hEART 2023

11th Symposium of the European Association for Research in Transportation

6-8 September 2023, ETH Zürich, Switzerland

Conference Guide

IVT Institut für Verkehrsplanung und Transportsysteme
Institute for Transport Planning and Systems

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

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1   Welcome

Dear participants,

With great pleasure we welcome you to hEART 2023, the 11th symposium of the European Association for Research in Transportation, which comes back to Switzerland after having been organized in Lausanne, Stockholm, Leeds, Copenhagen, Delft, Haifa, Athens, Budapest, Lyon, and Leuven.

We had the difficult task to select only a fraction of all submitted short papers, which show the international appeal that this symposium has achieved so far. Out of 248 short papers submitted, we could select only 115 to be presented in the three days of the event. We thank all authors, members of the program committee, and members of the steering committee for helping for a interesting and smooth conference organization; and we thank the participants for the interesting discussion and real life exchanges that expect this event will trigger!

Welcome to Zürich!

The organizers

We finally thank our sponsors:

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2 Program at a glance

Monday September 4

- 19:30 MATSim dinner — 23:00

Tuesday September 5

- 08:30 Coffee
- 09:00 MATSim User Meeting — HIL E51
- 10:00 Biogeme Users' Meeting — HIL H 35.1 (to 13:00)
- 10:30 Coffee — HIT Foyer
- 11:00 MATSim User Meeting — HIL E51
- 12:30 Lunch: Bellavista
- 14:00 MATSim User Meeting — HIL E51
- 14:00 PTV — Extensible ABM modeling with ActivitySim + PTV Visum — HIL H 35.1
- 14:00 Workshop — Public Transport (Low) Fares, Equity and Policy — HIL E 6
- 15:15 Coffee — HIL F 36.1 (15:45)
- 15:30 Coffee — HIT Foyer
- 15:45 Coffee — HIL F 36.1 (16:15)
- 15:45 PTV — Using PTV Vissim in co-simulations — HIL H 35.1 (17:30)
- 16:00 MATSim User meeting — HIL E51
- 17:30 MATSim Foundation e.V. — 18:00
- 18:30 Welcome apero — HIT Foyer — 19:30

Wednesday September 6

- 08:30 Coffee — Alumni Lounge — 09:00
- 09:00 Welcome address — HIL E3 — 09:30
- 09:30 Keynote 1 — HIL E3 — 10:30
- 10:30 Break — Alumni Lounge — 11:00
- 11:00 Session A1 B1 C1 D1 E1 — HIL E3 E6 E7 E8 E9 — 12:30
- 12:30 Lunch — Bellavista — 14:00
- 14:00 Session A2 B2 C2 D2 E2 — HIL E3 E6 E7 E8 E9 — 15:30
- 15:30 Break — Alumni Lounge — 16:00
- 16:00 Session A3 B3 C3 D3 E3 — HIL E3 E6 E7 E8 E9 — 17:30
- 17:30 Break — Alumni Lounge — 18:00
- 18:00 Session A4 B4 C4 D4 E4 — HIL E3 E6 E7 E8 E9 — 19:30
- 19:30 Dinner — Various locations city center — 23:00

Thursday September 7

- 08:30 Coffee — Alumni Lounge — 09:00
- 09:00 Session A5 B5 C5 D5 E5 — HIL E3 E6 E7 E8 E9 — 10:30
- 10:30 Break — Alumni Lounge — 11:00
- 11:00 Session A6 B6 C6 D6 E6 — HIL E3 E6 E7 E8 E9 — 12:30
- 12:30 Lunch — Bellavista — 14:00
- 14:00 Keynote 2 — HIL E3 — 15:00
- 15:00 Break — Alumni Lounge — 15:30
- 15:30 Session A7 B7 C7 D7 E7 — HIL E3 E6 E7 E8 E9 — 16:30
- 16:45 Guided visits timing might vary — 19:15
- 19:30 Gala Dinner — Die Waid — 23:00

Friday September 8

- 09:00 Coffee — Alumni Lounge — 09:30
- 09:30 Session A8 B8 C8 D8 E8 — HIL E3 E6 E7 E8 E9 — 11:00
- 11:00 Break — Alumni Lounge — 11:30
- 11:30 Keynote 3 — HIL E3 — 12:30
- 12:30 Closing of the Conference — HIL E3 — 13:00
- 14:00 Aimsun Workshop — HIL H 35.1 — 16:00

3   Rooms and facilities

Most of the events around and of the conference take place in the HIL building on the Hönggerberg Campus of ETH Zürich. The MATSim User meeting will be at HIT.
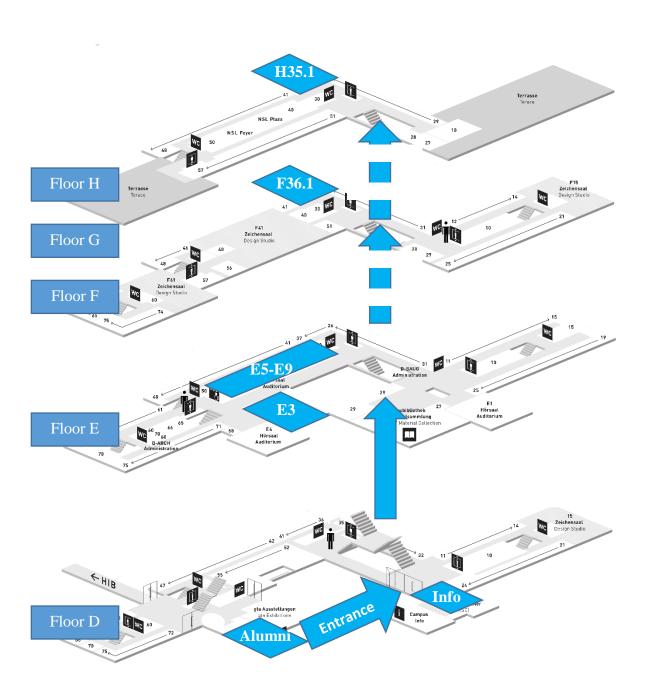
The lunches take place at the Restaurant Bellavista.

The coffee breaks during workshops on the conference from September 6 to 8 are at *Alumni lounge* on the ground floor of HIL. During the workshop day, September 5, coffee breaks are in HIT Foyer and HIL F 36.1 depending on the workshop attended.

The main rooms for the conference are located in the HIL building. The talks take place in rooms HIL E3, E6, E7 and E9. Room HIL E5 is also available for meetings. All those rooms are at the first floor, one floor up from the entrance on level D. For the workshops, also room HIL H 35.1 is used.

The information and registration desk is at the ground floor of HIL building, directly at the right of the entrance.

4   General Instructions

Public Transport

Your conference badge counts as a public transport ticket (2nd class) for zone 100 and 121 (entire Zürich city, plus Zürich Airport, and Dübendorf). It covers any trip from Zürich airport to Zürich city and viceversa; and within Zürich city, from 05 to 08 September (both included), for the entire duration of the conference. You will receive the badge in digital form a few days before the conference.

Conference badge

All conference participants will receive a **conference badge** at the registration and information desk. This badge is your document to enter the conference venue and participate in the sessions, coffee breaks, lunches and other activities as part of the conference for which you are registered. We therefore ask that you wear your badge visibly at all times during all conference activities.

Wi-Fi

Wi-Fi is available for all participants. Eduroam is available at the campus.

A guest wifi access is available via the instructions specified at:

https://www.s4d.id.ethz.ch/guest-accounts/

You can access the registration form by connecting to the WLAN public/public5 via the enter page https://enter-guest-net.ethz.ch

Lost and found

For all lost and found during hEART, please refer to the registration and information desk.

Liability

The organizers of the hEART Symposium shall not be liable for any damage or injury to persons or property related to the conference and/or related events.

Emergency Contact

In case of emergencies, please refer to +41 4463 33350.

5   Instructions for presenters

All presentations are allocated a **timeslot**. For the timing of the presentations, we kindly ask you to refer to the session details. The parallel session presenters can present for **20 minutes + 10 minutes for Q&A**.

Please keep to your time! A dry-run before the conference helps you to tailor the talk to your 20 min time slot. Remember to focus the talk on the new insights of your work and its policy conclusions.

There will be technical support and other helping hands with the presentation technology and the distribution of microphones to the audience for Q&A.

We advise you to prepare your talk in Powerpoint or PDF and upload it to the shared folder:

https://polybox.ethz.ch/index.php/s/xU749dCEuTclpK8

(changed on 04.09.2023! old uploads are ok)

with title *sessionID_surname_name*. The file should be uploaded before your session, so that it can be available on the conference laptop with Windows installed provided by us. The screens have 16:9 format.

Please note that presentations should be given only in **English**.

We kindly ask you to be in the room **15 minutes before the start of your session**. Please use this time also to **locate and present yourself to the technical support or helping students of your session** so they know you are present and your presentation can be uploaded.

The **final presenter** of a session has the responsibility of being the timekeeper. The help that will be in the room the entire time will help in this moderating role.

6   Plenary speakers

Keynote 1: The coordination of spatial and transport planning in Switzerland - model of success and challenges?

Dr. Maria Lezzi, director of the Federal office for Spatial planning ARE.

Switzerland has an excellent transport system. Both rail and road are well developed and co-ordinated with spatial development. Population and economy continue to grow. This means that traffic is also increasing and the need for space for living and working is growing. Further challenges arise from the energy and climate crisis. How can Switzerland ensure that its transport system will continue to be of high quality, use little land and protect the environment in the future?

Maria Lezzi studied geography and wrote her dissertation at the University of Zurich. Until 2001, she acted as deputy managing director of Regio Basiliensis, then head of the Planning Department in the Building and Planning Office of the Canton of Basel-Stadt for eight years. From 2004-2009, she was a member of the extra-parliamentary commission "Council for Spatial Planning". Since 2009 she is director of the Federal Office for Spatial Development ARE.

Keynote 2: Traffic congestion in urban networks: Reproducible? Predictable? Avoidable?

Dr. Mónica Menéndez, Associate Dean for Graduate Programs; Director of the Research Center for Interacting Urban Networks (CITIES); Professor of Civil and Urban Engineering, NYU Abu Dhabi

In this presentation, we will discuss how to bring together concepts from statistical physics and transportation engineering into a single science of traffic networks, with the goal of improving the performance of urban traffic, ultimately making our cities more sustainable. We will show that traffic and the ensuing congestion patterns for any given city are reproducible across days. Hence, it is enough to monitor the traffic performance of only a few roads to classify daily patterns and the resulting congestion patterns, allowing cities to reduce monitoring costs. In fact, road and bus network topology can explain around 90% of the empirically observed variation in network capacity for over 40 cities around the world. Moreover, it is possible to relate the road level dynamics to the network level dynamics by observing the number and size of traffic congestion pockets. This allows us to use concepts from physics (such as percolation) to describe the propagation of congestion, so that we can model it using sparse network-level data. It also gives us insights into the ability of different networks to cope with congestion, and the moment at which such congestion becomes so widespread that the whole network collapses.

Monica Menendez is the Associate Dean of Engineering for Graduate Affairs and a Professor of Civil and Urban Engineering at New York University Abu Dhabi (NYUAD). She is also the Director and Lead PI of the CITIES Research Center; and the recipient of the NYUAD Distinguished Research Award for 2021. Before joining NYUAD in 2018, Prof. Menendez was the Director of the research group Traffic Engineering at ETH Zurich. She holds a Ph.D. (2006) and a M.Sc. (2003) in Civil and Environmental Engineering from UC Berkeley, and a dual degree in Civil Engineering and Architectural Engineering (2002) from the University of Miami. Her research interests include multimodal transportation systems paying special attention to new technologies and information sources. Prof. Menendez is a member of multiple editorial

boards for top journals in Transportation, and a number of international organizations, including the International Advisory Committee of the International Symposium on Transportation and Traffic Theory (ISTTT), and the Mohammed bin Rashid Academy of Scientists (MBRAS). She is the author of around 100 peer-reviewed journal publications and over 200 conference contributions, book chapters, editorials, and technical reports. In the last five years, five of the papers that she has co-authored, have received best-paper awards.

Keynote 3: Turning sunlight into fuels

Dr Philipp Furler. CEO and Founder, Synhelion

Synhelion uses solar heat to produce sustainable transportation fuels. The fuels produced by Synhelion – such as solar jet fuel, gasoline, or diesel – can directly replace fossil fuels as they are fully compatible with existing global infrastructure. With its solar fuel technology, Synhelion offers a sustainable and economically viable alternative to fossil fuels and unlocks a clean future of transportation. In his presentation, Dr. Philipp Furler gives a first-hand account of the current state of the technology development and explains how solar fuels can make an important contribution to reducing CO_2 emissions in the transportation sector.

Dr. Philipp Furler is the CEO and co-Founder of Synhelion. Synhelion is a Swiss clean energy company that produces solar fuels to decarbonize transportation. The technology developed by Synhelion uses high-temperature solar heat for the production of liquid hydrocarbon fuels. Their solar jet fuel, diesel, and gasoline can directly replace fossil fuels and are fully compatible with existing global fuel infrastructure. Philipp Furler holds a PhD in Mechanical Engineering from ETH Zurich since 2014. In 2018, he completed his Executive MBA at the University of Strathclyde. Philipp has more than ten years of experience in high-temperature solar chemistry and reactor engineering. Prior to joining Synhelion, Philipp co-founded the ETH spin-off company Sunredox, which was merged with Synhelion in 2018.

7 Social program

Wednesday evening

For Dinner Wednesday, we reserved some spots at a few various locations of the city center. Check the invitation for registration participation information. **Please note that we just organized reservations at the restaurants so that participants can meet each other; but the dinner is not included in the registrations, and participants will have to pay it themselves. At each of those restaurants, there will be at least one senior host and one helper from the organization. Reservations have been made for 19:30.**

Kindli
Strehlgasse 24, 8001 Zürich
https://www.kindli.ch/restaurant

Zeughauskeller
Bahnhofstrasse 28A, 8001 Zürich
https://www.zeughauskeller.ch/home

Raclette-Stube
Zähringerstrasse 16, 8001 Zürich
https://www.raclette-stube.ch/wp-content/uploads/RST-Speisekarte-englisch-Winter.pdf

Rosengarten
Gemeindestrasse 60, 8032 Zürich
https://www.rosengarten.ch/eat

Ooki
Zentralstrasse 53, 8003 Zürich
https://ooki.tokyo

Bimi
Seefeldstrasse 25, 8008 Zürich
https://www.swissbimi.ch

Hiltl
Sihlstrasse 28, 8001 Zürich
https://hiltl.ch

Dapur

Schaffhauserstrasse 373, 8050 Zürich

https://www.dapur-indonesia.ch/

Brasserie Lipp

Uraniastrasse 9, 8001 Zürich

https://www.brasserie-lipp.ch/

Ban Song Thai

Kirchgasse 6, 8001 Zürich

https://www.bansongthai.ch/

New Bombay Indian Restaurant

Predigerpl. 34, 8001 Zürich

https://newbombay-zurich.ch/

Meister Gao

Rötelstrasse 125, 8037 Zürich

https://www.meistergao.ch/

Luigia

Talstrasse 61, 8001 Zürich

https://menu.luigia.ch/menu/luigia/en

St Gennaro

Hönggerstrasse 43, 8037 Zürich

https://www.sangennarozurigo.ch/

Simon's Steakhouse

Niederdorfstrasse 13, 8001 Zürich

https://simon-steakhouse.ch/

Gala Dinner

The Gala Dinner of hEART 2023 (included in the registration fee of the conference) is on Thursday at 19:30, at Retaurant

Die Waid

Waidbadstrasse 45, 8037 Zürich

https://diewaid.ch/en/home-page-englisch/

Excursions

Excursions are planned to Swiss Railway Operations Laboratory (Eisenbahnbetriebslabor); Graphic Arts Collection (Grafische Sammlung), Tram Museum Zurich, Art Museum (Kunsthaus), Swiss National Museum (Landesmuseum). Details are available online at http://heart2023.org/#excursions

The participants going to the excursions should gather at the registration and info desk.

8 Workshops and side program

Participation to the workshops is subject to registration and can have restricted amount of places.

MatSIM User Meeeting

Tuesday 05.09, 8:30-17: 30 HIT E 51

More information at https://www.ivt.ethz.ch/en/info/news/2023/09/matsim-user-meeting.html

PT: (Low) fares, equity and policy

Tuesday 05.09 14:00-17:30, HIL E6

Participation is free, registration required for organizational reasons. Program:

14:10 **An alternative urban policy: Geography and politics of fare-free public transport.** Wojciech Keblowski, Vrije Universiteit Brussel, Brussels;

14:40 **Vienna's 365 Euro annual ticket: 10 years of experience** (remote), Petra Rosenmayr-Fuchs, Wiener Linien, Vienna;

15:10 Coffee Break

15:40 **Impacts of fare-free public transport: Insights and lessons learned from Luxembourg**, Veronique van Acker, LISER, Luxembourg;

16:10 **Operationalising equity measurement based on distributional effects of policy interventions,** Yusak Susilo , BOKU Vienna;

16:40 **The 9-Euro and 49-Euro ticket in Germany: Results of a comprehensive empirical study,** Klaus Bogenberger , Technische Universität München, Munich.

PTV: Extensible ABM modeling (with ActivitySim + PTV Visum); Using PTV Vissim in co-simulations

Tuesday 05.09 14:00-17:30, HIL H 35.1

Biogeme Users' meeting

Tuesday 05.09. 10:00-13:00 HIL H 35.1

More Information and registration at https://transp-or-academia.epfl.ch/biogeme

Aimsun workshop

Friday 08.09, 14:00-16:00 HIL H 35.1

9 Sessions

			HIL E3	HIL E6	HIL E7	HIL E8	HIL E9
			A	B	C	D	E
wed 06.09	9:30-10:30		Keynote1				
wed 06.09	11.00-12.30	1	demand	energy choice	logistics	active modes	shared mobility
wed 06.09	14.00-15.30	2	demand	choice models	logistics	active modes	shared mobility
wed 06.09	16.00-17.30	3	demand	choice models	transit	active modes	shared mobility
wed 06.09	18.00-19.30	4	demand	choice models	transit	economics	shared mobility
thu 07.09	09.00-10.30	5	demand	choice models	transit	economics	road
thu 07.09	11.00-12.30	6	demand	choice models	transit	economics	road
thu 07.09	14:00-15:00		Keynote 2				
thu 07.09	15.30-17.00	7	demand	choice models	transit	economics	road
fri 08.09	09.30-11.00	8	working from home	energy	transit	economics	covid
fri 08.09	09.30-11.00		Keynote 3				

Last minute changes:

9483 Chris ten Dam, Francisco Bahamonde-Birke, Dick Ettema, Gert Jan Kramer and Vinzenz Koning. The influence of the built environment on real world car energy efficiency. **is scheduled in Session B8 (fri 9.30-11) (and available in the list of accepted papers)**

1397 Joris Wagenaar, Marie Schmidt and Evelien van der Hurk. A model for Robust Rolling Stock Scheduling. **Will not be presented and is canceled from session C5 (thu 9.00-10.30)**

8433 Sijia Sun, Hossam Abdelghaffar, Sérgio Batista, Mónica Menéndez and Yuanqing Wang. Analyzing Network-wide Energy Consumption of Electric Vehicles in a Multimodal Traffic Context: Insights from Drone Data. **Will not be presented and is canceled from Session B8 (fri 9.30-11)**

10 Session details

There are 5 parallel tracks A-B-C-D-E and 8 time slots; a total of 115 papers are presented.

	Session A1			

Demand modeling · E3

Start	End	ID	Authors	Title
wed 11:00	wed 11:30	6556	Cristian Domarchi and Elisabetta Cherchi	Changes in car ownership due to life events: Insights from the UK Longitudinal Household Survey
wed 11:30	wed 12:00	7441	Janody Pougala, Tim Hillel and Michel Bierlaire	Modelling the impact of activity duration on utility-based scheduling decisions: a comparative analysis
wed 12:00	wed 12:30	9070	Jaime Soza-Parra and Oded Cats	Who is ready to live a car-independent lifestyle? A latent class cluster analysis of attitudes towards car ownership and usage

	Session A2			

Demand modeling · E3

Start	End	ID	Authors	Title
wed 14:00	wed 14:30	840	Ruben A. Kuipers and Michelle Ochsner	The Impact of Weather Phenomena on Passenger Volumes for Commuter Trains
wed 14:30	wed 15:00	3890	Menno Yap, Howard Wong and Oded Cats	Public Transport Crowding Valuation in a Post-Pandemic Era
wed 15:00	wed 15:30	1055	Arkadiusz Drabicki, Oded Cats and Rafał Kucharski	Willingness to wait with real-time crowding information in urban public transport – before vs. after COVID-19 pandemic

	Session A3			

Demand modeling · E3

Start	End	ID	Authors	Title
wed 16:00	wed 16:30	4553	Benoit Matet, Etienne Côme, Angelo Furno, Sebastian Hörl and Latifa Oukhellou	Use of Origin-Destination data for calibration and spatialization of synthetic travel demand
wed 16:30	wed 17:00	8170	Aurore Sallard and Milos Balac	Bayesian Networks for travel demand generation: An application to Switzerland
wed 17:00	wed 17:30	8955	Ida Kristoffersson and Chengxi Liu	Estimation of demand models for long-distance cross-border travel

	Session A4			

Demand modeling · E3

Start	End	ID	Authors	Title
wed 18:00	wed 18:30	8690	Ana Tsui Moreno, Matthias Langer and Rolf Moeckel	How mobile are persons with mobility restrictions? Analysis of number of days with activities using one-week activity schedules in Germany
wed 18:30	wed 19:00	8819	Benjamin Gramsch Calvo and Kay W. Axhausen	Exploring the impact of the social network geography on the individual's activity space using structural equation models
wed 19:00	wed 19:30	3158	Daniel Hörcher and Daniel Graham	The spatial variation of travel time valuations: A general equilibrium model and application in project appraisal

	Session A5			

Demand modeling   **E3**

Start	End	ID	Authors	Title
thu 9:00	thu 9:30	4390	Filippos Adamidis, Sara Moghavem Ghaffari and Constantinos Antoniou	Acceptance of car-reducing measures: observed factors and latent attitudes
thu 9:30	thu 10:00	8134	Anna Reiffer and Peter Vortisch	Estimating Household-Level Time-Use within a Week Activity Scheduling Framework – Application of the MDCEV Model
thu 10:00	thu 10:30	9280	Margarita Gutjar, Chiara Calastri and Matthias Kowald	Householdfleet adaptation as reaction to price regulations: A stated adaptation experiment on the promotion of electric vehicles

	Session A6			

Demand modeling   **E3**

Start	End	ID	Authors	Title
thu 11:00	thu 11:30	2359	Muhamad Rizki, Tri Basuki Joewono and Yusak Susilo	Exploring the Effect of Apps Evolution and Users' Personality on Mobile Apps Adoption and Post-Adoption Pattern Over Time: Evidence from Super-Apps Users in Indonesian Cities
thu 11:30	thu 12:00	9291	Jing Lyu, Feixiong Liao and Soora Rasouli	Modeling Visit Probabilities within Space-Time Prisms of Daily Activity-Travel Patterns
thu 12:00	thu 12:30	9370	Gijsbert Koen de Clercq, Maaike Snelder, Arjan van Binsbergen and Bart van Arem	Analysing the Effects of Adding Shared Electric Bicycles as a New Mode on the Modal Split of Multimodal Trips between Delft and Rotterdam Using an Unlabelled Multimodal Supernetwork

	Session A7			

Demand modeling   **E3**

Start	End	ID	Authors	Title
thu 15:30	thu 16:00	6461	Hao Yin and Elisabetta Cherchi	A stated choice experiment to estimate preference for fully automated taxis: comparison between immersive virtual reality and online surveys
thu 16:00	thu 16:30	4548	Vishal Mahajan, Guido Cantelmo and Constantinos Antoniou	An open-source framework for the robust calibration of large-scale traffic simulation models
thu 16:30	thu 17:00			

	Session A8			

Working from home   **E3**

Start	End	ID	Authors	Title
fri 9:30	fri 10:00	856	Takara Sakai, Takashi Akamatsu and Koki Satsukawa	Welfare impacts of remote and flexible working policies in the bottleneck model
fri 10:00	fri 10:30	5830	Camila Balbontin, John Nelson, David Hensher and Matthew Beck	Identifying main drivers for students and staff members' mode choice or to work/study from home: A case study in Australia
fri 10:30	fri 11:00	9272	Daniel Heimgartner and Kay W. Axhausen	Contributions of Can, May and Want to the Home Office Frequency Decision

Session B1				

Energy and choice modelling E6

Start	End	ID	Authors	Title
wed 11:00	wed 11:30	2854	Ilka Dubernet and Dennis Seibert	Investigating preferences for powertrains when buying a car in Germany
wed 11:30	wed 12:00	7360	Elham Hajhashemi, Patricia Lavieri and Neema Nassir	Applying a latent class cluster analysis to identify consumer segments of electric vehicle charging styles
wed 12:00	wed 12:30	5957	Gabriel Hannon, Joanna Ji, Qin Zhang, Ana Tsui Moreno and Rolf Moeckel	Implementing an Agent-Based Formation of Social Networks for Joint Travel

Session B2				

Choice models E6

Start	End	ID	Authors	Title
wed 14:00	wed 14:30	554	Sander Van Cranenburgh and Francisco Garrido Valenzuela	Using computer vision-enriched discrete choice models to assess the visual impact of transport infrastructure renewal projects: A case study of the Delft railway zone
wed 14:30	wed 15:00	1203	Thomas Hancock, Charisma Choudhury, Joan Walker and Stephane Hess	Quantum choice models leap out of the laboratory: capturing real-world behavioural change.
wed 15:00	wed 15:30	1250	Bastián Henríquez-Jara, C. Angelo Guevara and Angel Jimenez-Molina	Identifying instant utility (latent emotion) triggers using psychophysiological indicators with an Experience-Based Choice Model in a travel experiment

Session B3				

Choice models E6

Start	End	ID	Authors	Title
wed 16:00	wed 16:30	727	Tom Haering and Michel Bierlaire	A Spatial Branch and Bound Algorithm for Continuous Pricing with Advanced Discrete Choice Demand Modeling
wed 16:30	wed 17:00	9449	Gabriel Nova, C. Angelo Guevara, Stephane Hess and Thomas O. Hancock	Random Utility Maximization model considering the information search process
wed 17:00	wed 17:30	566	Stephane Hess and Sander Van Cranenburgh	Combine and conquer: model averaging for out-of-distribution forecasting

Session B4				

Choice models E6

Start	End	ID	Authors	Title
wed 18:00	wed 18:30	1567	Gabriel Nova and C. Angelo Guevara	In-depth, Breath-first or Both? Toward the Development of a RUM-DFT Discrete Choice Model
wed 18:30	wed 19:00	7012	Andrea Pellegrini and John Rose	On allowing endogenous minimum consumption bounds in the Multiple Discrete Continuous Choice Model: An application to expenditure patterns
wed 19:00	wed 19:30	8572	Lorena Torres Lahoz, Francisco Camara Pereira, Georges Sfeir, Ioanna Arkoud, Mayara Moraes Monteiro and Carlos Lima Azevedo	Attitudes and Latent Class Choice Models using Machine Learning

Session B5

Choice models E6

Start	End	ID	Authors	Title
thu 9:00	thu 9:30	4019	Shadi Haj Yahia, Omar Mansour and Tomer To-ledo	Incorporating Domain Knowledge in Deep Neural Networks for Mode Choice Analysis
thu 9:30	thu 10:00	4339	Laurent Cazor, Mirosława Łukawska, Mads Paulsen, Thomas Rasmussen and Otto Nielsen	Whose preferences matter more? Handling unbalanced panel data for choice modelling
thu 10:00	thu 10:30	4477	Niousha Bagheri Khoulen-jani, Milad Ghasri and Mi-chael Barlow	Post-hoc explanation methods for deep neural networks in choice analysis

Session B6

Choice models E6

Start	End	ID	Authors	Title
thu 11:00	thu 11:30	5382	Nicola Ortelli, Matthieu de Lapparent and Michel Bierlaire	Faster estimation of discrete choice models via weighted dataset reduction
thu 11:30	thu 12:00	6199	Giancarlos Parady, Yuki Oyama and Makoto Chikaraishi	Text-aided Group Decision-making Process Observation Method (x-GDP): A novel meth-odology for observing the joint decision-mak-ing process of travel choices
thu 12:00	thu 12:30	6466	Fernanda Guajardo and Sebastián Raveau	Travel mode choice modelling of visually im-pair people through latent variables

Session B7

Choice models E6

Start	End	ID	Authors	Title
thu 15:30	thu 16:00	1540	Rui Yao and Renming Liu	Can Bayesian Optimization be the Last Puzzle for Automatic Estimation of Neural Network Discrete Choice Models? An experiment
thu 16:00	thu 16:30	9818	Eui-Jin Kim and Prateek Bansal	A new flexible and interpretable choice model with monotonicity constraints, non-linearity, and taste heterogeneity
thu 16:30	thu 17:00			

Session B8

Energy and power aspects E6

Start	End	ID	Authors	Title
fri 9:30	fri 10:00	1777	Carlos Gaete-Morales, Julius Jöhrens, Florian Heining and Wolf-Peter Schill	Power sector effects of alternative options for electrifying heavy-duty vehicles
fri 10:00	fri 10:30	7263	Hamoun Pourroshanfekr Arabani, Mattias In-gelström, Mats Alaküla and Francisco J. Márquez-Fernández	MATSim-based assessment of fast charging infrastructure needs for a full-electric passen-ger car fleet on long-distance trips in Sweden
fri 10:30	fri 11:00	9483	Chris ten Dam, Francisco Bahamonde-Birke, Dick Ettema, Gert Jan Kramer and Vinzenz Koning	The influence of the built environment on real world car energy efficiency

Session C1

Logistics   E7

Start	End	ID	Authors	Title
wed 11:00	wed 11:30	618	Sebastian Hörl and Puchinger Jakob	Modeling the ecological and economic footprint of last-mile parcel deliveries using open data: A case study for Lyon
wed 11:30	wed 12:00	9659	Jose Holguin-Veras, Diana Ramirez-Rios and Trilce Encarnacion	Who is Responsible for the Externalities Produced by Freight Carriers? Hint: The Answer is Not as Simple as it Seems…
wed 12:00	wed 12:30	3928	Jingyi Cheng and Shadi Sharif Azadeh	A data-driven dynamic demand hotspots forecasting framework for on-demand meal delivery platforms

Session C2

Logistics   E7

Start	End	ID	Authors	Title
wed 14:00	wed 14:30	5245	Rong Cheng, Andreas Fessler, Allan Larsen, Otto Anker Nielsen and Yu Jiang	Assessing the Impacts of Public Transport-Based Crowdshipping: A Case Study in Nørrebro District in Copenhagen
wed 14:30	wed 15:00	7914	Ryota Okazaki, Yuki Oyama, Naoto Imura and Katsuhiro Nishinari	Day-to-day delivery demand management: Evaluation based on routing efficiency and customer satisfaction
wed 15:00	wed 15:30	8845	Adrien Nicolet and Bilge Atasoy	Choice-driven Service Network Design and Pricing in Intermodal Transport

Session C3

Public Transport   E7

Start	End	ID	Authors	Title
wed 16:00	wed 16:30	2398	Florian Fuchs, Viera Klasovitá and Francesco Corman	Routing Passengers while Timetabling Based on Promises from Line Planning: A Logic-Based Benders Approach
wed 16:30	wed 17:00	4378	Christina Iliopoulou, Michail Makridis and Anastasios Kouvelas	Resilience-Oriented Design for Public Transport Networks
wed 17:00	wed 17:30	4434	Inneke Van Hoeck and Pieter Vansteenwegen	A heuristic approach to improve the robustness of a railway timetable in a bottleneck area

Session C4

Public Transport   E7

Start	End	ID	Authors	Title
wed 18:00	wed 18:30	4639	Gülin Göksu Başaran, Jesper Bláfoss Ingvardson and Otto Anker Nielsen	Influence of station characteristics, urban surroundings and perceived safety on satisfaction and public transport ridership
wed 18:30	wed 19:00	7837	Bogdan Kapatsila, Dea van Lierop, Francisco J. Bahamonde-Birke and Emily Grisé	The Effect of Incentives on the Actions Transit Riders Make in Response to Crowding
wed 19:00	wed 19:30	8724	Saumya Bhatnagar, Rongge Guo, Jihui Ma and Mauro Vallati	Prediction of Passengers Demand for Customized Bus Systems

Session C5

Public Transport E7

Start	End	ID	Authors	Title
thu 9:00	thu 9:30	4427	Léa Ricard, Guy Desaulniers, Andrea Lodi and Louis-Martin Rousseau	The stochastic multiple depot electric vehicle scheduling problem with recourse
thu 9:30	thu 10:00	6024	Emily Morey, R. Eddie Wilson and Kevin Galvin	Simulation of Mixtures of Legacy and Autonomous Mainline Rail Operations
thu 10:00	thu 10:30	~~1397~~	~~Joris Wagenaar, Marie Schmidt and Evelien van der Hurk~~	~~A model for Robust Rolling Stock Scheduling~~

Session C6

Public Transport E7

Start	End	ID	Authors	Title
thu 11:00	thu 11:30	629	Alessio Daniele Marra and Francesco Corman	Evaluating real-time information systems on public transport disturbances
thu 11:30	thu 12:00	7670	Kacper Rossa, Andrew Smith, Richard Batley and Phillip Hudson	The valuation of arrival and departure delays in the UK passenger rail using satisfaction survey data
thu 12:00	thu 12:30	4604	Federico Bigi, Nicola Schwemmle and Francesco Viti	Evaluating the impact of Free Public Transport using agent-based modeling: the case-study of Luxembourg

Session C7

Public Transport E7

Start	End	ID	Authors	Title
thu 15:30	thu 16:00	1943	Leon Weinsziehr, Frederik Bachmann, Antonios Tsakarestos and Klaus Bogenberger	Detection of Bus Bunching through the Analysis of Prevalent Public Transport Control Data
thu 16:00	thu 16:30	7809	Kailin Chen, Daniel Graham, Richard Anderson, Anupriya Anupriya and Prateek Bansal	Understanding the Capacity of Airport Runways
thu 16:30	thu 17:00			

Session C8

Public Transport E7

Start	End	ID	Authors	Title
fri 9:30	fri 10:00	636	Rowan Hoogervorst, Evelien van der Hurk, Philine Schiewe, Anita Schöbel and Reena Urban	The Bus Rapid Transit Investment Problem
fri 10:00	fri 10:30	5618	Léon Sobrie, Marijn Verschelde and Bart Roets	Explainable predictions for real-time employee workload management in railway control rooms
fri 10:30	fri 11:00	7561	Haoye Chen, Jan Kronqvist, Wilco Burghout, Erik Jenelius and Zhenliang Ma	Mixed Integer Formulation with Linear Constraints for Integrated Service Operations and Traveler Choices in Multimodal Mobility Systems

Session D1				
Micromobility and Active mobility				**E8**
Start	**End**	**ID**	**Authors**	**Title**
wed 11:00	wed 11:30	324	Anders Fjendbo Jensen and Jeppe Rich	Empirical analysis of cycling trends in two of Europe's most bicycle-friendly regions: Identifying the successes and the setbacks
wed 11:30	wed 12:00	2045	Rasha Bowirrat, Karel Martens and Yoram Shiftan	Explaining Walking in Cities – a Machine Learning Approach
wed 12:00	wed 12:30	2590	Georgios Kapousizis, Rumana Sarker, Baran Ulak and Karst Geurs	Acceptance of new technologies affecting safety on electric bicycles: evidence from five European countries

Session D2				
Micromobility and Active mobility				**E8**
Start	**End**	**ID**	**Authors**	**Title**
wed 14:00	wed 14:30	2155	Mads Paulsen and Jeppe Rich	Optimal bicycle network expansions with endogenous demand
wed 14:30	wed 15:00	3525	Ying-Chuan Ni, Michail Makridis and Anastasios Kouvelas	Investigating Link- and Network-level Bicycle Traffic Flow Characteristics using a Microsimulation Approach
wed 15:00	wed 15:30	4126	David Kohlrautz and Tobias Kuhnimhof	Modeling the Demand for Bicycle Parking Facilities

Session D3				
Micromobility and Active mobility				**E8**
Start	**End**	**ID**	**Authors**	**Title**
wed 16:00	wed 16:30	5543	Xiaowei Zhu, Anupriya Anupriya and Daniel Graham	Understanding the cycle traffic impacts of Cycle Superhighways in London
wed 16:30	wed 17:00	5563	Khashayar Khavarian, Shaghayegh Vosough and Claudio Roncoli	How do electric bikes affect the route choice of cyclists? A case study of Greater Helsinki
wed 17:00	wed 17:30	8554	Bingyuan Huang, Hans Wüst and Mathijs de Haas	Assessing the Long-term Impact of E-bikes on Sustainable Mobility: A National-Level Study in the Netherlands

Session D4				
Economics				**E8**
Start	**End**	**ID**	**Authors**	**Title**
wed 18:00	wed 18:30	2357	Hannes Wallimann, Kevin Blättler and Widar von Arx	Do price reductions attract customers in urban public transport? A synthetic control approach
wed 18:30	wed 19:00	6449	Dimitrios Argyros, Renming Liu, Ravi Seshadri, Felipe Rodrigues and Carlos Lima Azevedo	Bayesian Optimization of Road Pricing using Agent-based Mobility Simulation
wed 19:00	wed 19:30	2680	Claudia Bandiera, Richard Connors and Francesco Viti	Mobility Service Providers' Equilibrium Strategies in Multi-modal Networks

	Session D5			
Economics				**E8**
Start	**End**	**ID**	**Authors**	**Title**
thu 9:00	thu 9:30	3552	Louis Balzer and Ludovic Leclercq	Cooperation between Ride-Hailing and Public Transportation with Tradable Credit Schemes
thu 9:30	thu 10:00	4249	Mingye Luan, S.Travis Waller and David Rey	A non-additive path-based reward credit scheme for traffic congestion management
thu 10:00	thu 10:30	8505	Gaurav Malik and Chris Tampère	Application of a Metamodel-Based Optimization Approach for Toll Optimization and its comparison with Metaheuristics-based Model Optimization via a Case Study.

	Session D6			
Economics				**E8**
Start	**End**	**ID**	**Authors**	**Title**
thu 11:00	thu 11:30	1241	Konstantin Krauss	Shifting to sharing: Are external costs reduced or merely redistributed?
thu 11:30	thu 12:00	3545	Farnoud Ghasemi, Arkadiusz Drabicki and Rafał Kucharski	Dynamics of the Ride-Sourcing Market: A Co-evolutionary Model of Competition between Two-Sided Mobility Platforms
thu 12:00	thu 12:30	9239	Marko Maljkovic, Gustav Nilsson and Nikolas Geroliminis	On fair discounted charging in electric ride-hailing markets with limited budgets

	Session D7			
Economics				**E8**
Start	**End**	**ID**	**Authors**	**Title**
thu 15:30	thu 16:00	2447	Anupriya Anupriya, Daniel Graham and Prateek Bansal	Quantification of non-linear effects in agglomeration economies for transport appraisals
thu 16:00	thu 16:30	3039	Dimitrios Pappelis, Emmanouil Chaniotakis, Tim Hillel and Maria Kamargianni	Modelling Travel Time Anticipation Under Rational Inattention and Endogenous Information Constraints
thu 16:30	thu 17:00			

	Session D8			
Economics				**E8**
Start	**End**	**ID**	**Authors**	**Title**
fri 9:30	fri 10:00	9406	Allister Loder and Klaus Bogenberger	MobilityCoins - an integrated multimodal Wardropian model for policy analysis
fri 10:00	fri 10:30	9852	Nicole Adler, Gianmarco Andreana and Gerben de Jong	Competing on Emissions Charges
fri 10:30	fri 11:00	5388	Fábio Hipólito, Jeppe Rich and Peter Bach Andersen	Charging demand for the unserved — an agent-based model approach

				Session E1	

Shared Mobility   **E9**

Start	End	ID	Authors	Title
wed 11:00	wed 11:30	717	Patrick Stokkink, André de Palma and Nikolas Geroliminis	Carpooling with Transfers and Travel Time Uncertainty
wed 11:30	wed 12:00	2727	Thomas Schatzmann, Felix Zwick and Kay Axhausen	Investigating the preferences for the use of urban ridepooling
wed 12:00	wed 12:30	3758	Manon Seppecher and Ludovic Leclercq	An auctioning process for large-scale ride-hailing vehicles repositioning

				Session E2	

Shared Mobility   **E9**

Start	End	ID	Authors	Title
wed 14:00	wed 14:30	6563	Caio Vitor Beojone and Nikolas Geroliminis	Providing a Revenue-forecasting Scheme to Relocate Groups of Ride-Sourcing Drivers
wed 14:30	wed 15:00	5954	Michal Bujak and Rafal Kucharski	Assessing expected ride-pooling performance with non-deterministic, heterogeneous travellers' behaviour.
wed 15:00	wed 15:30	6443	Tai-Yu Ma, Yumeng Fang, Richard Connors, Francesco Viti and Haruko Nakao	A fast algorithm to optimize meeting-point-based electric first-mile feeder services with capacitated charging stations

				Session E3	

Shared Mobility   **E9**

Start	End	ID	Authors	Title
wed 16:00	wed 16:30	6043	Kenan Zhang, Andres Fielbaum and Javier Alonso-Mora	What do walking and e-hailing bring to scale economies? A general microeconomic model for on-demand mobility
wed 16:30	wed 17:00	9052	Lynn Fayed, Gustav Nilsson and Nikolas Geroliminis	On the dynamic pricing of pool ride-hailing services in bus lanes
wed 17:00	wed 17:30	6772	Severin Diepolder, Andrea Araldo, Tarek Chouaki, Santa Maiti, Sebastian Horl and Costantinos Antoniou	On the Computation of Accessibility Provided by Shared Mobility

				Session E4	

Shared Mobility   **E9**

Start	End	ID	Authors	Title
wed 18:00	wed 18:30	4233	Sara Momen, Bart van Arem and Shadi Sharif Azadeh	Dynamic location for charging operations of shared free-floating e-scooters
wed 18:30	wed 19:00	8358	Nico Kuehnel, Shivam Arora, Felix Zwick and Qin Zhang	Simulated Annealing in a Co-Evolutionary, Agent-Based Transport Modeling Framework - The Example of Ride-pooling Driver Supply Optimization
wed 19:00	wed 19:30	5316	Liang Ma, Daniel J. Graham and Marc E.J. Stettler	Using Explainable Machine Learning to Interpret the Effects of Policies on Air Pollution: COVID-19 Lockdown in London

Session E5				

Road Transport   **E9**

Start	End	ID	Authors	Title
thu 9:00	thu 9:30	2329	Felix Hofinger and Martin Fellendorf	Lane change behavior on motorways based on naturalistic trajectory data
thu 9:30	thu 10:00	2643	Gunnar Flötteröd	Improved precision in a heuristic for particle-based and stochastic dynamic traffic assignment
thu 10:00	thu 10:30	2677	Magdalena Schilling, Marvin V. Baumann, Jörg Sonnleitner, Markus Friedrich and Peter Vortisch	Design hourly volume estimation at freeway nodes using floating car data

Session E6				

Road Transport   **E9**

Start	End	ID	Authors	Title
thu 11:00	thu 11:30	5254	Hassan Idoudi, Mostafa Ameli, Cyril Nguyen Van Phu, Mahdi Zargayouna and Abderrezak Rachedi	Enhancing Evacuation Planning and Management through Vehicular Communication
thu 11:30	thu 12:00	5383	Lubing Li, Ka Fai Ng, Jacob Lo and Hong Lo	Adaptive Traffic Signal Control: A Novel Modelling Approach
thu 12:00	thu 12:30	5528	Yiru Jiao, Simeon Calvert, Sander van Cranenburgh and Hans van Lint	Varying critical time to collision: a perspective of driver space

Session E7				

Road Transport   **E9**

Start	End	ID	Authors	Title
thu 15:30	thu 16:00	6488	Milad Malekzadeh, Dimitrios Troullinos, Ioannis Papamichail and Markos Papageorgiou	Microscopic Simulation-based Testing of Internal Boundary Control of Lane-free Automated Vehicle Traffic
thu 16:00	thu 16:30	8738	Josephine Grau, Lea Fuchs, Torben Lelke and Peter Vortisch	City-wide bottleneck and deficiency analysis on a road network generated from the Open Street Map road network using Floating Car Data (FCD)
thu 16:30	thu 17:00			

Session E9				

Covid and epidemics   **E9**

Start	End	ID	Authors	Title
fri 9:30	fri 10:00	4391	Han Zhou, Yashar Araghi, Bachtijar Ashari and Maaike Snelder	An activity-based latent class modelling approach to assess the impact of hybrid working on travel demand in the Netherlands after COVID-19
fri 10:00	fri 10:30	7898	Nejc Geržinič, Maurizio van Dalen, Barth Donners and Oded Cats	The impact of covid-19 on modal shift in long-distance travel
fri 10:30	fri 11:00	4260	Joanna Ji, Qin Zhang, Ana Tsui Moreno and Rolf Moeckel	The impact of social networks and coordinated destination choice on the spread of epidemics using Episim

11 Accepted abstracts and papers

The list of accepted abstracts is available at:

https://heart2023.org/abstracts.pdf

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