RLS-SCIENCES WINTER EDITION NEWSLETTER



RLS-SCIENCES WINTER

21 JANUARY, 2022

Following a summer full of individual and institutional successes in the RLS-Sciences network, our researchers and management group began the next season with strong motivation and momentum. Through the autumn of 2021 and into the start of winter, the research groups worked to both promote and expand their research efforts and partnerships.

October began with the RLS-Global Aerospace Campus presenting a keynote and panel to an online audience of well over 200 at MTL Connect. November saw the first dedicated RLS-Digital Health Initiative Workshop. In December the first Green Hydrogen International Future Lab from TUM with RLS-Energy Network partners was announced, and a new partner for the RLS-Small Satellites became official.

These efforts have created the excellent framework conditions for our start into 2022. We hope this winter edition brings ideas and inspiration, as we prepare together for our Digital Week in April and our Overall RLS-Sciences Conference in September.

- Fiona Rumohr, RLS-Sciences Management Team

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INAUGURAL RLS-SCIENCES EVENT:

RLS-DIGITAL HEALTH WORKSHOP

On 8 and 9 November, 2021, the **RLS-Digital Health Initiative** met online for its first independent <u>workshop</u>. The workshop was designed to create an opportunity for participants from the RLS partner regions to exchange on topics related to digital health from their regional and research perspectives.

The inaugural workshop opened with statements from political representatives in Bavaria and Upper Austria. Speakers from Bavaria, Georgia, Québec, Shandong, and Upper Austria presented to nearly 50 participants out of the regions over the two days.

The workshop included presentations, discussions, and question-and-answer sessions covering digital health topics out of the RLS partner regions including AI applied to healthcare and medicine, the perspective of clinicians and practitioners on new developments in digital health, responsibility and ethics, and more.



To prepare for future collaborative work, coordinator and lead scientist **Dr. Sebastian Bickelhaupt** presented a joint roadmap for the group to discuss and further develop together. The roadmap created with regional perspectives will guide the next stages of the group as they advance together, and is currently under review.

RLS-SCIENCES CONTRIBUTES:

RLS-GLOBAL AEROSPACE CAMPUS AT MTL CONNECT 2021





Image Credit: WKS Bayern-Québec/ Alberta/International 2021 RLS-Sciences was pleased to return to MTL Connect once again in 2021. This year, the **RLS-Global Aerospace Campus** hosted a keynote, panel discussion, and networking activity on 14 October on the topic "Towards Advanced Air Mobility: Ecological, Social and Economic Challenges of the Aerial Mobility of the Future". The keynote presented by Prof. Mirko Hornung (Technical University of Munich/Bauhaus Luftfahrt), provided an overview to around 240 listeners about the vast number of small to large flying demonstrators developed and tested in the last years, as well as potential market demand and possible use cases for passengers, logistics as well as other flying services. The panel discussion featured experts from Bavaria, Georgia, Québec, and São Paulo where discussions ranged from opportunities to challenges to future perspectives for an audience of around 190. An opportunity for virtual networking with the experts wrapped up the three-part RLS-Global Aerospace Campus event.

The RLS-Global Aerospace Campus is coordinated by **Prof. Klaus Drechsler and Gloria Stamm**.

RLS-SCIENCES SUPPORTS:



RLS-SMALL SATELLITES GROUND STATION NETWORK

Image Credit: University of Georgia, 2022

In November, a delegation from the University of Georgia came to Munich, and visited the Scientific Coordination Office Bavaria-Québec/Alberta/International together with Bavaria's lead scientist for the Energy Network, Prof. Ralf Ludwig. The meeting included exchanges on the possibilities of integrating the University of Georgia into the RLS-Sciences Network.

Now, **Prof. Klaus Schilling and the RLS-Small Satellites group** are pleased to announce that the University of Georgia has joined RLS-Small Satellites. **Prof. Thomas Mote from the Center for Orbiting Satellite Mission Operations (COSMO) at the University of Georgia** (UGA) in Athens, will contribute to the ground station network, increasing the number of opportunities to downlink the data gathered by the satellites in orbit. The UGA ground station is a student-driven initiative. More ground stations mean better coverage, making the latest contribution from University of Georgia key.

RLS-SCIENCES CONGRATULATES:

TUM CHAIR OF ENERGY SYSTEMS TO ESTABLISH FIRST BMBF FUTURE LAB ON GREEN HYDROGEN

The Chair of Energy Systems at the Technical University of Munich has been awarded five million EUR in funding over three years to establish "Renewable Electricity Dispatch and Expendable Feedstock-Integrated Net-Zero-Emission Hydrogen Economy" (REDEFINE H2E). TUM will lead the international consortium to develop new technologies for the climateneutral production of green hydrogen.



Researchers from the **RLS-Sciences Energy Network in Bavaria, Québec, and São Paulo**, as well as further partners from 10 more countries, will use high-temperature electrolysis and the innovative gasification of biomass for the environmentally friendly production of green hydrogen. REDEFINE H2E is part of TUM.Hydrogen and PtX.

International Futures Labs (Internationale Zukunftslabore) are an initiative funded by the German Federal Ministry for Education and Research (BMBF). In 2020, the first three Future Labs were funded on the topic of artificial intelligence. REDEFINE H2E is the first Futures Lab funded on a new topic: green hydrogen.

Dr. Sebastian Fendt and the TUM Chair for Energy Systems are part of the the RLS- Energy Network.

RLS-SCIENCES DIGITAL WEEK

April 4 - 8, 2022 Virtual Event



The RLS-Sciences network will meet each day over the course of the week, with one dedicated day per research theme, consolidating the RLS-Sciences virtual conference format for future years. In April, the Digital Week will include several targeted opportunities for interdisciplinary exchange. This virtual event will give the research groups and the network an opportunity to exchange and prepare for the RLS-Sciences Overall Conference in September.

RLS-SCIENCES OVERALL CONFERENCE

September 18-21, 2022 Herrsching, Bavaria



In continuity with the model created by São Paulo and FAPESP with the inaugural RLS-Sciences Overall Conference in 2019, Bavaria and the Scientific Coordination Office Bavaria-Québec/Alberta/International will host the 2022 RLS-Sciences Overall Conference. The four-day conference will mark a return of RLS-Sciences to Bavaria six years after the launch of RLS-Sciences at the 8th Regional Leaders Summit in Munich in 2016.