

SCCER-Mobility 4th Annual Conference

Friday, 15 September 2017 – ETH Zürich, ML E 12

Poster Session

E-Mobility - Capacity Area A1

Nr.	Title	Authors
1	Thermal management of the e-dumper battery - best practice designed by NTB	Max Stöck, Gerhard Rizzo, Rouven Christen <i>NTB (EMS)</i>
2	E-Dumper: Energieflussmodellierung & Batteriecharakterisierung	Alejandro Santis, Ludovic Lauber, Daniel Luder, Andreas Meier, Christian Follin, Peter Affolter, Andrea Vezzini <i>BFH (CSEM and EsREC)</i>
3	E-Dumper: Battery cell characterization and risk assessment	Marcel Held, Daniel Aeppli <i>Empa (RST)</i>
4	E-Dumper: The world's largest electric vehicle	Marcel Held, Daniel Aeppli <i>Empa (RST)</i> Andrea Vezzini, Peter Affolter, Alejandro Santis <i>BFH (EsREC)</i> Max Stöck, Gerhard Rizzo <i>NTB (EMS)</i>
5	SwissTrolley plus: R&D on battery lifespan	Alejandro Santis, Ludovic Lauber, Daniel Luder, Stefan Brönnimann, Roger Filliger, Andrea Vezzini <i>BFH (CSEM and EsREC)</i>
6	High efficiency 22 kW inductive charging system for electric vehicles	Simon Nigsch, Janosch Marquart, Kurt Schenk <i>NTB (IES)</i>
7	Isolated DC-DC converter for battery storage in traction applications - control overview	Milos Stojadinovic, Jürgen Biela <i>ETHZ (HPE)</i> Bombardier Transportation
9	The world's first fully electric aerobatic airplane - Battery management system and monitoring tool for airborne systems	Patrick Wälti, Patrick Haldi, Andrea Vezzini <i>BFH (CSEM and EsREC)</i>

Chemical Energy Converters - Capacity Area A2

Nr.	Title	Authors
10	Efficient methane engines for light commercial vehicles	Jakub Rojewski, Patrik Soltic <i>Empa (APTL)</i> Daniel Klein, Gilles Hardy <i>FPT</i> Angelo Onorati, Giacomo Manca di Vilhermosa <i>Politecnico Milano</i>
11	Prototype vehicle powered by hydrogen enriched natural gas (HCNG, up to 25 Vol.% H ₂)	Thomas Bütler, Mathias Huber, Urs Cabalzar, Christian Bach <i>Empa (APTL)</i>
12	NextICE – The next generation of alternative fuel converters in the transportation sector	Richard Hutter, Philipp Elbert, Christopher Onder <i>ETHZ (IDSC)</i>
13	Temporally-resolved spark-induced emission spectroscopy for optical in-cylinder ignition diagnostics	Thomas Kammermann, Wolfgang Kreutner, Patrik Soltic, Christian Bach, Davide Bleiner <i>Empa (APTL)</i> Konstantinos Boulouchos <i>ETHZ (LAV)</i>
14	Pore-level investigation of water evaporation under air and hydrogen flows in gas diffusion layers of polymer electrolyte fuel cells	Amin Safia, John Mantzaras <i>PSI (CRL)</i> Nikolaos Prasianakis <i>PSI (WML)</i> Adrien Lamibrac, Felix Büchi <i>PSI (ECL)</i>
16	Hydrogen for electromobility: A promising energy carrier	Pierre Boillat, Magali Cochet, Felix Büchi, Adrien Lamibrac, Adrian Mularczyk <i>PSI (ECL)</i> Jürgen Schumacher, Roman Vetter <i>ZHAW (ICP)</i>
17	Optimal and universal calibration of a heavy-duty diesel engine and aftertreatment system	Stijn van Dooren, Philipp Elbert, Christopher Onder <i>ETHZ (IDSC)</i>
18	ALADIN II – Highly efficient and near-zero emission micro combined heat and power plant	Tammo Zobel, Philipp Elbert, Christopher Onder <i>ETHZ (IDSC)</i> Christian Schürch, Peter Obrecht, Konstantinos Boulouchos <i>ETHZ (LAV)</i> Markus Staubli <i>Motorex</i> Martin Moisi <i>Hoval Aktiengesellschaft</i> Daniel Gohl <i>sa-charging solutions AG</i>
19	Current challenges in two-phase PEMFC modeling	Roman Vetter, Jürgen Schumacher <i>ZHAW (ICP)</i>
20	Swiss Trolley plus	Andreas Ritter, Philipp Elbert, Christopher Onder <i>ETHZ (IDSC)</i>

Minimization of vehicular energy demand - Capacity Area A3

Nr.	Title	Authors
30	Powder-based processing of highly-loaded platelet-reinforced composites	Sara T. R. Velasquez, Justin-Aurel Ulbrich, Marco R. Binelli, Kunal Masania, Rafael Libanori, André R. Studart <i>ETHZ (CML)</i>
31	Kiss-roll coating for the high-speed manufacture of hybrid bicomponent fibers	Christoph Schneeberger, N. Aegerter, Joanna C. H. Wong, Paolo Ermanni <i>ETHZ (CMAS)</i>
32	Thermoplastic composites manufacturing: Direct melt impregnation of fabrics through injection moulding	Julia Studer, Clemens Dransfeld <i>FHNW (IKT)</i> Bodo Fiedler <i>TU Hamburg</i>
33	Additive manufacturing of ultra-lightweight fiber composite	Martin Eichenhofer, Joanna. C. H. Wong, Paolo Ermanni <i>ETHZ (CMAS)</i>
34	Manufacturing of thick composite profiles: Pultrusion of thermoplastic profiles	Max Volk, Joanna Wong <i>ETHZ (CMAS)</i>
35	Increasing strength in nacre-like polymer-matrix composites	Madeleine Grossman, Florian Bouville, Kunal Masania, Rafael Libanori, André R. Studart <i>ETH Zürich (CML)</i>
36	Characterization of a reinforcement fabric for high-volume production of composite components via melt thermoplastic Resin Transfer Molding (RTM)	Damiano Salvatori, Baris Caglar, Véronique Michaud <i>EPFL (LPAC)</i>

Systems for sustainable mobility - Capacity Area B1

Nr.	Title	Authors
40	GoEco! Extracting eco-feedback from movement trajectories	Dominik Bucher, David Jonietz, Martin Raubal <i>ETHZ (IKG)</i> Francesca Mangili, Claudio Bonesana, Francesca Cellina <i>SUPSI (ISAAC)</i>
41	Data completeness assessment for GNSS-assisted travel surveys	David Jonietz, Dominik Bucher, Martin Raubal <i>ETHZ (IKG)</i>
42	A virtual platform to evaluate policy scenarios targeting environmental impacts from household consumption	Andreas Frömel, Niko Heeren, Stefanie Hellweg <i>ETHZ (ESD)</i> René Buffat <i>ETHZ (IKG)</i>
43	Decarbonizing the Swiss heavy duty truck fleet: potential of battery-electric vehicles	Emir Çabukoglu, Gil Georges, Giacomo Pareschi, Konstantinos Boulouchos <i>ETHZ (LAV)</i>
44	Just in time: optimization of freight trains operations for increasing energy savings	Valerio de Martinis, Francesco Corman, Ulrich A. Weidmann <i>ETHZ (IVT)</i>

Integrated Assessment - Capacity Area B2

Nr.	Title	Authors
50	A living lab to co-design a smartphone app promoting sustainable individual mobility patterns	Francesca Cellina, Roman Rudel, Nikolett Kovacs, Roberta Castri, Pasquale Granato <i>SUPSI (ISAAC)</i>
51	Future LCA databases for prospective LCA of electric cars – Does the electricity used to make steel and batteries make a difference?	Brian Cox, Chris Mutel <i>PSI (LEA)</i> Angelica Mendoza <i>Institute of Environmental Sciences</i> Detlaf van Vuuren <i>PBL Netherlands Environmental Assessment Agency</i>
52	Including the energy saving potential of self-driving cars into LCA of future passenger vehicles	Brian Cox, Chris Mutel <i>PSI (LEA)</i>
53	V2G: Measuring electric vehicle drivers' willingness to co-create flexibility for smart grids	Merla Kubli, Moritz Loock, Rolf Wüstenhagen <i>University of St. Gallen (IWOE)</i>
54	Describing the Swiss mobility system as a basis for transformation assessment (B2.1.2)	Dr. Merja Hoppe, Tobias Michl <i>ZHAW (INE)</i>
56	Tipping points of competing battery and hydrogen fuel cell cars in Swiss energy transition	Ramachandran Kannan, Stefan Hirschberg, Tom Kober <i>PSI (LEA)</i>
57	Customer acceptance of E-Mobility: Survey results from Switzerland, Norway, Germany and Spain	Emmannuelle Reuter, Karoline Gamma, Rolf Wüstenhagen <i>University of St. Gallen (IWOE)</i>

Associated Research

Nr.	Title	Authors
	MAS CAS Future Transport Systems	CAS Neue Geschäftsmodelle Register until 31 October 2017
A1 8	Flash charging catenary-free railway restoration planning: electricity distribution networks impact in an Italian-Swiss case	Claudio Carlini, Diana Moneta <i>RSE</i>
A2 15	Performance evaluation of gasoline alternatives using detailed thermodynamic spark-ignition engine models	Dominic Gschwend, Alexander Wokaun <i>PSI</i> Patrik Soltic <i>Empa (APTL)</i> Frédéric Vogel <i>FHNW</i>
B2 55	The assessment, acceptance and implication of the use of different autonomous e-cars	Cathérine Hartmann, Markus Graf, Ester Reijnen, Markus Hackenfort <i>ZHAW (Psychological Institute)</i>

Best Poster Award finalists

Best Poster Award Winner