

Note from Coordinator

Dear EERA Geothermal members,

Our Joint Programme seems to have gone through some very calm waters in those last two years of Corona lockdowns and cancelled events. Certainly, the fact that we did not have a Newsletter at the end of 2021 helped to create this impression. Let me, however, use the opportunity of my first official note as a Joint Programme Chair to assure you that we are still moving ahead and participate in the EERA process. We represent the research pillar of the geothermal community in the European Technology and Innovation Platform, ETIP-DG, which has been instrumental in coordinating and drafting a list of topics for calls on geothermal energy in the next work programme of Horizon Europe (2023/2024). In addition, our contribution has been asked in the continuing effort to update and develop the SET Plan, in cooperation with the EU member states representatives in the Implementing Working Group (IWG) for the SET Plan. In 2021, we have had a successful online steering committee meeting, have contributed to the online version of the European Geothermal Workshop and supported the European Geothermal PhD Days,

also organised online by the students at Cergy Paris University in France jointly with University of Neuchatel in Switzerland. And we had an information event on our research activities for the Horizon Europe 2022 work programme.

But I do miss the dynamics of our personal interaction. That's why I am looking forward to having 'real' meetings again in 2022, to feel the creative and positive atmosphere of our research community. That's why I am looking forward to our next steering committee meeting. Please join us in Berlin on the 21st of October, right after the European Geothermal Congress 2022.

Looking forward to seeing you there

Best regards,



David Bruhn

*Joint Programme
Geothermal Coordinator*

Two JP Geothermal co-chairs appointed

David Bruhn suggested prior to his election as the new Joint Programme chair (JPC) to spread the work and responsibilities on several shoulders. For this reason, two co-chairs were appointed who volunteer to share the responsibility and work load. This will include the representation of our joint programme at EERA meetings, in working groups such as the Set Plan IWG, and the active and regular contribution to ETIP documents and processes. These two co-chairs will have to be confirmed by a formal election during the steering committee meeting in October.

Adele Manzella, senior researcher at CNR, the Italian Research Council, received her M.Sc. in Earth Sciences with geophysical specialization at Padua University in 1985 and a Diploma from the International School of Geothermics at the International Institute for Geothermal Research of CNR in 1986. After completing graduate courses in geophysics at the University of Berkeley, USA, in 1987, she worked at the Experimental Geophysical Observatory of Trieste (OGS) from 1988 to 1989, researching seismic wave modelling. Since 1990 she has been working at CNR, conducting underground exploration in volcanic and tectonically active regions, magnetotelluric surveys and geothermal resource assessment in Italy and abroad. In 2006 she won the G.W. Hohmann Award for “outstanding application of electrical and electromagnetic methods to the study of geothermal resources”. She coordinated the two national geothermal assessment projects of Southern Italy and led the participation of CNR in numerous European projects dedicated to geothermal exploration methods development, coordination of research efforts and geothermal networking, and promotion and support for the development of geothermal energy. In 2018 she won the Patricius Medal for “providing geothermal knowledge for accelerating the deployment of geothermal energy”. In recent years she also expanded her interest to the sustainability of geothermal energy, including environmental and social aspects and communication. She is co-chair of the European Technology & Innovation Platform of Deep Geothermal energy (ETIP DG) and member of the International Geothermal Association (IGA) Board. Adele has been the representative of CNR in the EERA- Joint Programme Geothermal Energy since 2009.

Virginie Harcouët-Menou, senior researcher at VITO, the Flemish Institute for Technological Research, graduated in geophysics in 2001 from the University of Strasbourg and obtained an engineering degree from the EOPG (Ecole de Physique du Globe de Strasbourg) in the same year. In 2005, she obtained a PhD in Sciences - Geophysics at the IPGP (Institut de Physique du globe de Paris, France). After her PhD, Virginie Harcouët-Menou worked as a post-doc at the Earthquake Research Institute in Tokyo (Japan), assessing the influence of temperature on the initiation of earthquakes along a subduction zone based on numerical models. From 2007 to 2009, she worked as a research associate at the University of Aachen (Germany). Here she coordinated a research project related to the development of a geothermal power plant in Turkey. Since March 2009 she has been working as a senior expert in geothermal energy within the Energy Technology team at VITO. She co-ordinates and is involved in strategic research and applied projects mainly on geothermal energy (from shallow to deep). She also participates to projects that aim to reuse abandoned mines for thermal energy storage and production. She has built sound expertise in numerical modelling of fluid and heat transfer in the subsurface. In recent years, Virginie Harcouët-Menou has built additional expertise in the field of LCA methodology applied to the geothermal sector. Virginie has been the representative of VITO in the EERA Joint Programme Geothermal Energy since 2010.

New Participants in the JP Geothermal

The JP Geothermal approved the participation of two additional universities as partners during the Steering Committee meeting in 2021. These are Izmir Institute of Technology from Turkey and the University of Stavanger from Norway.

Izmir Institute of Technology

IZTECH was founded in 1992 as a public university. In September 2017, IZTECH was distinguished as “one of the 10 Research Universities” in Turkey by The Council of Higher Education of Turkey and is currently the only “Institute of Technology” in Turkey. Emphasis is on education and research in science and technology. The language of instruction is English, and the Campus is in Gülbahçe, Urla, İzmir. The Geothermal Energy Research and Application Center was founded within the structure of IZTECH to conduct research on geothermal energy issues, to encourage and organize interdisciplinary studies on this subject, to provide consultancy services, to organize scientific meetings, courses and seminars. Another aim of the Center is to communicate with similar centers at home and abroad, to assist in the development of courses and programs in graduate education, to provide and disseminate knowledge, to carry out joint studies with other universities, public and industrial organizations and to create central laboratories to be used in carrying out these studies, hardware and data. In addition to its national activities, the center is also involved in international projects such as EU, EBRD, Worldbank, etc.

IZTECH is the only university within the geothermal area in the campus area in Turkey. A series of research projects (geological, geophysical, geochemical and hydrogeochemical) are carried out to activate the geothermal field within the campus.

University of Stavanger

Within the University of Stavanger, the Department of Energy and Petroleum Engineering (DEPE) conducts research within drilling and well engineering, energy systems engineering, catalysis and reaction engineering, computational engineering and rheology. The program area for geothermal energy, financed by the faculty of science and technology at University of Stavanger, aims at facilitating knowledge transfer between petroleum engineering (where the university is ranked among world leading organizations) and the renewable geothermal energy technology. The program area enables multi-disciplinary collaboration to address challenges relevant for geothermal installations. Automated drilling and well construction is a strong research area at the DEPE that can support further development of geothermal energy by improved effectiveness and cost reduction for geothermal installations. Another focus in geothermal research is on innovation in Underground Thermal Energy Storages with Borehole Heat Exchangers.

Another topic of geothermal relevance is the development of a super-critical CO₂ heat pump, a well instrumented test rig that will provide researchers with data for AI-based modeling and control. The test rig will use shallow geothermal wells as heat source for space heating and cooling, as well as for heat storage applications. Techno-economic evaluation of sCO₂ installations will be carried out for benchmarking with the standard installations. With these areas of research, University of Stavanger aims to strengthen the European efforts on the utilization of low enthalpy geothermal resources.

JP Geothermal Mobility Scheme

With the relaxation of the Corona measure the JP Geothermal mobility scheme can finally be implemented. This scheme allows young and/or established researchers to stay and work at one of our partner's institutions for up to 12 weeks. Details on the application procedure and the funding can be found on our [website](#).

9th European Geothermal Workshop - EGW 2021

For the online version of the European Geothermal Workshop, the EERA JP Geothermal showed great support and interacted closely with the organisers from KIT and University of Strasbourg. Initially planned as a hybrid event in Karlsruhe, the [EGW 2021](#) was arranged purely online on the 23rd and 24th of September 2021. The EGW has been supported by our Joint Programme for some time now and turned into our central scientific event and platform to present our research.

13th European Geothermal PhD Days

The 13th European Geothermal PhD Days were organized in Aachen by the PhD students of the [EASYGO ITN](#) on the 27th – 29th of April 2022. EERA JP Geothermal supported the event and contributed a number of invited talks by representatives of JP Geothermal participants. The EGP2022 was held as a physical meeting, which participants clearly enjoyed.

EERA JP Geothermal steering committee meeting 2022

The next Steering Committee meeting is scheduled for the 21st of October 2022 with a joint dinner on the 20th of October and will be organized as physical meeting in Berlin after [the European Geothermal Congress](#) 2022 (possible hybrid solutions will be considered).

Upcoming events

- **17 - 21 October 2022 – European Geothermal Congress**
- **20/21 October 2022 – JP Geothermal Steering Committee Meeting**