

International Conference on Operations Research

Decision Support & Choice-Based Analytics for a Disruptive World

August 29 to September 1, 2023 University of Hamburg, Germany

www.or2023.de







Welcome to the OR_{23} in Hamburg!



On behalf of the organizing committee, it is my pleasure to welcome you to the OR 2023 conference, jointly organized by Universität Hamburg (UHH) and the Kühne Logistics University (KLU). OR 2023 holds special significance as it marks the 25th Anniversary of the GOR (Gesellschaft für Operations Research). We are incredibly grateful for the unwavering support from the scientific community and for the GOR's sponsorship of sustainable drinking bottles as an anniversary gift for our participants.

Continuing the rich tradition of this annual gathering, the conference brings together distinguished scientists from academia and industry in the broad area of Operations Research. OR 2023 is centered around the theme "Decision Support & Choice-Based Analytics for a Disruptive World", providing an excellent platform to engage in discussions, present groundbreaking research, explore innovative applications and practices, generate valuable professional connections, and interact with leading industry experts.

We have an exciting scientific and social program ahead of us. More than 550 speakers will share their research across 19 streams and up to 22 sessions in parallel, accompanied by a distinguished lineup of plenary and semi-plenary speakers. Prior to the conference, we have the Dokt!OR program, tailored specifically for doctoral students.

In addition to the scientific program, our engaging social events include a welcome reception at UHH, a senate reception at KLU, and the conference dinner in the Grand Ballroom of the Grand Elysée. To showcase the vibrant city of Hamburg, we have arranged a boat ride to the Port of Hamburg and visits to two esteemed companies, Aurubis and Gebr. Heinemann.

Throughout the conference, you can recharge with coffee available at the "Mensa," where you will also find this year's exhibitors. Lunch will be served at the Mensa on Wednesday and Thursday, with a lunch box provided on Friday. We also encourage you to refill your drinking bottles at the designated water dispensers, clearly marked on the maps provided in this booklet. This small effort contributes to reducing the ecological footprint of the conference. Unfortunately, we have capacity restrictions for some events. If you have registered for the Senate Reception, Conference Dinner, Lunch Box on Friday, Boat ride, or company visits, please find your tickets in your personal conference materials.

For up-to-date information, please visit our webpage at **or2023.de**. In case of any technical difficulties, you can find a contact number in this booklet, along with maps to relevant locations, a concise program overview, and additional information. While we have omitted physical notepads from the materials, you will find some space at the end of this booklet for your notes on paper. Furthermore, the Technical Program (aka Book of Abstracts) was not printed, but you can access the PDF-file online, or you may use the EURO-Tool web app. Links are provided at or2023.de, along with any updates.

I would like to take this opportunity to express our gratitude to all our sponsors for their invaluable support, without which the conference fee would have been significantly higher.

Wishing all of us a successful and enriching conference in the vibrant city of Hamburg!

On behalf of the organizing committee and the program committee,



Bei Gurobi ermöglichen wir es, Studierenden und Forschenden, einfach mit mathematischer Optimierung zu arbeiten. Obfür den Einsatz in der Lehre oder in der Forschung, Akademiker können den Gurobi Optimizer kostenlos nutzen:

Alle Gurobi-Funktionen und volle Performance ohne Begrenzung der Modellgröße.

Darüber hinaus können Sie auf eine Vielzahl von Bildungsmaterialien zugreifen, um Ihnen das Lehren und Lernen von Gurobi zu erleichtern:

- •Burrito Optimization-Spiel (mit Lehrmaterialien und Spielanleitung)
- Gurobipy-Kartenspiel
- •Jupyter Notebook-Beispielbibliothek für alle Erfahrungsstufen
- •Modellbibliothek für Data Science
- •Schnellstartanleitungen und Dokumentation
- •Community-Forum
- •Videos, Trainings, Events und On-Demand-Webinare



Our Sponsors

We proudly present our sponsors.

Gold Sponsors



Silver Sponsors





LocalSolver









Bronze Sponsors







Absolventen!

Durch unser "Take Gurobi With You"-Programm können Sie Gurobi auch nach dem Abschluss weiterhin kostenlos nutzen.

How to get to OR_{23}

The OR 2023 conference is set at the Main Building of the University of Hamburg, located at Edmund-Siemers-Allee 1 (ESA 1).

The campus surrounding the Main Building ESA 1 is easily accessible by public transport. The closest stops include Dammtor for long-distance and S-Bahn trains, Hallerstraße or Stephansplatz for the U-Bahn, and the stop Staats- und Universitätsbibliothek for buses. Once you collect your name badge, it also serves as your pass for the Hamburg Public Transportation, a benefit included in your registration fee. You can find transportation schedules at www.hvv.de.

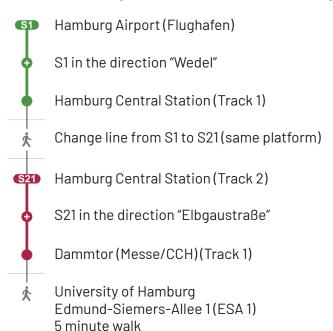


HVV public transportation schedule



Navigation from the Airport with Google Maps

Public transportation from the airport





Welcome Desk

The Registration/ Welcome Desk for the conference is located in the Main Building (ESA 1) – just straight ahead if you enter the building through the main entrance (at the coat check in front of Lecture Theater A).

The opening times for the Registration / Welcome Desk are

Tuesday, 2:00 p.m. - 8 p.m. (14:00 h - 20:00 h)

Wednesday, 7:30 a.m. – 5:30 p.m. (7:30 h – 17:30 h)

Thursday, 8:00 a.m. - 5:30 p.m. (8:00 h - 17:30 h)

Friday, 8:00 a.m. – 2:30 p.m. (8:00 h – 14:30 h).

There, you will receive your invoice, your confirmation of participation, your name badge, your tickets for the Reception by the Senate of the Free and Hanseatic City of Hamburg, the Conference Dinner, and any excursions you may have booked and some other small welcome gifts. Here, you will also receive your **lunch box on Friday**, **September 1**, if booked during the registration.

Our support team at the Welcome Desk will be available at any time during the opening hours to answer questions and provide help – particularly with your registration.

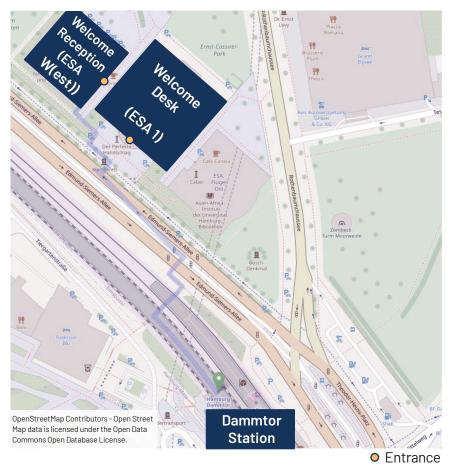
On Friday, we will offer a luggage storage at the Registration / Welcome Desk. Please note that bags are left at the owner's own risk as we cannot assume any liability for checked bags.



Location of the Welcome Desk in Google Maps

Welcome Reception

The Welcome Reception on **Tuesday, August 29th** starts in the Café dell' Arte / Foyer of the ESA W(est) Building **at 6:00 p.m. (18:00 h)**. The admission is included in the registration.





Location of the Welcome Reception in Google Maps

Conference Schedule

Tuesday, August 29, 2023

Dokt!OR

18:00-21:00 Welcome Reception

Wednesday, August 30, 2023

08:30-10:00	Opening Ceremony & GOR Scientific Award
10:30-12:00	Parallel Sessions
13:20-14:50	Parallel Sessions
15:10-16:10	Semi-Plenary Talk by Povoa, Weber, Jozefowska and Tutorial by AMPL
16:30-18:00 19:00	Parallel Sessions Senate Reception

Thursday, August 31, 2023

08:30-10:00	Parallel Sessions
10:30-11:30	Semi-Plenary Talks by Klimm and
	Brailsford and Tutorial by Gurobi
12:50-14:20	Parallel Sessions
14:35-15:35	Plenary Talk Kemme
15:50-17:20	Parallel Sessions
17:30-19:00	GOR Annual Meeting
20:00	Conference Dinner

Friday, September 1, 2023

08:30-10:00	Parallel Sessions
10:30-11:30	Semi-Plenary Talks by Manlove and Müller
12:00-13:30	Plenary Talk by Topaloglu and Closing Event

Detailed Schedule

The detailed scientific schedule is available as PDF file on our website or 2023.de. Furthermore, it can be found via the following link in the EURO Conference Tool:

www.euro-online.org/conferences/program/#conference/gor2023

Here, you will find a comprehensive overview of this year's conference's scientific program. The web app provides you with a detailed schedule of the sessions and events taking place during the conference. You can easily navigate through the program and mark the sessions that interest you the most. By doing so, you can compile your own personalized program tailored to your preferences.



Invited Speakers

We are excited about the speakers of this year's conference.

Plenary Speakers



Nils Kemme HPC Hamburg Port Consulting Out of the Box Thinking -Real Life OR Applications for Container Terminals



Huseyin Topaloglu Cornell University Incorporating Discrete Choice Models into Operations Management Models

Semi-Plenary Speakers



Sally Brailsford Southhampton Business School Improving emergency care using a new approach to generic simulation modelling



Ana Barbosa-Póvoa Instituto Superior Técnico Sustainable Supply Chain Management



Joanna Józefowska Poznan University of Technology Models for just-in-time scheduling



Christoph Weber
University Duisburg-Essen
OR-models for the energy transition –
coping with uncertainty and heterogeneity



Sven Müller
RWTH Aachen
Locational choices and decisions:
choice-based facility location planning



Max Klimm TU Berlin Information design for congested networks



David Manlove University of Glasgow Models and Algorithms for Kidney Exchange

Plenary Overview

Wednesday, August 30, 2023

08:30 - 10:00		
	ESA A	Opening Ceremony & GOR Scientific Award
15:10 - 16:10		
	ESA B	Tutorial by APML
	ESA C	Semi-Plenary talk Ana Barbosa-Póvoa
	ESAJ	Semi-Plenary Talk Christoph Weber
	ESA M	Semi-Plenary Talk Joanna Józefowska

Thursday, August 31, 2023

10:30-11:30		
	ESA B	Tutorial Gurobi
	ESA C	Semi-Plenary Talk Max Klimm
	ESAJ	Semi-Plenary Talk Sally Brailsford
14:35 - 15:35		
	ESA A	Plenary Talk Nils Kemme
17:30 - 19:00		
	ESA A	GOR Annual Meeting

Friday, September 1, 2023

10:30 - 11:30		
	ESA B	Semi-Plenary Talk David Manlove
	ESA C	Semi-Plenary Talk Sven Müller
12:30 - 13:30		
	ESA A	Plenary Talk Huseyin Topaloglu & Closing Event

Session Overview

Track	10:30-12:00	13:20-14:50	16:30-18:00
2. ESA B	WB-2: Decision Support in Sales and Logistics	WC-2: Decision Analysis in Transport	WE-2: Decision Support for Production Planning
3. WiWi A, VMP5	WB-3: Operational Efficiency in Logistics	WC-3: Advancements in Location and Inventory Management	WE-3: Exploring Advances in Delivery Systems
4. WiWi B1, VMP5	WB-4: Navigating Logistics Challenges	WC-4: Optimization and Planning in Modern Logistics	WE-4: Exploring Advanced Planning and Optimization
6. ESA C	WB-6: Production management	WC-6: Logistics	WE-6: Retail operations
7. ESA J	WB-7: Optimal Control in Models with Regime Switching	WC-7: Applications of Multi- Criteria Decision Analysis	WE-7: Value of Information
8. ESA M	WB-8: Inventory management	WC-8: Multilevel Optimization	WE-8: Hydrogen and biogas networks
9. ESA 0(st) 221	WB-9: Optimization with nonsmooth or combinatorial structures	WC-9: Conic Optimization and Applications	WE-9: Multi-objective Optimization
10. ESA W(est) 221			WE-10: Machine Learning/Al
11. ESA H	WB-11: Agent-based Modeling for Energy Economics and Energy Policy I	WC-11: Agent-based Modeling for Energy Economics and Energy Policy II	WE-11: Power grids and system resilience
12. ESA K	WB-12: GOR PhD Thesis Awards 2023	WC-12: Model coupling and aggregation for ESM	WE-12: Modelling electricity prices
13. ESA W(est) 121	WB-13: Logistics	WC-13: Sharing and pooling	WE-13: Railway Optimization
4. ESA W(est) 120	WB-14: Robust Optimization in Transportation	WC-14: Mobility on demand	WE-14: Advances in transportation and logistics
15. R 0077, VMP5	WB-15: Capacity Planning in Health Care	WC-15: Integrated Planning in Hospitals	WE-15: Capacity planning in healthcare networks
16. R 0079, VMP5	WB-16: What's New in Solvers	WC-16: What's New in Modeling Systems	WE-16: Algorithmic Advances in MIP and CP
7. ESA O(st) 121	WB-17: Discrete Optimization Applications I	WC-17: Discrete Optimization Solution Algorithms I	WE-17: Combinatorial Optimization I
8. ESA O(st) 122	WB-18: Facility Layout and Location	WC-18: Routing Problems I	WE-18: Approximation Algorithms
19. ESA O(st) 123	WB-19: Discrete optimization under uncertainty	WC-19: Robust Optimization I	WE-19: Multiobjective Optimization
20. ESA W(est) 119	WB-20: Auctions & Procurement	WC-20: Game Theory & Dynamics	
21. ESA W(est) 122	WB-21: Re-Enforcement Learning, Neural Networks, Transparency	WC-21: Financial Modeling	WE-21: Industry, Sales and Price Forecasting
22. ESA W(est) 220			WE-22: Meet the Editors
23. ESA W(est) 222	WB-23: Routing Problems	WC-23: Assembly Line Balancing and Warehouse Control	WE-23: OR and the Global South 1
24. ESA O(st) 120	WB-24: Flow Shops	WC-24: Agent-based Simulation	WE-24: Mixed Integer Based

and Stochastic Optimization

Markets

Approaches

WC-25: Assortments, Products & WE-25: Capacity Control

14

25. ESA O(st) 222

WB-25: Optimization

Methods in Engineering

Session Overview

Track	8:30-10:00	12:50-14:20	15:50-17:20
optimisation approaches in d		TC-2: Decision support for decarbonization in integrated energy systems	TE-2: Advanced Decision-Making Methods and Applications
3. WiWi A, VMP5 TA-3: Exploring Advances in Resource Optimization		TC-3: Exploring Challenges and Solutions in Modern Logistics	TE-3: Integrated & Robust Models for Planning & Scheduling
4. WiWi B1, VMP5	TA-4: Exploring Advances in Logistics and Network Configuration	TC-4: Exploring Advances in Vehicle Routing and Logistics	TE-4: Mastering Optimization in Logistics
6. ESA C	TA-6: Fuel and CO2 networks	TC-6: Food supply chains	TE-6: Supply chain coordination
7. ESA J	TA-7: Decision Support for Sustainable Production Systems and Supply Chains	TC-7: Risk Management	TE-7: Decision Support for Financial Planning and Analysis
8. ESA M	TA-8: Manufacturing	TC-8: Reverse and uncertain supply chains	
9. ESA O(st) 221	TA-9: Optimization with nonsmooth or combinatorial structures	TC-9: Optimal Control Theory and Applications	TE-9: Nonsmooth Optimization
10. ESA W(est) 221	TA-10: GOR Master Thesis Awards		TE-10: Assortment Planning
11. ESA H	TA-11: Industrial energy systems	TC-11: Power-to-Gas	TE-11: Teaching OR for Sustainability
12. ESA K	TA-12: Control Mechanisms and Agent Behaviour in Energy Markets	TC-12: Electric mobility and charging profiles	TE-12: Decentralized energy systems
13. ESA W(est) 121 TA-13: Shunting		TC-13: Recent Advances in Railway Optimization	TE-13: Timetabling
14. ESA W(est) 120 TA-14: Routing problems and traffic assignment		TC-14: Rolling Stock Problems	TE-14: EV: routing & locating charging infrastructure
15. R 0077, VMP5	TA-15: Scheduling in Health Care 1	TC-15: Emergency Services	TE-15: Scheduling in Health Care 2
16. R 0079, VMP5	TA-16: Nonlinear and Global Optimization	TC-16: Parallel Computing	TE-16: OR Software in Practice
17. ESA O(st) 121	TA-17: Routing Problems II	TC-17: Column Generation	TE-17: Discrete Optimization Applications II
18. ESA O(st) 122	TA-18: Optimization under Uncertainty	TC-18: Discrete Optimization Solution Algorithms II	TE-18: Combinatorial Optimization & Machine Learning
19. ESA O(st) 123	TA-19: Combinatorial Optimization II	TC-19: Robust Optimization II	TE-19: Branch-and-Cut-and- Price
20. ESA W(est) 119	TA-20: OR and the Global South 2	TC-20: Behavioral insights on Albased decision support	TE-20: Auctions & Procurement II
21. ESA W(est) 122	TA-21: Deep Learning & Pre- Trained Forecasting Models	TC-21: Optimization in Modern Official Statistics	TE-21: Forecasting Models, Theory, Case Studies
23. ESA W(est) 222		TC-23: Flexibility and Resilience	TE-23: Matheuristics and PSO
24. ESA 0(st) 120	TA-24: Scheduling applications	TC-24: Theory and practice	TE-24: Scheduling Problems
25. ESA O(st) 222	TA-25: Simulation and Machine Learning	TC-25: Dynamic Pricing	TE-25: Reinforcement Learning

Session Overview

2023
September,
-
Friday,

Track	8:30-10:00		
2. ESA B (0)	A-2: OR in Logistics and Supply Chain Management		
3. WiWi A, VMP5	A-3: Sustainable and Efficient Logistics: Insights into Electric Vehicle Routing and Waste Collection		
4. WiWi B1, VMP5	FA-4: Central vs. Distributed Systems		
6. ESA C	FA-6: Inventory routing		
7. ESA J	FA-7: Banking and Finance		
9. ESA O(st) 221	FA-9: Continuous and Global Optimization		
10. ESA W(est) 221	FA-10: GOR Young Researchers Awards		
11. ESA H	FA-11: Multi-objective optimization in energy and environment		
12. ESA K	FA-12: Quantum Optimization		
13. ESA W(est) 121	FA-13: Electric busses		
14. ESA W(est) 120	FA-14: Network design		
15.R 0077, VMP5	FA-15: Simulation in Health Care		
16. R 0079, VMP5	FA-16: Deployment Frameworks		
17. ESA O(st) 121	FA-17: Integer programming for polynomial optimization		
18. ESA O(st) 122	FA-18: Combinatorial Optimization III		
19. ESA O(st) 123	FA-19: About Secretaries and Prophets		
20. ESA W(est) 119	FA-20: Human-Algorithm Interaction		
21. ESA W(est) 122	FA-21: Sustainability and Business Analytics		
22. ESA W(est) 220	FA-22: Scheduling and Transportation Problems		
24. ESA O(st) 120	FA-24: (Resource Constrained) Project Planning		
25. ESA O(st) 222	FA-25: Last-Mile Delivery		

Please be aware that to respect the rights of our speakers, photography and filming of the lectures are prohibited.

Venues

The parallel sessions of the OR 2023 conference will be held in four buildings, the first three of which are adjacent to each other:

- 1. University Main Building (ESA 1) in Edmund-Siemers-Alle 1 with the Welcome Desk (Registration) and the seven lecture theaters ESA A, ESA B, ESA C, ESA H, ESA J, ESA K, and ESA M.
- 2. East Wing of the University Main Building (ESA O(ST)) in Edmund-Siemers-Allee 1 with the six seminar rooms ESA O(st) 120, ESA O(st) 121, ESA O(st) 122, ESA O(st) 123, ESA O(st) 220, and ESA O(st) 221.
- 3. West Wing of the University Main Building (ESA (W(EST)) in Edmund-Siemers-Allee 1 with the seven seminar rooms ESA W(est) 119, ESA W(est) 120, ESA W(est) 121, ESA W(est) 122, ESA W(est) 220, ESA W(est) 221, and ESA W(est) 222.
- 4. Von-Melle-Park 5 (VMP 5) is the Business and Economics Building in Von-Melle-Park 5 with two lecture theaters and two seminar rooms Wiwi A, Wiwi B1&B2, 0077, and 0079.

The walking distance from the Main Building ESA 1 to the VMP 5 building is less than 500 meters and should take no more than 6 minutes.



University Main Building in Google Maps



Von-Melle-Park 5 in Google Maps

Overview

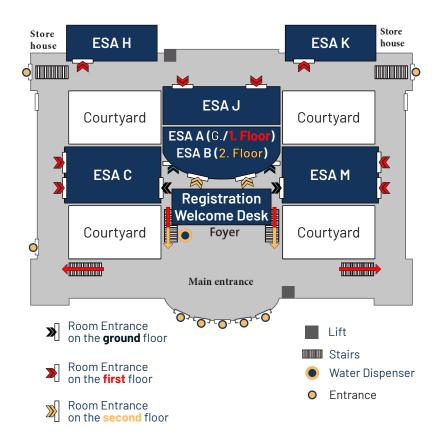


Water Dispensers

In ESA 1, ESA W(est) and ESA E(ast) you will find water dispensers, where you can fill up the bottle provided to you at the Welcome Desk. The locations are marked on the following pages.

University Main Building (ESA 1)







University Main Building (ESA 1) in Google Maps

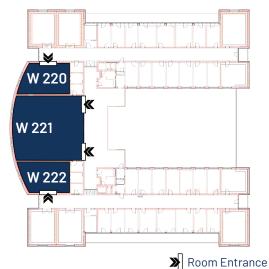
West Wing of the Main Building (ESA W(EST))



First Floor



Second Floor



East Wing of the Main Building (ESA O(ST))



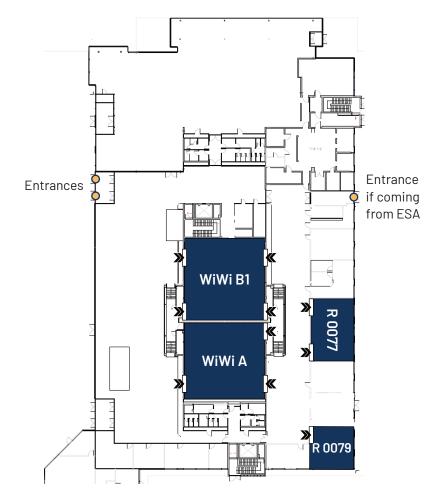
Entrance on Ground Floor Water Dispenser on Ground Floor 0 122 0 123

Second Floor



Von-Melle-Park 5 (VMP 5)

The walking distance from the Main Building ESA 1 to the VMP 5 building is less than 500 meters and should take no more than 6 minutes.





VMP 5 in Google Maps

Room Entrance

WIFI & Hardware

WIFI

Access to the EDUROAM network is available anywhere on campus. Please inform yourself at your home institution or via https://eduroam.org/

If you do not have access to EDUROAM you can use the registration information provided in your documents at the Welcome Desk.

Hardware

Session chairs and speakers are advised to bring their own hardware for their presentations. Ideally, session chairs organize ahead of their session's time slot that all presentations are copied to just a single device. All rooms are equipped with HDMI access to the local beamers. IT-support helpers will be available before the start of each session to help session chairs and speakers to connect their hardware with the beamer. A limited number of backup laptops, HDMI-to-USB C-adapters and replacement beamers will be available from the IT-support helpers.

Should you need help with technical problems call +49 40 42838 6410

Catering & Exhibition

All catering (coffee breaks and lunch on Wednesday and Thursday) will be offered at the Mensa Studierendenhaus (the official address is Von-Melle-Park 2, but it is much easier to enter the building from Schlüterstraße opposite from number 20 as indicated in the map and picture below).



Entrance



The Mensa will be open Wednesday to Friday at 7:45 a.m. with coffee, tea and some biscuits. Lunch is served on Wednesday and Thursday from 11:30 a.m. to 2:00 p.m. (11:30 h - 14:00 h). There will be a self-service salad buffet and a choice between a vegan, a vegetarian and a dish containing meat as well as a selection of desserts. The dishes (and the number of the corresponding queue) will be advertised on the displays at the bottom of the stairs. The Mensa Studierendenhaus also holds the conference exhibition.

Social Program

Dokt!OR

PhD students are invited to the Dokt!OR, a program by the GOR to promote young researchers. The event will take place at **ESA O(ST) Building in Room 221** (Edmund-Siemers-Allee 1, 20146 Hamburg) on **August 29, 2023, at 3:00 p.m. (18:00 h).**

Schedule

15:00	Introduction
15:15	A primer on modeling real-world preferences via choice based optimization
16:00	Coffee Break
16:15	Bringing OR to practice – What does it take to be successful?





Welcome Reception

The Welcome Reception on **Tuesday, August 29**th starts in the Café Dell' Arte / Foyer of the **ESA W(est) Building at 6:00 p.m. (18:00 h)**. The location is shown in detail on page 9.

Senate Reception (for ticket holders)

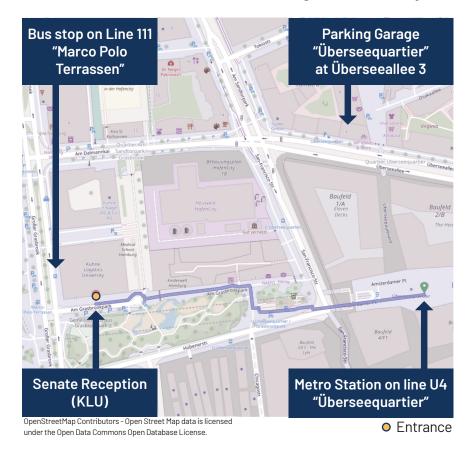
On **Wednesday at 7:00 p.m. (19:00 h)**, we are invited to a reception by the Senate of the Free and Hanseatic City of Hamburg at Kühne Logistics University (KLU) which is located at Großer Grasbrook 17.

There is no bus service for this reception, but it is a scenic walk from the Main Building of the University ESA 1 to KLU which leads you past a number of sights. The walk is about 3 km long and should not take more than 45 to 60 minutes. It is marked on page 30 in the section about the Hamburg Port Boat Tour. Of course, you can also use public transportation to get to KLU. On the next page you can see an overview of the area around the KLU as well as links to Google Maps and the public transport system of Hamburg.

Unfortunately, the number of participants is limited by safety regulations in terms of how many people can be admitted to this reception. So admittance is by ticket only.

If you have a ticket but decide – even on short notice – that you do not want to attend the reception we kindly ask you to return your ticket to the Registration / Welcome Desk such that it can be handed on to other people interested in attending the reception.

Overview of the area around Kühne Logistics University





Public Transportation to Kühne Logistics University



Kühne Logistics University in Google Maps

Conference Dinner (for ticket holders)

The conference dinner on **Thursday, August 31,** will be offered in the Main Ballroom of the Elysée Hotel, right opposite to the Main Building ESA 1. It is only a short walk from ESA 1 to the Elysée Hotel, which is best entered for the conference dinner from Thesdorpfstraße. The doors open **at 7:30 p.m. (19:30 h)** and an apéritif will be offered. The dinner starts **at 8:00 p.m. (20:00 h)**. There will be a buffet with a selection of regional specialties from Hamburg and the North of Germany – of course, with vegetarian options – and wine, beer, soft-drinks as well as coffee and tea are included in your ticket until 11:30 p.m.





Elysée Hotel in Google Maps

Hamburg Port Boat Tour (for ticket holders)

On **Wednesday, August 30**, afternoon, there is a harbor boat tour in the port of Hamburg. There is no bus service for this tour, but it is a scenic walk from the Main Building of the University ESA 1 which leads you past a number of sights. The dock is marked in the map below. The walk is about 3 km long and should not take more than 45 to 60 minutes. The boat leaves **at 3:30 p.m. (15:30 h)** and returns by 6:30 p.m. (18:30 h) which gives you enough time to walk to the Senate Reception at KLU.

Scenic walk from ESA 1 to the Senate Reception and the Hamburg Boat Tour (marked in purple)



HADAG Dock in Google Maps



OpenStreetMap Contributors - Open Street Map data is licensed under the Open Data Commons Open Database License

Company Excursions (for ticket holders)

There will be two excursions with company visits. The bus leaves as shown in the picture between ESA 1 and ESA 0(st).

The first visit is to Gebr. Heinemann DC on **Thursday, August 31, 2023, from 9.30 – 13.00**. We will visit the distribution center and meet the supply chain team of travel retailer Gebr. Heinemann in Hamburg-Allermöhe. The bus to the company visit leaves and returns at University of Hamburg.

The second visit is to Aurubis AG on **Thursday, August 31, 2023, from 13.30 – 17.00**. We will visit the largest site of Aurubis, a global supplier of non-ferrous metals and one of the world's largest copper recyclers. The bus to the company visit leaves and returns at University of Hamburg.



OpenStreetMap Contributors - Open Street Map data is licensed under the Open Data Commons Open Database License.



Bus stop for company visits in Google Maps

