

February 2024 SCOR Newsletter # 53



Ocean Sciences Meeting 2024 Edition (& More!)

Meet SCOR at booth #607 at the Ocean Science Meeting (OSM) in New Orleans, USA (18-23 February 2024)! Executive Director Emily Twigg and representatives from SCOR working groups and projects will be present. Interested in a specific activity? [View the booth schedule here](#).

Scroll down for more news about the call for new SCOR working groups, the selected 2024 SCOR Visiting Scholars, new publications, and more.

Upcoming Annual Meetings:

- 2024: 16-18 October, Qingdao, China
- 2025: Santa Marta, Colombia
- 2026 LOCATION NOW ANNOUNCED: Helsinki, Finland

Working Groups and Projects at OSM 2024

WG 145 MarChemSpec

- Posters on [marine carbon dioxide removal \(mCDR\)](#) (CM24A-1140) and [trace metal complexation](#) (OB34C-0880).
- Test drive new software at the Ocean Carbon & Biogeochemistry (OCB) booth (#512)

WG 148 IQuOD

- Oral Presentation [CC41A-03 Quantification of uncertainties in global ocean temperature observations: the International Quality-controlled Ocean Database \(IQuOD\) product](#)

WG 157 MetaZooGene

- Oral Presentation [OT41A-01 Reference Sequences for DNA-based Analysis of Global Marine Diversity: MetaZooGene Database and Atlas](#)

WG 161 ReMO

- Town Hall [TH33K - ReMO: Respiration in the Mesopelagic Ocean](#)

WG 162 OASIS

- Community Workshop: This 2-day workshop (17-18 February) will bring the OASIS community together for its first face-to-face meeting to review current activities and projects, frame the main objectives of OASIS, discuss the four Grand Ideas, highlight emerging areas, and define what is needed as a community to reach these objectives. [Register and learn more here](#).

WG 168 4D-BGC

- Visit members at the [SCOR booth](#).

WG 169 GLUBS

- Visit members at the [SCOR booth](#).

GEOTRACES (View complete information [here](#))

- Visit members at the [SCOR booth](#), including for assistance registering datasets for inclusion in the next Intermediate Data Product.
- Oral Session [CT12A - Geochemical Tracers of Ocean Processes](#)
- Oral Session [OB42A - Biogeochemical Cycling in the Caribbean Sea, the Gulf of Mexico, and Beyond](#)
- Oral Session [OB41C - Speciation and Bioavailability of Trace Metals in the Marine Environment](#)
- Oral Session [HE53A - Heading South: Contrasting Biogeochemical Cycling of Trace Elements and Isotopes from Tropical to Southern Ocean Waters](#)
- Oral Session [OB53B - Observation-Based Data Products of Ocean Biogeochemistry and the Importance of Standardized Measurement and Uncertainty Estimation Protocols in Marine Science](#)
- Oral Session [OB11C - Time Series Observations of Ocean Biogeochemistry: What We Have Learned and What We Will Learn](#)
- Poster Session [OB14D - The Influence of Boundary Currents on Exchange Processes Between Continental Margins and the Open Ocean and Biogeochemical Consequences Poster](#)
- Town Hall [TH13F - Margin/Basin Biogeochemical Dynamics: Priorities and Future Directions](#)

IIOE-2 Early Career Scientist Network

- Poster [ED24B-0114 Report on the ITCOocean machine learning and species distribution course and hackweek: first event of the UN Decade of the Ocean capacity development initiative "Devising Early-Career Capacity Development - Indian Ocean"](#)

IMBeR

- Poster [HD44B-0249 Developing an Action Plan for the Ocean](#)

SOLAS

- Visit members at the [SCOR booth](#).
- The OCB Ocean Atmosphere Interaction Committee and SOLAS would like to invite everyone to the [Courtyard Brewery](#), a location near the Ernest N. Morial Convention Center with food and drinks, on Wednesday, Feb. 21 starting at 6:30 PM.
- The Biogeochemistry of Air-Sea Exchange Processes
 - [Poster Session AI44B](#)
 - [Oral Session AI51A](#)
- Oral Presentation [AI51A-06 Seasonal Variability in Concentrations of Free and Combined Amino Acids in Seawater and Associated with Nascent Primary Marine Aerosol at the BATS Station](#)
- Physical and Biogeochemical Variability and Changes in the World's Upwelling Systems: Present and Future
 - [Oral Session I PI13A](#)
 - [Oral Session II PI21A](#)
 - [Poster Session PI24A](#)
- Oral Presentation [OB53B-07 High-resolution neural network demonstrates strong CO2 source sink juxtaposition in the coastal zone](#)
- Community Meeting and Workshop - [Benefits vs Risks of Ocean Plastic Pollution Cleanups](#)
- Ecological and Biogeochemical Impacts of Plastic Pollution in the Marine Environment
 - [Poster Session CE44B](#)
 - [Oral Session CE51A](#)
- Poster [HE44E-2740 Southern Ocean deep convection – a wild card in emission reduction scenarios?](#)
- Poster [CE44C-0472 Marine Microplastics: Modelling Different Phase-out Scenarios and Understanding their Potential Implications for Marine Contamination](#)
- Poster [OB24B-0764 Southern Ocean biogeochemistry and primary production during the Last Interglacial](#)
- Poster [OB24B-0762 Southern Ocean deep convection events increase meridional temperature gradients in warm climates](#)
- Oral Presentation [OB31A-09 Nitrogen Cycling in the Agulhas Current II: Agulhas Current Dynamics Drive \(Sub\)Mesoscale Nitrate Fluxes That Fuel New Production](#)
- Poster [OB34D-0898 Nitrogen cycling in the Agulhas Current I: Local and remote signals of Indian Ocean processes](#)
- The Indian Ocean: Mean State, Natural Variability, and Climate Change
 - [Online Session OP31C](#)
 - [Poster Session CC34C](#)
- Poster [AI44B-2456 Photochemical Degradation Decreases the Concentration of Surfactants in the North Atlantic Seawater and the Associated Sea Surface Microlayer](#)
- Poster [OB14C-0716 Measuring marine dissolved inorganic carbon \(DIC\) photoproduction from space](#)
- Poster [OB44E-1001 Expanding the Application of Remote Sensing-based Marine Photochemical Models to Novel Biogeochemical Estimates](#)

- Poster [AI14B-2315 A Holistic Approach to Ocean Observations for Process Understanding: Bubble mediated exchange in the Labrador Sea \(BELS\)](#)

SOOS (View complete information [here](#))

- Visit members at the [SCOR booth](#).
- Side meeting of the Southern Ocean Fluxes Capability Working Group [Southern Ocean Fluxes \(SOFLUX\): Shaping the future together](#), 22 February. **Registration is closed.**
- Side Meeting of the Weddell Sea and Dronning Maud Land Regional Working Group. Date and place to be announced soon
- Session by SOFLUX CWG [AI14A - Advances in understanding of air-sea fluxes & interaction in the Southern Ocean](#)
- Session Polar Technology Task Team [HE14B - Autonomous Sensing and Monitoring in Polar Environments](#)
- Session by SOOS-endorsed project, International Nutrient Inter-comparison Voyage, [OT34C - Breaking Barriers: Bridging the Gap in Methodologies and Data Reporting for Ocean Biogeochemistry](#)
- Poster [CC44E-1398 Southern Ocean Observing System for sustained and coordinated observations in a changing world](#)

Call for New SCOR Working Groups

In case you missed it...

The 2024 Call for SCOR Working Groups is open until the **17 May 2024**. The selection of the new SCOR working groups will take place at the 2024 SCOR Annual Meeting scheduled to take place in Qingdao, China on 16-18 October 2024.

For more information, read the [full call and proposal instructions](#).

Congratulations 2024 SCOR Visiting Scholars!

Six [SCOR Visiting Scholars](#) were selected to provide training in ocean science in 2024:



Ramia Al Bakain
(Jordan to Lebanon)
Evaluation and removal of
contaminants from marine
sediments and biota



Isaure de Buron
(USA to Morocco)
Marine parasitology in semi-
enclosed coastal systems



Jessica Glass
(USA to Seychelles)
eDNA and population genetics



James Moffett
(USA to India)
Biogeochemistry of oxygen
minimum zones



Satoshi Nagai
(Japan to Philippines)
Harmful Algal Bloom genomics



Eleanora Puccinelli
(Netherlands to South Africa)
Best practices in aquatic food
web investigations: stable isotope
and fatty acid approaches

Recognition and Awards in the SCOR Community

2023 International Science Council Fellows

The ISC Fellowship recognizes individuals for their outstanding contributions to the promotion of science as a global public good.

- Jacqueline Uku, member of the SCOR Executive Committee 2019-2023
- John Church, Full member of WG 94 Altimeter Data and In-situ Current Observations
- Ramia Al Bakain, 2024 SCOR Visiting Scholar

The Oceanography Society (TOS) Honors 2024

TOS recognizes members who have made outstanding and sustained contributions to the field of oceanography through scientific excellence, extraordinary service and leadership, and/or strategic development of the field.

- *TOS Fellow*: Claudia Benitez-Nelson, recent Chair of the SCOR Capacity Development Committee, Full member of WG 146 Radioactivity in the Ocean, 5 decades later (RiO5)
- *TOS Fellow*: Frank Muller-Karger, IMBeR SSC member (2018-2020), Associated member WG 154 Integration of Plankton-Observing Sensor Systems to Existing Global Sampling Programs (P-OBS), Associated member WG 158 Coordinated Global Research Assessment of Seagrass System (C-GRASS)
- *TOS Fellow*: Mitsuo Uematsu, SOLAS SSC member (2001-2006)
- *2024 TOS Mentoring Award*: Charitha Bandula Pattiaratchi, founding contributor to IIOE-2

News from the Working Groups and Projects

2024 Call for Applications for the GEOTRACES ECS Committee

The GEOTRACES Early Career Scientists (ECS) committee will act as a strategic and operational body to coordinate and champion early career activities within the framework of GEOTRACES science under the supervision of the GEOTRACES Scientific Steering Committee (SSC) and the International Project Office (IPO). The GEOTRACES ECS committee will consist of 10-20 rotating members, who will each serve for a 2-year term. [Read the announcement here.](#)

IMBeR IMBIZO7 Call for Abstracts

IMBeR will hold its seventh IMBIZO (the Zulu word for 'a gathering') at the Institut Agronomique et Vétérinaire Hassan II (IAV) in Rabat, Morocco from 23-26 September 2024. Submit an abstract to one of the three workshops to be considered as a participant in IMBIZO7 by **19 February**. [Read about the IMBIZO7 here.](#)

Submit your data for the GEOTRACES IDP2025

Data and intercalibration reports must be submitted by 15 May. [View the IDP2025 timeline here.](#)

Declaration on Operationalising the Surface Ocean Carbon Value Chain

IOCCP participated in the publication of the Oostende Declaration, which calls for concerted international and intergovernmental efforts to create a robust, resilient and sustainable surface ocean carbon observing system. [Read more here.](#)

Latest news from the projects at:

SCOR Research projects:

- Marine biogeochemical cycles of trace elements and their isotopes ([GEOTRACES](#))
- Integrated Marine Biosphere Research ([IMBeR](#))
- Surface Ocean Lower Atmosphere Studies ([SOLAS](#))
- International Indian Ocean Expedition II ([IIOE-2](#))
- International Quiet Ocean Experiment ([IQOE](#))

SCOR Infrastructural projects:

- International Ocean Carbon Coordination Project ([IOCCP](#))
- Global Harmful Algal Blooms ([GlobalHAB](#))
- Southern Ocean Observing System ([SOOS](#))
- Changing Ocean Biological Systems ([COBS](#))
- Joint Committee on Seawater ([JCS](#))

Recent Publications

[WG 167 RUSTED Special Issue](#)

Read the preface to this special issue: Perron, M. M. G., S. Fietz, D. S. Hamilton, A. Ito, R. U. Shelley, and M. Tang. (2024). Preface to the inter-journal special issue "RUSTED: Reducing Uncertainty in Soluble aerosol Trace Element Deposition", *Atmos. Meas. Tech.* 17, 165–166, <https://doi.org/10.5194/amt-17-165-2024>

WG 165: Baldrich, A. M., P. A. Díaz, S. A. Rosales, C. Rodríguez-Villegas, G. Álvarez, I. Pérez-Santos, M. Díaz, C. Schwerter, M. Araya, B. Reguera. (2024) An unprecedented bloom of oceanic dinoflagellates (*Karenia* spp.) inside a fjord within a highly dynamic multifrontal ecosystem in Chilean Patagonia. *Toxins* 16: 77. <https://doi.org/10.3390/toxins16020077>.

WG 157: Bucklin, A., J.M. Questel, P.G. Batta-Lona, M. Reid, P.H. Wiebe, R.G. Campbell, and C.J. Ashjian (2023) Population genetic diversity and structure of the euphausiids *Thysanoessa inermis* and *T. raschii* in the Arctic Ocean: Inferences from COI barcodes. *Marine Biodiversity* 53:70. <https://doi.org/10.1007/s12526-023-01371-y>.

GEOTRACES: Chen, X.-G., M. Gledhill, M. C. Lohan, A. Milne, and E. P. Achterberg. (2024). Surface ocean biogeochemistry and deep ocean circulation control relationships between nutrient-type trace metals (Cd, Ni, Cu, and Zn) and nutrients in the South Atlantic Ocean near the subtropical front. *Geochimica et Cosmochimica Acta*. <https://doi.org/10.1016/j.gca.2024.01.001>.

WG 165: Díaz P. A. and R. I. Figueroa. (2023). Toxic algal bloom recurrence in the era of global change: Lessons from the Chilean Patagonian fjords. *Microorganisms* 11:1874. <https://www.mdpi.com/2076-2607/11/8/1874>.

COBS: Feng, Y., Xiong, Y., Hall-Spencer, J. M., Liu, K., Beardall, J., Gao, K., Ge, J., Xu, J., & Gao, G. (2024). Shift in algal blooms from micro- to macroalgae around China with increasing eutrophication and

climate change. *Global Change Biology*, 30, e17018. <https://doi.org/10.1111/gcb.17018>.

SOLAS & WG 167 RUSTED: Hamilton, D. S., A. R. Baker, Y. Iwamoto, S. Gassó, E. Bergas-Masso, S. Deutch, J. Dinasquet, Y. Kondo, J. Lloret, S. Myriokefalitakis, M. M. G. Perron, A. Wegmann, and J.-E. Yoon. (2023). An aerosol odyssey: Navigating nutrient flux changes to marine ecosystems. *Elementa: Science of the Anthropocene* 11 (1): 00037. <https://doi.org/10.1525/elementa.2023.00037>. Part of the SOLAS *Special Feature: Boundary Shift: The Air-Sea Interface in a Changing Climate*.

COBS: Hudson, C. J., Agostini, S., Wada, S., Hall-Spencer, J. M., Connell, S. D., & Harvey, B. P. (2023). Ocean acidification increases the impact of typhoons on algal communities. *Science of The Total Environment*, 865, 161269. <https://doi.org/10.1016/j.scitotenv.2022.161269>.

COBS: Jiang, M., Hall-Spencer, J.M., Gao, L., Ma, Z. and Gao, G. (2023), Nitrogen availability regulates the effects of a simulated marine heatwave on carbon sequestration and phycosphere bacteria of a marine crop. *Limnol Oceanogr.* <https://doi.org/10.1002/lno.12487>.

GEOTRACES: Léon, M., van Beek, P., Sanial, V., Baudet, C., Charette, M. A., Souhaut, M., Vivier, F., Kestenare, E., Jeandel, C., and Planquette, H. (2024). Investigation of hydrothermal activity in the South West Indian ridge region using Ra isotopes and ²²⁷Ac as tracers. *Progress in Oceanography*, 221, 103191. <https://doi.org/10.1016/j.pocean.2023.103191>.

WG 165: McManus, G., A. Mitra, B. Reguera, and L. Santoferrara. (2023). The Mixoplankton paradigm in plankton ecology. In *Harmful Algae News*. Editors B. Reguera, E. Bresnan. 73: 15-18. <http://www.e-pages.dk/ku/1556/>.

WG 165: Mitra, A. and S. G. Leles. (2023). A revised interpretation of marine primary productivity in the Indian Ocean: The role of mixoplankton. In: Tripathy, S.C., A. Singh (eds) *Dynamics of Planktonic Primary Productivity in the Indian Ocean*. Springer, Cham. https://doi.org/10.1007/978-3-031-34467-1_5.

WG 157: O'Brien, T.D., L. Blanco-Bercial, P.G. Batta-Lona, J.M. Questel, and A. Bucklin (2024) DNA barcode reference databases: MetaZooGene Atlas and Database. In: DNA Barcoding: Methods and Protocols (Robert Desalle, Ed.); Springer Protocols Methods in Molecular Biology 2744 (Humana Press) ISBN-13: 978-1071635803.

WG 165: Reguera, B., M. García-Portela, E. Velasco-Senovilla, P. Rial, L. Escalera, P. A. Díaz, and F. Rodríguez. (2024) Dinophysis, a highly specialized mixoplanktonic protist. *Front. Protistol.* 1:1328026. doi: 10.3389/frpro.2023.1328026. <https://www.frontiersin.org/articles/10.3389/frpro.2023.1328026/full>.

WG 165: Rodríguez, F., L. Escalera, B. Reguera, E. Nogueira, A. Bode, M. Ruiz-Villarreal, A. E. Rossignoli, B. Ben-Gigirey, V. Rey, and S. Fraga. (2024) Red tides in the Galician rías: historical overview, ecological impact, and future monitoring strategies. *Environmental Science: Processes & Impacts* 26, 16-34. <https://pubs.rsc.org/en/content/articlehtml/2023/em/d3em00296a>.

COBS: Thomas, M. K., and R. Ranjan. (2024). Designing More Informative Multiple-Driver Experiments. *Annual Review of Marine Science*, 16(1), 513–536. <https://doi.org/10.1146/annurev-marine-041823-095913>.

COBS: Zhang, X., Zhang, P., Deng, Z., Huang, R., Zhang, D., Tian, Y., Wang, N., Li, H., Wang, X., Jiang, X., Sun, J., Fu, Q., Yi, X., Qu, L., Zhou, C., Rao, Y., Zeng, X., Hall-Spencer, J.M., Gao, G., Gao, K. and Lin, X. (2023), Ocean acidification has a strong effect on communities living on plastic in mesocosms. *Limnol. Oceanogr. Lett.* 8: 675-684. <https://doi.org/10.1002/lol2.10329>.

Obituaries

Robert Fournier (Canada) served as Secretary of SCOR from 1986 to 1992. He was professor emeritus of ocean studies at Dalhousie University at the time of his passing. According to a memorandum by Dalhousie, he was also passionate about outreach and communicating science to the public. Having made an estimated 2,500 appearances on CBC radio and television since 1974, Dr. Fournier helped educate a generation of listeners and viewers on a wide range of scientific topics. The obituary by Dalhousie University can be read [here](#).



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Emily Twigg
SCOR Executive Director

Scientific Committee on Oceanic Research | 003 Robinson Hall, University of Delaware, Newark, DE
19716

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Sent by emily.twigg@scor-int.org