



RLS-SCIENCES

SPRING SPECIAL EDITION

RLS-SCIENCES SPRING

28 MARCH, 2023

The RLS-Sciences network is preparing for its first virtual activity of the year: the 2023 RLS-Sciences Digital Week. In parallel, partners have been deepening work in their fields, and preparing new collaboration opportunities. This continues the momentum developed in Herrsching last autumn, and brings the network through into the new season.

The RLS-Sciences Digital Week was created during the pandemic to ensure a bridge between the in-person RLS-Sciences Conferences. The Digital Week will return again in 2023 for its third iteration from 24 to 28 April, under the overarching theme "Shandong in RLS-Sciences: Forward from Herrsching". As always, the Digital Week is open to the entire RLS-Sciences network and their invited guests. Please find further information in the following pages.

This newsletter also includes exciting news from RLS-Sciences partners, information about upcoming activities, and a funding opportunities highlight. Happy reading!

- Fiona Rumohr, RLS-Sciences Management Team

RLS-SCIENCES SPRING
SPECIAL NEWSLETTER

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CANADIAN PRIME MINISTER VISITS UQTR HYDROGEN RESEARCH INSTITUTE

Canadian Prime Minister Justin Trudeau and Minister of Innovation, Science and Industry François-Philippe Champagne visited the Université du Québec à Trois Rivières (UQTR) Hydrogen Research Institute (IRH) on 18 January. The Prime Minister and Minister Champagne met with Professors Kodjo Agbossou, Bruno G. Pollet, Souso Kelouwani and Loïc Boulon, who showcased ongoing research in green hydrogen, fuel cell development, energy storage, and electrical network optimization. To support discussions of specific research projects, the professors were accompanied by 15 graduate students and further colleagues, including UQTR president Christian Blanchette and Prof. Simon Barnabé.



Prof. Kodjo Agbossou is RLS-Sciences Vice-President, Québec and Prof. Simon Barnabé is Québec Lead Scientist for the RLS-Energy Network. [UQTR](#) and the [IRH](#) are partners in the RLS-Energy Network.

RLS-SCIENCES SHOWCASES:

DIGITAL TRANSITION WITH MEHDI BENBOUBAKEUR OF PRINTEMPS NUMÉRIQUE

On 2 March, Mehdi Benboubakeur, co-founder and executive director of Printemps numérique (Digital Spring), shared his thoughts on the digital transition in a virtual Science Café event, hosted by the Scientific Coordination Office Bavaria-Québec/Alberta/International. Speaking about the "digital divide" between generations, M. Benboubakeur described how through working with different societal groups, digital tools can provide a future oriented perspective for those who are otherwise excluded. He stated that technology can be a tool for overcoming today's challenges, but only if everyone has access to and understands it; thus creating an opportunity for "collective intelligence".

RLS-Sciences participated in MTL Connect, an annual conference hosted by Printemps numérique, in both 2020 and 2021. In 2020, the Expert Dialogue on Digitalization hosted a panel on "The Future of Work", and in 2021, the Global Aerospace Campus presented a keynote and panel discussion on "Advanced Urban Air Mobility".

[MTL Connect](#) will be held in 2023 from 10-13 October online and in Montréal, Québec, with the theme "Collective Intelligence".



INPE LAUNCHES JOINT SATELLITE WITH NASA



Brazil and the United States have jointly launched a nanosatellite called "Sport" (Scintillation Prediction Observations Research Task), which will gather data on upper atmosphere plasma. This area is important since bubbles in the plasma affect communications on Earth, especially in regions closer to the equator. The nanosatellite was developed by the space agencies of Brazil and the United States, including Instituto Nacional de Pesquisas Espaciais (INPE) and Instituto Tecnológico de Aeronáutica (ITA). INPE and ITA created the observation instrument for the satellite in partnership with NASA and several US universities. ITA designed the satellite, while the instruments on board were created in the US. The cost of the satellite was 6 million USD, and was shared equally between the two countries. Data captured by the satellite will be sent to INPE and NASA, and will be made public after it is processed. The shoe-box sized satellite weighs 9 kilos and development started in 2017. In 2019, INPE was co-host with FAPESP for the inaugural RLS-Sciences Overall Conference in São José dos Campos, São Paulo.

[INPE](#) is a partner in RLS-Small Satellites.

2023 MUNICH NEW SPACE SUMMIT

From 15-17 May, Munich Aerospace is hosting the [Munich New Space Summit 2023](#). The conference will explore the topic of "new space" together with representatives of space agencies (ESA, NASA), as well as industry, research, and government. Planned discussions will cover a comprehensive range, including new space strategies at the national and international levels, commercial innovation from the startup to the SME to the big industry level, regulatory and legal aspects, and state-of-the-art research projects.

The conference will take place in person at the Ludwig Bölkow Campus, just south of Munich. Partners from RLS-Sciences are very welcome and can get in touch with Dr. Peter Hülse if interested.



MUNICH AEROSPACE SUMMER SCHOOL 2023

The annual Munich Aerospace Summer School will be held with the theme "Space Exploration and Space Safety". From 10-11 July, experts will discuss developments and trends from topics such as space weather, space debris, commercial services & exploration, Moon & Mars geology, in-situ resource utilisation, and more. The detailed programme will be published soon. The summer school will take place in Gut Sonnenhausen, south of Munich. There will be space for five PhD students from RLS-Sciences regions. For further information, please contact Dr. Peter Hülse.

[Munich Aerospace](#) is Lead Partner in RLS-Global Aerospace Campus, and is organising both activities.

2023 RLS-SCIENCES DIGITAL WEEK

The RLS-Sciences Digital Week is returning in 2023 and will be held from 24-28 April. This will mark the third iteration of the RLS-Sciences Digital Week, and will be held under the theme "Shandong in RLS-Sciences: Forward from Hershing". This year, a particular space will be dedicated to contributions from Shandongese researchers, in recognition of Shandong hosting the 2023 RLS-Sciences Digital Week. This space will take the form of additional presentations from Shandongese researchers on topics ranging from novel hydrogen production, bio-gas from multisource feedstock, and battery design, to pico-satellite developments including crowdsourcing platforms and marine monitoring, through to digital health developments like big data for disease identification, and more. Further, there will be high level presentations on "Big Trends in Science and Technology in Shandong", covering renewable energy, aerospace, and digital health themes. The RLS-Sciences Digital Weeks create opportunities for regional experts to exchange not only on research themes like software for pico-satellites and developments in electric vertical take-off-and-landing vehicles, but also on emerging themes in the regions like scaling up hydrogen production and regulating artificial intelligence.

The RLS-Sciences Digital Week was first created during the COVID-19 pandemic to ensure continuity and progression for the RLS-Sciences network as a whole and for the five research groups. The virtual format creates accessibility and a bridge between the periods where the network can meet in person. Each Digital Week has an overarching theme.

The Digital Week format is comprised of two hour sessions for five days in a row, with a different thematic focus each day. Each session has a focus which provides coherence and allows for the deepening of topics. Past examples have included "Energy Modelling and Systems", "Advanced (Urban) Air Mobility", and "Data for Digital Health", among others.

The sessions are typically open to all RLS-Sciences network partners and their invited guests, creating great opportunities for interdisciplinary exchange. On one of the five days, a Joint Session is held to bring the network together across all three levels (political, scientific, and science management) to review and discuss the next steps for RLS-Sciences all together.

For further information about the RLS-Sciences Digital Week 2023, please feel free to contact wksebayfor.org.

RLS-SCIENCES DIGITAL WEEKS

2021

2022

40

speakers gave
24 scientific
presentations



30

speakers gave
18 scientific
presentations

Overall Theme:
"Data as a
Resource for
the Regions"



Overall Theme:
"Sustainable
and Resilient
Regional
Recoveries"

140 participants
from 7 regions



112 participants
from 7 regions

FUNDING OPPORTUNITIES HIGHLIGHT

2023 International Joint Initiative for Research in Climate Change Adaptation and Mitigation Competition

Deadline: Notice of Intent 2 May, 2023; Full Proposal 12 September, 2023 **Link:** Find more details [here](#).

The call aims to further the design and implementation of adaptation and mitigation strategies for vulnerable groups— groups most impacted by the effects of climate change. An interdisciplinary approach is required: across disciplines and across sectors. The call builds upon the 8 representative key risks identified by the 6th Assessment IPCC report. Participating countries include Brazil, Canada, Germany, Norway, South Africa, Switzerland, the United Kingdom, and the United States.

Accelerating climate neutral aviation, minimising non-CO2 emissions (HORIZON-CL5-2024-D5-01-07)

Deadline: Opening date 7 December, 2023; Full Proposal : 18 April, 2024 **Link:** Find more details [here](#).

Project results should focus to the minimisation of aviation non-CO2 emissions. EU-studies show that approximately 50-75% of aviation's climate impact is caused by non-CO2 emissions. This topic aims to integrate and provide clear operational guidelines supported by validated flight tests. Bavarian, Upper Austrian, and Western Cape partners are automatically eligible for funding. Other regions may participate through own funding mechanisms.

DAAD Study Visits / Seminars for Groups of Foreign Students to Germany.

Deadline: Three openings annually: 1 February for travel from 1 June; 1 May for travel from 1 September; and 1 November for travel from 1 March **Link:** Find more details [here](#).

The DAAD funds Study Visits and Study Seminars and Practicals in Germany for groups of foreign students under the direction of university teachers. Applications are open to university teachers from public and state-recognised German universities (Study Seminars and Practicals) or from foreign universities (Study Visits). Groups must be made up of at least 10 participants and must not, as a rule exceed 15 persons. Study Visits and Study Seminars and Practicals should last no less than 7 days. Funding is available for a maximum of 12 days (including travel days), although the stays may last longer.

International Graduate Research Training (IRTG).

Deadline: open annually for 1 May deadline **Link:** Find more details [here](#).

International Research Training Groups provide opportunities for joint doctoral training programmes between German universities and universities abroad. The research and study programmes are jointly developed and supervised. Doctoral students in the programme complete a six-month research stay at the respective partner institution. The DFG has agreements with various research funding organisations abroad including the Natural Sciences and Engineering Research Council of Canada (NSERC), the National Science Foundation (NSF) of the U.S.A., the National Research Foundation (NRF) of South Africa, and the São Paulo Research Foundation (FAPESP). However, in the case of countries with which there are currently no such agreements, solutions can normally be found.

Discover more funding opportunities on the [RLS-Sciences Online Funding Database](#), including:

- Multilateral and bilateral funding calls
- Unilateral calls focusing on international collaboration
- Mobility calls (incoming and outgoing) for students and researchers
- Calls organised per region and per thematic focus