

Previsional programme GIFT 2025 “Exploring the Seafloor”

Introduction

For over 20 years, the EGU Education Committee has organised the GIFT (Geoscience Information for Teachers) workshop. GIFT takes place in parallel to the EGU’s General Assembly (annual conference). Each year GIFT explores a different geoscience topic from many different perspectives with leading scientists contributing to boosting our subject knowledge, well ahead of the textbooks. In addition, there are examples of implementing these topics in class by carrying out hands-on activities.

We return in 2025 to Vienna, where we will be ‘Exploring the Sea Floor’ in the middle of UNESCO’s Ocean Decade.

GIFT offers teachers a rich learning experience: high-quality lectures mixed together with hands-on practical activities and workshops; networking with colleagues from across Europe and beyond as well as a poster session that allows sharing of practice between our classrooms.

The Sea Floor (a.k.a the seabed, ocean floor & ocean bottom) is a complex and intriguing landscape, subject to many of the geological processes we experience on land. While its landscape continues to change, it is worth remembering that as of May 2023, 75% of the world’s seafloor sea floor is yet to be mapped, in part because of its inaccessible and challenging nature. Remember the lowest point in the ocean is much deeper than the highest point on land.

Although out of sight for so long, the sea floor has the same general characteristics of the continental land with mountains, plains, channels, canyons, ridges, exposed rocks and sediment covered areas. The sea floor allows scientists to draw connections between volcanic, tectonic, hydrothermal, and biological systems in order to better understand the Earth’s remarkable, evolving geography.

It was 1973 before we got the first glimpse of the floor of the deep ocean. The F.A.M.O.U.S. study of the mid-ocean will feature in this year’s GIFT when a manned submersible reached depths of 2800 m. Yet 4 years earlier, man had made his first steps on the Moon! What we do know about the ocean, is testimony to those scientists who have pushed barriers to advance our knowledge in topics as broad as climate science, resource management, ocean conservation and sustainability. Leading experts in these topics will join us at GIFT and share that knowledge with us. Will you be there?

Applications to attend the GIFT workshop in Vienna between 27th and 30th April 2025 are now open. Thanks to the generous support of the European Geosciences Union, teachers attending GIFT receive a registration waiver and a grant to cover travel and subsistence costs.

Speak NOW to your Senior Leaders to request time away from the classroom to attend this exciting event guaranteed to boost your subject knowledge and reinvigorate your teaching practice.

Sunday, 27 April 2025

16:00-18:00 GUIDED TOUR
OF THE NATURAL HISTORY MUSEUM
Welcome to the teacher attendees of GIFT
Entrance: Maria-Theresien-Platz 1010 Vienna

18:30-20:00 Ice breaker party at Austria Center Vienna (ACV)
EGU General Assembly place
Bruno-Kreisky-Platz 1, 1220 Vienna

Monday, 28 April 2025

08:30-08:45 Opening GIFT25
EGU welcomes GIFT participants
with President of EGU + Chair of the Education Committee (EC)

08:45-09:30 Lecture 1
The major stages in the discovery of the sea floor (history of sea floor exploration)
by **Angelo Carmelenghi**, OGS Trieste, Italy

09:30-10:15 Lecture 2
The expedition « F.A.M.O.U.S » (French American Mid Ocean Undersea Study), 1973-1974, the first-ever marine scientific exploration by manned submersibles of a diverging tectonic plate boundary on a mid-ocean ridge.
by **Marcia Maia**, Ifremer, France

10:45-11:15 Welcome in IODP/ECORD Bremen Cores Collection
A virtual visit from Zentrum für Marine Umweltwissenschaften(MARUM)
Core Repository in Bremen
by **Ulrike Prange**, MARUM

11:30-12:15 Lecture 3
Iceland and the surrounding seafloor –
insights into a complex geological system from its origins to the present day
by **Dr. Rouwen Lehné**, Technische Universität Darmstadt

12:15-12:30 INSTRUCTIONS for the poster session & the hands-on sessions

14:00>15:45 HANDS-ON ACTIVITIES (WS 1-2)
(2 groups alternating, 2 sessions x 1h30)

WS 1: EGU Geoscience Education Field Officers
Plate tectonics/subduction zones/rifting zones/paleomagnetism...
by **EGU Geoscience Education Field Officers (GEFO) Team**

16:15>18:00 WS 2: Copernicus Browser:
an open online platform for teaching geography with satellite (Sentinel 2) images
by **András Zlinszky**

18:00 TOUR OF THE EGU EXHIBITION

19:00-20:00 Townhall Meeting
The Educational Activities organised within several committees at EGU in cooperation
with Outreach and EDI Committees
Presentation of Education Committee goals and initiatives
with Stavros Stathopoulos, Gina P. Correia, Giuliana Panieri, Teresita Gravina, Solmaz
Mohadjer

Tuesday, 29 April 2025

08:30-09:15 Lecture 4
To define

09:15-10:00 Lecture 5
The seafloor life - Biodiversity of hydrothermal vents -
by **Ana Colaço** (University of the Azores)

10:45>12:30 HANDS-ON ACTIVITIES (WS 3-4)
(2 groups alternating; 2 sessions x 1h00)

WS 3: Maps

Using maps to study the seafloor (paper and digital tools) with geomapapp
Presentation of the portal and exercises to calculate seafloor spreading rate (and/or
plate motion) from the database
by **Teresita Gravina** and **Francesca Funicello**, EC members

WS 4: Back to some oceanographic expeditions with teachers at sea
Teachers on board a research vessel and exploration of the seafloor
by **Hélder Pereira** and **Faustine Gendron**, Teachers at sea

14:00-14:45 Lecture 6
Oman seafloor Outcrop
Discovering the ocean crust in the open air: Oman -
by **Georges Ceulener**, OBS-MIP / GET – CNRS

15:00-15:45 Lecture 7
Ocean crust in the mountains (ophiolitic series and orogenesis) -
by **Jean Marc Lardeaux**, University Cote d'Azur

16:15-18:00 **POSTER SESSION**
Teachers present and share school projects at EGU G.A
Discovering the Seafloor in Class

18:00-19:00 NETWORKING EVENT IN THE POSTER HALL

Wednesday, 30 April 2025

08:30-09:15 Lecture 8

when seafloor disappears in the subduction zone
Plate tectonics and evolution on subduction zones. –
Deputy President of the Division on Tectonics and Structural Geology (TS)
By **João C. Duarte**, University of Lisbon

09:15-10:00 Lecture 9

when seafloor appears in ocean ridges -
Formation of oceanic crust and the tectonic and magmatic diversity of mid-ocean
ridges -
by **Cannat Mathilde**, IPGP (lecture by ZOOM)

10:00-10:15 GIFT CERTIFICATES DISTRIBUTION

10:45-11:30 Lecture 10

The seafloor and resources for tomorrow
By **Antje Boetius** (to be confirmed)

11:30- 12:15 Lecture 11

Formation and preservation of seafloor massive sulfide mineralization along ultraslow
spreading ridges: An insight from the Arctic Ocean
by **Sabina Palinkas** (The Arctic University of Norway)

**13:00 GENERAL SESSION AND CONCLUDING REMARKS
& GOOD BYE!**

By **Jean-Luc Berenguer & Stavros Stathopoulos** (EC Committee)