# Division Meeting Seismology

Philippe Jousset (sm@egu.eu)

General Assembly 2021 | Wednesday, April 21, 13:30-14:30



https://www.egu.eu/sm/home/

Meetings | Publications | Outreach | www.egu.eu



# **Agenda and Topics**



- Welcome
- vEGU2021 (https://www.egu21.eu/)
- Awards & Medals
- Structure of the Seismology Division
- Meeting & Session Statistics
- Report from the ECS Team
- Jobs
- Any other business





F-E Region Austria

Time 2021-04-19 22:57:13.0 UTC

Magnitude 4.3

Epicenter 16.20°E 47.80°N

Depth 10 km

Status A - automatic ②



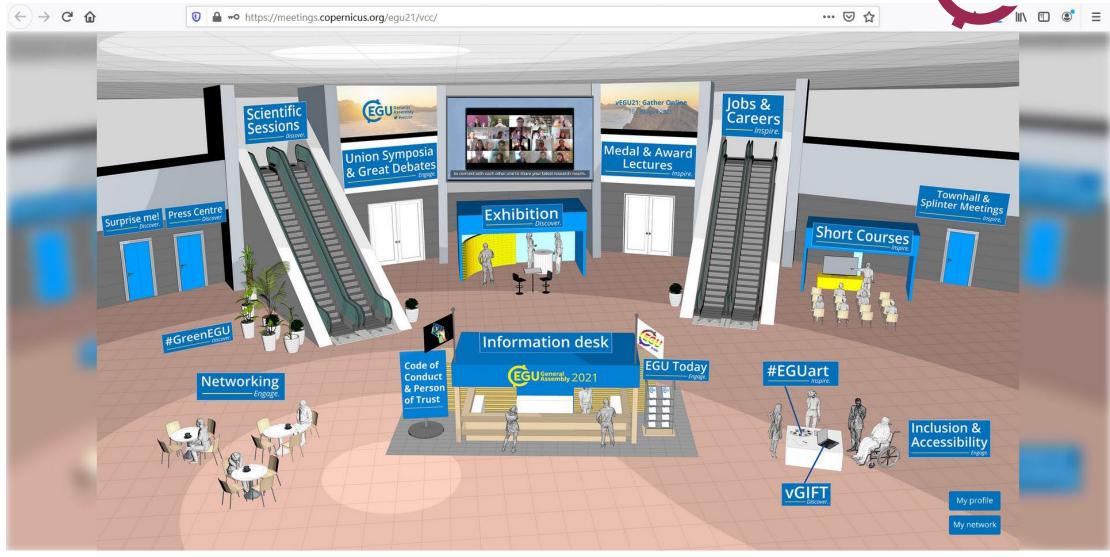


▲ Disclaimer: Unless revised by a geophysicist, automatically determined earthquake parameters may be erroneous!

# vEGU21: https://www.egu21.eu/

# https://meetings.copernicus.org/egu21/vcc/







# Seismology sessions and events in 2021



#### Wed, 21 Apr, this morning

SM 2021 Beno Gutenberg Medal Lecture & Division Outstanding ECS Award Lecture

- Malcolm Sambridge <u>Asking questions of data in nonlinear geophysical inversion</u>
- Eva P. S. Eibl Volcanic Tremor and its Relation to Volcano- and Glacier-related Processes

#### Mon, 26 Apr – Fri, Apr 30

Scientific sessions: https://meetingorganizer.copernicus.org/EGU21/meetingprogramme - 38 co-organised sessions (13 lead seismology sessions)

#### Wed, 28 Apr, 19:00-20:00

Seismology Early Carreer Scientists event

Convener: Janneke de Laat<sup>ECS</sup> | Co-conveners: Maria Tsekhmistrenko, Eric Löberich<sup>ECS</sup>

#### Thu, 29 Apr, 14:30–15:30

Short Course (SC4.3) - Seismology 101

Convener: Maria Tsekhmistrenko<sup>ECS</sup> | Co-conveners: Janneke de Laat<sup>ECS</sup>, Eric Löberich<sup>ECS</sup>, Javier Ojeda<sup>ECS</sup>, Michaela Wenner<sup>ECS</sup>



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- EGU features an extensive awards and medals programme on all career stages
- Nominations are exclusively by EGU members\* while candidates do not need to be EGU members. (\*An exception is one award to promote excellence in journalism allowing nominations from non-members and self nominations)
- Individual award and medal committees are then evaluating the nominations selecting the most deserving candidate based on scientific achievements\*\*. (\*\*plus one medals each for journalism, outreach and service to the union)







#### How to nominate

Where: https://www.egu.eu/awards-medals/nominations/

When: from now to June 15

What is required:

	Division and Union medals	Outstanding Early Career Scientists Awards			
Nomination letter	1 page	½ page			
Curriculum Vitae	2 pages	1 page			
Selected bibliography	2 pages	½ page			
Supporting letters	3-5 (maximum 1 page each)	-			

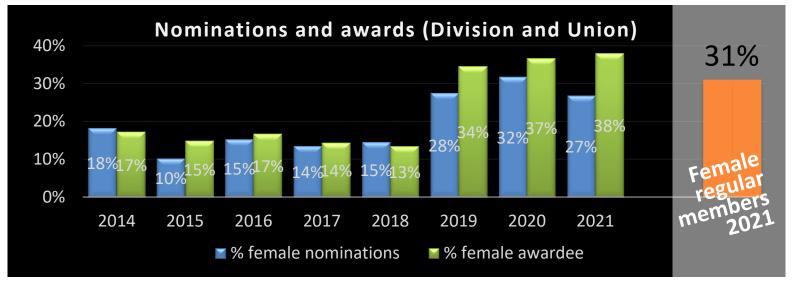






We encourage all members to contribute to the awards program by nominating suitable candidates

When nominating please think about people who may have been overlooked in your discipline



Over the past years the fraction of awards and medals obtained by women has increased. This is due to the increase in nominations.

**Equality of opportunities in geosciences: The EGU Awards Committee experience** 

Session EOS5.1, abstract EGU21-651

https://meetingorganizer.copernicus.org/EGU21/EGU21-651.html



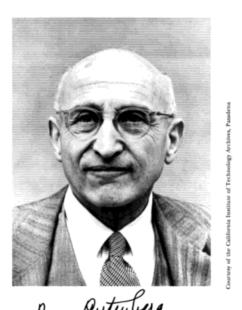
# Beno Gutenberg Medal 2021



The 2021 Beno Gutenberg Medal is awarded to **Malcolm Sambridge** for his outstanding and creative contributions to the development, implementation, and selfless dissemination of stochastic inverse methods in Seismology and the Earth science community at large.



Malcolm Sambridge





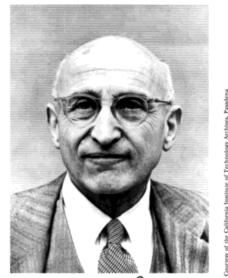


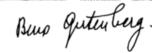
The Beno Gutenberg Medal is awarded to active scientists for their outstanding research contributions in Seismology.

# You know someone who deserves it

**Submit nominations for 2022** 

https://www.egu.eu/awardsmedals/nominations/ by 15.06.2022







# Beno Gutenberg Medal

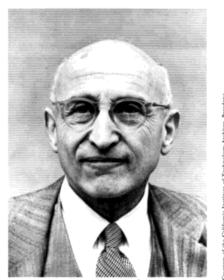


The Beno Gutenberg Medal is away 2 1112 ive scientists for their outstanding research contributions in Seignary 2 1112 ive scientists for their outstanding

nominations for 2022

medals/nominations/

by 15.06.2022



Bus gutuberg





#### Beno Gutenberg Medal – Committee for 2022

**The Committee** for the Beno Gutenberg Medal 2022 is composed of the last five medalists who have been awarded the Beno Gutenberg Medal

There must be a non-medalist: proposal former Seismology Division President

2021



Malcolm Sambridge

2018



Haruo Sato

2017



Hitoshi Kawakatsu (chair)

2003



Barbara Romanovicz

Non-medalist



Martin Mai



http://www.egu.eu/awards-medals/beno-gutenberg/

http://www.egu.eu/awards-medals/proposal-and-selection-of-candidates/





#### Beno Gutenberg Medal – Committee for 2022

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There must be a non-medalist: proposal former Seismology Division President

Think about the one outstanding seismologistst

who changed your scientific work and

**NOMINATE** for **Gutenberg Medal 2022** 

Gather your colleagues to compile a nomination package!

Kawakatsu (chair)



http://www.egu.eu/awards-medals/beno-gutenberg/

http://www.egu.eu/awards-medals/proposal-and-selection-of-candidates/



# Early Career Scientist

- An Early Career Scientist (ECS) is a student, a PhD candidate, or a practising scientist who received their highest certificate (e.g. BSc, MSc or PhD) within the past seven years. The seven-year period can be extended to allow for periods when the scientist was not working in science because of, but not limited to, caring and/or parental responsibilities, disability, personal illness, community obligations or national service.
- For the purpose of the awards the nominee should satisfy one of the above criteria by 1 January of the year when the award is presented.

https://www.egu.eu/awards-medals/ecs-definition/



# Seismology Division Outstanding Young Scientist 2020 received an Arne Richter award



# **Environmental seismology: Listening to landslides whispering**

The 2020 Arne Richter Award for Outstanding Early Career Scientists is awarded to **Weian Chao** in recognition of his major contributions to using existing seismic networks to improve landslide monitoring, allowing authorities to act quickly to mitigate landslide damage.



Congratulations!

**Weian Chao** 



# Seismology Division Outstanding Young Scientist 2021



# Volcanic Tremor and its Relation to Volcano- and Glacier-related Processes

The 2021 Division Outstanding Early Career Scientist Award is awarded to Eva P. S. Eibl in recognition of her transformative contributions to our ability to understand, model, and monitor volcano-, geyser- and glacier-related processes using conventional and new seismological tools.



Congratulations!

**Eva Eibl** 



# ECS Award – no Committee

- ECS award is mainly decided by the Division President after evaluation of the nominations
- Proposition:

Create a Commitee

Composition:

- Division President
- The 2 last awardees
- Suggestions?
- Questions?



# **Agenda and Topics**



- Welcome
- vEGU2021 (https://www.egu21.eu/)
- Awards & Medals
- Election : November 2021 Seismology Division
- Meeting & Session Statistics
- Report from the ECS Team
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# Structure of our Division



- EGU is a bottom-up organization, and we as a division are rather flexible on how to organize ourselves
- Possible additions / changes?
  - Science Officers
  - President: Philippe Jousset (until April 2023)
  - Deputy Position: Vacant
  - Election for new President : November 2021 need to volunteer



# **Agenda and Topics**

EGU Seismology

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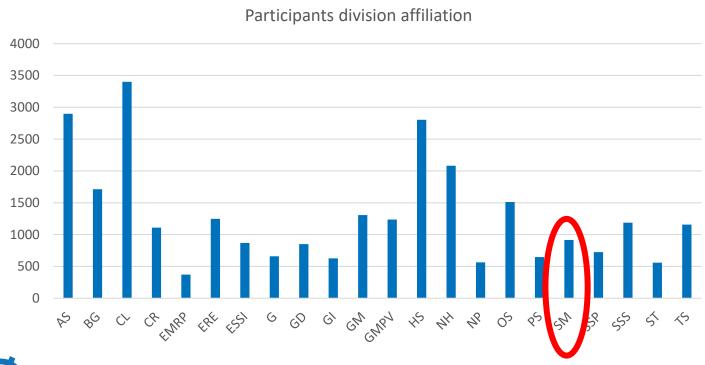
### vEGU21: Sessions and abstracts, Schedule

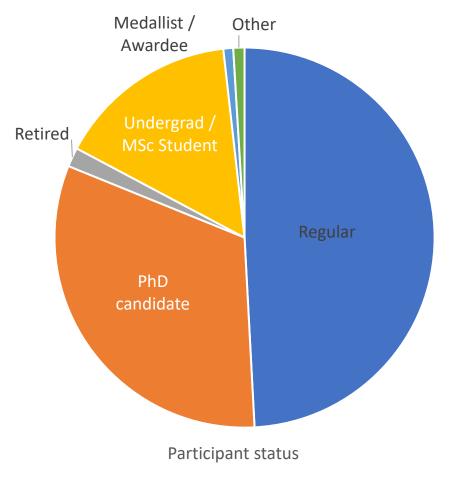
- 13,801 abstracts in programme | -24% relative to 2020
- 843 active sessions | 636 vPICO sessions | 56 Short Courses | 32 Medal and Award Lectures
- Week 1 (19-23 Apr): Union Symposia | Great Debates (Except GDB1) | most Medal and Award Lectures | most Division Meetings | 2 Short Courses per day
- Week 2 (26-30 Apr): 38/39 parallel vPICO sessions | 4 Short Courses per day
- Networking Events (including pop-ups), Townhall Meetings, Side Events during both weeks
- EGU Plenary 19 Apr | Medal & Award celebration 22 Apr | Closing party 30 Apr



# vEGU21: Registration numbers and breakdown

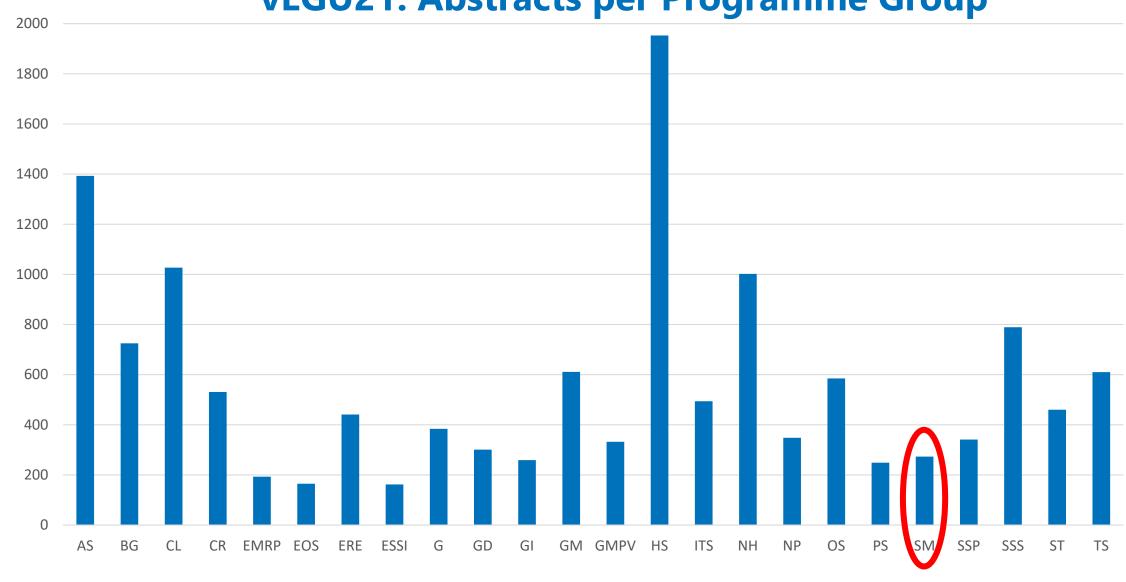
- 13,982 registrations (17 April 2021, 11:30)
- Participants from 126 countries







# vEGU21: Abstracts per Programme Group





עט	Geogynamics	301	∠%0	17	Year total Abstracts		stracts	SM	Co-organised
GI	Geosciences Instrumentation & Data Systems	259	2%	14					<b>O</b>
GM	Geomorphology	611	4%	34	2021:	13721		273 (2%)	586
GMPV	Geochemistry, Mineralogy, Petrology & Volcanology	348	3%	15		13/21		•	380
		4.000	4.40/	400	2020:	18061		546 (3%)	1204
HS	Hydrological Sciences	1,989	14%	100	2010.	16227		•	1212
NH	Natural Hazards	1,030	8%	47	2019:	16237		523 (3%)	1313
NP	Nonlinear Processes in Geosciences	410	3%	17	2018:	17238		412 (3%)	1665
os	Ocean Sciences	624	5%	19	618 34	1,242 53			
PS	Planetary & Solar System Sciences	/ 17	2%	14	154 9	418 23			
SM	Seismology	273	2.6	13	586 25	859 38			
SSP	Stratigraphy, Sedimentology & Palaeontology		2%	20	422 28	762 48			
SSS	Soil System Sciences	837	6%	40	550 28	1,387 68			



Solar-Terrestrial Sciences

Tectonics & Structural Geology

460

610

13,721 100%

3%

18

24

907

242

245

14 702

Last update: 20.04., 18:20:05

855

10

32

34

ST

TS

Sum

# **Agenda and Topics**



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# **Early-Career Scientist Events at vEGU21**

- 56 Short courses
  - 34 Short courses ECS as head-convener
- 21 Networking event led by and aimed at ECS
- 3 Great Debates led by ECS
- Jobs and Career Center initiatives
  - Meet the exhibitors
  - Meet the Talents
  - Blog on CV writing
  - Online CV-sticker
- Outreach
  - Introducing ECS Reps via EGU Blog
  - Blogs and Social Media blurbs about ECS-events





Michaela Wenner ETH **Maria Tsekhmistrenko**DIAS

Janneke de Laat DIAS **Chiara Civiero**DIAS

Walid Ben Mansour
Washington Universtity
European
Geosciences
Union

**Eric Löberich**Vienna
University

Javier Ojeda
Chile University

# Seismology Early Career Scientist (EGU Seismology representative team





Janneke de Laat (EGU Point of contact & Facebook



Michaela Wenner (SM101 and guest blog hunter)



Maria Tsekhmistrenko (editor-in-chief)



**Chiara Civiero** (SONAR blog series)



**Eric Löberich** (Twitter & Job hunter)



Walid Ben Mansour (Honorary member and guest blog hunter)



Javier Ojeda (Earthquake Watch blog series)

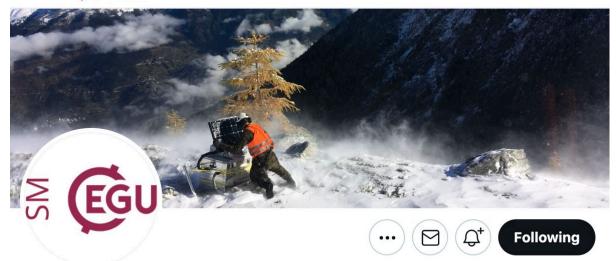






#### **EGU Seismology**

2,762 Tweets



#### **EGU Seismology**

@EGU\_Seismo Follows you

Twitter page of the EGU Seismology Division, which coordinates the scientific programme on Seismology and activities carried out by its members.

⊕ egu.eu/sm/home/ III Joined May 2016

**191** Following **1,273** Followers

Followed by Andy Parsons, SEA-SEIS, and 19 others you follow



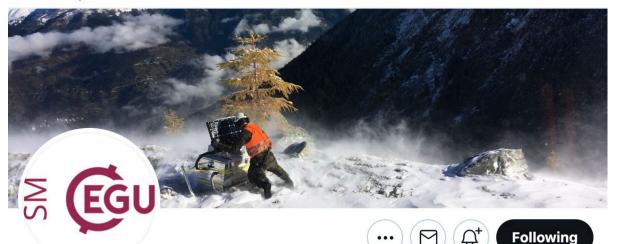
Followers





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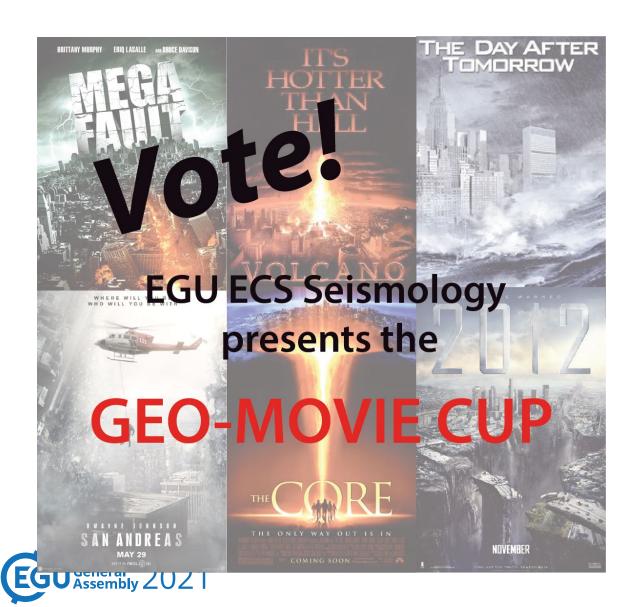
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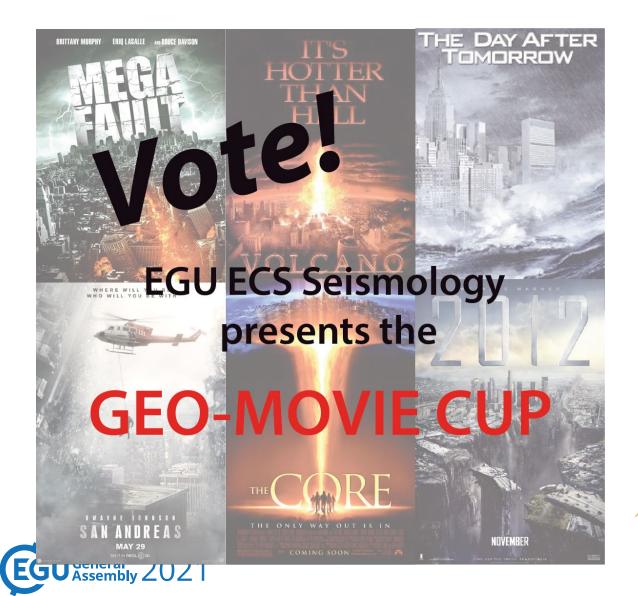














# **Seismology Blog**



#### **Guest blog posts**

- Eva Eibl

  Field work in winter in Iceland: The beautiful nature of Strokkur geyser
- Verónica Rodríguez Tribaldos
   From light to waveform: how fiber-optic cables can be repurposed as seismic arrays
- Akash Kharita Forensic Seismology: The Beirut Explosion
- Elisabeth Clyne

  The Journey of an Antarctic Seismologist
- James Hammond Volcano-seismology in North Korea
- Lapo Boschi
   Lockdown in Northern Italy, what did seismology see?



Guest blog posts

Seismology Job Portal

Earthquake Watch

State of the ECS

**SENSOR** 









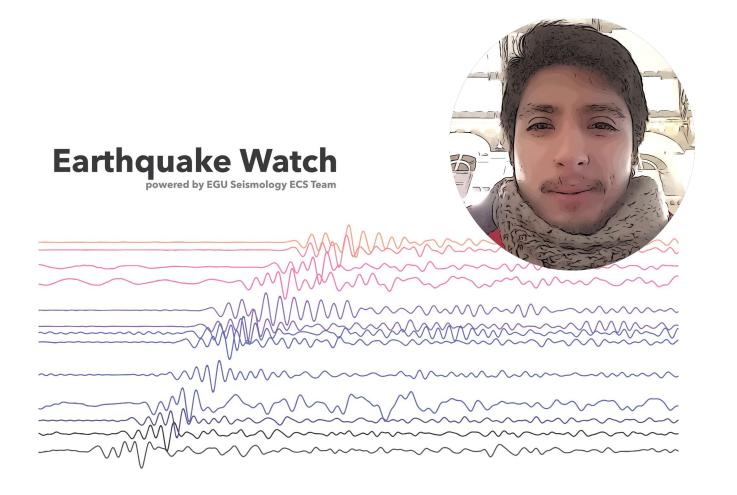






# **Seismology Blog**





# **Editorial line**

Guest blog posts

Seismology Job Portal

Earthquake Watch

State of the ECS

**SENSOR** 







EGU Seismology ECS Team · April 9, 2021 · Experiment, SENSOR · No Comments

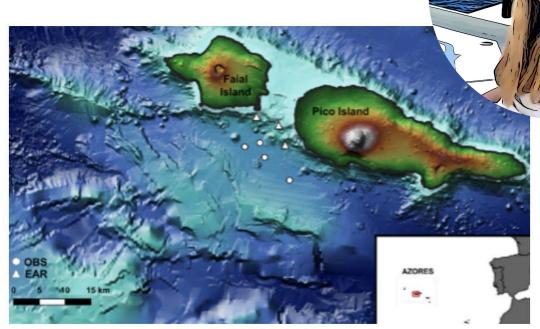


Figure 1 | AWERNESS study area

"SENSOR" – stands for **S**eismological **E**xperiments, **N**etwork **S**ystems, **O**bservations and **R**ecovery

## **Editorial line**

Guest blog posts

Seismology Job Portal

Earthquake Watch

State of the ECS







"State of the ECS": Pre-EGU madness

EGU Seismology ECS Team · April 12, 2021 · The state of ECS · No Comments



## **Editorial line**

Guest blog posts

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## **Editorial line**



Guest blog posts

Seismology Job Portal

Earthquake Watch

State of the ECS





#### Git or Perish

Maria Tsekhmistrenko · August 25, 2020 · Code, Computational Seismology, Miscellaneous · 1 Comment

# 

Disclaimer: This example was designed to showcase a bad code. Do not use. Do not replicate. Forget you have ever seen it!

#### What's it like to be black in academia?

Maria Tsekhmistrenko · August 19, 2020 · Interview, Long read, Racial (in)equality · No Comments

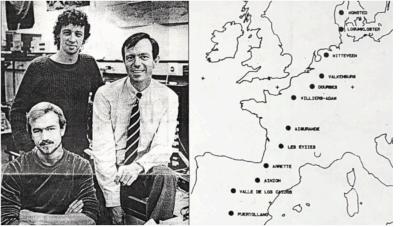


# <u>Editorial line</u>

Seismology throughout the years: from blown pre-amplifiers to the internet of things — a technician's view on seismology

Nienke Blom · November 3, 2020 · History of Seismology, Interview, Long read · No Comments

gy \_Seismology Job Portal



Left: Arie, Guust and Bernard. Right: Setup of the first NARS array deployment (1983-- 1988). Images are historical

**Earthquake Watch** 

State of the ECS

















in numbers...

45 posts in 12 months

including job portals

~8 guest writers

excluding interviews

~1200 visitors in the last 30 days

accessed on Apr, 12 2021

#### "State of the ECS": Pre-EGU madness

EGU Seismology ECS Team · April 12, 2021



Ciao, Ohh, March is already over, well it ended how it started... reading, writing, sleep, repeat, but I can see some light at the end of the tunnel of the paper . This work will be the last part of my thesis, and of course, I will present it at #vEGU21, so stay tuned. Besides research, we ECS reps currently focus on the preparation of network activities for the general assembly. So if ... [Read More]

### Earthquake Watch February: Loyalty Islands Mw 7.7

EGU Seismology ECS Team · April 6, 2021

## SENSOR: The AWARENESS project

EGU Seismology ECS Team · April 9, 2021

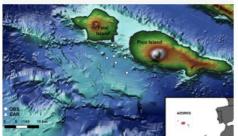


Figure 1 | AWERNESS study area

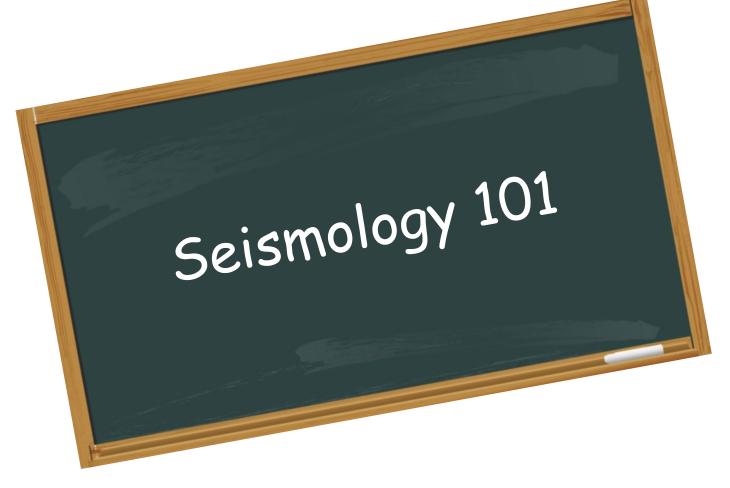
"SENSOR" – stands for Seismological Experiments, Network Systems, Observations and Recovery In this blog series, we share news about recent or upcoming seismic experiments around the globe! The first blog of the SENSOR series follows a young researcher, Dr. Andreia Pereira, from the Instituto Dom Luiz of the University of Lisbon, who is working on the AWARENESS project and has explained to me the ... [Read More]

#### Seismology Job Portal

EGU Seismology ECS Team · March 30, 2021



- What is Seismology?
- A bit of History
- What is an earthquake?
- What are beachballs?
- What is tomography?
- How to analyse an earthquake?
- Where to learn more and what tools are out there?
- How to Bridge between other fields of study?





# Seismology Early Career Scientist representative team

## Beyond seismology...

We are collaborating with ECS from other divisions on overarching ECS themes

- We are working in various Working Groups, like Careers and Work-Life Balance.
- We are in organising short courses (Outreach and Mental Health) during the GA.
- The ECS Reps managed to change the definition of Early Career Scientist.



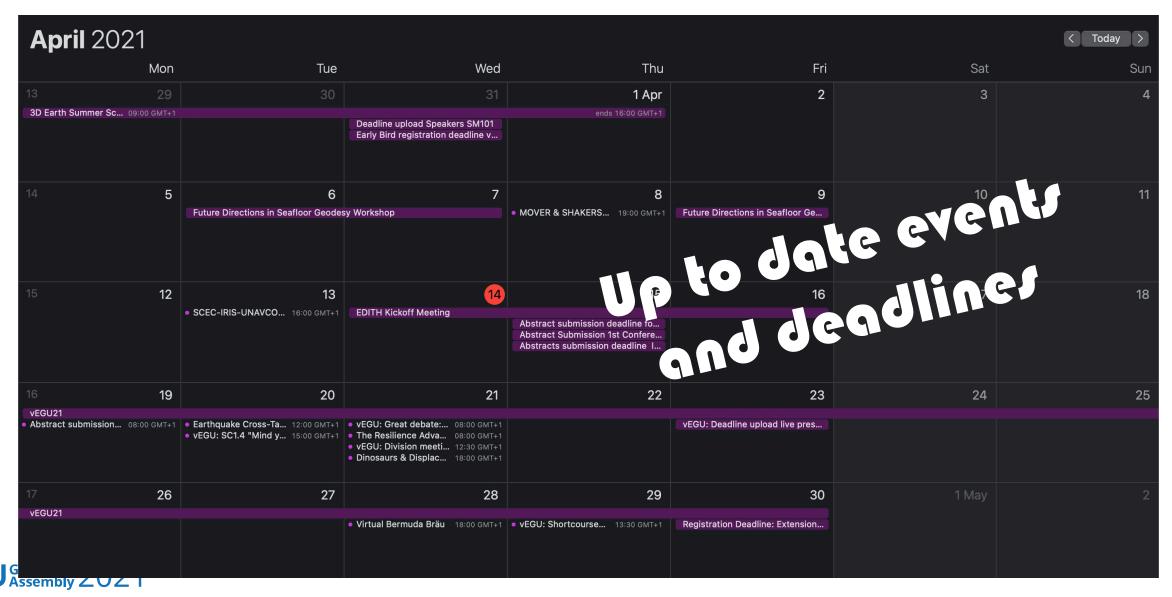
## Join the slack channel!

- Bermuda Bräu event
- Dinosaurs & Displacements sign up
- Google Calendar "how to join?" information
- Science gone wrong competition entries
- vEGU Shanty entries





# Join the Google Calendar!



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- Innovative Training network funded by EU H2020 programme
- Goals:
  - Integrate emerging ground-motion sensing technology into seismological practice
  - Effect of small-scale structure and changes on the seismic wave field
  - Improve monitoring of geo-hazards
  - Train a new generation of researchers: 15 PhD positions across Europe

**Germany** University of Hamburg

(Coordinated by Celine Hadziioannou)

LMU Munich

**GFZ Potsdam** 

**Switzerland** ETH Zürich

**France** IPGP Paris

Université Grenoble Alpes

**Ireland** DIAS Dublin

**UK** University of Edinburgh

**British Geological Service** 

Some positions still open,

Apply now!

Learn more:

spin-itn.eu

Follow on twitter:

twitter.com/spin\_itn

Funded by the European Union's Horizon 2020 research and innovation programme



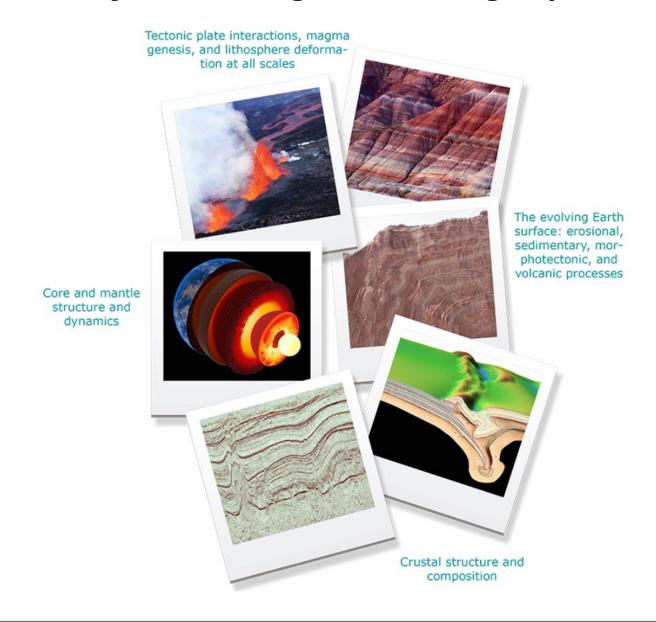
## Solid Earth is EGU's journal addressing topics of many divisions



open access as basic principle interactive discussion papers



## **Enter the journal through 4 thematic groups**

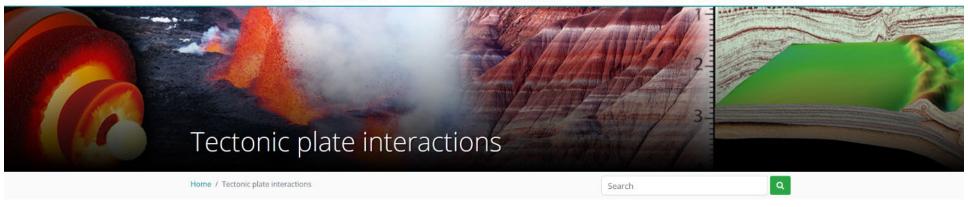


## Continue from there to disciplines



#### Solid Earth

ARTICLES & PREPRINTS ▼ SUBMISSION POLICIES ▼ PEER REVIEW ▼ EDITORIAL BOARD ABOUT ▼ EGU PUBLICATIONS ▷



#### Relevant editorial teams:

- Geodynamics, geodesy, gravity, and geomagnetism | S. Buiter, J. Aubert, J. Dannberg, T. Gerya, N. Gillet, M. Mandea, and S. McClusky
- Geochemistry, mineralogy, petrology, and volcanology | J. Gottsmann, A. di Muro, J. Lissenberg, A. Longo, and P. Rey
- Seismics, seismology, geoelectrics, and electromagnetics | C. Krawczyk, U. Werban, M. Malinowski, T. Nissen-Meyer, I. Bianchi, and C. Beghein
- Stratigraphy, sedimentology, geomorphology, and palaeontology | A. Stroeven, S. Gardin, M. Mutti, K. Ogata, and M. Oliva
- Structural geology and tectonics, rock physics, experimental deformation | F. Rossetti, M. Allen, F. Fusseis, D. Healy, Z. Mildon, and V. Toy

#### Recent papers

22 Mar 2021

Accelerating Bayesian microseismic event location with deep learning

Alessio Spurio Mancini, Davide Piras, Ana Margarida Godinho Ferreira, Michael Paul Hobson, and Benjamin Joachimi

Solid Earth Discuss., https://doi.org/10.5194/se-2021-24, 2021

Preprint under review for SE (discussion: open, 0 comments)

▶ Short summary

22 Mar 2021

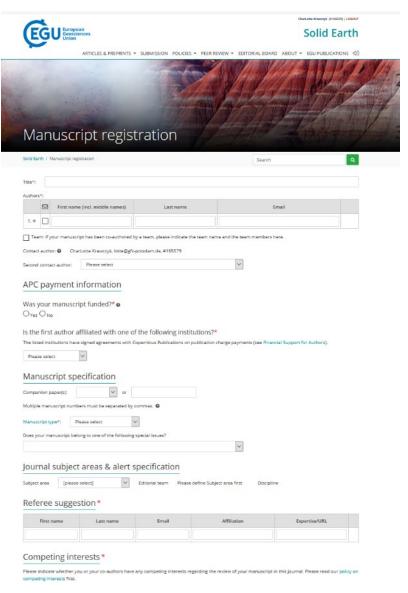
Late to post-Variscan differential uplift and basement segmentation along the SW Bohemian Massif, Central Europe

Andreas Eberts, Hamed Fazlikhani, Wolfgang Bauer, Harald Stollhofen, Helga de Wall, and Gerald Gabriel



# We welcome your submissions

### **Executive editors** Susanne Buiter **RWTH Aachen University** Tectonics and Geodynamics Faculty of Georesources and Materials Engineering Germany ☑ ☑ Joachim Gottsmann Univ. of Bristol Dep. of Earth Sciences United Kingdom Z CharLotte Krawczyk GFZ German Research Centre for Geosciences Germany Federico Rossetti Università Roma Tre Dipartimento di Scienze Italy ⑤ ☑ Arjen Stroeven Stockholm University Department of Physical Geography Sweden



① ☑ % ☑

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- Any other business see appendix
  - Science & policy
  - Equality, Diversity and Inclusion (EDI) Events at vEGU21
  - #EGUart
  - #vEGU21 Networking, #vEGU21 Outreach activities, #vEGU21 Media





## Thank you and enjoy vEGU21!

## Take home message:

- nominate for Medal and Outstanding ECS
- elections Seismology Division

Questions?



# Come and meet experts working at the interface of science & policy at a #vEGU21 networking session!

**Science for Policy Meet and Greet: 26 April, 16:00** 

Science-policy pairing scheme: a panel discussion: 27 April, 16:00

Practice pitching your policy ask to a policymaker:

28 April, 17:00





# How can scientists effectively engage with policy? Find out during these #vEGU21 Short Courses!

- Your Handbook to Science for Policy: 27 April, 10:00
- How to influence policy through engaging with Parliaments: 28 April, 16:00





## **Equality, Diversity and Inclusion (EDI) Events at vEGU21**

- SC2.8 Promoting Diversity in Geosciences | 19 Apr 10:00 11:00 CEST
- SC2.9 Practical Recommendations on how to combat discriminatory work environments in the Geosciences | 19 Apr 14:30 – 15:30 CEST
- EOS5.1 Promoting and supporting equality, diversity and inclusion in the geosciences |
   26 Apr 11:00 14:15 CEST
- GDB5 Bullying in Academia: towards creating a healthy and safe working environment (ECS Great Debate) | 22 Apr 09:00 – 10:30 CEST
- GDB1 Challenging discrimination in the geosciences: Amplifying unheard voices 26 Apr 15:00 – 16:30 CEST
- NET0 Picture a Scientist Film Screening | 24 26 Apr
- EDI Networking Event | 26 Apr 17:00 17:30 CEST
- EGU Pride 19 Apr 17:30 19:00 CEST
- EGU EDI Colouring Book





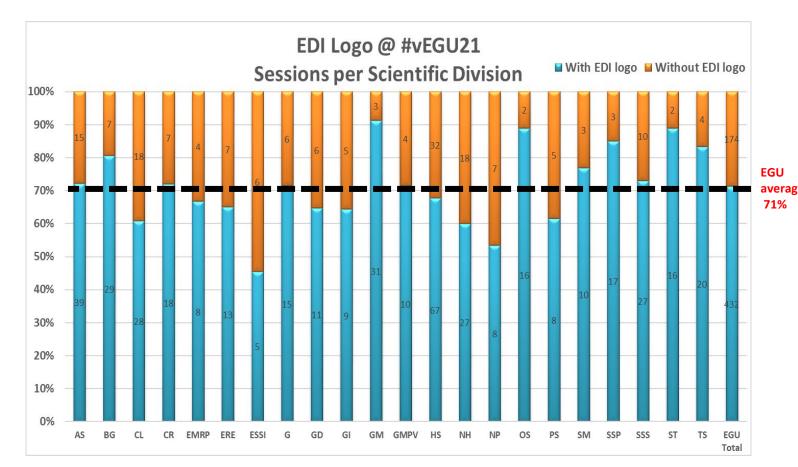






Session conveners fulfill all three criteria:

- 1. Include conveners from multiple countries and institutes
- 2. Have conveners from **different career stages**, including at least one ECS
- 3. Include conveners that represent more than one form of gender identity



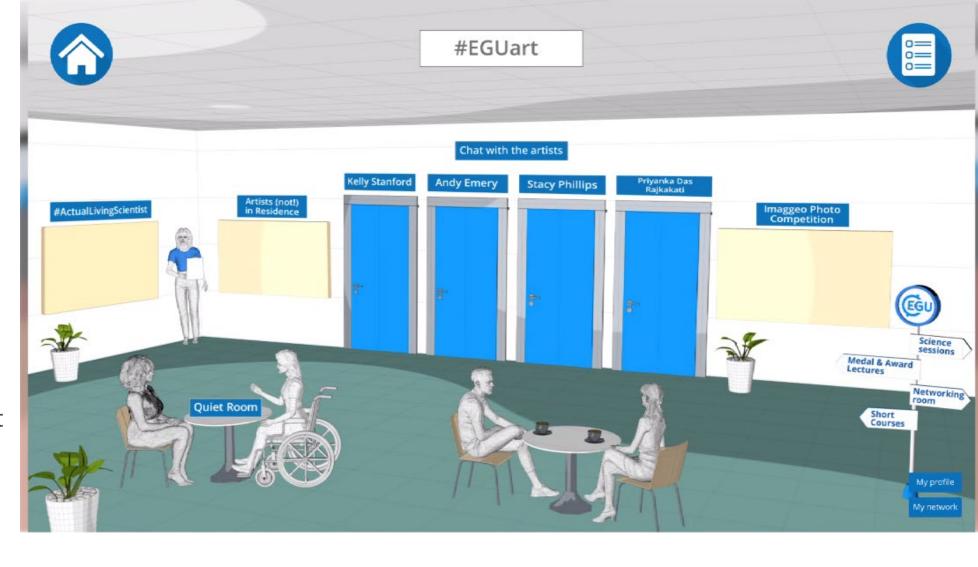
Send suggestions to: <a href="mailto:edilogo@egu.eu">edilogo@egu.eu</a>



## **#EGUart**

- 4 artists (not!) in residence
- #EGUart room in platform
- #ActualLivingScientist (EDI initiative)
- Colouring book (EDI initiative)
- Imaggeo photo competition
- Kids Art





## **#vEGU21 Networking**

- Scheduled networking events (Division, ECS, etc.), including on Gather.town
- Pop-up networking events
- EGU committee meet & greets
- Viennese settings (café, art exhibits, cooking)
- Quiet room (Spotify playlist)
- vEGU21 platform built-in networking capabilities (networker, handshake)





## **#vEGU21 outreach activities**

- EGU Public Lecture: Günter Blöschl, Vienna University of Technology and previous EGU President, 21 Apr 18:00 CEST; link on EGU and vEGU21 websites. The lecture is hosted and organised by the Austrian Academy of Sciences.
- **EGU Mentoring**: 130 mentees successfully paired with 83 mentors.
- Croome & Krafft award presentations 20 Apr 18:00 CEST
- Teaching/scientist pairing scheme pilot project

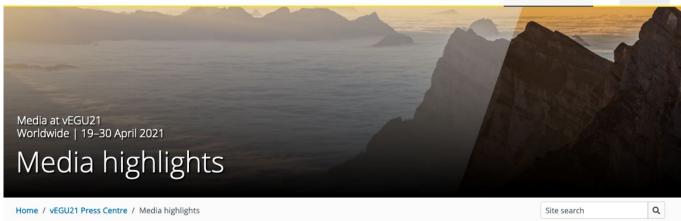


REGISTRATION ▼ MEDIA HIGHLIGHTS

EGU21.EU

## **#vEGU21 Media activities**

- 6 press conferences
- New: media highlights page
- New: 5 press releases
- New: 5 media tip sheets
- Every PG represented in these materials!



#### The evolution of feathers

Birds are covered in feathers, but they are not the only animal to sport a colorful coat. Dinosaurs once did too, according to recent scientific findings. Researchers have uncovered fossils that show feathers existed 100 million years ago and were likely on all dinosaur groups.

Michael Benton, paleontologist at the University of Bristol, UK, presents research on Tuesday, 20 April at 15:05 CEST covering the evolution of feathers, including how paleontologists are detecting colours and patterns of dinosaur feathers. He will also discuss new frontiers of research in paleobiology.



Dinosaurs that are 100 million years old show evidence of feathers. Scientists have discovered that Sinosauropteryx had ginger and white rings of feathers down its tail. Image credit: Sam / Olai Ose / Skjaervoy, CC 2.0, Flickr.

#### Lessons learned when an earthquake struck during the pandemic



The deadliest earthquake of 2020 occurred amid the global COVID-19 pandemic. When a magnitude-6.9 quake struck the eastern Aegean Sea in October, 119 people died in Turkey and Greece, predominantly from buildings collapsing. It was the scene emergency responders and natural hazards scientists had feared: a major quake occurring during the pandemic.

Normal actions immediately following an earthquake — like search and rescue, first-aid treatment, and setting up emergency shelters — were riskier and more challenging because of COVID. For example, responders needed proper personal protective equipment, especially facemasks, and the affected

