

PERSONAL INFORMATION



Soultana ZERVOUDAKI

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Sex Female Date of birth 03/10/1971 | Nationality Hellenic.

RESEARCH INTERESTS

Spatiotemporal distribution patterns of zooplankton in relation to principal physical characteristics of the water column, mesoscale hydrological structures and biological variables. Zooplankton taxonomy. Ecology and ecophysiology of major groups of zooplankton. Plankton food webs in marine systems and the role of zooplankton in the control of microplankton communities (including harmful algal blooms). Trophic dynamics of plankton and secondary production. Zooplankton ecophysiology. Mesozooplankton resting eggs and vertical carbon fluxes. Copepod response on ocean acidification and metal accumulations. Biochemical indicators for zooplankton respiration and growth. Ballast water management, Marine Strategy.

WORK EXPERIENCE

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| 2011-now | Senior Researcher <i>Hellenic Centre for Marine Research (HCMR)</i> |
| 2006-2010 | Associate Researcher <i>Hellenic Centre for Marine Research (HCMR)</i> |
| 1996-2006 | Research Scientist <i>Hellenic Centre for Marine Research (HCMR)</i> |
| 1993-1996 | Research scientist with contract Zoology Lab, Section of Biology, <i>University of Athens, Panepistimioupolis, 15771</i> , European project (MAST-PELAGOS Contract MAS2-CT93-0059,EEC) |

EDUCATION AND TRAINING

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| 2005 | PhD in Oceanography Zoology Lab, Section of Biology, University of Athens, Greece Title of PhD Thesis: "Small pelagic Copepods in different marine environments" Recognition: Excellent |
| 1998 | MSc in Oceanography (Honor from the Greek State Scholarships Foundation) Zoology Lab, Section of Biology, University of Athens, Greece Title of Master Thesis: "Seasonal variation of zooplankton in a marine aquaculture" Recognition: Excellent |
| 1995 | Bachelor in Biology: Recognition: Very Good |

Zoology Lab, Section of Biology, University of Athens, Greece

Title of Bachelor Thesis: "Composition and seasonal variation of mesozooplankton in Cretan arc area"

Recognition: Excellent

PERSONAL SKILLS

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|-------------------|---------------|---------|--------------------|-------------------|---------|
| Mother tongue(s) | Greek | | | | |
| Other language(s) | UNDERSTANDING | | SPEAKING | | WRITING |
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C1/C2 | C1/C2 | C1/C2 | C1/C2 | C1/C2 |
| Fench | C1/C2 | C1/C2 | C1/C2 | C1/C2 | C1/C2 |
| German | A1 | A1 | A1 | A1 | A1 |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

Communication skills Good communication skills gained through my experience as a scientist.

Organisational managerial skills /Leadership (responsible in national projects and the good functioning of the zooplankton lab in our Institute)

Computer skills Good command of Microsoft Office™ tools, Sigma Stat, Sigma Plot, Grapher, Surfer, Statgraphic Plus, Corel Draw, Primer, Image Pro

Other Skills and competences

Scientific evaluator of the following peer review journals: Aquatic Microbial Ecology, Journal of Marine Systems, Journal of Environmental Management, International Journal of Limnology, Chinese Limnology and Oceanography and Marine Biology Research, Journal of Plankton Research, Continental Shelf Research, Marine Ecology Progress Series, etc.

Invited Reviewer of international Projects: Qatar Foudation Grants, RIA EU Projects
Guest Editor of Deep Sea Research II of the SI: *Recent Eastern Mediterranean Status*

Supervised students for internships and dissertation and lectures on Copepod production and grazing at the University of Athens in the frame of the MSc in Oceanography.

SELECTED PROJECTS (since 2000)

2000-today: Monitoring of Saronikos Gulf/ Seasonal and inter annual variation of mesozooplankton in SaronikosGulf.

IRIS-SES (2015-2016)- Integrated Regional monitoring Implementation Strategy in the South European Seas/IRIS. DG ENV.

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| 2015-2017: ActionMed: Action Plans for Integrated Regional Monitoring Programmes, Coordinated Programmes of Measures and Addressing Data and Knowledge Gaps in Mediterranean Sea” 1/11/2015-31/1/2017. Funded by DG ENV, Grant Agreement No 11.0661/2015/712631/SUB/ENVC.2 |
| 2017-2019: “MEDCIS: Support Mediterranean Member States towards Coherent and coordinated Implementation of the second phase of the MSFD” 1/3/2017 – 28/2/2019. Funded by DG ENV, Grant Agreement No 11.0661/2016/748067/SUB/ENVC.2. |
| 2019-2021: ‘MEDREGION: SUPPORT MEDITERRANEAN MEMBER STATES TOWARDS IMPLEMENTATION OF THE MARINE STRATEGY FRAMEWORK DIRECTIVE NEW GES DECISION AND PROGRAMMES OF MEASURES AND CONTRIBUTE TO REGIONAL/SUBREGIONAL COOPERATION”. |
| 2018-today: Marine Strategy Framework directive in Hellenic Sea Waters, Descriptions 1 and 4. |
| 2019-today: Quotation for the provision of Site Survey and Environmental sampling Habitat Assessment Baseline surveys services WEST PATRAIKOS GULF, WESTERN GREECE |
| PERSEUS (2011-2015) (Policy-oriented marine Environmental Research in the Southern EUropean Seas) |
| ATMOMED The impact of atmospheric deposition on the microbial food web. MESOAQUA/mesocosm facilities Heraklion Crete 2012 |
| MEDEX (2009-2011): Inter-basin exchange in the changing Mediterranean Sea: Impact on ecosystems in the vicinity of the Straits connecting the Mediterranean Sea with the adjacent Basins. MarinERAEU 6th FP. ERA-NET Scheme, 2009-2011 |
| 2010-2014: Mediterranean Sea Acidification in a changing climate (MedSeA). Effects of acidification on zooplankton communities (Field and Lab experiments). |
| 2007-2015: CROA-Copepod Response to Ocean Acidification. NSRF. |
| 2010-2011: UNDERSTANDING THE DYNAMICS OF INVASIVE SPECIES UNDER CONTRASTING MARINE ECOSYSTEMS. THE CASE STUDY OF THE CLADOCERAN <i>PENILIA AVIROSTRIS</i> (PROGRAMME FOR THE PROMOTION OF THE EXCHANGE AND SCIENTIFIC COOPERATION BETWEEN GREECE AND GERMANY (IKYDA 2010). |
| 2006-today: Southern European Seas: Assessing and Modelling Ecosystem changes (SESAME)/EC, Mesozooplankton study in NE Aegean Sea, in Turkish Straits and in Marmara Sea as well as study of grazing and production rates of key mesozooplankton species in the above areas |
| 2007-σήμερα: Study of the long term effect of the Sea Diamond oil spill in Caldera/Santorini area/ Ministry of Mercantile Marine Effects of mesozooplankton community |
| 2006-2007: “Study of the environmental conditions in Antikira Bay”/ Greek Aluminium, Study of mesozooplankton community in Antikira Bay |
| 2004-2005, Transfer and Fate of Harmful Algal Bloom (HAB) toxins in European Marine Waters (FATE)/EC, Effect of toxic phytoplankton to the copepods grazing and production rates. |
| 2002-2004: «Invasion of Mnemiopsis into the Saronikos Gulf (Aegean sea): a question of origin and effect on ecosystem» NATO Science Programme/Study of the dynamic of population of Ctenophores as well as grazing and production experiments with this group. |

2001-2003: «Impact of natural and trawling events on re-suspension, dispersion and fate of pollutants» (INTERPOL)/EC, Study of mesozooplankton community in Thermaikos Bay, copepod production and study of resting eggs in sediments of copepods and cladocerans

2000-2001: “ Distribution of the ctenophore *Mnemiopsis leidyi* in Aegean Sea, its effect on pelagic communities and comparison of its populations between Aegean Sea and Black Sea/ Hellenic Russian Cooperation, GSRT

1998-2001 «Key coastal processes in the mesotrophic Skagerrak and the oligotrophic Northern Aegean: a comparative study» (KEYCOP)/ (EU-MAST-III), Study of mesozooplankton in NE Aegean Sea as well as study of grazing and production rates of key species of mesozooplankton, study of pelagic food web and estimation of the carbon flux in NE Aegean Sea

2000-2008: Monitoring of Thermaikos Gulf/ Seasonal and inter annual variation of mesozooplankton in Thermaikos Gulf.

2009-2010: STOUPA: Integrated marine and land survey for the investigation of the quantity, quality and water collection of the submarine water discharges of Stoupa, Municipality of Lefktro, Messinia County/ Seasonal variation of mesozooplankton in Stoupa

MEMBERSHIPS

CIESM Zooplankton Group

ICES Zooplankton ecology working Group

ICES/IOC/IMO Working Group on Ballast and Other Ship Vectors

Advisor of the Ministry of Maritime Affairs on Biodiversity.

AWARDS AND RECOGNITION

1998. Greek State Scholarships Foundation.

2003-2004 Marie Curie Fellowship worked in DMU (Denmark) with Prof. T.G. Nielsen

PUBLICATION LIST

1. Protopapa M., R. Koppelman, **S. Zervoudaki**, C., C. Wunsch, J. Peters, C. Parinos, F. Paraschos, A. Gogou, C. Möllmann. (2019). Trophic positioning of prominent copepods in the epi- and mesopelagic zone of the ultra-oligotrophic Eastern Mediterranean Sea. Deep-Sea Research Part II <https://doi.org/10.1016/j.dsr2.2019.04.011>.
2. Protopapa M., **S. Zervoudaki**, C. Tsangaris, D. Velaoras, R. Koppelman, S. Psarra, C. Möllmann. 2019. Zooplankton distribution, growth and respiration in the Cretan Passage, Eastern Mediterranean. Deep-Sea Research Part II <https://doi.org/10.1016/j.dsr2.2019.03.001>.
3. Siokou I., **Zervoudaki S.**, Velaoras D., Theocharis A., E. D. Christou, M. Protopapa, M. Pantazi. 2019. Mesozooplankton vertical patterns along an east-west transect in the oligotrophic Mediterranean Sea. Deep Sea Research Part II (in press)
4. Varkitzi, J. Francé, A. Basset, F. Cozzoli, E. Stanca, **S. Zervoudaki**, A. Giannakourou, G. Assimakopoulou, A. Venetsanopoulou, P. Mozetič, T. Tinta, S. Skejic, O. Vidjak, J-F. Cadiouf, K.

- Pagou (2018) Pelagic habitats in the Mediterranean Sea: A review of Good Environmental Status (GES) determination for plankton components and identification of gaps and priority needs to improve coherence for the MSFD implementation Ecological Indicators 95 203–218.
5. N. Kapetanaki , E. Krasakopoulou , E. Stathopoulou , A. Pavlidou, **S. Zervoudaki** , M. Dassenakis and M. Scoullos (2017). Simulation of Coastal Processes affecting pH with Impacts on Carbon and Nutrient Biogeochemistry. Mediterranean Marine Science DOI: <http://dx.doi.org/10.12681/mms.14439>.
 6. Tsagaraki, T.M., Herut, B., Rahav, E., Berman Frank, I.R., Tsiola, A., Tsapakis, M., Giannakourou, A., Gogou, A., Panagiotopoulos, C., Violaki, K., Psarra, S., Lagaria, A., Christou, E.D., Papageorgiou, N., **Zervoudaki, S.**, de Puelles, M.L.F., Nikolioudakis, N., Meador, T.B., Tanaka, T., Pedrotti, M.L., Krom, M.D., Pitta, P. (2017). Atmospheric deposition effects on plankton communities in the Eastern Mediterranean: A mesocosm experimental approach. *Frontiers in Marine Science*, 4 (JUL), art. no. 210, DOI: 10.3389/fmars.2017.00210.
 7. Christou, E.D., **Zervoudaki, S.**, De Puelles, M.L.F., Protopapa, M., Varkitzi, I., Pitta, P., Tsagaraki, T.M., Herut, B. (2017). Response of the calanoid copepod *Clausocalanus furcatus*, to atmospheric deposition events: Outcomes from a mesocosm study *Frontiers in Marine Science*, 4, art. no. 35, DOI: 10.3389/fmars.2017.00035.
 8. **Zervoudaki, S.**, E. Krasakopoulou, T. Moutsopoulos, M. Protopapa, S. Marro, F. Gazeau (2016) Copepod response to ocean acidification in a low nutrient-low chlorophyll environment in the NW Mediterranean Sea. *Estuarine Coastal and Shelf Science*. DOI: 10.1016/j.ecss.2016.06.030.
 9. R. Ptacnik, A. Gomes, S.-J. Royer (2016) A light-induced shortcut in the planktonic microbial loop. *Nature Scientific Reports* DOI: 10.1038/srep29286.
 10. Guillem Chust, Ernesto Villarino, Anne Chenuil, et al. Dispersal similarly shapes both population genetics and community patterns in the marine realm (2016) *Nature Scientific Reports* 6:28730 DOI: 10.1038/srep28730.
 11. Pitta, P., J. C. Nejstgaard, T. M Tsagaraki, **S. Zervoudaki** et al. (2016) Confirming the " Rapid phosphorus transfer from microorganisms to mesozooplankton in the Eastern Mediterranean Sea " scenario through a mesocosm experiment. *Journal of Plankton Research* DOI: 10.1093/plankt/fbw010
 12. Isari, S., **S. Zervoudaki**, J. Peters, G. Papantoniou, C. Pelejero, E. Saiz Lack of evidence for elevated CO₂-induced bottom-up effects on marine copepods: a dinoflagellate–calanoid prey–predator pair (2016) *ICES Journal of Marine Science* 73(3):650-658. DOI: 10.1093/icesjms/fsv078
 13. Hannides, C.S., I. Siokou, **S. Zervoudaki**, C. Frangoulis, M. A Lange (2015) Mesozooplankton biomass and abundance in Cyprus coastal waters and comparison with the Aegean Sea (Eastern Mediterranean) *Mediterranean Marine Science* 16(2):373-384 DOI: 10.12681/mms.1171
 14. Isari, S., **S. Zervoudaki**, E. Saiz, C. Pelejero, J. Peters (2015). Copepod vital rates under CO₂-induced acidification: A calanoid species and a cyclopid species under short-term exposures. *Journal of Plankton Research*, DOI: 10.1093/plankt/fbv057.
 15. Hannides, C.S., **S. Zervoudaki**, C. Frangoulis, M. A. Lange (2014) Mesozooplankton stable isotope composition in Cyprus coastal waters and comparison with the Aegean Sea (eastern Mediterranean). *Estuarine Coastal and Shelf Science* 154: DOI 10.1016/j.ecss.2014.12.009.
 16. S. Isari, **S. Zervoudaki**, A. Calbet, E. Saiz, R. Ptacnikova, J. C. Nejstgaard, D. Sousoni, S. A. Berger, and R. Ptacnik. (2014). Light-induced changes on the feeding behaviour of the calanoid copepod *Clausocalanus furcatus* (Brady, 1883): evidence from a mesocosm study. *J. Plankton Res.* (2014) 0(0): 1–14. doi:10.1093/plankt/fbu054.

17. Calbet A., R. A. Martínez, S. Isari, **S. Zervoudaki**, J. C. Nejstgaard, P. Pitta, A. F. Sazhin, D. Sousoni, A. Gomes, S. A. Berger, T. M. Tsagaraki, R. Ptacnik, 2012: Effects of light availability on mixotrophy and microzooplankton grazing in an oligotrophic plankton food web: Evidences from a mesocosm study in Eastern Mediterranean waters. *Journal of Experimental Marine Biology and Ecology*, 424–425, 2012, 66–77.
18. Berline L, I. Siokou-Frangou, I. Marasov, O. Vidjak, M.L. Fernández de Puelles, M.G. Mazzocchi, G. Assimakopoulou, **S. Zervoudaki**, S. Fonda Umani, A. Conversi, C. Garcia-Comas, F. Ibanez, S. Gasparini, L. Stemmann, G. Gorsky, 2012: Intercomparison of six Mediterranean zooplankton time series. *Progress in Oceanography*, 97-100, 76–91.
19. Siokou I., **S. Zervoudaki**, E. D. Christou, 2013: Mesozooplankton community distribution down to 1000 m along a gradient of oligotrophy in the Eastern Mediterranean Sea (Aegean Sea). *Journal of Plankton Res* 35(6), 1313–1330, doi:10.1093/plankt/fbt089.
20. **Zervoudaki, S.**, C. Frangoulis, C. Svensen, E. D. Christou, E. Tragou, E. G. Arashkevich, T. N. Ratkova, I. Varkitzi, E. Krasakopoulou, K. Pagou, 2013: Vertical Carbon Flux of Biogenic Matter in a Coastal Area of the Aegean Sea: The Importance of Appendicularians. *Estuaries and Coasts*, DOI 10.1007/s12237-013-9723-z.
21. **Zervoudaki, S.**, C. Frangoulis, L. Giannoudi, E. Krasakopoulou, 2013. Effects of low pH and raised temperature on egg production, hatching and metabolic rates of a Mediterranean copepod species (*Acartia clausi*) under oligotrophic conditions. *Mediterranean Marine Science*, DOI:http://dx.doi.org/10.12681/mms.553.
22. **Zervoudaki, S.**, E.D. Christou, G. Assimakopoulou, H. Örek, A.C. Gucu, A. Giannakourou, P. Pitta, T. Terbiyik, N. Yucel, T. Moutsopoulos, K. Pagou, S. Psarra, E. Özsoy and E. Papathanassiou (2011). Copepod communities, production and grazing in the Turkish Straits System and the adjacent northern Aegean Sea during spring. *Journal of Marine Systems* 86 (3-4), 45-56.
23. Frangoulis, C., F. Carlotti, L. Eisenhauer, **S. Zervoudaki** (2010). Converting copepod vital rates into units appropriate for biogeochemical models. *Progress in Oceanography* 84, 43–51.
24. Pavlidou, H. Kontoyiannis, Ch. Anagnostou, I. Siokou–Frangou, K. Pagou, E. Krasakopoulou, G. Assimakopoulou, **S. Zervoudaki**, Ch. Zeri, J. Chatzianestis and R. Psyllidou-Giouranovits. (2010). «Biogeochemical Characteristics in the Elefsis Bay (Aegean Sea, Eastern Mediterranean) in relation to anoxia and climate changes» in: E. Yakushev (ed) *Handbook of Environmental Chemistry*, Springer-Verlag, Volume 4E / 1999 - Volume 12 / 2010.
25. Frangoulis K., Psarra S., Zervakis V., Meador T., Mara P., Gogou A., **Zervoudaki S.**, Giannakourou A., Pitta P., Lagaria A., Krassakopoulou E. Siokou I., (2009). Connecting plankton food web functioning and biogeochemical cycles in the Mediterranean area affected by the Black Sea water inflow. *J. Plankton Res.* (2010) 32(8): 1203-1216.
26. Siokou-Frangou, **S. Zervoudaki**, E. D. Christou, V. Zervakis, D. Georgopoulos (2009) Variability of mesozooplankton spatial distribution in the North Aegean Sea, as influenced by the Black Sea waters outflow. *Journal for Marine Systems*, 78(4), 557-575.
27. **Zervoudaki S**, T. G. Nielsen and J. Carstensen (2009). Seasonal succession and composition of the zooplankton community along an eutrophication– and salinity gradient exemplified by Danish waters. *Journal of Plankton Research* 31(12), 1475-1492.
28. **Zervoudaki, S.**, E. D. Christou, T. G. Nielsen, I. Siokou-Frangou, G. Assimakopoulou, A. Giannakourou, M. Maar, K. Pagou, E. Krasakopoulou, U. Christaki and M. Moraitou-Apostolopoulou (2007). The importance of small-sized copepods in a frontal area of the Aegean Sea. *Journal of Plankton Research* 29(4), 317–338.

29. **Zervoudaki, S.**, T.G. Nielsen, E. D. Christou and I. Siokou-Frangou (2006). Zooplankton distribution and diversity in a frontal area of the Aegean Sea. *Marine Biology Research*, 2:3, 149 – 168.
30. Tönnesson K , Maar M, Vargas C, Møller EF, Satapoomin S, **Zervoudaki S**, Christou E, Giannakourou A, Sell A, Petersen JK, Nielsen TG, Tiselius P. (2005) Selective feeding and grazing impact of *Oikopleura dioica* on an autumn protist community. *Marine Biology Research* 1(5): 365-373.
31. Maneiro I, Iglesias P, Guisande C, Riveiro I, Barreiro A, **Zervoudaki S**, Graneli E (2005) Fate of domoic acid ingested by the copepod *Acartia clausi* *Marine Biology*, 148: 123–130.
32. Siokou-Frangou I, **Zervoudaki S**, Kampouroglou V and Belmonte G (2005) Distribution of mesozooplankton resting eggs in sea bottom sediments of Thermaikos Gulf (Aegean Sea, Greece) and possible effects of resuspension. *Continental Shelf Research* 25: 2597-2608.
33. Shiganova TA, Christou ED, Bulgakova JV, Siokou-Frangou I, **Zervoudaki S**, Siapatis A (2004). Distribution and biology of *Mnemiopsis leidyi* in the northern Aegean Sea, and comparison with the indigenous *Bolinopsis vitrea* In: Dumont H, Shiganova T, Niermann U (eds). *Aquatic invasions in the Black, Caspian and Mediterranean Seas*. Kluwer Academic Publishers, 113-135.
34. Maar M, Nielsen TG, Gooding S, Tönnesson K, Tiselius P, **Zervoudaki S**, Christou C, Sell A and Richardson K (2004) Trophodynamic function of copepods, appendicularians and protozooplankton in the late summer zooplankton community in the Skagerrak. *Marine Biology*, 144: 917–933.
35. Tiselius P, Petersen JK, Nielsen TG, Maar M, Møller EF, Satapoomin S, Tönnesson K, **Zervoudaki S**, Christou E, Giannakourou A, Sell A, Vargas C (2003) Functional response of *Oikopleura dioica* to house clogging due to exposure to algae of different sizes. *Marine Biology*, 142: 253-261.
36. Vargas CA, Tönnesson K, Sell A, Maar M, Møller EF, **Zervoudaki S**, Giannakourou A, Christou ED, Satapoomin S, Petersen JK, Nielsen TG, Tiselius P (2002) Importance of copepods versus appendicularians in vertical carbon fluxes in a Swedish fjord. *Marine Ecology Progress Series*, 241: 125–138.
37. Maar M, Nielsen TG, Richardson K, Christaki U, Hansen OS, **Zervoudaki S** and Christou ED (2002) Spatial and temporal variability of the food web structure during the spring bloom in the Skagerrak. *Marine Ecology Progress Series*, 239: 11-29.
38. Shiganova TA, Mirzoyan ZA, Studenikina EA, Volovik SP, Siokou-Frangou I, **Zervoudaki S**, Christou ED, Skitra AY, Dumont HJ (2001) Population development of the invader ctenophore *Mnemiopsis leidyi*, in the Black Sea and in other seas of the Mediterranean basin. *Marine Biology*, 139:431-445.
39. Moraitou-Apostolopoulou M, **Zervoudaki S**, Kaporis K (2000) Composition, bathymetric and temporal differentiation of zooplankton in an oligotrophic area (South Aegean Sea). *Marine Life*, 10(1-2): 43-55.