

Cirriculum Vitae

Name: Ioannis G. Mamoutos
Date of birth: 21 January 1983
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Education

- 2008: B.Sc. (4 year Degree) in Marine Sciences, Department of Marine Science, University the Aegean, Mytilene, Greece.
- 2010: M.Sc. In Mathematical Modeling, Department of Mathematics, University of the Aegean, Samos, Greece.
- 2022: PhD in Physical Oceanography, Department of Marine Science, University the Aegean, Mytilene, Greece.

Work Experience

- 2011 – 2016, 2018: Research assistant at Laboratory of Physical and Chemical Oceanography (LPCO), Department of Marine Sciences, University of the Aegean, Mytilene, Greece.
- 2017: February 1st to December 31st Scientific Technical Officer (STO) at Ocean Climate and Information Services (OCIS) section, Marine Institute, Galway, Ireland.
- 2019 – 2022: From 15/02/2019 to 28/02/2022 research associate at Operational Oceanography Group (POSEIDON System), Institute of Oceanography, Hellenic Centre for Marine Research, Anasyssos, Greece
- 2022 – Now: Research associate at LPCO, Lecturer (not permanent) at Department of Marine Sciences, University of the Aegean, Mytilene, Greece.

Teaching

Undergraduate courses

- Vector Calculus (Spring Semester 2021 – 2022).
- Calculus (Winter Semester 2022 – 2023).
- Differential Equations (Spring Semester 2022 – 2023).
- Oceanography of the Mediterranean Sea (Spring Semester 2022 – 2023).

Scientific Interests

- Ocean numerical simulations – coastal and region/basin scale.
- Data Assimilation Methods.
- Operational Forecasting using hydrodynamic and wave model – coupled or uncoupled.
- Internal Waves and mixing processes.

Participation in National and European Research Projects

- Southern European Seas : Assessing and Modelling Ecosystem changes (SESAME), funded by the 6th FP (6.3: Climate Change and Ecosystems) 01/01/ 2007 – 31/10/ 2007.
- Tracking Oil Spills and Coastal Awareness Network (TOSCA), funded by MED, 01/03/2011 – 31/03/ 2013.
- Policy-oriented marine Environmental Research for the Southern European Seas (PERSEUS), 21/08/2012 – 30/09/2015.
- THALIS – CCSEAWAVS, GSRT/NSRF, 01/11/2012 – 31/12/2013.
- AegeanMarTech – Technological and oceanographic cooperation Network for the Study of mechanisms fertilizing the North-East Aegean Sea, Thalís, GSRT/NSRF, 06/03/2013 – 31/05/2015.
- TAPAS – Tools for Assessment and Planning of Aquaculture Sustainability, Project funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 678396, 01/02/2017 – 30/11/2017.
- Kalloni Archetype (Pilot Oceanography System for monitoring the Gulf of Kalloni), funded by the Ministry of Education. 2997 (34), 1/1/2018 – 1/1/2019
- HIMIOFoTS – Hellenic Integrated Marine Inland water Observing Forecasting and offshore Technology System, 15/02/2019 – 31/10/2021.
- Copernicus Marine Service (CMEMS). Med-Waves Operational Group, 1/11/2021 – 28/02/2022.
- Evaluation, control and Mitigation of the Environmental impacts of shipping Emissions (EMERGE), financed by EU Program 2014-2020, Horizon 2020, 1/9/2022 – 31/12/2023.

Languages

- Greek (Native)
- English (Fluent)

Computing Skills

- Operation Systems: Linux/Unix, DOS, Windows.
- Programming Languages: Fortran, MATLAB, Python, Mathematica.
- Hydrodynamic Models: ROMS (Regional Ocean Modeling System).
- Wave Models: SWAN
- GIS Suites: ESRI ArcGIS, Golden Software Surfer.
- Office Suites: TeX/LaTeX, Microsoft Office, Open/Libre Office.

Experience in High Performance Computing Systems (HPC/Cluster)

- Use of ARIS supercomputer infrastructure (<https://hpc.grnet.gr>) for research projects PALIROIA (4/12/2015 - 23/04/2016), TWIK (1/12/2017 - 31/12/2018) FORAS 1 & 2 (2020 - 2021), IMVANA (2022 - 2023) allocating up to 1000 cores for scaling, benchmarking and run simulations using ROMS ocean model.
- Administrator and user of LPCO computing cluster, OCIS HPC systems (Prometheus, Ganymede, Europa) and POSEIDON system HPC facilities (Neptune 1 & 2, Avyssos 2, Pegasus).

Publications

- Housiadas K. D., Georgiou G. C. , **Mamoutos I. G.** , 2012. *Laminar axisymmetric flow of a weakly compressible viscoelastic fluid*. Rheologica Acta 51:511–526, DOI 10.1007/s00397-011-0610-x.
- L. Bellomo, A. Griffa, S. Cosoli, P. Falco, R. Gerin, I. Iermano, A. Kalampokis, Z. Kokkini, A. Lana, M.G. Magaldi, **I. Mamoutos**, C. Mantovani, J. Marmain, E. Potiris, J.M. Sayol, Y. Barbin, M. Berta, M. Borghini, A. Bussani, L. Corgnati, Q. Dagneaux, J. Gaggelli, P. Guterman, D. Mallarino, A. Mazzoldi, A. Molcard, A. Orfila, P.-M. Poulain, C. Quentin, J. Tintoré, M. Uttieri, A. Vetrano, E. Zambianchi, V. Zervakis, 2015: *Toward an integrated HF radar network in the Mediterranean Sea to improve search and rescue and oil spill response: the TOSCA project experience*. Proceedings of the Institute of Marine Engineering, Science, and Technology. Journal of operational oceanography 8(2). DOI:10.1080/1755876X.2015.1087184.
- Kokkini, Z., Zervakis, V., **Mamoutos, I.**, Potiris, E., Frangoulis, C., Kioroglou, S., Maderich, V., Psarra, S., 2017: *Quantification of the surface mixed-layer lateral transports via the use of a HF radar: application in the North – East Aegean Sea*. Continental Shelf Research, 147:17 – 31, doi.org/10.1016/j.csr.2017.04.006.
- **Mamoutos, I.**, Zervakis, V., Karydis, M., Krasakopoulou, E., Tragou, E., Frangoulis, C., Kolovoyiannis, V., Georgopoulos, D., Psarra, S., 2017: *The role of wind-forced coastal upwelling on the thermohaline functioning of the North Aegean Sea*, Continental Shelf Research, 147:52 – 68, doi.org/10.1016/j.csr.2017.05.009
- Stamatios Petalas, **Ioannis Mamoutos**, Alexandros Dimitrakopoulos, Angeliki Sampatakaki, Vassilis Zervakis, 2020: *Developing a Pilot Operational System for an Enclosed basin*. Journal of Marine Science and Engineering, 8(5):336 – doi:10.3390/jmse8050336.

- Sampatakaki Angeliki, Zervakis Vassilis, **Mamoutos Ioannis**, Tragou Elina, Gogou Alexandra, Triantaphyllou Maria, Skliris Nikolaos, 2021: *Investigation of the Inherent Variability of the Mediterranean Sea Under Contrasting Extreme Climatic Conditions*. *Frontiers in Marine Science*, Volume 8 – doi: 10.3389/fmars.2021.656737.
- **Mamoutos Ioannis**, Potiris Emmanuel, Tragou Elina, Zervakis Vassilis, Petalas Stamatios, 2021: *A High-Resolution Numerical Model of the North Aegean Sea Aimed at Climatological Studies*. *Journal of Marine Science and Engineering*, 9(12):1463 – doi: 10.3390/jmse9121463.
- Bourma, Evi, Leonidas Perivoliotis, George Petihakis, Gerasimos Korres, Constantin Frangoulis, Dionysios Ballas, Vassilis Zervakis, Elina Tragou, Petros Katsafados, Christos Spyrou, Manos Dassenakis, Serafim Poulos, Persefoni Megalofonou, Sarantis Sofianos, Theodora Paramana, Georgios Katsaounis, Aikaterini Karditsa, Stelios Petrakis, Apostolia-Maria Mavropoulou, Vasiliki Paraskevopoulou, Niki Milatou, Paris Pagonis, Spyros Velanas, Manolis Ntoumas, **Ioannis Mamoutos**, Manos Pettas, Sylvia Christodoulaki, Dimitris Kassis, Maria Sotiropoulou, Aspasia Mavroudi, Antigoni Moira, Dimitra Denaxa, Gerasimi Anastasopoulou, Emmanuel Potiris, Vassilis Kolovogiannis, Agisilaos-Alexandros Dimitrakopoulos, Stamatios Petalas, and Nikos Zissis, 2022: *The Hellenic Marine Observing, Forecasting and Technology System – An Integrated Infrastructure for Marine Research*. *Journal of Marine Science and Engineering* 10(3):329 – doi:10.3390/jmse10030329
- Petalas, S.; Tragou, E.; **Mamoutos, I.G.**; Zervakis, V., 2022: Simulating the Interconnected Eastern Mediterranean–Black Sea System on Climatic Timescales: A 30-Year Realistic Hindcast. *J. Mar. Sci. Eng.*, 10, 1786. <https://doi.org/10.3390/jmse10111786>
- Nagy, H.; **Mamoutos, I.**; Nolan, G.; Wilkes, R.; Dabrowski, T., 2023: High-Resolution Model of Clew Bay – Model Set-Up and Validation Results. *J. Mar. Sci. Eng.*, 11, 362. <https://doi.org/10.3390/jmse11020362>.
- Papadakis, O., **Mamoutos, I.**, Ramfos, A., Catanese, G., Papadimitriou, E., Theodorou A., J., Batargias, C., Papaioannou, C., Kamilari, M., Tragou, E., Zervakis, V., Katsanevakis, S. (2023). Status, distribution, and threats of the last surviving fan mussel populations in Greece. *Mediterranean Marine Science*, 24(3), 679–708. doi.org/10.12681/mms.35384.
- Potiris, M., **Mamoutos, I.G.**, Tragou, E., Zervakis, V., Kassis D, Ballas D., 2024. Dense Water Formation in the North–Central Aegean Sea during Winter 2021–2022. *Journal of Marine Science and Engineering*; 12(2):221. <https://doi.org/10.3390/jmse12/2/221>.

Participation in International Conferences

- **Ioannis Mamoutos**, Giorgos Kakagiannis, Elina Tragou: *Variability of mean sea level in the Greek Seas during the period 1961-2000, and projected mean sea level rise from updated climate model results following an IPCC emission scenario*. Thalys - CCSEAWAVS 2nd Annual meeting, Mytilene, Lesvos, Greece; 02/2014.
- **Ioannis Mamoutos**, Giorgos Kakagiannis, Elina Tragou: *Mean sea-level changes in the greek seas*. 6th Panhellenic Symposium on Coastal Management, National Technical

University of Athens, Athens, Greece; 11/2014.

- **Ioannis Mamoutos**, Vassilis Zervakis, Elina Tragou: *Assessing different turbulence closure schemes in the North Aegean: Preliminary results*. EGU General Assembly 2015, held 12-17 April, 2015 in Vienna, Austria.; 04/2015.
- **Ioannis Mamoutos**, Vassilis Zervakis, Elina Tragou: *Long term simulations of the North Aegean deep-waters' interannual variability*. 11th Panhellenic Symposium on Oceanography and Fisheries, Mytilene, Lesvos island, Greece 2015; 05/2015.
- **Ioannis Mamoutos**, Vassilis Zervakis, Elina Tragou, Zoi Kokkini, Manos Potiris: *Improving the monitoring and simulations of the Black Sea influence on the Aegean*. PERSEUS Final Scientific Conference, Brussels; 12/2015.
- **Ioannis Mamoutos**, Tomasz Dabrowski, Kierran Lyons, Garry McCoy: *A two way nested high resolution coastal simulation in a tidally dominated area: Preliminary results*. 8th EuroGOOS Conference, Bergen, Norway, 3 – 5 October 2017.
- **Ioannis Mamoutos**, Petalas Stamatis, Sampatakaki Angeliki, Dimitrakopoulos Agisilaos Alexandros, Vassilis Zervakis: *A high resolution hydrodynamic simulation of Lesvos semi-enclosed embayment Kalloni Gulf: Preliminary results*. 3rd HydroMedit Conference, Volos, Greece, 8 – 11 November 2018.
- Stamatis Petalas, **Ioannis Mamoutos**, Alexandros Dimitrakopoulos, Angeliki Sampatakaki, Vassilis zervakis 2019: *Prototype Oceanographic Monitoring system development for the Kalloni Bay, Lesvos, Greece*. CHEERS 2019 – Bordeaux France, October 2019.
- Stamatis Petalas, **Ioannis Mamoutos**, Elina Tragou, Vassilis Zervakis 2019: *A 30-year hindcast of the interconnected Eastern Mediterranean – Black Sea System: A first step towards climate projections for the Aegean Sea*, EGU General Assembly 2019, April 2019 Vienna, Austria.
- Angeliki Sampatakaki, Vassilis Zervakis, **Ioannis Mamoutos**, Elina Tragou 2019: *Internal Variability of the Mediterranean Sea Under different climate conditions*, EGU General Assembly 2019, April 2019 Vienna, Austria.
- Hazem Nagy, Kieran Lyons, Joseph V. McGovern, Diego Pereiro, **Ioannis Mamoutos**, Glenn Nolan, Tomasz Dabrowski 2021: *Recent Progress in Downscaled local Ocean Forecast Models for Irish Maritime Users*, 9 th EuroGOOS Conference, 3 – 5 May 2021.
- **Ioannis Mamoutos**, Vassilis Zervakis and Elina Tragou: *Investigating the impact of tides in the North Aegean on the deep water formation events (DWFe) during Eastern Mediterranean Transient (EMT)*, EGU General Assembly 2023, April 2023 Vienna, Austria.
- Manos Potiris, **Ioannis G. Mamoutos**, Vassilis Zervakis and Elina Tragou: *Record-high salinity and interannual dense water formation variability in the Aegean Sea coincide with reduced inflow of Black Sea Water*, EGU General Assembly 2023, April 2023 Vienna, Austria.
- Stamatis Petalas, Elina Tragou, **Ioannis Mamoutos** and Vassilis Zervakis: *On the role of Black Sea Waters in controlling the North Aegean buoyancy fluxes*, EGU General Assembly 2023, April 2023 Vienna, Austria.
- Vassilis Kolovoyiannis, Aikaterini Anna Mazioti, Evaggelia Krasakopoulou, Vassilis Zervakis, Eleni Anthi Tragou, **Ioannis Mamoutos**, Emmanouil Potiris, Stamatis Petalas, Christos Chatzilaou, Kyriaki Mosiou, Harilaos Kontoyiannis, Vasiliki Paraskevopoulou, and

Alexandros Athiniotis: *Implementation of a modelling system for the investigation of the Saronikos Gulf marine ecosystem (Eastern Mediterranean)*, EGU General Assembly 2023, April 2023 Vienna, Austria.

- Vassilis Zervakis, Evangelia Krasakopoulou, Elina Tragou, Vassilis Kolovoyiannis, **Ioannis Mamoutos**, Manos Potiris, Ioannis Androulidakis, Korina Mosiou, Maria Ignatia Kalatzi, Aikaterini Anna Mazioti, Christos Chatzilaou, Rafailia Filitsa Kougioumtzoglou, and Stamatios Petalas: *Development of a Coastal Oceanographic Observatory for the North Aegean Sea: The AEGIS projects*, EGU General Assembly 2023, April 2023 Vienna, Austria.
- Mosiou K., **Mamoutos I.,G.**, Zervakis V., Tragou E. and Krasakopoulou E.: *Assessing the wind wave climate at several scales in the offshore and coastal zones*, 2nd International Conference International Scientific Conference on Design and Management of Harbor Coastal and Offshore Works, Thessaloniki, Greece, May 24-27 2023.

Monographies

- Investigating the impact of Dardanelles flow at the thermohaline functioning of the Aegean Sea, Bachelor Thesis, Department of Marine Science, University the Aegean, Mytilene 2008, Greece.
- Analytical solutions using perturbation methods for the problem a Laminar axisymmetric flow of a weakly compressible viscoelastic fluid, Master Thesis, Department of Mathematics, University the Aegean, Samos 2010, Greece.
- Investigating the impact of Internal Waves (IW) in the vertical mixing processes of North Aegean deep Basins using ROMS ocean Model, Doctoral Thesis, Department of Marine Science, University the Aegean, Mytilene 2022, Greece.