

**Vassilios D. Vervatis**  
Physical Oceanographer

Ocean Physics and Modelling Group, Department of Physics  
Section of Environmental Physics and Meteorology  
National and Kapodistrian University of Athens

[vervatis@oc.phys.uoa.gr](mailto:vervatis@oc.phys.uoa.gr)  
<http://www.oc.phys.uoa.gr>  
University Campus, Building Physics 5  
Athens 15784, Greece  
tel. +30 210 727 6839

---

### Education

- PhD, Physical Oceanography** 2012  
Department of Physics, NKUA.  
Title: *The dynamics of the Aegean-Levantine Seas and their climatic implications.*  
<https://pergamon.lib.uoa.gr/uoa/dl/object/1309762>
- MSc, Environmental Physics and Meteorology** 2005  
Department of Physics, NKUA.  
Title: *Saharan dust dispersion in the Mediterranean Sea: a numerical modelling study.*
- BSc, Physics** 2002  
Department of Physics, NKUA.

### Fellowships & Awards

- Postdoc - IKY** 2017-2019  
Host: Department of Physics, NKUA.  
Title: *Uncertainty assessment of the Mediterranean ecosystem using stochastic ocean modelling.*
- Postdoc - Centre National de la Recherche Scientifique (CNRS)** 2013-2015  
Host: Laboratoire d'Etudes en Géophysique et Océanographie Spatiales.  
Title: *Stochastic methods for regional ocean models and ensemble-based data assimilation.*

### Appointments

- Research Scientist & Adjunct Lecturer** 11/2015-  
Ocean Physics and Modelling Group, Department of Physics, NKUA. date  
<http://www.oc.phys.uoa.gr>
- Adjunct Lecturer** 2018-2019  
Department of Environmental Engineering, Polytechnic School, University of Western Macedonia.  
<http://enveng.uowm.gr> [vvervatis@uowm.gr](mailto:vvervatis@uowm.gr)
- Visiting Scientist** 04/2015-  
R&D Department, Mercator Océan, Ramonville Saint-Agne, France. 10/2015  
<http://www.mercator-ocean.fr> [vvervatis@mercator-ocean.fr](mailto:vvervatis@mercator-ocean.fr)

- Postdoctoral Researcher** 2013-03/2015  
Laboratoire d'Etudes en Géophysique et Océanographie Spatiales, CNRS, Toulouse, France.  
<http://www.legos.obs-mip.fr>
- Research Associate** 2004-2012  
Ocean Physics and Modelling Group, Department of Physics, NKUA.  
<http://www.oc.phys.uoa.gr>
- Research Associate** 2004-2012  
Institute of Accelerating Systems and Applications.  
<http://www.iasa.gr>

***Peer reviewed publications***

- 1. Distribution of the thermohaline characteristics in the Aegean Sea related to water mass formation processes: 2005-2006 winter surveys**, Vervatis, V. D., S. S. Sofianos, and A. Theocharis (2011), J. Geophys. Res., 116, C09034, <https://doi.org/10.1029/2010JC006868>.
- 2. Long-term sea surface temperature variability in the Aegean Sea**, Skliris, N., S. Sofianos, A. Gkanasos, P. Axaopoulos, A. Mantziafou, and V. Vervatis (2011), Advances in Oceanography and limnology, 2:2, 125-139, <https://doi.org/10.1080/19475721.2011.601325>.
- 3. Decadal scale variability of sea surface temperature in the Mediterranean Sea in relation to atmospheric variability**, Skliris, N., S. Sofianos, A. Gkanasos, A. Mantziafou, V. Vervatis, P. Axaopoulos, and A. Lascaratos (2011), Ocean Dynamics, <https://doi.org/10.1007/s10236-011-0493-5>.
- 4. The dynamics of the Aegean-Levantine Seas and their climatic implications**, Vervatis, V. D. (2012), Ph.D. Dissertation, School of Science, Faculty of Physics, Pergamos Institutional Repository/Digital Library of the University of Athens, <https://pergamos.lib.uoa.gr/uoa/dl/object/1309762>.
- 5. Mechanisms controlling the thermohaline circulation pattern variability in the Aegean-Levantine region. A hindcast simulation (1960-2000) with an eddy resolving model**, Vervatis, V. D., S. S. Sofianos, N. Skliris, S. Somot, A. Lascaratos, and M. Rixen (2013), Deep-Sea Res. Part I, 74, 82-97, <https://doi.org/10.1016/j.dsr.2012.12.011>.
- 6. Climate variability and water mass formation in the eastern Mediterranean Sea**, Sofianos S., V. Vervatis, N. Skliris, S. Somot, A. Lascaratos, and A. Mantziafou (2013), Springer Atmospheric Sciences, Advances in Meteorology, Climatology and Atmospheric Physics, Part 2, pages 729-735, <https://doi.org/10.1007/978-3-642-29172-2>.
- 7. An Integrated Weather and Sea State Forecasting System for the Arabian Peninsula (WASSF)**, Al Qahtani, J., E. Alaa, G. Kallos, G. Galanis, S. Sofianos, C. Mitsakou, C. Spyrou, C. Kalogeri, N. Bartsotas, J. Athanaselis, V. Vervatis, S. Solomos, P. Axaopoulos, D. W. Beard, and I. Alexiou (2014), Book Air Pollution Modelling and its Application XXIII, Pages 173-177, Publisher Springer International Publishing, [https://doi.org/10.1007/978-3-319-04379-1\\_28](https://doi.org/10.1007/978-3-319-04379-1_28).
- 8. Inter-annual/decadal variability of the north Aegean Sea hydrodynamics over 1960-2000**, Vervatis, V. D., N. Skliris, and S. S. Sofianos (2014), Medit. Marine Science, 15 (4), 696-705, <https://doi.org/10.12681/mms.852>.
- 9. Characterisation of errors of a regional model of the Bay of Biscay in response to wind uncertainties: a first step toward a data assimilation system suitable for coastal sea domains**,

Quattrocchi, G., P. De Mey, N. Ayoub, V. Vervatis, C.-E. Testut, G. Reffray, J. Chanut, and Y. Drillet (2014), *J. Oper. Oceanogr.*, 7 (2), 25-34, <https://doi.org/10.1080/1755876X.2014.11020156>.

**10. Climate variability and deep water mass characteristics in the Aegean Sea**, Georgiou, S., A. Mantziafou, S. Sofianos, I. Gertman, E. Özsoy, S. Somot, and V. Vervatis (2015), *Atmospheric Research*, 152, pp. 146-158, <https://doi.org/10.1016/j.atmosres.2014.07.023>.

**11. Investigating deep-water formation variability in the Aegean Sea and its influence in the adjacent basins deep circulation**, Sofianos, S., V. Vervatis, A. Mantziafou, M. Ravdas and S. Georgiou (2015), *Journal of Black Sea/Med. Environment*, Special Issue Vol. 21, pages 74-77, ISSN: 1304-9550, <http://blackmedjournal.org/volumes-archive/vol21-2015/vol-21-2015-special-issue/>

**12. MED-CORDEX initiative for Mediterranean Climate studies**, Ruti, P., S. Somot, F. Giorgi, C. Dubois, E. Flaounas, A. Obermann, A. Dell' Aquila, G. Pisacane, A. Harzallah, E. Lombardi, B. Ahrens, N. Akhtar, A. Alias, T. Arsouze, R. Aznar Lecocq, S. Bastin, J. Bartholy, K. Beranger, J. Beuvier, S. Bouffies-Cloche, J. Brauch, W. Cabos, S. Calmanti, J.-C. Calvet, A. Carillo, D. Conte, E. Coppola, V. Djurdjevic, P. Drobinski, A. Elizalde, M. Gaertner, P. Galan, C. Gallardo, S. Gualdi, M. Goncalves, O. Jorba, G. Jorda, B. Lheveder, C. Lebeaupin-Brossier, L. Li, G. Liguori, P. Lionello, D. Macias-Moy, B. Onol, B. Rajkovic, K. Ramage, F. Sevault, G. Sannino, M.-V. Struglia, A. Sanna, C. Torma, and V. Vervatis (2016), *Bulletin of the American Meteorological Society*, <https://doi.org/10.1175/BAMS-D-14-00176.1>.

**13. Data assimilative twin experiments in a regional configuration of the Bay of Biscay: a 4D EnOI approach based on stochastic modelling of the wind forcing**, Vervatis, V. D., C.-E. Testut, P. De Mey, N. Ayoub, J. Chanut, and G. Quattrocchi (2016), *Ocean Modell.*, 100, 2016, pp. 1-19, <https://doi.org/10.1016/j.ocemod.2016.01.003>.

**14. Ensemble downscaling of a regional ocean model**, Ghantous, M., N. Ayoub, P. De Mey-Frémaux, V. Vervatis and P. Marsaleix (2020), *Ocean Modelling*, 145, 101511, <https://doi.org/10.1016/j.ocemod.2019.101511>

**15. Dissolved oxygen variability in the Mediterranean Sea**, Mavropoulou, A.-M., V. Vervatis and S. Sofianos (2020), *Journal of Marine Systems*, 208, 103348, <https://doi.org/10.1016/j.jmarsys.2020.103348>

**16. Variability of water exchanges through the Strait of Hormuz**, Vasou, P., V. Vervatis, G. Krokos, I. Hoteit and S. Sofianos (2020), *Ocean Dynamics*, <https://doi.org/10.1007/s10236-020-01384-2>

**17. Investigating the impact of atmosphere-wave-ocean interactions on a Mediterranean tropical-like cyclone**, Varlas, G., V. Vervatis, C. Spyrou, E. Papadopoulou, A. Papadopoulos and P. Katsafados (2020), *Ocean Modelling*, 153, 101675, <https://doi.org/10.1016/j.ocemod.2020.101675>.

**18. The impact of tides on the Bay of Biscay dynamics**, Karagiorgos, J., V. Vervatis and S. Sofianos (2020), *J. Mar. Sci. Eng.*, 8(8), 617 <https://doi.org/10.3390/jmse8080617>.

**19. Assessment of a regional physical-biogeochemical stochastic ocean model. Part 1: ensemble generation**, Vervatis, D. V., P. De Mey-Frémaux, N. Ayoub, J. Karagiorgos, M. Ghantous, M. Kailas, C.-E. Testut and S. Sofianos, *Ocean Modelling*, under review.

**20. Assessment of a regional physical-biogeochemical stochastic ocean model. Part 2: empirical consistency**, Vervatis, D. V., P. De Mey-Frémaux, N. Ayoub, J. Karagiorgos, S. Ciavatta, R. Brewin and S. Sofianos, *Ocean Modelling*, under review.

***Publications in International Conferences' Proceeding with Reviewers***

1. Sofianos, S., A. Lascaratos and V. Vervatis, **Monitoring the Saharan dust dispersion in the Mediterranean Sea with a numerical model (2001-2002)**, Rapp. Comm. int. Mer. Médit., 37, 142, 2004.
2. Sofianos, S., N. Skliris, V. Vervatis, D. Olson, V. Kourafalou, A. Lascaratos and W. Johns, **On the forcing mechanisms of the Aegean Sea surface circulation**, Geophys. Res. Abstr., 7, 04223, EGU 1607-7962.
3. Theocharis, A., V. Vervatis and S. Sofianos, **Monitoring the evolution of the Aegean Sea thermohaline characteristics in the post-Eastern Mediterranean Transient period**, Geophys. Res. Abstr., 8, 06515, EGU.
4. Skliris, N., A. Mantziafou, S. Sofianos, V. Vervatis, A. Lascaratos, I. Keramitzoglou, G. Vlahopoulos, N. Adaktilou and C. Kartalis, **Modelling the ecohydrodynamics of the Aegean Sea**, Geophys. Res. Abstr., 9, 06481, EGU 1607-7962.
5. Sofianos, S., A. Theocharis and V. Vervatis, **Changes in the Aegean Sea thermohaline characteristics in the post-EMT period**, Rapp. Comm. int. Mer. Médit., 38, 200, 2007.
6. Skliris, N., A. Mantziafou, S. Sofianos, A. Gkanasos and V. Vervatis, **Variability of sea surface temperature and chlorophyll in the Aegean Sea from satellite measurements**, Geophys. Res. Abstr., 11, EGU 2009-487.
7. Vervatis, V., S. Sofianos and A. Theocharis, **Water mass distribution and formation processes in the Aegean Sea**, Geophys. Res. Abstr., 11, EGU 2009-4794 (oral presentation).
8. Skliris, N., A. Mantziafou, S. Sofianos, A. Gkanasos, P. Aksaopoulos and V. Vervatis, **Satellite-derived long-term variability of sea surface temperature in the Mediterranean Sea**, Geophys. Res. Abstr., 12, EGU 2010-6448.
9. Sofianos, S. and V. Vervatis, **The response of the Aegean and Levantine Seas to Changes of the air-sea fluxes**, Ocean Sciences Meeting, Salt Lake City, Utah, USA, 20-24 February 2012.
10. Sofianos, S., V. Vervatis, N. Skliris, S. Somot, A. Lascaratos and A. Mantziafou, **Climate variability and water mass formation in the Eastern Mediterranean Sea**, 11<sup>th</sup> International COMECAP2012, Athens, Greece, 30 May-1 June 2012.
11. Özsoy, E., S. Sofianos, I. Gertman, A. Mantziafou, A. Aydođlu, V. Vervatis, E. Tutsak, A. Lascaratos and M. A. Latif, **Deep-water variability and inter-basin interactions in the Eastern Mediterranean Sea**, MedCLIVAR 2012, Madrid, Spain, 26-28 September 2012.
12. Ravdas, M., S. Sofianos, A. Mantziafou and V. Vervatis, **The dynamics of the Ionian Sea and its climatic implications: Interannual simulation for the period 1960-2000**, Geophys. Res. Abstr., 15, EGU 2013-4909.
13. Somot, S., P. M. Ruti, F. Adloff, B. Ahrens, A. Alias, R. Aznar, J. Bartholy, S. Bastin, K. Béranger, J. Brauch, W. Cabos, S. Calmanti, J.-C. Calvet, A. Carillo, B. Decharme, A. Dell'Aquila, C. Dubois, V. Djurdjevic, P. Drobinski, A. Elizalde-Arellano, M. Gaertner, P. Galán, C. Gallardo, F. Giorgi, D. Gomis, S. Gualdi, A. Harzallah, M. Herrmann, D. Jacob, G. Jordà, S. Krichak, C. Lebeaupin-Brossier, B. L'Heveder, L. Li, G. Liguori, P. Lionello, E. Lombardi, A. Mariotti, P. Nabat, B. Onol, B. Raikovic, K. Ramage, D. Rostkier-Edelstein, G. Sannino, F. Sevault, M. Stéfanon, Y. Tramblay, and V. Vervatis, **The Med-CORDEX initiative: status of the simulations and first achievements**, Geophys. Res. Abstr., 15, EGU 2013-9427.

14. Kallos, G., G. Galanis, C. Spyrou, C. Mitsakou, S. Solomos, N. Bartsotas, C. Kalogeri, I. Athanaselis, S. Sofianos, V. Vervatis, P. Axaopoulos, A. Papapostolou, J. Al Qahtani, E. Alaa, I. Alexiou and D. Beard, **An integrated weather and sea-state forecasting system for the Arabian Peninsula (WASSF)**, Geophys. Res. Abstr., 15, EGU 2013-10629.
15. Sofianos, S., E. Özsoy, I. Gertman, V. Vervatis, S. Georgiou and M. Ravdas, **Deep-water variability and controlling mechanisms in the Eastern Mediterranean Sea**, Ocean Sciences Meeting, Honolulu, Hawaii, USA, 23-28 February 2014.
16. Vervatis, V., C.-E. Testut, P. De Mey, N. Ayoub, J. Chanut and C. Bricaud, **Quantification of ocean model error covariances in an ensemble of high-resolution Bay of Biscay simulations using stochastic modelling of the wind forcing**, Geophys. Res. Abstr., 16, EGU 2014-12019 (oral presentation).
17. Sofianos, S., V. Vervatis, A. Mantziafou and M. Ravdas, **Investigating deep-water formation variability in the Aegean Sea and its influence in the adjacent basins deep circulation**, MedCLIVAR 2014 Understanding Climate Evolution and Effects on Environment and Societies in the Old World Region, METU, Ankara, Turkey, 22-25 June 2014.
18. Vervatis, V., P. De Mey, C.-E. Testut, N. Ayoub, and G. Quattrocchi, **Ensemble estimation of background-error covariances using stochastic wind forcing: a coastal data assimilative twin experiment**, WWOSC 2014, Montréal, Canada, 16-21 August 2014 (oral presentation).
19. Vervatis, V., P. De Mey, C.-E. Testut, N. Ayoub, G. Quattrocchi, J. Chanut, and C. Bricaud, **A 4D EnOI twin-experiment in a Bay of Biscay regional configuration**, MyOcean science days conference on operational oceanography 2014, Toulouse, France, 22-24 September 2014 (oral presentation).
20. Vervatis, V., C.-E. Testut, P. De Mey, N. Ayoub, J. Chanut and Y. Drillet, **Towards an ensemble prediction method for Mercator Océan forecasting system: application to a regional configuration**, The 47<sup>th</sup> International Liege colloquium: Marine Environmental Monitoring Modelling and Prediction, Liege, Belgium, 4-8 May 2015.
21. Testut, C.-E., V. Vervatis, J.-M. Brankart and P. De Mey, **Towards an error covariance modelling using ensemble statistics for the Mercator Ocean reanalysis and forecasting system: application to a regional configuration**, 1<sup>st</sup> GODAE OceanView DA-TT Workshop, Met Office, Exeter, UK, May 20-22, 2015.
22. Vervatis, V., C.-E. Testut, P. De Mey, N. Ayoub, J. Chanut and Y. Drillet, **Towards an ensemble prediction method for Mercator Ocean forecasting system: application to a regional configuration**, GMMC/LEFE Workshop, Meteo-France, Toulouse, FR, June 15-17, 2015.
23. Struglia, M.-V., M. Adani, A. Carillo, G. Pisacane, G. Sannino, J. Beuvier, T. Lovato, F. Sevault and V. Vervatis, **Inter-annual variability of the Mediterranean thermohaline circulation in Med-CORDEX simulations**, Geophys. Res. Abstr., 18, EGU 2016-7213.
24. Vervatis, V., P. De Mey N. Ayoub, C.-E. Testut and S. Sofianos, **Stochastic Coastal/Regional Uncertainty Modelling: insights from ensemble sensitivity experiments**, GMMC/LEFE Workshop, Université de Toulon, Toulon, FR, June 7-9, 2016.
25. Pefanis, V., A. Nenes, A.-M. Mavropoulou, V. Vervatis and S. Sofianos, **Impact of Surface Water Turbidity on the dynamics of the Mediterranean Sea and its interaction with the atmosphere**, MedCLIVAR 2016 Learning from the past, perceiving the present, engaging for the future, Athens, Greece, 26-30 September 2016.

26. Vervatis, V., P. De Mey, M. Kailas, N. Ayoub and S. Sofianos, **Stochastic Coastal/Regional Uncertainty Modelling: insights from ensemble sensitivity/consistency experiments**, 5<sup>th</sup> GODAE OceanView COSS-TT-ICM5, Cape Town, South Africa, 3-7 April 2017 (oral presentation).
27. Vervatis, V., P. De Mey, M. Kailas, N. Ayoub and S. Sofianos, **Stochastic Coastal/Regional Uncertainty Modelling: a Copernicus marine research project in the framework of Service Evolution**, “Forced and Chaotic ocean variability: toward probabilistic oceanography”, a workshop by invitation, Grenoble, FR, April 20-21, 2017.
28. Ghantous, M., N. Ayoub, V. Vervatis and P. De Mey, **Downscaling model errors in the Bay of Biscay**, “Forced and Chaotic ocean variability: toward probabilistic oceanography”, a workshop by invitation, Grenoble, FR, April 20-21, 2017.
29. Vervatis, V., P. De Mey, N. Ayoub, M. Kailas and S. Sofianos, **Stochastic Coastal/Regional Uncertainty Modelling: a Copernicus marine research project in the framework of Service Evolution**, Geophys. Res. Abstr., 19, EGU 2017-10054.
30. Struglia, M.-V., M. Adani, A. Carillo, G. Pisacane, G. Sannino, J. Beuvier, T. Lovato, F. Sevault and V. Vervatis, **Multi-model analysis of the Eastern Mediterranean thermohaline circulation and representation of the EMT event in hindcast simulations**, 10<sup>th</sup> HyMeX Workshop, Barcelona, Spain, July 4-7, 2017.
31. Darmaraki S., S. Somot, F. Sevault, P. Nabat, G. Sannino, V. Djurdjevic, L. Li, L. Cavicchia, C. William, D. Sein, N. Bensoussan, M. Bensi, V. Cardi, G. Siena, N. Dunic, J. Garrabou, V. Vervatis, **Future evolution of marine heat waves in the Mediterranean: coupled regional climate projections**, 10th HyMeX Workshop, Barcelona, Spain, July 4-7, 2017.
32. Zodiatis, G., G. Galanis, A. Nikolaidis, H. Radhakrishnan, G. Emmanouil, G. Nikolaidis, R. Lardner, S. Sofianos, S. Stylianou, M. Nikolaidis, and V. Vervatis, **Downscaling the Copernicus CMEMS Med MFC in the Eastern Mediterranean: The new CYCOFOS forecasting systems at regional and sub-regional scales**, Operational Oceanography Serving Sustainable Marine Develop., 8 EuroGOOS IC, D/2018/14.040/1, ISBN 978-2-9601883-3-2, 516, Bergen, Norway, 3-5 October 2017.
33. V. Vervatis, P. De Mey, M. Kailas, N. Ayoub, G. Charria, and S. Sofianos, **Stochastic Coastal/Regional Uncertainty Modelling and Array Design**, GODAE OceanView Joint DA-TT & OSEval-TT Meeting, CMRE, La Spezia, 11-13 October 2017.
34. Zodiatis, G., H. Radhakrishnan, G. Galanis, A. Nikolaidis, G. Emmanouil, G. Nikolaidis, R. Lardner, S. Stylianou, M. Nikolaidis, S. Sofianos and V. Vervatis, **Downscaling the Copernicus marine service in the Eastern Mediterranean**, Abstract OM14A-2026, Ocean Sciences Meeting, Portland, OR, 12-16 February 2018.
35. Vervatis, V., P. De Mey, M. Kailas, N. Ayoub and S. Sofianos, **Model uncertainties stemming from ocean-biogeochemical autoregressive processes: a high-resolution application for the Bay of Biscay**, Abstract OM14A-2027, Ocean Sciences Meeting, Portland, OR, 12-16 February 2018.
36. Mavropoulou, A.-M., V. Vervatis, A. Nenes and S. Sofianos, **Interannual to decadal variability of the Oxygen minimum zone in the Mediterranean Sea**, The 50<sup>th</sup> International Liege colloquium on ocean dynamics: Long-term studies in oceanography, Liege, Belgium, 28 May - 1 June, 2018.

37. Vervatis, V., P. De Mey, M. Kailas, N. Ayoub, S. Ciavatta, R. Brewin and S. Sofianos, **Ensemble consistency analysis in coastal ecosystems: the Bay of Biscay paradigm**, 6<sup>th</sup> GODAE OceanView COSS-TT-ICM6, Puertos del Estado, Madrid, Spain, 19-21 September 2018.
38. Katsafados, P., C. Spyrou, G. Varlas, A. Papadopoulos, G. Korres, E. Papadopoulou and V. Vervatis, **Towards the incorporation of an ocean circulation model as an additional component in CHAOS modeling system**, 14<sup>th</sup> International COMECAP2018, Alexandroupolis, Greece, 15-17 October 2018.
39. De Mey-Frémaux, P., V. Vervatis, B. Lemieux-Dudon, J. Karagiorgos, N. Ayoub and S. Sofianos, **Generation, Consistency and Reliability of Ensemble-based Regional Physical/Biogeochemical Uncertainty Estimates**, 27<sup>th</sup> International Union of Geodesy and Geophysics (IUGG 2019), Montréal, Canada, 8-18 July 2019.
40. De Mey-Frémaux, P., V. Vervatis, B. Lemieux-Dudon, J. Karagiorgos, N. Ayoub and C.-E. Testut, **Generation, Consistency and Reliability of Ensemble-based Regional Physical/Biogeochemical Uncertainty Estimates, and their Use for Data Assimilation**, 4<sup>th</sup> China-France Joint Workshop on Operational Oceanography, Nanjing, China, 16-18 October 2019.
41. Vervatis, V., B. Lemieux-Dudon, P. De Mey-Frémaux, J. Karagiorgos, N. Ayoub and S. Sofianos, **Generation, Consistency and Reliability of Physical and Biogeochemical Ensemble-based Uncertainties at Regional Scales**, 4th Data Assimilation Task Team meeting of OceanPredict, Toulouse, France, 20-22 January 2020.
42. Vassou, P., V. Vervatis, G. Krokos, I. Hoteit and S. Sofianos, **Variability of water exchanges through the Strait of Hormuz**, Ocean Sciences Meeting, San Diego, California, USA, 16-21 February 2020.
43. Mavropoulou, A.-M., V. Vervatis, and S. Sofianos, **Dissolved oxygen response on the climate variability of the Mediterranean Sea**, Ocean Sciences Meeting, San Diego, California, USA, 16-21 February 2020.
44. Karagiorgos, J., V. Vervatis, B. Lemieux-Dudon, P. De Mey-Frémaux, N. Ayoub and S. Sofianos, **On the use of atmospheric ensembles to generate physical-biogeochemical ocean model uncertainties**, Ocean Sciences Meeting, San Diego, California, USA, 16-21 February 2020.
45. Mavropoulou, A.-M., V. Vervatis, and S. Sofianos, **Basin scale dissolved oxygen interannual variability of the Mediterranean Sea: Analysis of long-term observations**, EGU General Assembly 2020, Online, 4-8 May 2020, <https://doi.org/10.5194/egusphere-egu2020-15189>.
46. Kampouris, K., V. Vervatis, J. Karagiorgos, and S. Sofianos, **Oil spill forecasting systems uncertainty assessment in the Aegean Sea**, EGU General Assembly 2020, Online, 4-8 May 2020, <https://doi.org/10.5194/egusphere-egu2020-20228>.

***Publications in National Conferences' Proceeding with Reviewers***

1. Skliris, N., S. Sofianos, A. Mantziafou, V. Vervatis and A. Lascaratos, **Ocean forecasting in the eastern Mediterranean with the MFS-ALERMO system**, Proceedings of the 8th National Symposium of Oceanography and Fisheries, pp. 121, HCMR, Greece.
2. Sofianos, S., A. Theocharis and V. Vervatis, **Profiling float observations in the Aegean Sea**, Proceedings of the 8th National Symposium of Oceanography and Fisheries, pp. 27, HCMR, Greece.

3. Tzali, M., S. Sofianos, A. Mantziafou and V. Vervatis, **Impact of the Black Sea water on the circulation of the north Aegean Sea**, Proceedings of the 9th National Symposium of Oceanography and Fisheries, Vol. 1, pp. 450-455, HCMR, Greece.
4. Vervatis, V., S. Sofianos and A. Theocharis, **Water mass structure and its evolution in the Aegean and Levantine basins from direct observations**, Proceedings of the 9th National Symposium of Oceanography and Fisheries, Vol. 1, pp. 399-404, HCMR, Greece (oral presentation).
5. Mavropoulou, A.-M., V. Vervatis, A. Nenes and S. Sofianos, **Climatic trends of dissolved oxygen in the Mediterranean Sea**, Proceedings of the 12th National Symposium of Oceanography and Fisheries, Department of Computer Science of the Ionian University, Corfu, Greece, 30 May - 3 June, 2018, ISBN 978-960-9798-08-2. 223 pp.
6. Varlas, G., E. Marinou, A. Tsekeri, A. Gialitaki, K. Tsarpalis, C. Spyrou, S. Solomos, A. Papadopoulos, V. Amiridis, V. Vervatis, and P. Katsafados, **Implementation and evaluation of a wave-dependent sea spray parametrization scheme in modeling system CHAOS**, First scientific conference PANACEA, University of Crete, Heraklion, Greece, 23 - 24 September, 2019, ISBN 978-969-9430-20-3.

### **Selected Technical Reports**

- **Inter-basin exchange in the changing Mediterranean Sea: Impact on the ecosystems in the vicinity of the Straits connecting the Mediterranean Sea with the adjacent Basins**, V. Vervatis, N. Skliris, S. Sofianos (2012), MedEX (MarinERA ERA-NET project).
- **MedEX high-resolution reanalysis of the atmospheric conditions near the Straits of Gibraltar and Dardanelles for the last 2 decades**, V. Vervatis, N. Skliris, S. Sofianos (2012), MedEX (MarinERA ERA-NET project).
- **Prototype Operational Continuity for the GMES Ocean Monitoring and Forecasting Service**, S. Cailleau, J. Chanut, B. Levier, G. Reffray, V. Vervatis, R. Aznar, M. Sotillo (2014), MyOcean2 (FP7-SPACE-20011-1).
- **Stochastic Coastal/Regional Uncertainty Modelling**, V. Vervatis, P. De Mey, S. Sofianos, N. Ayoub, M. Kailas (2018), Copernicus - CMEMS Service Evolution, EU.
- **Stochastic Coastal/Regional Uncertainty Modelling**, V. Vervatis, P. De Mey, S. Sofianos, N. Ayoub, C.-E. Testut (2018), ECMWF Special Project, <https://www.ecmwf.int/en/research/special-projects/spgrverv-2016>.
- **Stochastic Coastal/Regional Uncertainty Modelling 2**, V. Vervatis, P. De Mey-Frémaux, B. Lemieux-Dudon, J. Karagiorgos, N. Ayoub, S. Sofianos (2020), Copernicus - CMEMS Service Evolution, EU.

### **Field Experience**

- **March 1-10, 2005: Profiling Floats Observations in the Aegean Sea**, HCMR R/V AEGAEO, ONR, US (N00014-04-1-0524) ([http://www.oc.phys.uoa.gr/lagr\\_obs.html](http://www.oc.phys.uoa.gr/lagr_obs.html)).
- **February 3-13, 2006: Profiling Floats Observations in the Aegean Sea**, HCMR R/V AEGAEO, ONR, US (N00014-04-1-0524) ([http://www.oc.phys.uoa.gr/lagr\\_obs.html](http://www.oc.phys.uoa.gr/lagr_obs.html)).



### **Funded Research Projects**

- **Copernicus - CMEMS – SCRUM**. Stochastic Coastal/Regional Uncertainty Modelling: sensitivity, consistency and potential contribution to CMEMS ensemble data assimilation; contract: 70/3/13337; consortium: NKUA, Greece and Laboratoire d'Etudes en Géophysique et Océanographie Spatiales, CNRS, France; funding 2016-2018: EU, CMEMS, Service Evolution, V. Vervatis: Co-I.  
<https://www.mercator-ocean.fr/en/mercator-ocean/copernicus/>  
<http://ted.europa.eu/TED/notice/udl?uri=TED:NOTICE:376109-2015:TEXT:EN:HTML>
- **Copernicus - CMEMS - SCRUM2**. Stochastic Coastal/Regional Uncertainty Modelling 2: Consistency, reliability, probabilistic forecasting and contribution to CMEMS ensemble data assimilation; contract: 70/3/15017; consortium: NKUA, Greece and Laboratoire d'Etudes en Géophysique et Océanographie Spatiales, CNRS, France; funding 2018-2020: EU, CMEMS, Service Evolution, V. Vervatis: Co-I.  
<https://www.mercator-ocean.fr/en/mercator-ocean/copernicus/>  
<http://ted.europa.eu/udl?uri=TED:NOTICE:336147-2017:TEXT:EN:HTML>

### **Participation in Research Projects**

- **ADIOS** - Atmospheric Deposition and Impact of pollutants, key elements and nutrients on the Open Mediterranean Sea.
- **Profiling Float Observation in the Aegean Sea**
- **MFSTEP** - Mediterranean Forecasting System Toward Environmental Prediction.
- **PYTHAGORAS II**.
- **ECOOP** - European COastal-shelf sea OPerational observing and forecasting system.
- **MyOcean** - Integration of pan-European capacity for Ocean Monitoring and Forecasting (GMES Programme).
- **WASSF** - Weather And Sea State Forecast. A weather, dust, wave, sea currents and tidal forecasting system for the Arabian Peninsula, Red Sea and Gulf Region.
- **MARINA Platform** - Evaluation of multi-purpose platforms for Marine Renewable Energy.
- **MedEX** - Inter-basin exchange in the changing Mediterranean Sea: Impact on the ecosystems in the vicinity of the straits connecting the Mediterranean Sea with the adjacent basins.
- **MyOcean2** - Prototype Operational Continuity for GMES Ocean Monitoring and Forecasting.
- **MyOcean Follow On** - Pre-Operational Marine Service Continuity in Transition towards Copernicus.

### **High Scalability Computational Projects (PI, Co-I)**

- **PRACE GR ARIS - SOUND** - Stochastic Ocean Uncertainty Modelling  
<https://hpc.grnet.gr/awarded/2nd-cut-off>
- **PRACE GR ARIS - INTEGEr** - Influence of the turbidity in the Global Ocean heat budget and fluxes: an OGCM application, <https://hpc.grnet.gr/awarded/6th-cut-off>
- **PRACE GR ARIS – INVenTORS-1, -2, -3** - Interannual variability of oxygen in the Mediterranean Sea  
<https://hpc.grnet.gr/awarded/4th-production-call>  
<https://hpc.grnet.gr/awarded/6th-production-call>  
<https://hpc.grnet.gr/awarded/8th-production-call>
- **PRACE GR ARIS - ASSIMILATE** - Data assimilation experiments in the Arabian Gulf and Marginal Seas, <https://hpc.grnet.gr/awarded/4th-production-call>
- **ECMWF Special Project - SCRUM** - Stochastic Coastal/Regional Uncertainty Modelling, <https://www.ecmwf.int/en/research/special-projects/spgrverv-2016>
- **ECMWF Special Project - SCRUM2** - Stochastic Coastal/Regional Uncertainty Modelling 2, <https://www.ecmwf.int/en/research/special-projects/spgrver2-2018>

### Invited Talks and Seminars

- **The dynamics of the Aegean-Levantine Seas and their climatic implications**, LEGOS/CNRS Seminars, Toulouse, France, 6 June 2013 (<http://www.legos.obs-mip.fr/evenements/seminaires/seminaire-septembre-2012-aout-2013>).
- **Vervatis, V.**, C.-E. Testut, P. De Mey, N. Ayoub, J. Chanut and C. Bricaud, **An ensemble data assimilation using stochastic modelling of the wind forcing in a NEMO coastal configuration of the Bay of Biscay**, NEMO Users meeting, Grenoble, France, July 7-8, 2014.
- **Forced and Chaotic ocean variability: toward probabilistic oceanography**, a workshop by invitation, Grenoble, FR, April 20-21, 2017 (<https://chaoticocean17.sciencesconf.org>).
- De Mey, P. et **V. Vervatis**, **Estimation et validation ensembliste des incertitudes dans l'océan côtier**. 2ème colloque de restitution TOSCA, Paris, 21-22 March 2017.
- **Stochastic Coastal/Regional Uncertainty Modelling: a Copernicus marine research project in the framework of Service Evolution**, NKUA, 28 April, 2017 (<http://env.phys.uoa.gr/seminaria/>).
- **Vervatis, V.**, P. De Mey, S. Sofianos, N. Ayoub, M. Kailas and Mercator Ocean Team, **Stochastic Coastal/Regional Uncertainty Modelling (SCRUM): Sensitivity, Consistency and potential contribution to CMEMS Ensemble Data Assimilation**, CMEMS Service Evolution R&D Copernicus Marine Week, Brussels, Belgium, September 25-29, 2017.
- **Vervatis, V.**, P. De Mey, S. Sofianos, N. Ayoub, J. Karagiorgos, B. Lemieux-Dudon and Plymouth Marine Laboratory Research Team, **Stochastic Coastal/Regional Uncertainty Modelling II (SCRUM2): Consistency, reliability, probabilistic forecasting and contribution to CMEMS ensemble data assimilation**, CMEMS General Assembly Meeting, Brussels, Belgium, May 20-24, 2019.

### Professional Societies and Associations

[EGU](#), [AGU](#), [SEOK](#), [CIESM](#), [MED-CORDEX](#), [GODAE-Ocean View](#), [Ocean Predict](#)

### Service

- Reviewer: Continental Shelf Research, Global and Planetary Change, Journal of Marine Systems (outstanding contribution reviewer award), Mediterranean Marine Science, Ocean Dynamics, Ocean Modelling, Ocean Science, Progress in Oceanography, Deep Sea Research Part II, Climate, Atmosphere, Remote Sensing.
- Research panels: Natural Environment Research Council, UK, Research & Innovation, <https://nerc.ukri.org/> ; Copernicus Climate Change Service, Data Evaluation for Climate Models, <https://climate.copernicus.eu/data-evaluation-climate-models> ; Copernicus Climate Change Service, Sector Engagement for C3S Translating EU User Requirements, <https://climate.copernicus.eu/secteur>.

### Teaching Experience

- **Physical Oceanography**. Co-Instructor, 2016-date, Postgraduate Course Environmental Physics and Meteorology, Department of Physics, NKUA, <http://en.env.phys.uoa.gr/postgraduate-studies.html>
- **Dynamical Physical Oceanography**. Co-Instructor, 2016-date, Inter-Institutional Postgraduate Course Oceanography and Management of the Marine Environment, NKUA, <https://oceanography.geol.uoa.gr>
- **Introduction to numerical modelling**. Co-Instructor, 2016-date, Inter-Institutional Postgraduate Course Oceanography and Management of the Marine Environment, NKUA, <https://oceanography.geol.uoa.gr>
- **Waves and Tides**. Co-Instructor, 2016-2017, Inter-Institutional Postgraduate Course Oceanography and Management of the Marine Environment, NKUA,

- <https://oceanography.geol.uoa.gr>
- **Dynamics of Atmosphere and Oceans.** Co-Instructor, 2017-2018, Inter-Institutional Postgraduate Course Naval and Marine Engineering, NKUA, [http://www.naval.ntua.gr/postgraduate\\_courses](http://www.naval.ntua.gr/postgraduate_courses)
- **Marine Biogeochemistry.** Adjunct Lecturer, 2018-2019, Undergraduate Course, Department of Environmental Engineering, Polytechnic School, University of Western Macedonia, <http://enveng.uowm.gr>
- **Introduction to Oceanography.** Adjunct Lecturer, 2018-2019, Undergraduate Course, Department of Environmental Engineering, Polytechnic School, University of Western Macedonia, <http://enveng.uowm.gr>