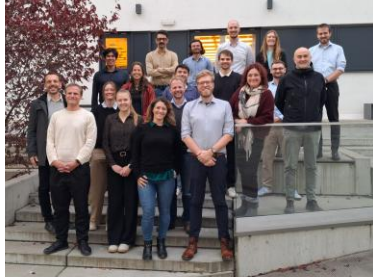


### Our third project meeting in Vienna



- What happened in the last six months?
- Where to find us at upcoming events?
- How to join our Summer School?

### Our first Summer School and how to apply

**First KCORC Summer School on innovative ORC and heat pump technologies**

September 7-11, 2026

Registration is now open, secure your spot by March 31st. Don't miss it! Join us if you are a PhD student, Master's student, a young professional, or simply young at heart and passionate about ORC & heat pumps!

**Why attend?**

- Gain in-depth knowledge on ORC and heat pump technologies
- Learn from leading experts in the field
- Expand your professional and academic network
- Participate in hands-on workshops and practical work sessions
- Get valuable experience in ORC and heat pump technologies
- Connect during social activities, from lunches and dinners to evening fun activities
- Earn a 2 ECTS certificate!
- Participate in the poster session and win the best poster award!

**Where?**

Technical University of Munich School of Design and Engineering, Munich Campus Learning

**Don't Miss Out!**

- Summer School Dates: September 7-11, 2026
- Registration is now open
- Secure your spot by March 31st!
- Full programme schedule coming soon

**Participation fee?**

None!

Please note: Participants are responsible for their own travel and accommodation.

**Organized by:** FlexGeo, KCORC, Geothermal Action Team

**Funded by:** the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101147576

### Attended events



and many more...



### Published results

**ORC LAPPEENRANTA 2025** Paper ID: 323, Page 1

**Working fluid/oil separation in a reversible ORC test rig with a twin-screw machine: Lessons learned and remaining challenges**

Janiuk von Zabinski<sup>1</sup>, Florian Kaufmann<sup>1</sup>, Peter Geil<sup>1</sup>, Harmut Splittboeck<sup>1</sup>, Schillbacher<sup>1</sup>

<sup>1</sup> Chair of Energy Systems, Technical University of Munich, Boltzmannstraße 1, Germany

\* Corresponding Author: janiuk.zabinski@tum.de

**ORC LAPPEENRANTA 2025** Paper ID: 325, Page 1

**Bringing reversible ORC-heat pump systems into the market: A perspective on the current obstacles and future application potential**

Christopher Schillbacher<sup>1</sup>, Marco Astolfi<sup>2</sup>, Soritico Kamilla<sup>3</sup>, Tamas Rompöck<sup>4</sup>, Marcus Buhl<sup>5</sup>, Maximilian Weiser<sup>6</sup>, George Koumouk<sup>7</sup>, Vincent Lommen<sup>8</sup>

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<sup>6</sup> Área de Geología, Facultad de Ciencias (FC) de la Universidad de Cantabria (UC), 39100, Santander, Spain

<sup>7</sup> Institute of Energy Efficient Buildings and Indoor Climate (EEBC), ETH Zurich, Switzerland

<sup>8</sup> Institute of Energy Efficient Buildings and Indoor Climate (EEBC), ETH Zurich, Switzerland

**EUROPEAN GEOTHERMAL CONGRESS 2025**

**Reversible high-temperature heat pumps (ORCs) for flexible and reconfigurable geothermal projects: Bridging academic activities into the market via the FlexGeo project**

Christopher Schillbacher<sup>1</sup>, Janik von Zabinski<sup>1</sup>, Anne Weisauer<sup>1</sup>, Florian Kaufmann<sup>1</sup>, Daniela Geyrhofer<sup>1</sup>, Felix Guenther<sup>1</sup>, Andreas Schuster<sup>1</sup>, Tobias Rumpöck<sup>2</sup>, Jozsef Szilagyi<sup>3</sup>

<sup>1</sup> Chair of Energy Systems, Technical University of Munich, Boltzmannstraße 1, 85748 München, Germany

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<sup>3</sup> Laboratory of Thermal Processes, School of Chemical Engineering, Technical University of Athens, 5, Soranou Efessiou, Zografou, 15701, Athens, Greece

**EUROPEAN GEOTHERMAL CONGRESS 2025**

**Decarbonising Heating and Cooling Systems via a SCBC Network Powered by Shallow Geothermal Energy: A Case Study from the Catalan Pyrenees in the FlexGeo Project**

Jordi Garcia-Capdevila<sup>1</sup>, Ignasi Hervas<sup>1</sup>, Guillem Pons<sup>1</sup>, George Angel<sup>2</sup>, Victor Caspà<sup>3</sup>, Miquel Colomer<sup>4</sup>, Jordis Arcegoitia<sup>5</sup>, Anna Galcerà<sup>6</sup>, Albert Miquel<sup>6</sup>, Jochen Hoffmann<sup>7</sup>, Jose Juan De Pineda<sup>8</sup>

<sup>1</sup> Department of Mining, Metallurgical and ICT Engineering, Universitat Politècnica de Catalunya, Av. Diagonal 645, E-08034 Barcelona, Spain

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**EUROPEAN GEOTHERMAL CONGRESS 2025**

**Optimizing Advanced Geothermal Systems: Insights from the FlexGeo Project**

Martina Fazzolari<sup>1</sup>, Daniel Polzella<sup>1</sup>, Yuliaeva Oksana<sup>1</sup>, Jasper de Rooij<sup>1</sup>, Martin O. Saar<sup>2</sup>

<sup>1</sup> Geothermal Energy and Geology (GEG) Group, Institute of Geophysics, Department of Earth and Planetary Sciences, ETH Zurich, Switzerland

<sup>2</sup> Institute of Energy Efficient Buildings and Indoor Climate (EEBC), ETH Zurich, Switzerland

### Where to find us next



### Project Partners



## 2. FlexGeo Newsletter – March 2026

### Welcome to our second project newsletter

Around six months ago, in September 2025, our FlexGeo Newsletter was launched, one year after the start of the Project FlexGeo. Funded under the European Union's Horizon Europe framework programme, we aim to demonstrate the potential of flexible geothermal energy use through reversible Organic Rankine Cycle / high-temperature heat pump technology and innovative concepts.

The primary goal of the project is to deliver sustainable solutions for the stabilization and optimization of DHCN systems across Europe and to pave the way for the market entry of commercial modular reversible ORC systems. The obtained results will significantly enhance the use of both shallow and deep geothermal energy, thereby supporting the European Union's efforts to achieve net-zero greenhouse gas emissions.

With this newsletter, we want to inform you about our activities over the last six months, during which the project has transitioned into its full operational phase, about upcoming events, and about opportunities to get actively involved in the project.

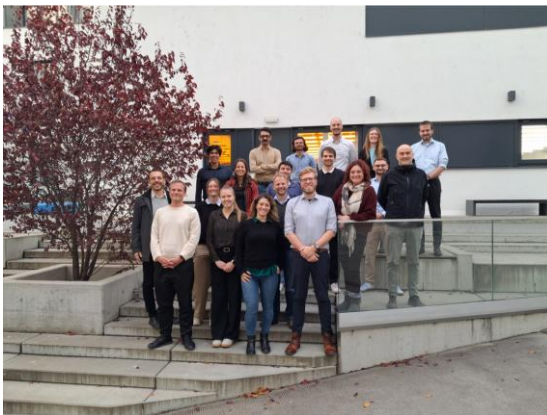
### Project meetings

After three fruitful project meetings, the online Kick-off Meeting in June 2024, and the two in-person General Assemblies, in November 2024 in Munich and in May 2025 in Liège, we were happy to hold a productive and enjoyable in-person General Assembly in Vienna.

#### Third General Assembly – Technical University of Vienna

In November 2025, we met at the Technical University of Vienna for our third [General Assembly](#). We are looking back on three very active and fruitful days, including joint evening activities such as a visit to a Christmas market. Some of the meeting's highlights were:

- The realization of two interactive workshops on innovative flexible geothermal energy system concepts and reversible ORC configurations;
- Updates on each work package, including the first completed deliverable and milestones.



Pictures of the meeting in Vienna

## First reversible ORC dataset published

We are happy to announce that we have published the first dataset from the reversible ORC test rig at TUM. This dataset contains the raw experimental data from the oil flow variation tests conducted in high-temperature heat pump mode in the reversible ORC system. The measurements were performed at the Chair of Energy Systems, Technical University of Munich. The analyzed results were presented at the 8th International Seminar on ORC Power Systems (2025), and the corresponding publication, "Working fluid/oil separation in a reversible ORC test rig with a twin-screw machine: Lessons learned and remaining challenges", is available in the conference proceedings.

You can access the dataset [here](#) on zenodo.org.

Further datasets from the FlexGeo test campaigns will be shared and uploaded on zenodo. Stay tuned!

## Attended events

Over the past six months, we have participated in numerous events, reaching both scientific and industry communities. Next to presenting the project's ambition and first results, the constant exchange with external stakeholders helps us further shape and develop our project. The attended events have been:

- European Geothermal Congress 2025 (Zurich, Switzerland)
- High-Temperature Heat Pump Symposium (Copenhagen, Denmark)
- 8<sup>th</sup> International Seminar on ORC Power Systems 2025 (Lappeenranta, Finland)
- German Geothermal Congress 2025 (Frankfurt, Germany)
- Geotherm Industry Fair (Offenburg, Germany)



Project partners at the International Seminar on ORC Power Systems and project presentation at the High-Temperature Heat Pump Symposium

## Apply now for our Summer School

September 2026

### First KCORC Summer School on innovative ORC and heat pump technologies

📌 The first KCORC Summer School is happening in September 7-11, 2026!  
Apply now, until April 12<sup>th</sup>, don't miss it!

Join us if you are a PhD student, Master's student, a young professional, or simply young at heart and passionate about ORC & heat pumps!

**Why attend?**

- Gain in-depth knowledge on ORC and heat pump technologies
- Learn from leading experts in the field
- Expand your professional and academic network
- Participate in hands-on workshops and practical work sessions
- Join technical excursions to real ORC and heat pump installations
- Connect during social activities, from barbeques and Biergarten evenings to a guided Munich city tour
- Earn a 2 ECTS certificate!
- Participate in the poster session and win the best poster award

**Where?**



**Participation fee?**  
**None!**

Please note: Participants are responsible for their own travel and accommodation

**Organized by**



in cooperation with




**Don't Miss Out!**

- 📅 Summer School Dates: September 7-11, 2026
- ✍️ Applications are now open
- 🕒 Secure your spot by April 12<sup>th</sup>
- 📅 Full programme schedule coming soon

Follow us on




Contact person & FlexGeo coordinator: Christopher Schifflachner  
Chair of Energy Systems - Technical University of Munich  
c.schifflachner@tum.de

 **Funded by the European Union**

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101147576

We are pleased to announce that FlexGeo, in cooperation with KCORC, is organizing a Summer School from 07-11 September 2026 in Munich. The KCORC Summer School 2026 offers an exciting opportunity for participants to deepen their expertise in ORC (Organic Rankine Cycle) and heat pump technologies. The application period is now officially open until 12 April!

During the five-day Summer School, PhD and master students from various universities and institutions, and industrial professionals will gain in-depth knowledge on ORC and heat pump technologies, learn from leading experts from industry and academia, and expand their professional and academic network. They will participate in hands-on workshops and practical sessions, join technical excursions to ORC and heat pump installations, and connect through social activities. During the Summer School, participants will earn a 2 ECTS certificate upon successful completion and will participate in a poster session, which enables them to compete for the best poster award.

To learn more about the KCORC Summer School, visit our [website](#) and complete the following steps to apply:

1. **Fill in the [registration form](#)**
2. **Send your CV and a motivation letter to: [kcorc.les@ed.tum.de](mailto:kcorc.les@ed.tum.de)**

Please ensure that your 1-page motivation letter includes your **research field and why you want to participate** in the summer school. These details will be considered during the evaluation process.

## Published results

We are happy to share that in the last six months, we published further experimental and numerical results on the reversible ORC/heat pump technology:

- Kaufmann et al. (2025): **Experimental Analysis of a Reversible High-Temperature Heat Pump/ORC Test Rig for Geothermal CHP Applications**. Applied Thermal Engineering. The paper can be found [here](#).
- Kaufmann et al. (2025): **Reversible High-Temperature Heat Pumps for Peak Load Coverage in Geothermal Heating Plants: A Techno-Economic Analysis**. Energy Conversion and Management. The paper can be found [here](#).
- Esmaeilpour et al. (2025): **Optimizing Advanced Geothermal Systems: Insights from the FlexGeo Project**. Proceedings of the European Geothermal Congress, which can be found [here](#).
- García-Céspedes et al. (2025): **Decarbonizing Heating and Cooling Systems via a 5GDHC Network Powered by Shallow Geothermal Energy: A Case Study from the Catalan Pyrenees in the FlexGeo Project**. Proceedings of the European Geothermal Congress, which can be found [here](#).

- Schifflechner et al. (2025): **Reversible high-temperature heat pumps/ORCs for flexible and economical geothermal projects: Bringing academic activities into the market via the FlexGeo project.** Proceedings of the European Geothermal Congress, which can be found [here](#).
- Von Zabienski et al. (2025): **Working fluid/oil separation in a reversible ORC test rig with a twin-screw machine: Lessons learned and remaining challenges.** Proceedings of the 8<sup>th</sup> International Seminar on ORC Power Systems 2025, which can be found [here](#).
- Schifflechner et al. (2025): **Bringing reversible ORC-heat pump systems into the market: A perspective on the current obstacles and future application potential.** Proceedings of the 8<sup>th</sup> International Seminar on ORC Power Systems 2025, which can be found [here](#).

## Where to find us next?

In the next months, we will be present at several key events in the geothermal and ORC/heat pump community. Below you find the dates and places of those events, as well as what to expect. We hope to see you there. More details can be found on the particular websites of the [15<sup>th</sup> IEA Heat Pump Conference](#), the [World Geothermal Congress](#), and the [ECOS 2026](#).



Vienna, Austria  
May 26 – 29



Calgary, Canada  
June 8 – 11



Constanța, Romania  
June 28 – July 3

## Stay tuned

You don't want to miss any news updates of our project, such as the two upcoming webinars later in the year? Then follow us on [LinkedIn](#).



### Responsible for the newsletter and contact person:

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