

Energy, Resources & the Environment (ERE)

Virtual Division Meeting – 7 May 2020

Sonja Martens
Contact: ere@egu.eu



EGU2020: Sharing Geoscience Online | May 2020

Meetings | Publications | Outreach | www.egu.eu

The ERE Team welcomes you

- President/PG Chair: Sonja Martens
- Deputy President: Chris Juhlin
- Officer Publications: Michael Kühn
- Officer “above ground”: Viktor Bruckman
- Officer “subsurface”: Maria Ask
- Economics & Integration: Kristen Mitchell
- ECS Representative: Natalie Nakaten



S. Martens



C. Juhlin



M. Kühn



V. Bruckman



M. Ask



K. Mitchell



N. Nakaten

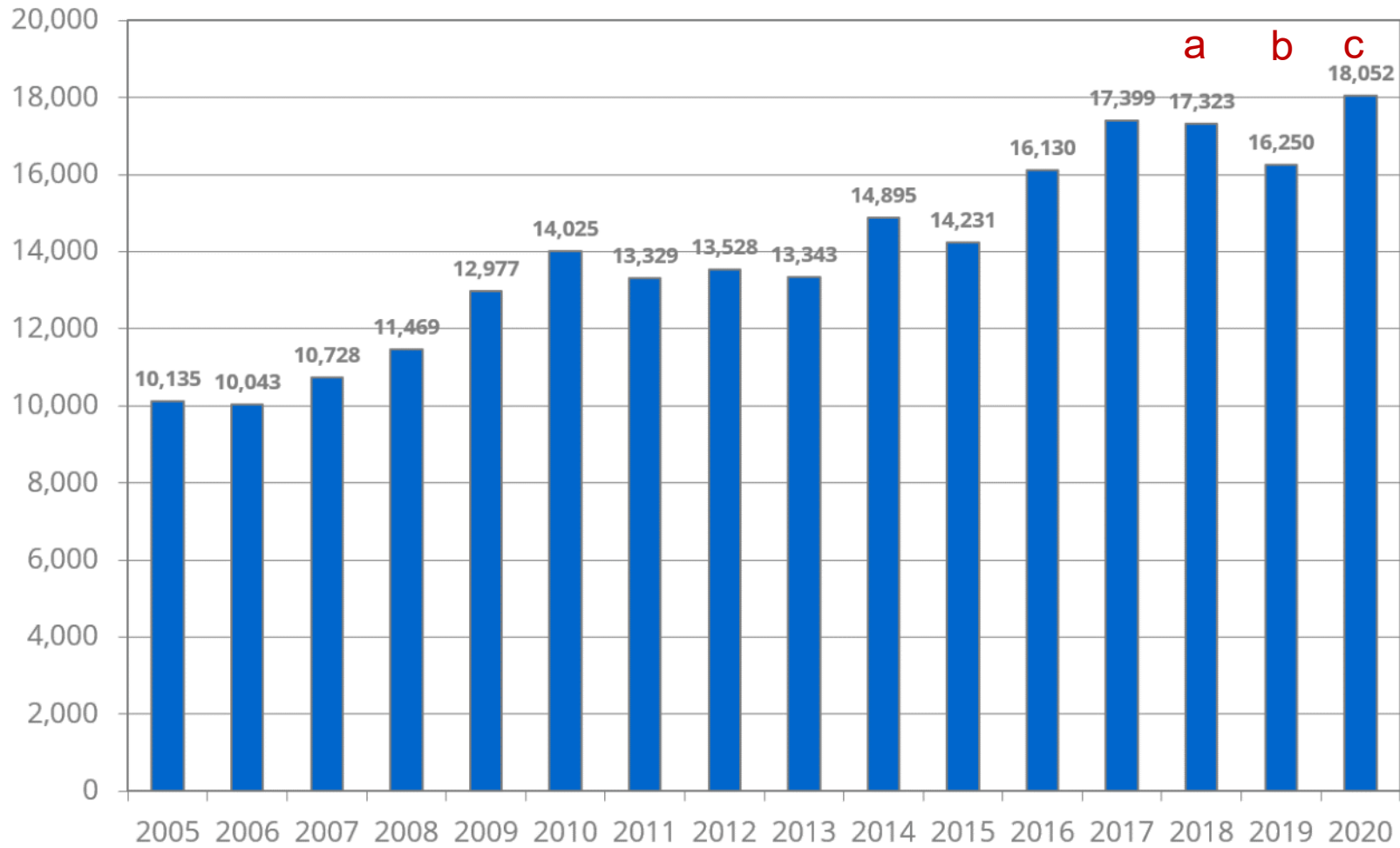
EGU General Assembly 2020 Facts

As of 5 April, the Assembly 2020 provides

- 18,052 abstracts in programme | +11.1% relative to 2019
- 702 unique scientific sessions
- 440 out of 702 scientific sessions are co-organized (62.7%)
- 6/88 short courses online
- 1,135 presentation materials uploaded



Abstracts in programme 2005 - 2020



- a) withdrawal of no-show abstracts
- b) one first-author abstract rule
- c) Physical GA cancelled; part of the GA brought online

Sharing Geoscience Online: New concept

- Online? Yes! Because it is EGU's responsibility to help minimise the impact of COVID-19 on scientific research and collaboration
- Pilot experiment - we acknowledge your feedback!
- Free registration
- Our considerations:
 - Science submitted to the General Assembly 2020 can be presented and shared
 - All authors and conveners can participate
 - Sharing Geoscience Online is accessible for anyone (in terms of bandwidth, even with hearing or visual difficulties)
 - The concept works for all presentation types: oral, poster, PICO



Sharing Geoscience Online in a nutshell

Our concept of Sharing Geoscience allows:

- Authors to upload presentation materials and receive feedback on those from 1 April to 31 May 2020
- Conveners, authors and attendees to discuss abstracts, presentation materials during a live, text-based chat (4 to 8 May)
- Everyone to participate in Union Symposia, Great Debates, Short Courses, Networking, Division Meetings, #shareEGUart, Photo Competition and more
- EGU to gather experience with online activities and use these in plans for reducing the environmental impact of the General Assembly





2020/21 EGU Governance Review – EGU Member input is welcome

Objectives:

To review the governance processes and structures of the EGU, and make recommendations for any changes to enable the organisation:

- to best deliver its Mission and Vision
- to best serve the current and future needs of the organisation and its members
- to ensure EGU structures deliver appropriate scientific and professional diversity and representation amongst EGU committees and boards

Timescales:

The Governance panel (= one independent Chair and 10 EGU members including the president) will convene in late May 2020, and conduct their review over the following 9-12 months.

EGU members may **input** their **views** to the Governance Review directly at email at: governancereview@egu.eu

Aim of our ERE division

- **EGU** brings together geoscientists covering all disciplines of the earth, planetary and space sciences (interdisciplinarity).
- We – **Energy, Resources and the Environment (ERE)** – bring together these scientists to ...
- ... tackle **challenges** of the future: Provide adequate and reliable supplies of affordable **energy** and other **resources**, obtained in **environmentally sustainable** ways, which will be essential to economic prosperity, environmental quality and political stability around the world.

Energy, Resources
& the Environment

Division



ERE Division Officers 2019/20

- President/PG Chair: Sonja Martens
- Deputy President: Chris Juhlin
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M. Ask



K. Mitchell



N. Nakaten

Natalie will leave the team - thanks for your efforts, Natalie!

The new ERE president from 2021 on: Viktor Bruckman

EGU Elections Autumn 2019 for the next Union President and Division Presidents were closed on 30 November 2019.

Viktor Bruckman was elected to serve as ERE President for the term 2021–2023.

From 2020, he will serve as Deputy President for one year. He will then serve as ERE President for two years starting from the 2021 EGU plenary meeting and may stand for re-election for further two years.



Congratulations, Viktor!

ERE Twitter Account run by Maria Wetzel



Thank you,
Maria, for your tweets
and creative images!



https://twitter.com/ERE_EGU

PERSONAL DATA

Name Morgan Tranter
 Nationality German / British



CAREER / EDUCATION

Since 2018 **Doctorate**
 GFZ German Research Centre for Geosciences
 Fluid Systems Modelling
 Topic: Reactive reservoirs in geothermal systems. Dissolution and precipitation of minerals in fractures and their impact on hydraulic and mechanical rock properties.

2017-2018 **Project Engineer** for Water Management
 Mull und Partner Ingenieurgesellschaft, Hannover, Germany

2016-2017 **Research and Teaching Assistant**, Chair of Hydrogeology
 Institute for Applied Geosciences, Berlin Institute of Technology, Germany

2016 **M.Sc.** (Geotechnology)
 Institute for Applied Geosciences, Berlin Institute of Technology, Germany

2013 **B.Sc.** (Geotechnology)
 Institute for Applied Geosciences, Berlin Institute of Technology, Germany

RESEARCH INTERESTS

Hydro- and Geochemistry, Numerical Modelling, Geothermal Energy Systems

Motivation for applying as ECS Representative

Collaboration and communication of young scientists across borders is of paramount importance for maintaining and further improving the open-science community of the future.

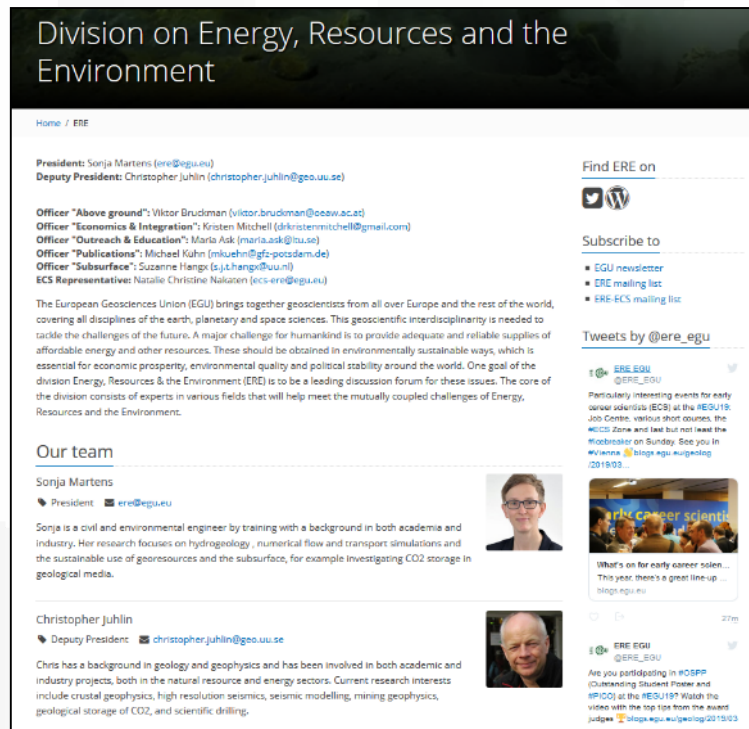
I am deeply committed to the idea that by working closely together, early career scientists inspire each other and benefit from a pool of knowledge.

This is now more important than ever, where physical meetings, perhaps the annual General Assembly, may not be a matter of course, and we all have to make best use of our digital communication resources.



Aims and Activities of ERE Division

- Plan and organize the ERE sessions
- Attract ERE early career scientists
- Publication of an annual special issue
- Run the ERE website and twitter



Division on Energy, Resources and the Environment

Home / ERE

President: Sonja Martens (ere@egu.eu)
Deputy President: Christopher Juhlin (christopher.juhlin@geo.uu.se)

Officer "Above ground": Viktor Brudiman (viktor.brudiman@ceaw.ac.at)
Officer "Economics & Integration": Kristen Mitchell (dkristemitchell@gmail.com)
Officer "Outreach & Education": Maria Ask (maria.ask@tu.se)
Officer "Publications": Michael Kuhn (mkuehn@gfz-potsdam.de)
Officer "Subsurface": Suzanne Hango (s.juhango@uu.nl)
ECS Representative: Natalie Christine Nakazon (ecs.ere@egu.eu)

The European Geosciences Union (EGU) brings together geoscientists from all over Europe and the rest of the world, covering all disciplines of the earth, planetary and space sciences. This geoscientific interdisciplinarity is needed to tackle the challenges of the future. A major challenge for humankind is to provide adequate and reliable supplies of affordable energy and other resources. These should be obtained in environmentally sustainable ways, which is essential for economic prosperity, environmental quality and political stability around the world. One goal of the division Energy, Resources & the Environment (ERE) is to be a leading discussion forum for these issues. The core of the division consists of experts in various fields that will help meet the mutually coupled challenges of Energy, Resources and the Environment.

Our team

Sonja Martens
President: ere@egu.eu
Sonja is a civil and environmental engineer by training with a background in both academia and industry. Her research focuses on hydrogeology, numerical flow and transport simulations and the sustainable use of georesources and the subsurface, for example investigating CO2 storage in geological media.

Christopher Juhlin
Deputy President: christopher.juhlin@geo.uu.se
Chris has a background in geology and geophysics and has been involved in both academic and industry projects, both in the natural resource and energy sectors. Current research interests include crustal geophysics, high resolution seismics, seismic modelling, mining geophysics, geological storage of CO2, and scientific drilling.

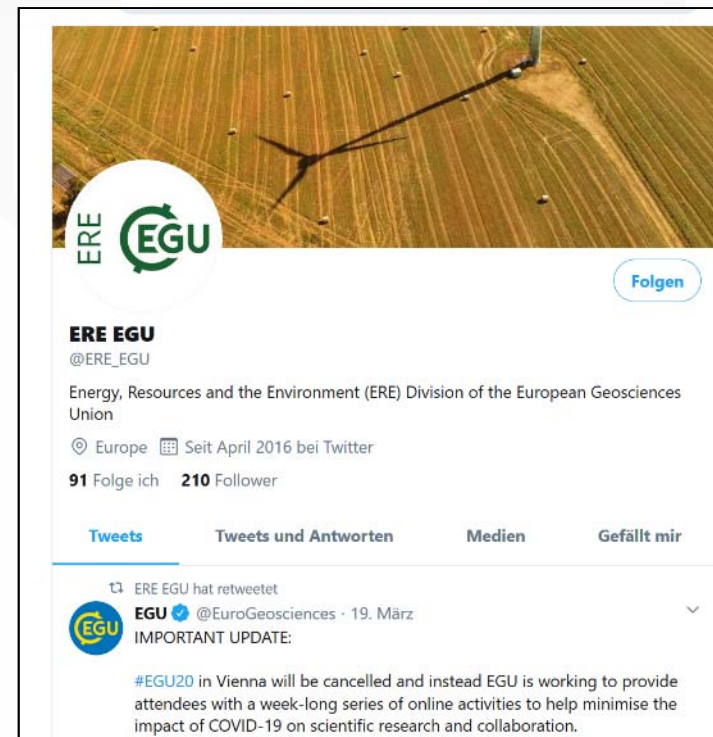
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- ERE-ECS mailing list

Tweets by @ere_egu

<http://www.egu.eu/ere/home/>



ERE EGU
@ERE_EGU

Energy, Resources and the Environment (ERE) Division of the European Geosciences Union

Europe Seit April 2016 bei Twitter

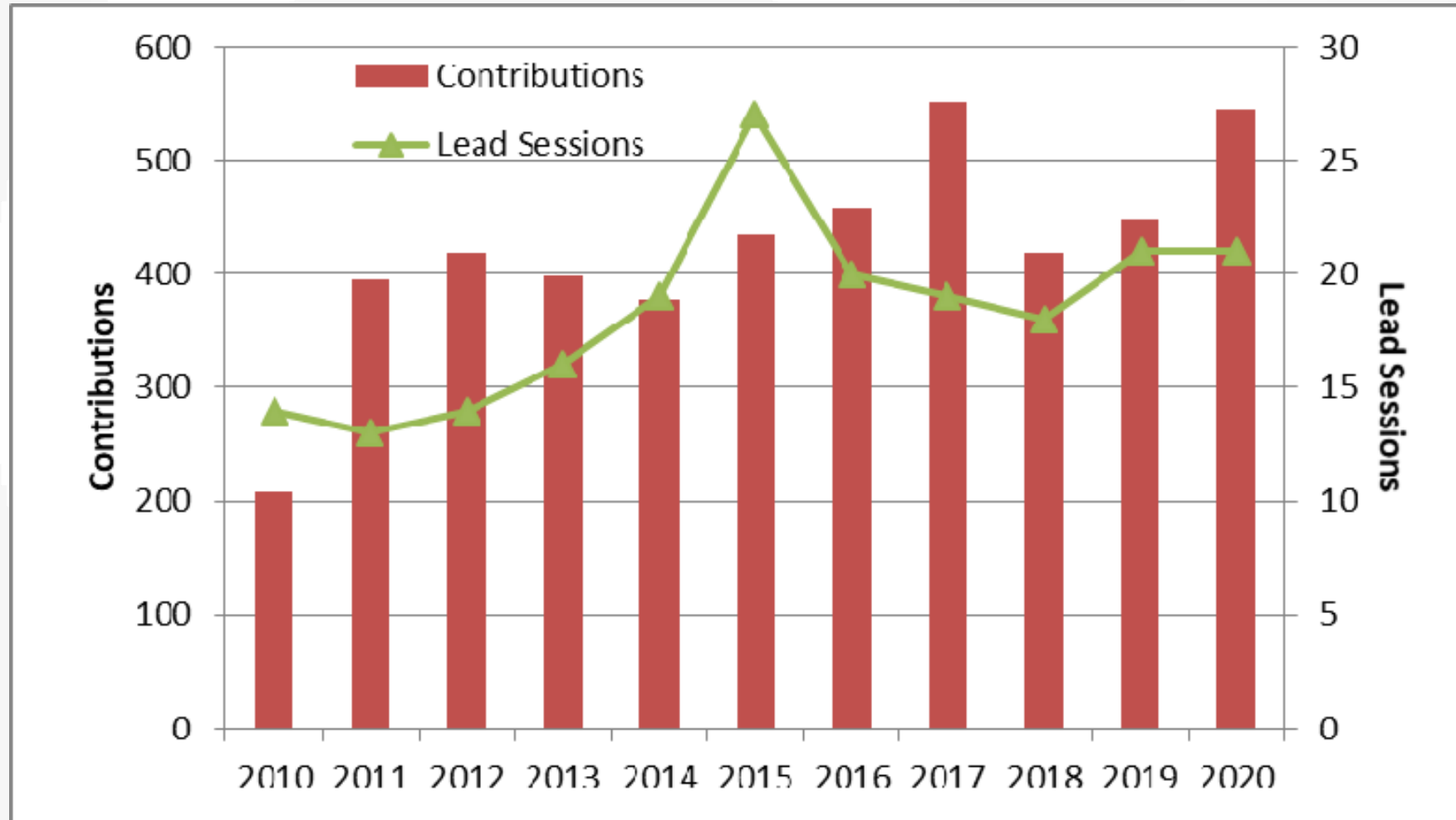
91 Folge ich 210 Follower

Tweets Tweets und Antworten Medien Gefällt mir

ERE EGU hat retweetet
EGU @EuroGeosciences · 19. März
IMPORTANT UPDATE:
#EGU20 in Vienna will be cancelled and instead EGU is working to provide attendees with a week-long series of online activities to help minimise the impact of COVID-19 on scientific research and collaboration.

https://twitter.com/ERE_EGU

ERE – Scientific Programme



Scientific Programme of ERE in 2020

- **ERE1 – Integrated studies**

- ERE1.1 Energy, Resources & the Environment
- ERE1.2 GeoERA: Towards integrated European geoscience services for today's and future generations
- ERE1.3 The Environment and Smart Circular Economy and Cities: A New Geo management Approach

- **ERE2 – Renewable energy**

- ERE2.1 Energy Meteorology
- ERE2.2 Spatiotemporal modelling of distributed renewable energy systems
- ERE2.3 Marine renewable energy; resource characterisation, interactions and impacts
- ERE2.6 Exploration, utilization and monitoring of conventional and unconventional geothermal resources
- ERE2.7 Characterization and modelling of (coupled) THMC processes for geothermal energy
- ERE2.8 Shallow geothermal systems for building heating and cooling: geoscience and engineering approaches
- ERE2.10 Rethinking the energy transition in light of the Sustainable Development Goals: Maximizing synergies and minimizing trade-offs

- **ERE3 – Fossil energy**

- ERE3.1 Petroleum exploration and production and their impact on the environment

Scientific Programme of ERE in 2020

▪ ERE4 – Geo-storage

- ERE4.1 Versatile subsurface storage for future energy systems
- ERE4.2 Towards a safe nuclear waste repository – assessment of barrier integrity, geoscientific, technological, societal and regulatory challenges and approaches

▪ ERE5 – Raw materials

- ERE5.1 Constructional GeoMaterials: Resources, Properties, Uses, and Environmental Interactions
- ERE5.2 Heritage Stones: Global relevance vis-à-vis architectonic heritage
- ERE5.4 State-of-the-art in mineral exploration
- ERE5.5 Sustainable mining and circular economy: waste characterization and exploitation supported by geophysical methods

▪ ERE6 – Process coupling and monitoring related to geoenergy applications

- ERE6.1 Process quantification and modelling in subsurface utilization
- ERE6.2 Induced/triggered seismicity in geo-energy applications: monitoring, modelling, mitigation, and forecasting
- ERE6.3 FRACTURES: Breaking the Laws

▪ ERE7 – Nexus approaches and applications

- ITS1.1/ERE7.1 Multi-scale water-energy-land nexus planning to manage socio-economic, climatic, and technological change

Outstanding Student Poster Presentation

The European Geosciences Union presents the OSPP award to



Mengdi Pan

for the presentation entitled

**“Changes of Permeability as a Result of Hydrate
Dissociation in Sand-Clay Sediment from Qilian Mountain
Permafrost, China?”**

presented at the EGU General Assembly 2019 in Vienna.

Outstanding Student Poster Presentation

The European Geosciences Union presents the OSPP award to



Parminder Kaur

for the presentation entitled

“Jaisalmer Golden Limestone and Sandstone: A Heritage Stone Province from the Desert of Western India”

presented at the EGU General Assembly 2019 in Vienna.

2020 Division Outstanding ECS Award

The European Geosciences Union presents the award to



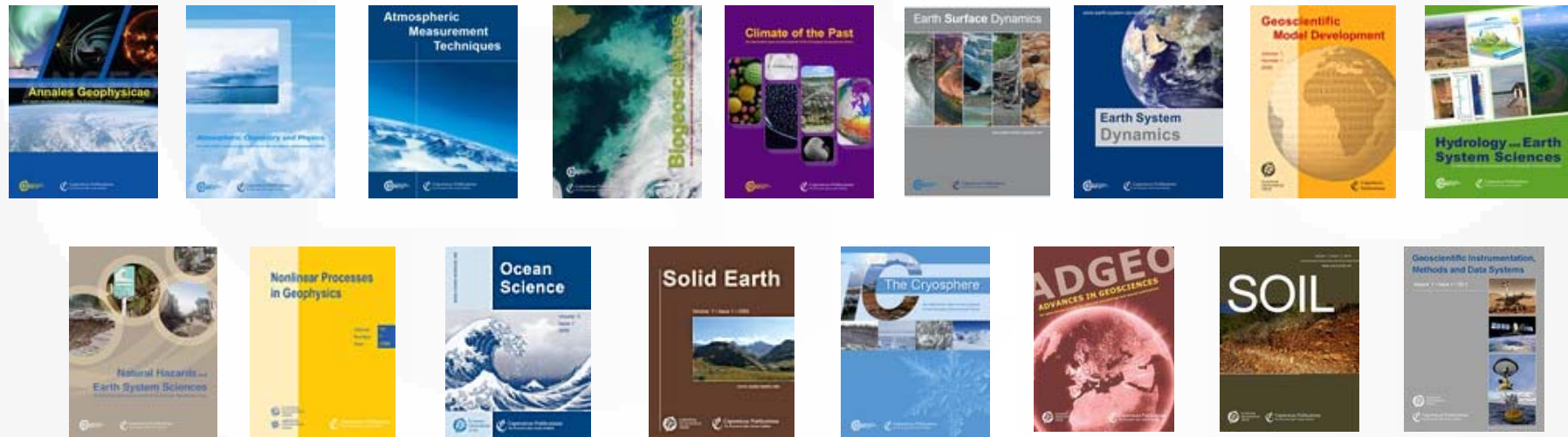
Estanislao Pujades

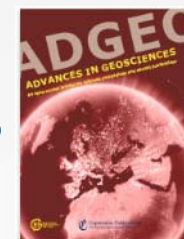
for his outstanding research on Underground Pumped Storage Hydropower using abandoned mines and its interaction with groundwater.

Estanislao's presentation will be given in 2021.

EGU's Open Access Journals

- Advantages of Open Access
 - Immediate free access to the online article.
 - Increased citation through unlimited access.
 - Author retains copyright.
- EGU Journals are extremely successful with high impact.





- **Join the ERE special issue 2020 in Advances in Geosciences (ADGEO).**
- If you submitted an abstract to an **ERE session** or a co-organized one for the GA 2020, you are welcome to contribute with a publication.
- Your manuscript needs to be directly linked to your **EGU abstract** (please add your abstract number when submitting).
- **Guidelines for preparations and template** are available on the ADGEO website: <https://www.advances-in-geosciences.net/>
- Manuscripts need to be 4 pages long and should **target** around **10 pages**.
- **Publication fee** depends on the length of paper and your home institution.
- **Submissions** are possible from 17 April **until 12 June 2020**.
- **Reviews** are done by ERE officers, conveners and authors of the GA 2020.
- If you submit a manuscript we expect you to **take part in the reviewing** process. So we might ask you to do up to two reviews.
- **Questions?** Please contact: Michael Kühn + Sonja Martens (adgeo.ere.egu@gfz-potsdam.de)

Make use of the GA Survey

- GA 2019: More than 1,600 responses.
 - Survey results:
<https://egu2020.eu/EGU2019-survey-results.pdf>
 - These played a large part in shaping improvements for the GA 2020.
- Distribution:
 - via email to participants after GA
 - links on social media & blog
 - egu2020.eu website
- Survey live until beginning of June 2020



See you next year: 25 – 30 April 2021