive Bodies and Professional Associations

- Member of the Science Steering Committee and Operational Advisory Group of the **Mediterranean Operational Oceanography Network (MOON)**, the EuroGOOS Task Team for the Mediterranean Sea <http://www.moon-oceanforecasting.eu/>
- Member of the **American Geophysical Union (AGU)**
- Member of the **European Geophysical Union (EGU)**
- Member of **CIESM (Commission Internationale pour l'Exploration Scientifique de la mer Méditerranée)**
- Member of the board of the **Greek Association of Oceanographers**

Fellowships

September 1995 – August 1996: Rosenstiel Fellowship by Rosenstiel School of Marine and Atmospheric Science (University of Miami).

Research interests and experience

- Investigation of the oceanic general circulation with emphasis on semi-enclosed basins
- Investigation/forecast of the general circulation and coastal systems with the use of numerical models (MICOM – POM - GFDL MOM)
- Statistical analysis of spatio-temporal oceanic variability and air-sea interaction at various time scales (synoptic to climatic)
- Strait dynamics
- Operational Oceanography applications. Supervision of operational oceanography product development (ALERMO - ocean circulation forecast and TRITON – wave forecast systems), which are provided during the last four years at <http://www.oc.phys.uoa.gr/>
- Interdisciplinary applications

Employment

October 1994 – June 1995 : Research assistant in the Laboratory of Physical Oceanography of the University of Athens (Greece)

August 1995 – June 2000 : Research assistant at the Rosenstiel School of Marine and Atmospheric Science (University of Miami, USA)

July 2000 – February 2003: Research associate in the Laboratory of Physical Oceanography of the University of Athens (Greece)

February 2003 – today: Researcher at the Division of Environmental Physics, University of Athens, coordinator or physical oceanography scientific responsible in several Greek, EU and US projects, including: *MFSTEP*, *Profiling Float Observations in the Aegean Sea*, *IASON*, *ECOOP*, *DIAVLOS*, *MyOcean*.

June 2008: Elected Lecturer (Physical Oceanography) at the Department of Physics, University of Athens.

Research experience

- Coordinator or physical oceanography scientific responsible in several Greek, EU and US projects. Most recent including: *Profiling Float Observations in the Aegean Sea*, *IASON*, *ECOOP*, *DIAVLOS*, *MyOcean*, *TOSCA* (currently participating in 4 EU projects).
- Participation in a total of 28 EU, US and Greek projects.
- Participation in Scientific Committees, Organization of Scientific Conferences and
- Seminars
- Supervision of the Ocean Physics And Modelling group consisting of two postdoc collaborators, three PhD students, one researcher, two postgraduate students and one technician.

Research Products

- Coordination of the marine operational forecasting system ALERMO (Aegean-Levantine Eddy Resolving Modeling system). As of September 2004, the system provides 5-days marine circulation forecasting in the Aegean-Levantine region (<http://www.oc.phys.uoa.gr/oceanf.html>).
- Participation and coordination of the wave forecasting system TRITON, providing 60-hours wave forecasting in a 14-model system, from global scale to coastal (<http://www.oc.phys.uoa.gr/dok1.htm>).
- Coordination of a marine operational forecasting system in the North Aegean Sea (<http://www.oc.phys.uoa.gr/mfstep/bulnaeg/>) and an oil-spill forecasting tool (<http://diavlos.oc.phys.uoa.gr>) implemented in the area of the Burgas-Alexandroupolis oil-pipe development area.
- Coordination of a near real time and delayed mode drifter and profiling float monitoring system in the Eastern Mediterranean Sea, in collaboration with the University of Washington, University of Miami and Hellenic Center for Marine Research (http://www.oc.phys.uoa.gr/lagr_obs.html).

Field Experience

November 1994: Participation in an oceanographic cruise in the Otranto Strait area in the framework of *OTRANTO* project (R/V AEGAEO).

January 1995: Participation in an oceanographic cruise in the Cretan Sea area in the framework of *PELAGOS* project (R/V AEGAEO).

February 1995: Participation in an oceanographic cruise in the Otranto Strait area in the framework of *OTRANTO* project (R/V AEGAEO).

February 2000 – March 2000: Participation in an oceanographic cruise in the area of tropical Atlantic in the framework of *North Brazil Current Rings Experiment (NBC)* project (R/V SEWARD JOHNSON).

August 2001: Participation, as chief scientist, in an oceanographic cruise in the Red Sea in the framework of *Red Sea Outflow Experiment (REDSOX)* project (R/V MURICE EWING).

November 2004: Participation in an oceanographic cruise in the southern Aegean, in the framework of *Internal Wave Mixing Experiment in the Aegean Sea* project (R/V Oceanus).

March 2005: Participation in an oceanographic cruise in the Aegean Sea, for CTD survey and profiling float deployment in the framework of the *Profiling Floats Observations in the Aegean Sea* project (R/V AEGAEO).

February 2006: Participation in an oceanographic cruise in the Aegean Sea, for CTD survey and profiling float deployment in the framework of the *Profiling Floats Observations in the Aegean Sea* project (R/V AEGAEO).

Teaching experience

- One (1) undergraduate course at the Department of Physics, University of Athens (Physical Oceanography) since 2009.
- Eight (8) graduate courses at the graduate program in Oceanography and Marine Environmental Management and at the graduate Program in Environmental Physics, University of Athens (Introduction to Physical Oceanography, Air-Sea Interaction, Dynamical Physical Oceanography, Waves and Tides, Numerical Modelling in Oceanography, Air-sea-land interactions, Data Analysis Methods, Operational Oceanography) since 2002.

- Teaching textbook on the “*Introduction to numerical modeling in Physical Oceanography*”
- Participation in the supervision of four (6) PhD students
- Supervision or participation in the supervision of nineteen (19) MSc students of the graduate programs in Oceanography and Marine Environmental Management and Environmental Physics and Meteorology, University of Athens
- Supervision of five (5) undergraduate students dissertations.

Publications in peer reviewed journals and books

[1] *Wind induced sea level variability in the Red Sea*, S. S. Sofianos and W. E. Johns, Geophysical Research Letters, 28, 3175-3178, 2001.

[2] *Heat and freshwater budgets in the Red Sea from direct observations at Bab el Mandeb*.

S. S. Sofianos, W. E. Johns, and S. P. Murray, Deep Sea Research II, 49, 1323-1340, 2002.

[3] *An Oceanic General Circulation Model (OGCM) investigation of the Red Sea circulation, 1. The exchange between the Red sea and the Indian Ocean*. S. S. Sofianos and W. E. Johns, Journal of Geophysical Research, 107, 3196, doi: 10.1029/2001JC001184, 2002.

[4] *An Oceanic General Circulation Model (OGCM) investigation of the Red Sea circulation. Part II.: The three-dimensional circulation in the Red Sea*. S. S. Sofianos and W. E. Johns, Journal of Geophysical Research, 108, 3066, doi: 10.1029/2001JC001185, 2003.

[5] *Interannual variability of atmospheric parameters over the Mediterranean basin fro 1945 to 1994*. A. Lascaratos, S. Sofianos, and G. Korres, In: Tracking long-term hydrological change in the Mediterranean Sea, Briand, F. (Ed.), CIESM Workshop Series, vol. 16, pp. 21-24, 2003.

[6] *Variability of sea water properties in the Ionian, Cretan and Levantine seas during the last century*. A. Theocharis, A. Lascaratos, and S. Sofianos, In: Tracking

long-term hydrological change in the Mediterranean Sea, Briand, F. (Ed.), CIESM Workshop Series, vol. 16, pp. 73– 76., 2003.

[7] ***Long term water masses: time scales***, A. Lascaratos, S. Sofianos, A. Theocharis and M. Tsimplis, in “*State of the Hellenic Marine Environment*”, Eds. V. Papathanasiou and A. Zenetos, HCMR Publ., 360 pp, ISBN: 960-86651-8-3, 2005.

[8] ***Nesting operational forecasting models in the Eastern Mediterranean: active and slave mode***, S. S. Sofianos, N. Skliris, A. Mantziafou, A. Lascaratos, G. Zodiatis, R. Lardner, D. Hayes, and G. Georgiou, Ocean Science Discussions, 3, 1225–1254, 2006.

[9] ***Hydrological changes in the Mediterranean Sea in relation to changes in the freshwater budget: A numerical modelling study***, N. Skliris, S. Sofianos and A. Lascaratos, Journal of Marine Systems, 65, 400-416, 2007.

[10] ***Observations of the summer Red Sea circulation***, S. S. Sofianos and W. E. Johns, Journal of Geophysical Research, VOL. 112, C06025, doi:10.1029 - 2006JC003886, 2007.

[11] ***Operational ocean forecasting in the Eastern Mediterranean: implementation and evaluation***, Zodiatis, G., R. Lardner, D. Hayes, G. Georgiou, S. Sofianos, N. Skliris, A. Lascaratos, Ocean Science, 4, 31-47, 2008. [TIMES CITED: 0]

[12] ***The Mediterranean Forecasting System***, Pinardi, N., Coppini, G., Dobricic, S., Fratianni, C., Tonani, M., Oddo, P., Manzella, G. M. R., Tziavos, C., Nittis, K., Larnicol, G., Poulain, P.-M., Send, U., Raicich, F., Griffa, A., Crispi, G., De Mey, P., Lascaratos, A., Sofianos, S., Kallos, G., Katsafados, P., Pytharoulis, I., Zavatarelli, M., Triantafyllou, G., Zodiatis, G., and Petit De La Villeon, L, Bulletin of the American Meteorological Society, submitted, 2008.

[13] ***Satellite-derived variability of the Aegean Sea ecohydrodynamics***, Skliris, N., Mantziafou, A., Sofianos, S., Gkanasos, A., Continental Shelf Research, 30 (5), pp. 403-418, 2010.

[14] ***Modelling the impact of Black Sea water inflow on the North Aegean Sea hydrodynamics***, Tzali, M., S. Sofianos, A. Mantziafou and N. Skliris, Ocean Dynamics, DOI: 10.1007/s10236-010-0277-3, 2010.

CITATIONS: 75

Publications in proceedings of international conferences

- [1] *Atmospherically forced exchange through the strait of Bab el Mandeb.* W. E. Johns, S. P. Murray, and S. S. Sofianos, 1998 Ocean Sciences Meeting, AGU, February 1998, San Diego, California, USA.
- [2] *Investigation of the seasonal exchange between the Red Sea and the Indian Ocean, a numerical model approach.* S. S. Sofianos and W. E. Johns, 2000 Ocean Sciences Meeting, AGU, January 2000, San Antonio, Texas, USA.
- [3] *The exchange flow at Bab el Mandeb and the inferred heat and freshwater budgets of the Red Sea.* W. E. Johns, S. S. Sofianos, and S. P. Murray, April 2000, EGS XXV General Assembly, Nice, France.
- [4] *Modeling the seasonal exchange between a semi-enclosed sea and the open ocean.* S. S. Sofianos and W. E. Johns, April 2000, EGS XXV General Assembly, Nice, France.
- [5] *Atmospherically forced exchange through the strait of Bab el Mandeb.* W. E. Johns, and S. S. Sofianos, April 2002, Villefrance, Second ONR Straits Workshop.
- [6] *Use of atmospheric forecast fields in ocean circulation and wave prediction models in Greek areas.* G.Korres, A.Lascaratos and S.Sofianos. 5th RAMS Workshop and Related Applications. 29 Sept. – 3 Oct. 2002, Santorini, Greece.
- [7] *The ALERMO ocean circulation forecast system.* G.Korres, A.Lascaratos, S.Sofianos and G.Kallos. 3rd EuroGOOS Conference, December 2002, Athens, Greece
- [8] *The TRITON wave forecast system.* G.Korres, A.Lascaratos, S.Sofianos and G.Kallos. 3rd EuroGOOS Conference, December 2002, Athens, Greece
- [9] *Exchanges of the Arabian Marginal Seas with the Indian Ocean,* W. E. Johns, S. P. Murray, S. Sofianos, D. B. Olson and F. Yao, IUGG 2003 Meeting, Sapporo, Japan, June 30 – July 11, 2003.
- [10] *Forcing mechanisms of the Aegean Sea Circulation,* S. Sofianos, N. Skliris, and A. Lascaratos, CIESM 2004 Meeting, Barcelona, May 2004.
- [11] *Deep water mass variability in the Eastern Mediterranean,* A. Lascaratos, and S. Sofianos, CIESM 2004 Meeting, Barcelona, May 2004.
- [12] *Relative Contribution of the Eutrophication and Hydromorphology to Bottom Oxygen Deficiency: The case of the Mediterranean and Black Seas,* J-N. Druon, W. Schrimpf, S. Dobricic, E. Peneva, A. Lascaratos, S. Sofianos, P. Garreau, S. Djavidnia, CIESM 2004 Meeting, Barcelona, May 2004.

- [13] *Monitoring the Saharan dust dispersion in the Mediterranean Sea with a numerical model (2001-2002)*, S. Sofianos, A. Lascaratos, and V. Vervatis, CIESM 2004 Meeting, Barcelona, May 2004.
- [14] *Modelling the impact of the Nile damming on the Mediterranean thermohaline circulation*, N. Skliris, A. Lascaratos, and S. Sofianos, CIESM 2004 Meeting, Barcelona, May 2004.
- [15] *Past and future changes in the Mediterranean "climate" in relation to changes in the freshwater budget: a numerical modeling study*, N. Skliris, S. Sofianos, A. Lascaratos, 36th International Liege Colloquium on Ocean Dynamics: "Marine Environmental Monitoring and Prediction", May 2004, Liege, Belgium.
- [16] *Limited area atmosphere/ocean forecasting system for the Eastern Mediterranean MFSTEP activities*, G. Kallos, S. Sofianos, I. Pytharoulis, P. Katsafados and N. Skliris, 2005 International Ocean Research Conference, UNESCO-TOS, Paris, France, June 2005.
- [17] *On the Forcing Mechanisms of the Aegean Sea Surface Circulation*, S. Sofianos, N. Skliris, V. Vervatis, D. Olson, V. Kourafalou, A. Lascaratos and W. Johns, Geophysical Research Abstracts, Vol.7, 04223, 2005.
- [18] *Changes in the Mediterranean Sea climate in relation to changes in the freshwater budget: a numerical modeling study*, N. Skliris, S. Sofianos and A. Lascaratos, Geophysical Research Abstracts, Vol.8, 02251, 2006.
- [19] *Implementation and evaluation of regional and coastal ocean forecasting systems in the Eastern Mediterranean*, G. Zodiatis, R. Lardner, D. Hayes, G. Georgiou, S. Sofianos, N. Skliris and A. Lascaratos, Geophysical Research Abstracts, Vol.8, 04627, 2006.
- [20] *Monitoring the evolution of the Aegean Sea thermohaline characteristics in the post-Eastern Mediterranean Transient period*, A. Theocharis, V. Vervatis and S. Sofianos, Geophysical Research Abstracts, Vol.8, 06515, 2006.
- [21] *Profiling Float Observations in the Aegean Sea*, S. Sofianos, A. Theocharis and V. Vervatis, Second Argo Science Workshop, Venice, Italy, March 13-18, 2006.
- [22] *Ocean Forecasting in the Eastern Mediterranean, the ALERMO system*, N. Skliris, S. Sofianos, A. Mantziafou and A. Lascaratos, CIESM 2007 Meeting, Istanbul, Turkey, 2007.

- [23] *Changes in the Aegean Sea Thermohaline Characteristics in the Post-Eastern Mediterranean Transient Period*, S. Sofianos, A. Theocharis and V. Vervatis, CIESM 2007 Meeting, Istanbul, Turkey, 2007.
- [24] *Modelling the Ecohydrodynamics of the Aegean Sea*, N. Skliris, A. Mantziafou, S. Sofianos, A. Lascaratos, I. Keramitsoglou, G. Vlahopoulos, N. Adaktilou and C. Cartalis, EGU General Assembly, Vienna 15-20 April 2007.
- [25] *Validation of Ocean Forecasts in the Levantine Basin, Eastern Mediterranean*, G. Zodiatis, R. Lardner, D. Hayes, G. Georgiou, S. Sofianos, N. Skliris, G. Kallos and A. Lascaratos, International Conference, Fluxes and Structures in Fluids, St. Petersburg, Russia, July 2007.
- [26] *The Mediterranean Operational Oceanography Network Forecasting System*, S. Sofianos, GODAE Coastal Workshop, Liverpool, UK, October 2007.
- [27] *A study of the plankton ecosystem of the Aegean Sea using Seawifs data and a 3D coupled hydrodynamic/biological model*, N. Skliris, A. Mantziafou, S. Sofianos, A. Lascaratos, I. Keramitsoglou, G. Vlahopoulos, C. Cartalis, V. Paraskevopoulou, M. Scoullou, EGU General Assembly, Vienna, April 2008.
- [28] *Evaluation of operational ocean forecasting in the Cyprus subregion*, G. Zodiatis, D. Hayes, R. Lardner, G. Georgiou, S. Sofianos, N. Skliris, A. Lascaratos, EGU General Assembly, Vienna, April 2008.
- [29] *Evaluating nesting procedures in ocean operational forecasting in the Eastern Mediterranean*, G. Zodiatis, S. Sofianos, N. Skliris, A. Mantziafou, A. Lascaratos, R. Lardner, D. Hayes, G. Gerogiou G., Fluxes and Fluid structure conference, Moscow, Lomonosov University, June 2009.
- [30] *Variability of sea surface temperature and chlorophyll in the Aegean Sea from satellite measurements*, N. Skliris, A. Mantziafou, S. Sofianos, A. Gkanasos, V. Vervatis, EGU General Assembly, Vol. 11, EGU2009-487, Vienna, April 2009.
- [31] *Water mass distribution and formation processes in the Aegean Sea*, V. Vervatis, S. Sofianos, and A. Theocharis, Vol. 11, EGU2009-4794, Vienna, April 2009.
- [32] *Oil spill dispersion forecasting system for the region of installation of the burgas alexandroulopis pipeline outlet (N.E. Aegean) in the framework of "DIAVLOS" project*, Tzali, M., Sofianos, S., Kallos, G., Mantziafou, A., Zafeirakou, A., Dermisis, V., Koutitas, Ch., Zervakis, V., AIP Conference Proceedings 1203, pp. 1037-1041, 2009.

- [33] *Long term variability of sea surface temperature in Mediterranean Sea*, Axaopoulos, P., Sofianos, S., AIP Conference Proceedings 1203, pp. 899-904, 2009.
- [34] *Ocean forecasting in the Aegean-Levantine region*, Sofianos S., Skliris, N. Mantziafou A. and Tzali M., Eos Trans. AGU, 91(26), Ocean Sci. Meet. Suppl., 2010.
- [35] *Satellite-derived long-term variability of sea surface temperature in the Mediterranean Sea*, N. Skliris, A. Mantziafou, S. Sofianos, A Gkanasos, P. Aksaopoulos, and V. Vervatis, Geophysical Research Abstracts Vol. 12, EGU2010-6448, EGU General Assembly, 2010.
- [36] *Sea surface temperature and chlorophyll non-seasonal variability in the Aegean sea by means of EOF analysis of satellite data*, N. Skliris, A. Mantziafou , S. Sofianos, A. Gkanasos and A. Lascaratos, 39th CIESM Congress, Venice, Italy, 2010.

Journal Reviewer

- Journal of Physical Oceanography
- Journal of Geophysical Research
- Deep Sea Research
- Geophysical Research Letters
- Ocean Science

Project evaluator

Participation in EU 6th and 7th Framework Project evaluation activities.

Collaborations

Collaboration with International and Greek Universities and Research Institutes:

1. University of Miami, Rosenstiel School of Marine and Atmospheric Science, USA
2. University of Washington, USA
3. Georgia Institute of Technology, USA
4. Louisiana State University, USA
5. Istituto Nazionale di Geofisica e Vulcanologia, Italy
6. University of Bologna, Italy
7. Centro Marino Internazionale, Italy
8. Consejo Superior de Investigaciones Cientificas, Spain

9. Universitat Politecnica de Catalunya, Spain
10. Israel Oceanographic & Limnological Research, Israel
11. Centre National del la Recherche Scientifique, Poled'Oceanographie Cotiere de Toulouse, France
12. Institut Francais de Recherche pour l'Exploitation de la Mer, France
13. Meteo France, France
14. University of Cyprus, Cyprus
15. Institute of Marine Sciences, Middle East Technical University, Turkey
16. International Ocean Institute, Malta Operational Centre, University of Malta, Malta
17. Universite de Liege, Belgium
18. Danish Meteorological Institute, Denmark
19. Proudman Oceanographic Laboratory, UK
20. UK Met Office, UK
21. University of Sofia, Department of Meteorology and Geophysics, Bulgaria
22. Irish Marine Institute, Ireland
23. Marine Hydrophysical Institute, Ukraine
24. Delft University of Technology, Netherlands
25. Finnish Institute of Marine Research, Finland
26. Institute for Coastal Research, Germany
27. University of Bern, Switzerland
28. University of Thessaloniki, Greece
29. University of Creta, Greece
30. Hellenic Center for Marine Research, Greece
31. University of Aegean, Greece