

Newsletter

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Dear Reader

We are pleased to present the latest SCCER Mobility news to you. This issue communicates major advancements and events of our research platform. Enjoy reading!

Dr. Gloria Romera, Managing Director SCCER Mobility

Management Office News

New members in the Management Office & new offices

Dr. Kirsten Oswald joined the Management Office as Project Manager Communications this March and will be in charge of communication and dissemination activities. She recently completed her PhD at ETHZ and Eawag in the field of biogeochemistry and studied in the USA and in Tübingen, Germany, previously. She is interested in communication of research results to a wider audience to create an impact in society. Since January, Dr. Renate Grau is the new Program Manager of the [MAS|CAS in "Future Transport Systems"](#) and Laura Gonzalez will support her with the program administration. The Management Office is now located on the 2nd floor of the LEO building in rooms C 14, 16 and 17.

New advanced study program "Future Transport Systems" at ETH Zurich premiered!

ETH Zurich is now offering a new continuing education program MAS|CAS in "Future Transport Systems". The program creates a platform for science meets practice where newest insights from current research projects on mobility systems and transport technologies are conveyed with a practical focus. Topics range from up-to-date trends like autonomous driving to intelligent transport systems and new business models. The first 12 enrolled participants are senior specialists, managers and project leaders from transport companies and related fields, who are completing the program part-time.

Phase II: successful kick-off!

Phase II officially started with a kick-off meeting on January 17, welcoming around 50 members from the participating research groups at ETHZ. Along with commencing the next funding phase, fundamentals of the competence center including the SCCER Mobility mission and portfolio, financial framework, monitoring and governance were recapped and highlighted. Individual Capacity Area meetings and an apéro finalized the kick-off. We kindly welcome the new research groups that have joined SCCER Mobility in Phase II:

Prof. Kurt Schenk's team at the [Institut für Energiesysteme](#), NTB (CA A1)

Prof. Kai Herrmann's team at the [Institut für Thermo- und Fluid-Engineering](#), FHNW (CA A2)

Prof. Gabriela Hug's team at the [Power Systems Laboratory](#), ETHZ (CA B1)

Prof. Rolf Wüstenhagen's team at the [Institut für Wirtschaft und Ökologie](#), HSG (CA B2).

Additionally, five new companies will also support our research endeavor in Phase II: **Boschung Engineering AG**, **Kyburz Switzerland AG**, and **Batteriewerk Schweiz AG** intend to collaborate with the research groups of Capacity Area A1. **Dow Europe GmbH** will provide

crucial support to the researchers of Capacity Area A3. **Adaptricity AG** is a spin-off company of the Power Systems Laboratory at ETH Zurich, which develops simulation and optimization software tools for adapting electric distribution grids for the transition towards renewable energies.

New in Phase II: Joint Activities

The SCCERs received additional support for so-called Joint Activities (JAs). The JAs coordinate collaborative research projects between different SCCERs in order to address particular topics in a more holistic, interdisciplinary and complementary manner. SCCER Mobility will participate in four JAs: CREST-Mobility, Power2Gas, Simulation & Modelling and CEDA.

Upcoming Events

CAS ETH in "Future Transport Systems: Technology Potential"

The next CAS "Technology Potential", part of the MAS "Future Transport Systems", will begin on **September 4** and registration is now open until **April 30**. The course covers topics including advancements in vehicle technology, energy carriers and infrastructure among others. For more information, contact [Dr. Renate Grau](#), Program Manager MAS|CAS ETH in "Future Transport Systems". More information and the application form can be found on the [program website](#).

Start-up and Entrepreneurship Sensitizing Event on June 8 at ETH Zurich

This event, hosted by CTI, will allow SCCER members to learn about the support and infrastructure, offered for entrepreneurship and start-ups in Switzerland. Participants will meet CTI start-up coaches and start-up companies in the field of mobility and energy research. The services offered by ETH for industry cooperation, inventions, patents and starting ETH spin-off companies will also be introduced. More details about the program, location and registration will follow soon!

#REMforum – 8th St.Gallen Forum for Management of Renewable Energies

This 2-day conference, themed *Investing in Tomorrow's Energy Markets, Today*, is hosted by the Institute for Economy and the Environment (IWÖ-HSG) on **May 11-12** in **St. Gallen**. The event provides a platform to exchange about crucial questions, challenges and stakeholders in the dawn of the energy transition and serves as an interface for academic research and best practices in the clean energy industry. Two workshops pertaining to eMobility will take place on the second day and are organized by our SCCER Mobility colleagues Dr. Karoline Gamma and Dr. Emmanuelle Reuter. Visit the [website](#) for information about the program and registration.

News and Highlights

Swiss Trolley plus: new hybrid electric busses developed within SCCER Mobility

15%-more-efficient hybrid electric busses will soon be in operation in Zurich. This is an ongoing project within the SCCER Mobility framework in collaboration with the VBZ and HESS AG. Research on improved traction batteries (Prof. Vezzini's group at BHF, Capacity Area A1) and integrated energy management systems (Prof. Onder's group at ETHZ,

Capacity Area A2) have contributed to achieving the increased energy efficiency of these busses. Normal passenger operation will be tested on lines 33 and 83 during a two-year trial period scheduled to start this year. For more info click [here](#).

CEDA Joint Activity

Our colleague Dr. Gil Georges from LAV-ETHZ will lead the **CEDA** (Coherent Energy Demonstrator Assessment) joint activity, which aims to coordinate research on demonstrator and pilot plant infrastructures. Demonstrators and pilot plants have been developed by different Swiss research institutes to promote a faster knowledge and knowhow transfer. However, projects that combine and connect these efforts are still lacking. The goal of CEDA is to identify synergies and support cooperation between the different components and infrastructures. Ultimately, this will provide on demand data for different energy carriers to optimize real-world infrastructure. For more info click [here](#).

Please visit the SCCER Mobility website for more [highlights](#) of our partners.

SCCERs

The **3rd SCCER-FURIES Annual Conference** took place on December 2, 2016 at the SwissTech Convention Center in Lausanne. 150 experts from academia, industry and public authorities working on the power grid came together to exchange knowledge and experiences. Results from SCCER-FURIES were presented in 16 presentations and 44 posters. A committee of industrial experts from ABB, Swissgrid and Leclanché selected three of these posters for an award. Presentations and winning posters are accessible through this [link](#).

The 2014-2016 **SCCER-FURIES** activities report has been released. This includes a summary on SCCER-FURIES achievements, a directory of the expertise and skills of this competence center, key projects and a list of main publications including FURIES' results. The e-version of this document is accessible [here](#).

SCCER HaE will be present at the Hanover Fair from **April 24-28**. Free tickets are available from SCCER HaE upon request if you want to visit the fair. For further information, contact the [HaE management office](#).

The **5th SCCER HaE Symposium** and the **33rd PSI Electrochemistry Symposium** will take place jointly under the motto "From the Lab to the Market" on **May 9-10** at PSI. This double symposium will be held in collaboration with the **Switzerland Innovation Park Innovaare**. The first day (**May 9**) covers topics on energy storage in the context of start-ups and new business cases. On the second day (**May 10**), electrochemical solutions for energy storage challenges will be discussed, with a focus on transferring these innovative ideas to the market. More information is available on the [event's website](#). [Registration](#) is open until **May 1**.

Did you know that the **SCCER-SoE** launched a blog? So far, there are five posts, in which you can learn about current developments in the field of geo-energy and hydropower in Switzerland. All posts are available in English, German and French. [Check it out!](#)

HYDROFIB (Micro-aerobic hydrolysis of fiber-rich biomass for increased biogas production) is a new project within the **SCCER-BIOSWEET** network. This new technology, which offers

the potential to produce bio-methane from fiber-rich biomass (harvest residues, straw, corn husks), will be assessed at a new test facility at Allmig AG (Canton Zug). Check out more information on the [BIOSWEET website](#).

SCCER Mobility Glossary

This section intends to widen the common ground between all SCCER Mobility partners. Contributions from our members are welcome. To make suggestions for this section, please contact the Management Office.

Fiber-reinforced plastics/polymers (FRP) are a type of composite material composed of fibers supporting a polymer matrix. Fiber-reinforced plastics are typically lightweight, which is especially interesting for the transportation sector, yet high-volume production remains costly. Materials that may be used in the reinforcing fibers include glass, carbon, aramid, basalt, flax, as well as other natural and synthetic materials. The polymer matrix system may be either a thermosetting or thermoplastic polymer. **Thermosetting resins** are low viscosity liquids, which polymerize into a 3-dimensional network through a non-reversible process known as curing. On the other hand, **thermosoftening plastics** or **thermoplastics** tend to be solid at room temperature but become malleable above a certain temperature.

Pultrusion is a technique to produce fiber-reinforced plastics that have constant profiles. During standard pultrusion, the reinforcing fibers are impregnated with a polymer matrix (thermosetting or thermoplastic) and then pulled through a heated die (a special tool used to cut or form material) where the matrix is polymerized or solidified. **Extrusion** is another such method, where solid plastic material is supplied to an extruder, where it is melted gradually and then pushed through a die to form a structure with a continuous profile.

Quiz

How many electric cars were newly registered in Switzerland in 2016? The first person to send the correct answer to [Kirsten Oswald](#) is the winner (e-mail subject: QUIZ).

Solution of previous quiz: the Gotthard Basis tunnel is 57.09 km long. The winner was Corsin Battaglia from EMPA. Congratulations!

This information is provided by the Management Office of SCCER Mobility. Our newsletter is issued 2-3 times per year. If you have information that you would like to share, please contact [Kirsten Oswald](#).

In case you do not wish to receive our newsletter in the future, [unsubscribe](#) here.

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