



66th LCA Discussion Forum

LCA of Mobility solutions: approaches and findings

Wednesday, 30 August 2017, ETH Zürich, Alumni Pavillon

We cordially invite you to the **66th Discussion Forum on Life Cycle Assessment**
The official language of this event is English

Passenger and freight transport are causing substantial environmental burdens contributing to global warming and other adverse impacts on human health and ecosystems due to emission of pollutants, noise, etc. Despite of the introduction of cleaner technologies, overall mobility related burdens continue to increase. However, the mobility sector might face substantial changes such as the shift from fossil fuels to electricity and electricity-based fuels or the introduction of autonomous vehicles with yet unknown environmental consequences.

This discussion forum will provide insights into state-of-the art assessment of mobility – from the individual technology to the system level and covering the environmental, social and economic dimensions. Mobility companies will show how they are applying LCA in daily work. Furthermore, assessments of large-scale mobility solutions for entire regions will be shown, for the current situation as well as future scenarios, including major technology developments and changes.

This discussion forum is intended to foster the exchange between scientists and LCA practitioners.

We look forward to meeting you in Zürich.

Stefanie Hellweg, ETH Zürich

Christian Bauer, PSI

Rolf Frischknecht, treeze Ltd.

Andreas Frömel, ETH Zürich

Programme DF 66 «LCA of Mobility solutions»

Time	Title	Speaker [Moderator]
8:30	Registration, coffee & croissants	
9:00	Welcome and introduction	Christian Bauer (PSI)
9:05	Transport outlook 2040 for Switzerland	Nicole Mathys (ARE)
	Session 1 – Recent developments in mobility related LCI data	[Andreas Frömelt (ETH)]
9:25	Updates in LCI of transportation services in view of mobitool v2.0	Rolf Frischknecht (treeze)
9:45	LCI of future mobility technologies	Brian Cox (PSI)
10:05	Post-Diesel mobility with or without Diesel?	Thomas Büttler (Empa) and Christian Bach (Empa)
10:25	Discussion	All
10:40	Coffee break	
	Session 2 – Challenges in mobility related environmental impact assessment	[Stefanie Hellweg (ETH)]
11:05	How to calculate the environmental impact of electric vehicles?	Patricia van Loon (RISE Viktoria, Sweden / INSEAD, France)
11:25	Assessing the impacts of noise emissions of land-based mobility in Switzerland	Samuel Schiess (ETH)
11:45	Climate change impacts of aviation emissions into the stratosphere / upper troposphere	Thomas Peter (ETH)
12:05	Quantifying PM emissions and assessing health impacts	Jing Wang (ETH/Empa)
12:25	Discussion	All
12:40	Lunch	
	Session 3 – LCA applications in practice	[Rolf Frischknecht (treeze)]
13:40	LCA tools for decision making of SBB	Salome Schori (SBB)
14:00	From the first LCA to Collaborative LCA of innovative products at Renault	Stéphane Morel (Renault)
	Short presentations	
14:20	Best practice for calculating the carbon footprint of airplane transports	Niels Jungbluth (ESU-services Ltd.)
14:30	Infrastructure energy demand for battery and hydrogen fuel cell vehicles	Yorick Ligen (EPFL)
14:40	Environmental impacts of the CO ₂ methanation value chain – Implications on mobility with passenger cars	René Itten (ZHAW)
14:50	Large scale electric mobility and its challenges in Germany	Kirsten Biemann (ifeu)
15:00	Future market penetration of electric cars, and implications on recycling rates of batteries and on electric mobility power mix	Peter De Haan (EBP), Andy Spörri (EBP) and Roberto Bianchetti (EBP)
15:10	Discussion	All
15:25	Coffee break	
	Session 4 – Mobility scenarios and environmental impacts	[Christian Bauer (PSI)]
15:45	Air transportation and the environment	Andreas W. Schäfer (University College London)
16:05	IEA scenarios and environmental impacts: focus on freight transport	Pierpaolo Cazzola (International Energy Agency)
16:25	Future scenarios of land-based mobility including autonomous vehicles	Sebastian Hörl (ETH) and Andreas Frömelt (ETH)
16:45	Discussion	All
17:05	Wrap up and announcements	Stefanie Hellweg (ETH)
17:15	Farewell	



Practical information

Registration

To register for the whole year or a single LCA Discussion Forum, please use the following link:

<https://www.converia.ethz.ch/frontend/index.php?sub=33>

To register you need to create a profile, which is done in very few steps and is self-explanatory. In case you are not able to pay by credit card, please send an e-mail to: lcaforum@ethz.ch with a short notice that you want to receive an invoice instead. Please provide the full invoice address as well as the chosen fee type.

For all questions regarding the registration process, please do not hesitate to contact: lcaforum@ethz.ch

Programme updates will be available at: www.lcaforum.ch

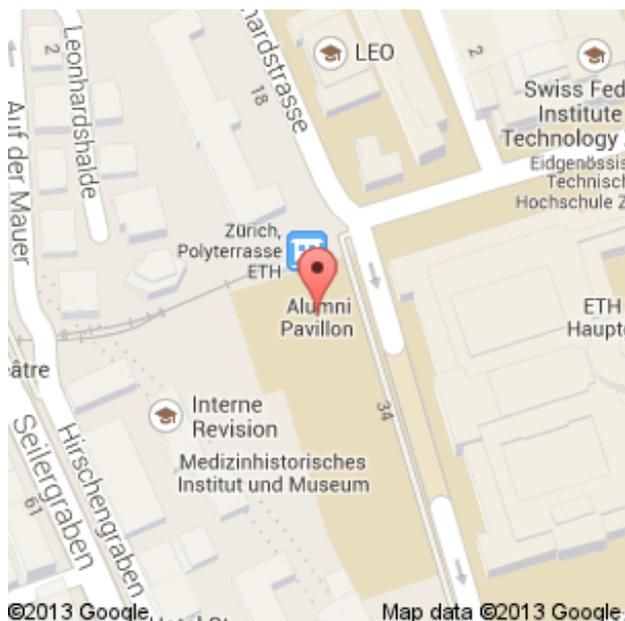
Lunch

Vouchers for lunch at the ETH restaurant will be provided to all participants. A vegetarian meal option is always on offer.

Location

The DF will take place in the Alumni (GEP) Pavillon, Swiss Federal Institute of Technology Zurich, 8001 Zurich.

<https://maps.google.ch/maps/ms?msa=0&msid=205813047619347088253.0004e0af154b1fc2c1968&ie=UTF8&ll=47.376616,8.546441&spn=0.00287,0.006968&t=m&z=18&vpsrc=6&iwloc=0004e0af154df9d0190e4>



For further information, please contact Barbara Dold: lcaforum@ethz.ch