Conference Program

STRC | **18th Swiss Transport Research Conference**
Monte Verità / Ascona, May 16-18, 2018

It is my pleasure to welcome you to the 18th edition of the Swiss Transport Research Conference (STRC). Over the years, STRC has become an excellent opportunity to exchange knowledge and ideas among researchers in Switzerland, covering a variety of aspects regarding transport and land use. This year, 50 presentations will cover a multiplicity of topics, including: traffic monitoring, modeling and control, automated and connected transport systems, demand modeling, logistics, land use data, public transport operations and infrastructure, big data for transport and mobility, pedestrian modeling, among others. The following Keynote speakers have confirmed their attendance:

Prof. Dr. Anna Nagurney, University of Massachusetts Amherst

Prof. Dr. Caspar Chorus, TU Delft

Claudio Ruch, ETH Zurich

We encourage you to interact with members from the other groups. STRC has led to numerous collaborations in recent years and we hope that this tradition continues, especially with the groups attending for the first time this year.

On behalf of the STRC organizing committee, welcome!

Kay W. Axhausen, IVT, ETH Zurich

General Information

Location

Fondazione Monte Verità, Strada Collina 84, CH-6612 Ascona.
The venue is near Ascona and Locarno.

Arrival / Shuttle bus

We recommend to travel by train as there are only a limited number of parking spots. On Wednesday 16th there will be a shuttle service from Locarno train station to Monte Verità. Please let us know if you have not been assigned to a specific departure time. We recommend attendants to plan their arrival to the Locarno station before 13.00h.

On Friday 18th there will be also shuttle services from Monte Verità to Locarno starting at 12:35.

Check-in

Check-in is at the reception of the conference center. There you will find your name badge.

Presentation

The presentation time this year is 15 minutes with 10 minutes for questions (5 minutes for sessions (2B, 8A, and 8B).

Information

The program as well as the papers of the conference can be accessed through the conference web page: http://www.strc.ch/. Details regarding the venue can be found: http://www.monteverita.org. Finally, information concerning travel times by train can be checked at: http://www.sbb.ch/

Questions

For other questions regarding the conference, please send us an e-mail:
strc2018@ivt.baug.ethz.ch

For emergency cases please call Felix Becker: +41 78 896 6168
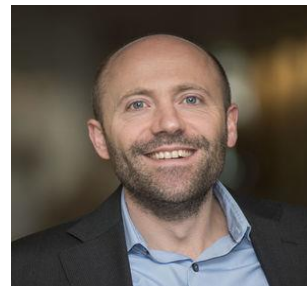
Keynote Speakers

Anna Nagurney

Anna Nagurney is the John F. Smith Memorial Professor in the Department of Operations and Information Management in the Isenberg School of Management at the University of Massachusetts Amherst. She is also the Founding Director of the Virtual Center for Supernetworks and the Supernetworks Laboratory for Computation and Visualization at UMass Amherst. She devotes her career to education and research that combines operations research / management science, engineering, and economics. Her focus is the applied and theoretical aspects of network systems, particularly in the areas of transportation and logistics, critical infrastructure, and in economics and finance.

Caspar Chorus

Caspar Chorus is Professor of choice behavior modelling at the Faculty of Technology, Policy, and Management at TU Delft. He develops formal models of decision making by humans and artificial agents. His ambition is to understand – through modeling, empirical analysis and simulation – the rationality, sociality and morality of decision-making. He is editor in chief of the European Journal of Transport and Infrastructure Research and editorial advisory board member of the Journal of Choice Modelling. Among others, he has published in Transportation Research Part A, B, C, PLoS ONE, and the Journal of Choice Modelling.

Claudio Ruch

Claudio Ruch received his MSc degree from ETH Zurich in the interdisciplinary Robotics, Systems and Control program in 2014. At the time he worked on rebalancing algorithms for bicycle sharing schemes. He has worked internationally in industrial projects including the development and marketing of robotic logistics products in China. Now he is a PhD candidate at ETH Zurich and focuses on the control, simulation and analysis of autonomous mobility-on-demand systems under the supervision of Emilio Frazzoli. Claudio Ruch has published in ICRA, the European Control Conference, TRB and NIPS. Current work is under review in IEEE Transactions on Network Science and Engineering, Transportation Research Part-C, IEEE Conference on Intelligent Transportation Systems and others.

Schedule overview

	16 May 2017	17 May 2017	18 May 2017
		Breakfast 08:45	*Breakfast* 09:00
09:00		08:45 *Sessions 3A, 3B* 10:25	09:00 *Sessions 8A, 8B* 10:20
10:00			
		10:25 *Break* 10:45	10:20 *Break* 10:30
11:00		10:45 *Sessions 4A, 4B* 12:00	10:30 *Sessions 9A, 9B* 11:20
			11:20 *Keynote III by Caspar Chorus* 12:20
12:00	12:00 *Registration and lunch* 14:00	12:00 *Lunch* 13:30	
13:00			
14:00	14:00 *Keynote I by Anna Nagurney* 15:00	13:30 *Keynote II by Claudio Ruch* 14:30	
		14:30 *Break* 15:45	
15:00	15:00 *Break* 15:15	14:45 *Discussions* 16:00	
	15:15 *Sessions 1A, 1B* 16:55		
16:00		16:00 *Break* 16:15	
		16:15 *Sessions 6A, 6B* 17:05	
17:00	16:55 *Break* 17:10	17:05 *Break* 17:20	
	17:10 *Sessions 2A, 2B* 18:25	17:20 *Sessions 7A, 7B* 18:10	
18:00			
		18:15 *Photo* 18:30	
	18:30 *Committee meeting* 19:30		
19:00		19:00 *Gala dinner*	
	19:30 *Dinner*		
20:00			

Sessions: 16 May 2017

Keynote			
Chair:	Michel Bierlaire	**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**
14:00	15:00	Anna Nagurney	*Perishable Product Supply Chain Networks: The Role of Transportation*

Session 1A			
Chair:	José Veiga Simao	**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**
15:15	15:40	George Adaimi	*Learning nuisances to track pedestrians in autonomous vehicles*
15:40	16:05	Simon Romanski	*Forecasting Human Fine-grained Behaviours*
16:05	16:30	Marco Derboni	*Challenges and opportunities in deploying a mobility platform integrating public transport and car-pooling services*
16:30	16:55	José Simao Veiga	*Outcomes of a smart city living lab prompting low-carbon mobility patterns by a mobile app*

Session 1B			
Chair:	Anastasios Kouvelas	**Room:**	**Balint**
Start	**End**	**Author**	**Title**
15:15	15:40	Lukas Ambühl	*Approximative network partitioning for MFDs from stationary sensor data*
15:40	16:05	Raphael Lamotte	*(In)stability of departure time choice with the bottleneck model*
16:05	16:30	Yizhe Huang	*Evaluating Shanghai's Non-local Vehicle Restriction Policy Using the Empirical Macroscopic Fundamental Diagram*
16:30	16:55	Mikhail Murashkin	*Approximating the dynamics of number of vehicles in a zone with homogeneous speed*

Session	2A		
Chair:	Alexandre Alahi		**Room:** Auditorium
Start	**End**	**Author**	**Title**
17:10	17:35	Aoyong Li	*Trip purpose imputation for taxi data*
17:35	18:00	Maxim Janzen	*Measuring Long-Distance Travel*
18:00	18:25	Michele Bolla	*Vehicle motion patterns for energy research: Comparison of annual mileage using vehicle and person-based data*

Session	2B		
Chair:	Denis Métrailler		**Room:** **Balint**
Start	**End**	**Author**	**Title**
17:10	17:30	Wolfgang Scherr	*Micro Meets Macro: A Transport Model Architecture Aiming at Forecasting a Passenger Railway's Future.*
17:30	17:50	Sebastian Hörl	*An integrated simulation environment for Autonomous Mobility on Demand in Zurich*
17:50	18:10	Anastasia Makarova	*Calibration of Agent Based Transport Simulations with Multi-Fidelity Bayesian Optimization*
18:10	18:30	Denis Métrailler	*Adding Realism and Efficiency to Public Transportation in MATSim*

18:30	19:30		Committee meeting

Sessions: 17 May 2017

Session	3A			
Chair:	Sven Kreiss		**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**	
08:45	09:10	Isik Sirmatel	*Hybrid Model Predictive Control of Public Transport Operations*	
09:10	09:35	Allister Loder	*Modeling multi-modal traffic in cities*	
09:35	10:00	Dimitrios Tsitsokas	*Optimal allocation of designated bus lanes in multi-modal urban networks*	
10:00	10:25	Kaidi Yang	*Control strategy for bi-modal highway lanes*	

Session	3B			
Chair:	Henrick Becker		**Room:**	**Balint**
Start	**End**	**Author**	**Title**	
08:45	09:10	Sergio Guidon	*On the trade-off between proximity to social contacts and commuting time: results from a residential location choice model*	
09:10	09:35	Kun Gao	*Valuations and Interactions of Inertia Effects in Mode Shift Behavior: Implications for Demand Estimations*	
09:35	10:00	Basil Schmid	*Simultaneous estimation of a joint time use, expenditure allocation and mode choice model for Austrian workers*	
10:00	10:25	Maximilian Held	*Future mobility demand estimation based on sociodemographic information: A data-driven approach using classification and sampling techniques*	

Session	4A		
Chair:	Basil Schmid	**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**
10:45	11:10	Brian Sifringer	*Enhancing Discrete Choice Models with Neural Networks*
11:10	11:35	Gael Lederrey	*SNM: Stochastic Newton Method for Optimization of Discrete Choice Models*
11:35	12:00	Tim Hillel	*Validation of probabilistic classifiers*

Session	4B		
Chair:	Marc Sinner	**Room:**	**Balint**
Start	**End**	**Author**	**Title**
10:45	11:05	Alessio Marra	*Multimodal passive tracking of passengers to analyse public transport use*
11:05	11:25	Thibaut Dubernet	*Using Passively Collected Data to Investigate Social Travel*
11:25	11:45	Christopher Tchervenkov	*Estimating externalities from GPS traces using MATSim*
11:45	12:05	Igor Dakic	*Incorporating transit signal priority and pre-signals for controlling bi-modal traffic at the perimeter*

	Keynote		
Chair:	Ricco Maggi	**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**
13:30	14:30	Claudio Ruch	*Autonomy and the Future of Urban Mobility: Beyond the Hype.*

Session	5A			
Chair:	Kay W. Axhausen		**Room:**	**Auditorium**
Start	**End**	**Moderator**	**Title**	
14:45	16:00	Kay W. Axhausen	*Designing cities for future transport modes*	

Session	5B			
Chair:	Christian Laesser		**Room:**	**Balint**
Start	**End**	**Moderator**	**Title**	
14:45	16:00	Christian Laesser	*Justifications for subsidies for mass transit - today and in an automated future*	

Session	6A			
Chair:	Martin Repoux		**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**	
16:15	16:40	Georgios Sarlas	*Off-street residential parking and car ownership*	
16:40	17:05	Thomas Schatzmann	*Spatial modelling of origin-destination commuting flows with 1 endogenous weight matrices*	

Session	6B			
Chair:	Charles Jeanbart		**Room:**	**Balint**
Start	**End**	**Author**	**Title**	
16:15	16:40	Meritxell Paneque	*A Lagrangian relaxation technique for the demandbased benefit maximization problem*	
16:40	17:05	Stefano Bortolomiol	*Modelling competition in demand-based optimization models*	

Session	7A			
Chair:	Raphael Lamotte		**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**	
17:20	17:45	Leonardo Bellocchi	*Dynamical efficiency in multilayer transportation network*	
17:45	18:10	Beda Büchel	*Modelling Probability Distributions of Public Transport Travel Time Components*	

Session	7B			
Chair:	Riccardo Scarinci		**Room:**	**Balint**
Start	**End**	**Author**	**Title**	
17:20	17:45	Marc Sinner	*Towards a functional, transport-market-oriented definition of regional traffic*	
17:45	18:10	Martin Repoux	*On-line proactive relocation strategies in station-based one-way car-sharing systems*	

Session	7B			
Chair:	Riccardo Scarinci		**Room:**	**Balint**
Start	**End**	**Author**	**Title**	

Sessions: 18 May 2017

Session	8A		
Chair:	Igor Dakic	**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**
09:00	09:20	Henrik Becker	*A MATSim 2015 scenario for Basel, Switzerland*
09:20	09:40	Joseph Molloy	*Microsimulation of Time Variant Road Pricing for Kanton Zug using MATSim*
09:40	10:00	Anugrah Ilahi	*Implementing Bayesian Network and Generalized Raking Multilevel IPF for Constructing Population Synthesis in Megacities*
10:00	10:20	Pieter Fourie	*Urban Planning for Autonomous Vehicles*

Session	8B		
Chair:	Alexandre Alahi	**Room:**	**Balint**
Start	**End**	**Author**	**Title**
09:00	09:20	Nicholas Molyneaux	*Two management strategies for improving passenger transfer experience in train stations*
09:20	09:40	Andrea Schneider	*Evaluating safety experience in train stations by using an innovative feedback app and stereo sensors*
09:40	10:00	Charles Jeanbart	*Network design of moving walkways in transportation hubs*
10:00	10:20	Antonin Danalet	*Mobility Resources in Switzerland in 2015*

Session	9A			
Chair:	Ernst Bosina		**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**	
10:30	10:55	Zhengchao Wang	*Pedestrian activity schedule models: review and promises*	
10:55	11:20	Ernst Bosina	*Creating a generic model of the pedestrian fundamental diagram*	

Session	9B			
Chair:	Norman Garrick		**Room:**	**Balint**
Start	**End**	**Author**	**Title**	
10:30	10:55	Norman Garrick	*The Growth of Rideshare in NYC Neighborhoods and What It Portends for the Future of Mobility*	
10:55	11:20	Daniel Reck	*Should marktes of autonomous taxis be regulated?*	

	Keynote			
Chair:	Kay W. Axhausen		**Room:**	**Auditorium**
Start	**End**	**Author**	**Title**	
11:20	12:20	Caspar Chorus	*How to keep your AV on the moral high ground? An obfuscation-based model of decision-making by autonomous agents*	

Acknowledgments

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Schweizerische Eidgenossenschaft
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Confederaziun svizra

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