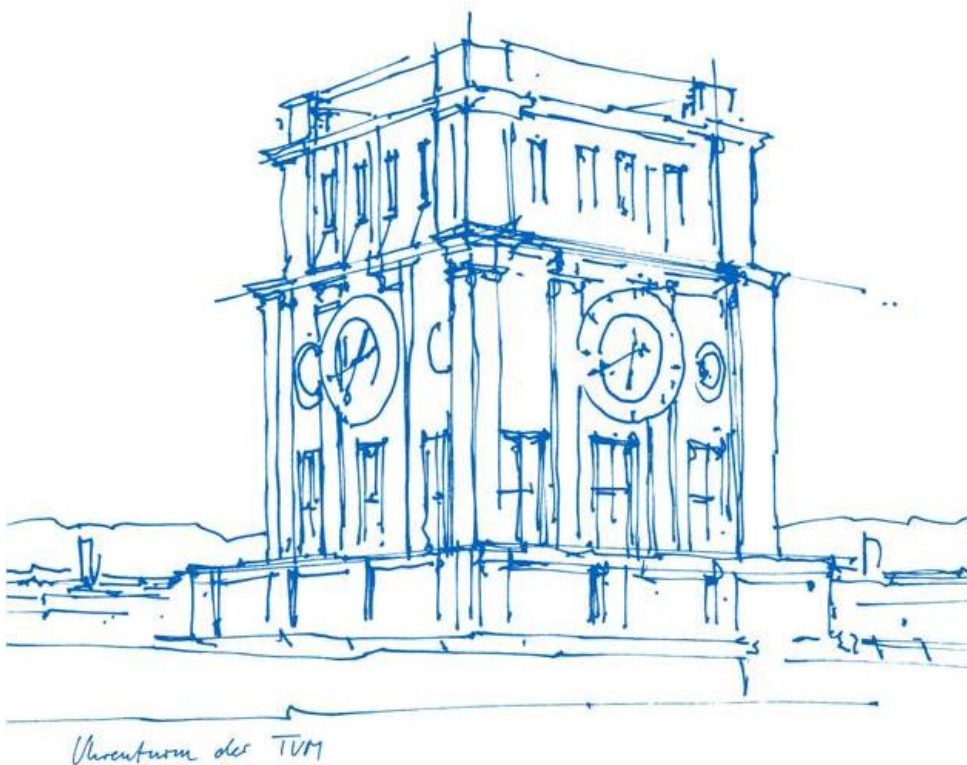


mobil.TUM 2017
International Scientific Conference
on Mobility and Transport

Intelligent Transport Systems
in Theory and Practice

July 4 & 5, 2017
Munich, Germany



1st conference day – Tuesday, July 4, 2017

09:00	Registration and Welcome Coffee	
09:30	Opening Session	
	Welcome and introduction	Fritz Busch, Technical University of Munich
	Welcome address Technical University of Munich	Gerhard Müller, Senior Vice President Academic and Student Affairs
	Welcome address City of Munich	Thomas Feig, Head of Traffic Department, KVR
	Keynote "Future challenges and opportunities of urban mobility. How digital revolution and new business models reinvent mobility."	Martin Hauschild, Head of Mobility Technologies, BMW Group
10:45	Coffee Break	
11:00	Autonomous Vehicles (Moderation: M. Fellendorf)	Session 1
	Simulation assisted impact analyses of automated driving on motorways for different levels of automation and penetration	M. Haberl, R. Neuhold, M. Fellendorf, M. Rudigier, A. Kerschbaumer, A. Eichberger, B. Rogic
	Effects of shared autonomous vehicles on the level of service in the Greater Munich metropolitan area	C. Llorca, A. T. Moreno, R. Moeckel
	Between private cars and mass transit: the rise of intermediate modes in the urban setting	J. Berrada, F. Leurent, G. Lesteven, V. Boutueil
	Managing automated vehicles at signalized intersections	J. Vreeswijk, O. Pribyl, R. Blokpoel, J. Schindler, M. Rondinone
12:30	Lunch	
13:15	Poster Presentations	
	A technology acceptance perspective for electric mobility with Intelligent Transport Systems	L. Kauschke, W.H. Schulz
	Validation of HD-maps for autonomous driving	P. Fischer, T. Krauß, F. Kurz, B. Plaß, H. Runge
	Accounting for localization errors in a mixed-vehicle centralized control system	R.H. Patel, J. Häri, C. Bonnet
	Classification of traffic jams on alpine motorways	B. Bursa, M. Mailer
	Multiple CTM based offset optimization technique	M.A. Ali, A. Poschinger
	Development and evaluation of a game application for parking lot identification	C. Pflügler, M. Schreieck, M. Wiesche, H. Krömar
	Determination of static criticality measures for predictive safety state evaluation in vehicles	J. Wallner, S. Engel, F. Diermeyer
	Early warning system for emergency vehicles to prevent rear-end collisions by using radar sensors of current driver assistance systems	C. Bidingler, K. Bogenberger
	The intelligent transport system for TRISTAR – theory becomes practice	J. Lüßmann, B. Thormann, C. Kemper, R. Hildebrand, F. Weichenmeier
	Using the 4P model to understand why people choose to use automated vehicles in public transport	S. Nordhoff, R. Madigan, B. van Arem, U. Schönduwe, N. Merat
	Combining cloud based Smart City activities and c2x use cases in Darmstadt	J. Mück, O. Rolle, C. Müller
	Shared autonomous electric vehicles – system architecture and fleet management	L. Kissmer, C. Takacs, K. Bogenberger
	openTLC: an open traffic control program	M. Harmenon, R. van den Dries, A. van Turenhout, J. Vreeswijk
	Integrated, personalized, real-time traveler information and incentive technology for energy efficient mobility systems	L. Zhang, C. Xiong, Y. Yin, M. Shahabi, Y. Ji
	Estimation of integrated and highly dimensional travel choice models	D. Emaasit, A. Paz
14:00	Urban Traffic Control 1 (Moderation: A. Stevanovic)	Session 2A
	The Melbourne approach – applying advanced traffic control to Melbourne’s motorways – methods, results and new findings	M. Hall, J. Gaffney, H. Zurlinden, P. Lam
	Adaptive traffic signal control under mixed traffic condition	S. Gashaw, J. Häri, P. Goatin
	Generalization of subnetwork types in urban areas to extrapolate traffic effects	T. Ren, J. Geßenhardt, C.E. Murphy
	VITAL: traffic signal control based on V2X communication data – application and results from the field	R. Oertel, J. Erdmann, T. Hesse, R. Markowski, J. Trumpold, P. Wagner
14:00	Non-motorized Traffic (Moderation: H. Twaddle)	Session 2B
	Integrating the mobility of crowds into the planning process of metro station buildings with real time feedback	D.H. Biedermann, A. Borrmann, M. Flurl, R.-P. Mundani, E. Rank
	Improvements in pedestrian tracking by a generalized potential field approach	F. Particke, M. Hiller, L. Patiño-Studencki, C. Sippl, C. Feist, J. Thielcke
	Usage patterns and demand analysis in a hybrid bike sharing system	S. Albinski, P. Fontaine, S. Minner
	Multimodal dynamic routing for wheelchairs and pedestrians	D. Dzafic, N. Wagener, P. Schoonbrood, D. Franke, S. Kowalewski
15:30	Coffee Break	
16:00	Public Transport (Moderation: A. Tsakarestos)	Session 3A
	Sustainable public transport acceleration based on C-ITS	B. Noll, K. Hartung
	Vehicle concept development for future public transport systems. Literature review and methodology.	M. Klöppel, M. Lienkamp
	Big data for infrastructure evaluation: an ex-post analysis of Copenhagen’s BRT pilot	A.K.S. Jones, F.C. Pereira, M.B. Barford, M.K. Niss
	Imputation of passengers’ trip activities based on smart card data	B. Du, Y. Zhou, A. Rau
16:00	Crowd Sourcing (Moderation: M. Margreiter)	Session 3B
	Social community approach to traffic management in a MaaS context	J. Vreeswijk, R. van den Dries, A. Gajadien
	Transferability and sample specification for social media data: a comparative analysis	E. Chaniotakis, C. Antoniou, K. Goulias
	Crowd-based feedback system for construction site information quality on German highways	G. Hermanns, J. Wahle
	Automatically generated origin-destination matrices from cell phone trajectories	M. Cik, C. Horn, M. Fellendorf
17:30	Guided Tour Deutsches Museum Verkehrszentrum (1-min walk from conference)	
19:00	Conference Dinner (Wirtshaus am Bavariapark)	

2nd conference day – Wednesday, July 5, 2017

09:00 Morning Coffee

09:30 Urban Traffic Control 2 (Moderation: J. Katha) Session 4A

- Methods for the identification of fixed time traffic light parameters with in-car camera systems M. Schönfelder, V. Protschky, H. Belzner, T. Bäck
- Optimizing public transport by co-operative traffic signal control - implementation of signal programs in micro simulation models T. Weidemann, M. Schäfer, R. Hoyer
- Virtual induction loops using smartphones for urban traffic control systems G. Albertengo, B. Cacioppo, W. Hassan, E. Papapanagiotou
- New performance measures for improved evaluation and retiming of traffic signals A. Stevanovic, D. Mitrovic, N. Mitrovic

09:30 Travel Choice and Mobility Behavior (Moderation: R. Moeckel) Session 4B

- Operational model and impacts of mobility service based on autonomous vehicles S. Sziget, C. Csizsár, D. Földes
- Observations of trip generation, route choice, and trip chaining with private-sector probe vehicle GPS data C.M. Day, H. Li, S.M.L. Hubbard, D.M. Bullock
- Evolution of passenger information in public transport to bi-directional communication gives access to new data sources C. Dohmen

11:00 Coffee Break

11:30 Traffic Demand and Routing (Moderation: G. Wulfhorst) Session 5A

- Marginal effects evaluation with respect to changes in OD demand for dynamic OD demand estimation T. Dukic, M. Breen, D. Masip, J. Perarnau, J. Budin, J. Casas
- Co-modal coaching with avatar support: a tool for shifting mobility choices L. Cocone, M. Milli
- An adapted A* algorithm for park spot routing M. Hedderich, U. Fastenrath, G. Isaac, K. Bogenberger
- DYNAMO dynamic, seamless mobility information, sponsored by the Federal Ministry of Transport and Digital Infrastructure - report on the results of the research project in Munich and future developments H.-J. Mentz, A. Wiegand

11:30 Data Collection and Transport System Analysis (Moderation: C. Antoniou) Session 5B

- Estimating detectors' systematic error in signalized intersection using flow conservation Z. Amini, A. Skabardonis, P. Varaiya
- Nonlinear moving horizon estimation for large-scale urban networks I.I. Sirmatel, N. Geroliminis
- Event characteristics that disrupt transport system's balance I. Markou, F. Rodrigues, F.C. Pereira
- Personal mobility data: threats and opportunities D. Huth, A. Faber, F. Matthes

13:00 Lunch

14:00 Modeling and Simulation (Moderation: P. Vortisch) Session 6

- New solutions for complex traffic situations: requirements analysis and driving simulation of the Finkenwerder Ring in the port of Hamburg D. Mühlbacher, J. Rademacher, Y. Forster, S. Engelhardt
- Macroscopic traffic modeling of heterogeneous road networks using colored Petri nets H. Fu, K. Chen, N. Liu, N. Geroliminis, A. Kouvelas
- A comparison of machine learning techniques for data-driven car-following models V. Papathanasopoulou, C. Antoniou
- Investigating the computational characteristics of large scale traffic forecasting applications Y. Petalas, P. Georgakis, C. Nwagboso

15:30 Closing Session

- mobil.TUM Awards 2017 presented by ITS Bavaria
- See you! Auf Wiedersehen! F. Busch

16:30 Farewell Coffee

17:00 End of Conference

Rooms Main Hall: Plenary Sessions and Sessions marked „A“
Bavariasaal: Sessions marked „B“

Intelligent Transport Systems in Theory and Practice

Intelligent Transport Systems and Services (ITS) provide a wide variety of solutions to existing transport problems and to the ecological and societal challenges presented by an increasing demand for mobility. With growing capabilities concerning information, communication and automation techniques and an increasing digitalization in all domains of transport and mobility, a future with high fidelity transport information in a seamlessly connected, safe and highly automated mobile world for all types of travelers draws ever nearer. In order to respond to the multifaceted character of these developments, science and practice within the mobility domain involve an increasingly broad range of different disciplines.

The mobil.TUM conference will therefore once again serve as an opportunity for international dialogue across disciplines on the latest challenges and achievements in ITS. The conference is organized by the Chair of Traffic Engineering and Control at TUM (Technical University of Munich). It will explore the various aspects of ITS and Services, focusing on the latest technologies and solutions and the perspectives for which they allow. The conference will consist of presentations, a poster session and panel discussions, and is accompanied by a small exhibition.

mobil.TUM Conference Series

mobil.TUM is a conference organized by the focus area Mobility & Transportation Systems at the department of Civil, Geo and Environmental Engineering at TUM.

Previous conferences examined the following topics:

- 2008: Erreichbarkeit – Accessibility – Accessibilité
- 2009: ITS for Larger Cities
- 2011: Making Sustainable Mobilities
- 2012: Transportation Demand Management
- 2013: ITS for Connected Mobility
- 2014: Sustainable Mobility in Metropolitan Regions
- 2015: Technologies, Solutions and Perspectives for ITS
- 2016: Transforming Urban Mobility

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mobil.TUM 2017 – Facts

Scientific Conference, July 4 & 5, 2017

Venue Alte Kongresshalle am Bavariapark
Theresienhöhe 15, D-80331 Munich, Germany

Fee 460 € incl. VAT (230 € for students and speakers)

- Entrance to 2-day conference and exhibition
- Conference proceedings
- 2-day coffee breaks and lunch
- Conference dinner
- Guided tour Deutsches Museum Verkehrszentrum

Digital (R)evolution of ITS New Options for Transport through Digitalization and Big Data

1 day post-conference workshop, July 6, 2017

Venue TUM, Arcisstraße 21, D-80333 Munich, Germany

Fee 230 € incl. VAT (115 € for students)

For registration and further information visit:

www.mobil-tum.de

Or contact us directly:

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The conference is supported by:

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