

Curriculum Vitae (Nov 2023)

RUT PEDROSA PÀMIES, D.

Assistant Research Investigator

The Ecosystems Center

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Research Interests

- x Marine biogeochemistry
- x Cycling of elements in the deep
- x Role of microbes in regulating particle fluxes and sedimentation processes in marine ecosystems
- x Transfer and fate of organic pollutants in the ocean

and Dr. A. Calafat

Academic Appointments

- | | |
|--------------|--|
| 2022-present | * Assistant Research Investigator, The Ecosystems Center, Marine Biological Laboratory (Woods Hole, MA, USA) (equivalent of a tenure track position) |
| 2018-present | Research Scientist, The Ecosystems Center, Marine Biological Laboratory (Woods Hole, MA, USA) |
| 2016-2018 | Postdoctoral Scientist, The Ecosystems Center, Marine Biological Laboratory (Woods Hole, MA, USA) Supervisor: Dr. Maureen H. Conte |
| 2015-2016 | Assistant Researcher. |

- 2014 Visiting Researcher Hellenic Centre for Marine Research, Institute Oceanography(HCMR)(Anavyssos, Attiki, Greece). Supervisor Alexandra Gogou and Constantine Parinos. Topic Geochemical analysis of biomarkers in sediment trap samples and discussion of the results (6 weeks).
- 2012 Visiting Researcher HCMR(Anavyssos, Attiki, Greece). Supervisor Dr. Nikolaos Lampadariou and Dr Alexandra Gogou. Topic Geochemical analysis of surface samples and manuscript writing (3 months).
- 2011-2015 Pre-

Professional Affiliations

Geochemical Society, American Geophysical Union (AGU), Oceanography Society

Professional Service (Management and committees)

- 2023-2024 Advisor PhD Committee Charlotte Schnepfer (ETH, Zurich).
- 2023 NSF EarthCube funded Research Coordination Network (MERCSN) steering committee representative for the long time series Oceanic Flux Program Helping to develop FAIR data practices for commonly measured biological and biogeochemical variables in time series
- 2023-2024 Chair in the International Ocean Science Meeting (New Orleans, February 2024) session:
"Time Series Observations of Ocean Biogeochemistry: What We Have Learned and What We Will Learn" (Co-chairs: M. Noguchi Aita, M. Honda and A. E. White)
"Behavior, Fate, and Ecosystem Impacts of Aquatic Plastics" (Co-chairs: M. Duhaime, Z. Liu and J. K. Choi)
- 2023-2024 Topic Editor in Frontiers in Earth Science for the research topic "The Ocean Particle Flux and its Cycling Within the Deep Water Column"
- 2021-2022 Lead chair in the International Ocean Science Meeting session "Biogeochemistry of marine particles: from coastal to deep ocean", Honolulu, February 2022. chairs: Z. Liu, A. Bochdansky, A. Engel
- 2020 Editor of the Ecosystems Center (Marine Biological Laboratory) [Annual Report 2018-2019](#)
- 2019-2021 Topic Editor in Frontiers in Earth Science for the research topic "The Ocean Particle Flux and its Cycling Within the Deep Water Column"
- 2019 Co-Chair in the International Goldschmidt Conference session "The Oceanic Particle Flux and its Cycling Within the Deep Water Column", Barcelona, August 2019.
- 2010-2016 Assistant Secretary Doctoral Program in Marine Science (University of Barcelona, Coord. Miquel Canals)
- 2011-2016 Student Representative Doctoral Program in Marine Science (University of Barcelona).
- 2013 Ad hoc Reviewer, Doctoral Programs for the Andalusian Agency of Knowledge (AGAE). Assessment tasks for verification and modification of official Doctoral Programs 2012 (member of the doctoral committee).
- 2012 Assistant organizer for the International conference "The Deep Sea & Sub Seafloor Frontiers Conference" (DS3F) 14-15 March 2012, Sitges, Barcelona.

Reviewer for proposals for the National Science Foundation.

Review for journals Progress in Oceanography, Biogeosciences, Geochimica et Cosmochimica Acta, Continental Shelf Research, Aquatic Ecology, ACS Earth and Space Chemistry, Remote Sensing, Geosciences Research Letters, Limnology and Oceanography, Global Biogeochemical Cycles.

Scientific expertise

Analytical chemistry: analysis of lipid biomarkers (MS and GORMS), elemental composition (C, OC, TN and Ca), stable isotopic composition ($\delta^{13}C$ and $\delta^{15}N$), grain size, elemental analysis (MS and ICPOES), imaging (SEM/EDS)

Oceanographic instrumentation:

Other Participation in other Research Projects

2016-2018 National Science Foundation Oceanic Flux Program (OFF) Particle Flux Time Series (1978-). PI Maureen Conte Funding:

Role elemental and isotopic composition analysis, conference presentations and manuscript writing.

Ongoing Research Collaborators list

US national institutions M. H. Conte (Marine Biological Laboratory (MBL) oceanography, organic geochemistry), E. Ruff (MBL, genomics plastic research), J. Mark Welch (MBL, genomics/microscopy plastic research), A. Kumar (Marine Biological Laboratory, particles image analysis), J. Lloret and Ivan Valiela (MBL, coastal/estuarine plastic research), A. Subhas M. Hashim (WHOI, a, aBL

and arsenic in submarine canyons. *Progress in Oceanography*, , 218
doi.org/10.1016/j.pocean.2023.103122.

Conte, M., PedrosaPàmies, R., Honda, M., Herndl, G., 2022. The oceanic particle flux and its cycling within the deep water column. *Front. Earth Sci* 10:1020065. doi: 10.3389/feart.2022.1020065.

Tarrés, M., Cerdà Domènech, M., PedrosaPàmies R., Rumí Caparrós, A., Calafat, A., Canals, M., Sanchez Vidal, A., 2022. Particle fluxes in submarine canyons along a sedimented continental margin and in the adjacent open slope and basin in the SW Mediterranean Sea. *Progress in Oceanography* 203, 102783. doi:10.1016/J.POCEAN.2022.102783

PedrosaPàmies, R., Parinos, C., Sanchez Vidal, A., Calafat, A., Canals, M., Velaoras, D., Mihalopoulos, N., Kanakidou, M., Lampadariou, N. and Gogou, 2021. Atmospheric and oceanographic forcing impact on particle flux and carbon sequestration in the Eastern Mediterranean Sea: a trace sediment trap timeseries study in the deep Ierapetra Basin. *Frontiers in Earth Science* 9, 25, doi:10.3389/feart.2021.591948.

Lloret, J., PedrosaPàmies, R., Vandal, N., Rorty R., Ritchie M., McGuire, C., Chenoweth, K., Valiela, I., 2021. Salt marsh sediments act as sinks for microplastics and reveal effects of current and historical land use changes. *Environmental Advances*, 4, 100060, doi:10.1016/j.envadv.2021.100060*Both authors contributed equally to this

*This paper had a large coverage by the media and was cited in several news (Paper in Science, Standard Times, New Bedford Cape Cod Times, Falmouth Enterprise, Rhodes College news, etc.) and local radio programs (Local NPR for the Cape, Coast & Islands).

Bourrin, F., Uusõue, M., Artigas, M. C., Sánchez Vidal, A., Aubert, D., Menniti, C., Klar, J., Amblás, D., Calafat, A. M., Frigola, J., Iglesias, O., Manea, E., PedrosaPàmies, R., Quesada, S., Rayo, X., Rivera, J., Rumí, A., Tangherlini, M. and Tubau, 2021. Release of particles and metals into seawater following sediment resuspension of a coastal mine tailings disposal off Portmán Bay, Southern Spain, *Environmental Science Pollution Research* 18, doi:10.1007/s11356-021-14006-1.

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*PedrosaPamies, R, December 2021. Sinking marine particles and tropical storms in the North Atlantic. University of Southern Mississippi, Marine Science Seminar Series (Web Seminar).

*PedrosaPamies, R, July 2021. Tropical cyclone activity and its impact on marine ecosystems. Seminar talk and discussion. University of Chicago Francis and Rose Yuen Chinese Oceans (Webinar).

Jiang, X., Gallagher, S., PedrosaPamies, R, Ruff, R., Bochdansky, A., Liu, J, June 2021. Evaluation of plastic photodegradation. *Marine Chemistry* 367: 1-11. doi:10.1016/j.marchem.2021.06.002

*PedrosaPàmies, R.,

- PedrosaPàmies, R., SanchezVidal, A., Calafat, A., Canals, M., Parinos, C., Gogou, A., Lampadariou, N. February 2013 The deep basins of the Eastern Mediterranean Sea: results of a deep-sea physical and biogeochemical assessment. Annual ReDEco meeting Athens (Greece)
- PedrosaPàmies, R., Veres, O., RumínCaparrós, A., February 2013 Marine sedimentary particles as drivers of the deep marine ecosystem. Talk Conference on Interdisciplinary Doctoral Researchers (JIPI, University of Barcelona), Barcelona (Spain) (orally contributed)
- Canals, M., SanchezVidal, A., Cafat, A., PedrosaPàmies, R., Lastras, G. April 2013 Extreme event impacts on seafloor ecosystems. Talk. EGU (European Geosciences Union) General Assembly. Vienna (Austria)
- Durán, R., Canals, M., Lastras, G., SanchezVidal, A., Micallef, A., Amblas, D., PedrosaPàmies, R. September 2012. Seafloor impact of episodic events in the neighbourhood of Blanes submarine canyon head, NW Mediterranean Sea. Poster 3rd Annual Hermione Meeting. Faro (Portugal).
- RumínCaparrós, A., SanchezVidal, A., Calafat, A., Canals, M., PuigP., Martín, J., PedrosaPàmies, R., Amblas, D., Rayo, X. September 2012. 2009 and 2010-11 winter dense shelf water formation in the Gulf of Lion and its consequences in Cap de Creus submarine canyon. 3rd Annual Hermione Meeting. Faro (Portugal).
- PedrosaPàmies R., SanchezVidal, A., Calafat, A., Canals, M., Lampadariou, S. September 2012 The

2014 Lucía Quirós Collazos (Master in Oceanography and Management of Marine Environment, Univ. of Barcelona) MSc thesis "Carbon composition and isotopic characterization in nearshore sediments of the NW Mediterranean" Co-supervisor: Anna Sanchez Vidal

Undergraduate students (Marine Biological Laboratory)

2023 Lillian Cusa (Semester in Environmental Science, SES) student, the Ecosystems Center Project "

July 2021

Children's book collaboration with Gregory Monaghan (How our planet works?). Role interview with the writer/illustrator to help them to understand the dynamics