



Newsletter

No. 11 / March 2019

Dear Reader

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

News & Highlights



ETH Week 2019 "Rethinking Mobility"

SCCER Mobility is supporting the organization and content of this year's ETH Week, a one-week course for ETH Zurich students interested in learning about, addressing and finding innovative solutions to global issues. This year it will deal with the challenge of moving mobility towards sustainability. Professors and industry partners of our network will provide inputs and insights.

[Read more](#)



SCCER Interview with Shelly Arreguin

Shelly Arreguin is a researcher in the Composite Materials and Processing group at CMASLab (ETH Zurich) and member of Capacity Area A3. When asked how mobility will change in the future, she thinks that mobility "will address many of its current issues by migrating towards ride sharing, increasing overall energy efficiency of vehicles as well as substantial modifications to our current behavior patterns."

[Read more](#)



More news on nacre-inspired materials

Researchers in the Complex Materials Group (ETH Zurich) investigated the design principles of tough biological materials by studying nacre-inspired composites structured across three length scales. The hierarchical materials exhibit mechanical properties that rival conventional composite materials and offer new insights into multiscale toughening mechanisms.

[Read more](#)



Photograph by Andreas Eggenberger, ETH Zurich

ETH Mobility Initiative – new partner & open call

Siemens Mobility AG is the first industry partner to join the “Mobility Initiative”, which ETH Zurich initiated together with the Swiss Federal Railways (SBB) in 2018. Furthermore, the second call for proposals is now open until 6 May 2019. For members of ETH, submit your project idea that addresses scientific challenges in the fields of decarbonization, digitalization and development of infrastructure.

[Read more](#)



Law fulfilled, but still a long way from the target

In an interview with NZZ am Sonntag Christian Bach, Coordinator of Capacity Area A2, comments on the EU’s plans to lower vehicle emissions drastically. In order to avoid similar problems as encountered for NOx emissions when regulating CO2, he thinks that lifecycle emissions must be considered instead of just those coming from the tailpipes of vehicles.

[Read more](#)

[More news highlights](#)

MAS | CAS ETH “Future Transport Systems” News



MAS|CAS successful start into its second round!

We welcomed 16 new MAS|CAS students in January and had a successful start into the second round of the MAS|CAS “Future transport systems”. In the current CAS “System Aspects”, we opened part of the module “Traffic Modelling with MATSim” to external participants, allowing mobility specialists to deepen their knowledge in this specific area. Registration for CAS “Technology Potentials” taking place in the autumn semester 2019 is still open until end of April.

[More information](#)

[Contact](#)

Upcoming events

SCCER Mobility Webinar Series Spring Semester 2019

After receiving positive feedback about the pilot webinar series, SCCER Mobility launches the second round in the current semester. The series promotes connectivity between the different groups and locations. Jana Plananska (University of St. Gallen) started the series with her talk presenting research on customer acceptance of electric mobility within Capacity Area B2. Find out more about this semester's program [here](#).

Symposium "Thermoplastic Composites"

Carbon Composites Switzerland and the CCeV working group "Thermoplastic Composites" is organizing this symposium on **9 April 2019** at EPFL Innovation Park, Lausanne. The target audience includes decision makers, engineers and technicians, who would like to inform themselves about the state-of-the-art and newest developments in the area of continuous fiber-reinforced thermoplastics. SCCER Mobility members Véronique Michaud, Kunal Masania and Martin Eichenhofer will be giving input talks. [More details and program](#)

Public event "Environmental Impacts of New Car Technologies"

The Laboratory for Energy Systems Analysis (PSI) recently published a report "The environmental burdens of passenger cars: today and tomorrow". In this context, SCCER Mobility is organizing a public information event on **2 May 2019** at ETH Zurich. The event will highlight the facts and assumptions surrounding life cycle assessment, the findings of the PSI study, followed by a panel discussion with expert stakeholders and a networking apéro. Save the date, more information will follow soon.

SCCER School 2019 "Shaping the Energy Transition"

The second edition of the SCCER School will take place **11-14 June 2019** in Flüeli-Ranft. It discloses the big picture of the energy transition and provides insights into how your research can shape it. The SCCER School is open to PhD and postdoctoral students of the ETH-Domain and Swiss universities, as well as scientific assistants of universities of applied sciences, who are working in the field of energy research. [More details and registration](#)

SCCER Mobility Annual Conference 2019

Save the date for the 2019 edition of the SCCER Mobility Annual Conference. It will take place on **6 September 2019** at ETH Zurich. More information will follow soon.

[More upcoming events](#)

SCCERs



SCCER CREST Annual Conference

Save the date for this year's SCCER CREST Annual Conference on **19 September 2019** in Siders/Sierre. More information will follow soon.

SCCER CREST White Papers

SCCER CREST recently published two white papers. The [seventh paper](#) investigates in how far the Swiss multi-level system already adequately divides tasks between governance levels, which can support the transition to a more sustainable energy system, and where room for improvement exists. The [eighth paper](#) analyzes the causes for the energy efficiency gap, which hinders the achievement of the set energy political targets.

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](#).

Urban or spatial planning is an interdisciplinary field that steers the structured development in urban, suburban and rural areas. Principally it is both a technical and political activity to plan how land is used as well as how the built environment is designed. It covers the arrangement of communities, towns and cities and the infrastructure, such as transportation and communication networks, passing into and out of them. However, it also includes the development of other resources like water and air as well as agricultural and conservational land areas. The ultimate goal of urban planning is public welfare including sanitation, efficient use and protection of land, energy and other resources as well as social and economic aspects. Concerned with this multitude of factors it is by nature interdisciplinary and encompasses disciplines such as architecture, landscape architecture, civil engineering and public administration.

Urban densification refers to increasing the density of people living and working in a certain area. Densification can either happen by urban buildings expanding upwards or downwards as well as constructing new buildings more compact and closer together. It can be quantified by the floor area ratio (total building floor divided by the land area of the building), residential density (number of residences per unit area), population density (number of people per unit area) or employment density (number of jobs per unit area) as well as others. Already today more than half of the global population lives in urban areas and the number keeps rising. In order to protect valuable green space, land and other resources, urban densification is a strategy for limiting urban sprawl and human encroachment on natural systems, while still preserving and enhancing quality of life. Providing identity in dense urban structures is a key cultural question of densification. Furthermore, denser urban areas are more sustainable as they use less energy and resources per person. This is because people travel less, denser construction requires less energy to heat or cool and infrastructure and supply chains are more efficient. Complementary, academic research on densification also includes the phenomena of shrinking cities and shrinking areas, as is happening in Eastern Germany, the Swiss Jura and in some US Midwestern regions among others.

Sustainable development aims at using resources - especially energy - in a way that meets societal needs without damaging the integrity and stability of the natural environment. It tries to merge human development goals with maintaining the capacity of natural systems to provide the natural resources and ecosystem services that our society and economy require for our next generations.

Within SCCER Mobility, the Dencity Platform headed by Joachim Huber (BFH) and part of Capacity Area B1 investigates research questions surrounding these topics with a focus on how mobility concepts can be integrated sustainably into densification strategies. For more information, refer to the [Dencity website](#).

Quiz

By how many percent will car manufacturers in the EU have to lower emissions of new vehicles within the next decade? The first 10 people to send the correct answer to [Fiorella Meyer](#) will enter the final drawing and have a chance to win (e-mail subject: QUIZ).

Solution of the previous quiz: The brick-and-mortar structure of nacre inspired researchers in developing a novel composite material.

This information is provided by the Management Office of SCCER Mobility. Our newsletter is issued 4 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, please [unsubscribe](#).

Dr. Gloria Romera Guereca, Managing Director SCCER Mobility
ETH Zurich - LEO C14, Leonhardstrasse 27, 8092 Zurich, Switzerland
phone +41 44 633 8006, email gloria.romera@sccer.ethz.ch
www.sccer-mobility.ch

