

1st GEOTWINS Annual Meeting

28 - 30 October 2025, Pisa, Italy

GEOTWINS project	
Project acronym	Digital Twin Components for Deep Geothermal Energy Power and Heat Generation
Date	28.10.2025 – 30.10.2025
Venue	Auditorium Museo dell'Opera del Duomo, Pisa, Italy

Dear GEOTWINS participants,

We are happy to share with you the agenda for the 3 days meeting on 28-30 October 2025 in Pisa, Italy. The key objectives of the meeting are:

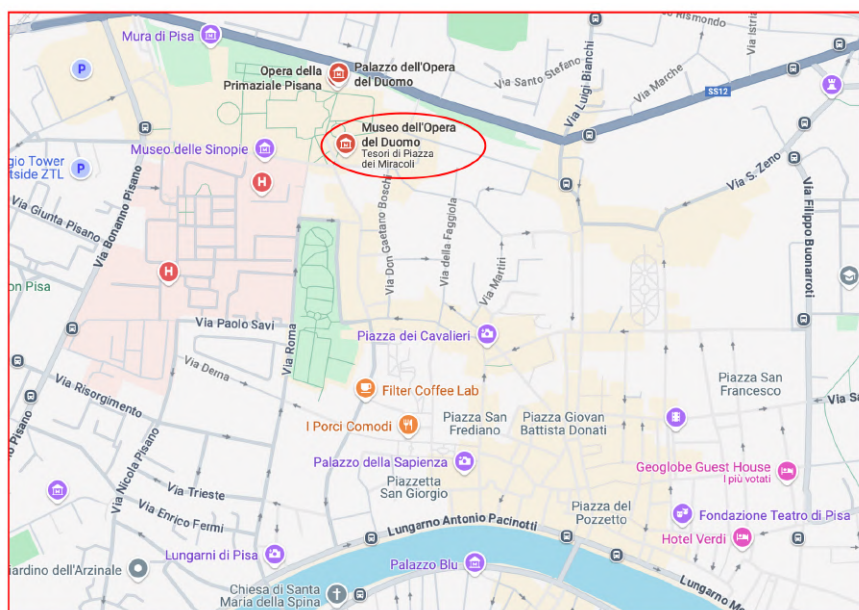
- 1) To update everybody on what has happened in the tasks and WPs in the past 12 months.
- 2) To plan the next 12 months, this implies a strong focus on the first end-to-end Digital Twin prototype and demonstration of the interconnected DTCs.
- 3) To look beyond GEOTWINS, connect what we do to other ongoing and upcoming projects in our domain and discuss interesting science.
- 4) To network, exchange and enjoy an in-person meeting in a nice location

We would like to thank you our local organizer (Francesco Grigoli and his team) from the University of Pisa and Seismix that have helped us (Laura) to find great locations for the meetings and social events. The next few pages explain the locations of the venue and events as well as include a list of hotels nearby. For the actual agenda, please jump to page 5.

Looking forward to seeing you all in Pisa!

Federica, Stefan & Laura

Location of Venue on Map



Venue: Auditorium dell'Opera del Duomo



Location & Transportation

Venue: Auditorium Museo dell'Opera del Duomo

Address: Piazza del Duomo 23, 56126 Pisa, PI, Italy

How to get there:

- **From Pisa Airport** - Pisa Galileo Galilei Airport is only two kilometres from the city centre. From the airport, you can reach the central railway station (Pisa Centrale) via an elevated monorail called Pisa Mover. Alternatively, you can take the LAM Verde bus service. The bus stop is located less than 400 metres from the terminal, on Via Sant' Agostino.

Once at **Pisa Centrale**, follow the directions below:

- **From Railway Station (Pisa Centrale)** - Take the LAM Rossa bus towards 'Park Pietrasantina' and get off at the 'Torre' stop.
- **By Taxi:** You can contact the Radio Taxi service on +39 050 541600. A journey from the railway station to the venue costs around €15; from the airport to the venue, about €25. Taxis are usually available outside the railway station and the airport.
- **On foot:** from the Railway Station, it's a walk of about 25 minutes through the historic city centre.

List of Accommodations options near the event venue

There are many hotels or Airbnb in Pisa, and most of you prefer to book online. We have not made reservations, but we do list a few hotels that are well located. All of the following accommodations are available at booking.com or other search engines:

1. Hotel Villa Kinzica
2. Villa Natalina B&B
3. Hotel Roma

This research was funded by CETPartnership, the Clean Energy Transition Partnership under the 20XX joint call for research proposals, co-funded by the European Commission (GA N°101069750) and with the funding organizations detailed on <https://cetpartnership.eu/funding-agencies-and-call-mod-ules>.

4. Relais dell'Uszero
5. Hotel Di Stefano
6. Relais Dei Mercanti B&B And Suites
7. Residenza D'Epoca - Santa Caterina
8. Grand Hotel Duomo
9. B&B Via Corsica 10
10. B&B - Residenza d'epoca Piazza Cairolì

Social Event on Day 1: Ice breaker at Grand Hotel Duomo Pisa, Panorama Rooftop bar

Address: Via Santa Maria, 94

Website: <https://www.grandhotelduomopisa.it/ristoranti-e-bar/panorama-rooftop-bar.html>



Social Event on Day 2: Lunch at Bistro dell'Opera (same building as the venue)

Address: Piazza del Duomo 23

Website: <https://bistrotdellopera.com>



Social Event on Day 2: Dinner at Osteria I Santi, traditional Tuscan cuisine

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Address: Via Santa Maria 71

Website: <https://www.osteria-isanti.com/it/>



Social Event on Day 3: Lunch at Bistro dell'Opera (same as Day 2)

Address: Piazza del Duomo 23

Website: <https://bistrotdellopera.com>

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Program (All times Central European Time)

Day 1 – Tuesday 28 October 2025

- Until 17:00: arrival in Pisa
- 18:00: Ice Breaker at Grand Hotel Duomo Pisa, Panorama Rooftop bar

Day 2 – Wednesday 29 October 2025

(20 minutes talks, (*) online speaker)

9:00 – 9:05	Welcome, Opening Remarks	Stefan Wiemer (ETH)
9:05 – 9:10	Logistics	Laura Gulia (ETH)
Computational Infrastructure and Digital integration of DTCs		
9:10 – 10:10	Status of GLOW and preliminary demonstration	Michael Afanasiev (MONDAIC)
10:10 – 10:30	Next Steps and Planning	All
10:30 – 11:10	Coffee break	
Digital Geothermal Reservoir Twin		
11:10 – 11:15	Introduction on status of WP tasks	Claudia/Luigi
11:15 – 11:35	<i>Monitoring a deep geothermal reservoir using ambient seismic noise: challenges in assessing the dominant hydrological effects</i>	Flavien Mattern (UniStra)
11:35 – 11:55	<i>Multiscale digital twins for geothermal reservoirs: Lab- and Field-informed concept and first results</i>	Claudia Finger (IEG)
11:55 – 12:15	<i>Progress on modelling hydrofractures for Geothermal Reservoirs</i>	Luigi Passarelli (INGV)
12:15 – 12:30	Next Steps and Planning	WP leaders
12:30 – 14:30	Lunch Break: Bistrot dell' Opera	
Hazards, Vulnerability, and Risk Analysis		
14:30 – 14:35	Introduction on status of WP tasks	Cecilia/Marco
14:35 – 14:55	<i>Forecasting Induced Seismicity with Deep Learning</i>	Ryan Schultz (ETH)
14:55 – 15:15	<i>Progress towards dynamic ground shaking and seismic risk models for induced seismicity</i>	Graeme Weatherill (GFZ)
15:15 – 15:35	<i>Toward a Fully Stochastic Framework for Dynamic Seismic Risk in Induced Events within a Digital Twin Context</i>	Marco Broccardo (UNITN)
15:35 – 15:50	Next Steps and Planning	WP leaders
15:50 – 16:30	Coffee break	
Validation and demonstration in operational environments		
16:30 – 17:00	Haute-Sorne Pilot Stimulation	Andrès Alcolea (GES)
17:00 – 17:30	<i>Guest Talk on Utah FORGE (*)</i>	Kris Pankow (UUTAH)
17:30 – 18:00	FORGE-DT prototype discussion	All
19:30 – 21:00	Organized Dinner: Osteria I Santi	

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Day 3 – Thursday 30 October 2025

Seismic Monitoring and Imaging		
9:00 – 9:05	Introduction on status of WP tasks	Francesco/Federica
9:05 – 9:25	<i>Machine-Learning seismic catalog enhancement</i>	Francesco Grigoli (UNIPi)
9:25 – 9:45	<i>Bayesian Magnitude of Completeness Method with Machine Learning-based Ambient Seismic Noise Bias Correction for Network Optimisation in a Digital Twin (*online)</i>	Arnaud Mignan
9:45 – 10:05	<i>DAS data modelling and analysis</i>	Sonja/Davide (SEISMIX)
10:05 – 10:25	<i>Digital Twin for Seismic Waves of Induced Events in a Geothermal Reservoir</i>	Federica Lanza (ETH)
10:25 – 10:40	Next Steps and Planning	WP leaders
10:40 – 11:20	Coffee break	
Visualization and Decision-Making Tools		
11:20 – 11:25	Introduction on status of WP tasks (*online)	Michèle Marti (ETH)
11:25 – 11:45	<i>Monitoring Urban Induced Seismicity with Low-Cost Stations: Insights from the Strasbourg Seismic Network (*online)</i>	Riccardo Minetto (UniStra)
Road forward		
11:45 – 12:15	Cross-cutting issues and next steps	Stefan & Federica
12:15 – 14:00	Lunch Break: Bistrot dell' Opera	

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