



SERC NEWS

A NEWSLETTER FROM SMART EXPLORATION RESEARCH CENTER

AUTUMN 2025

GREAT ENERGY IN THE CENTER!

This autumn has been intense within SERC and the activity is higher than ever. We summarise some of the main events and activities that our members have conducted during the recent months.

Visit from Brazil

SERC had an inspiring event in September where our team in Uppsala hosted a Brazilian delegation including representatives from five major mining companies: Anglo American, Vale, Nexa Resources, Herculano Mineração and Samarco. We presented an overview of the center activities and how a collaboration would be possible within our four thematic hubs. Thank you Business Sweden for organising the visit and for great discussions!

Innovation breakfast & Grants day

Our Center Director Alireza Malehmir was invited to talk at two events organised by Uppsala University: At the Innovation breakfast he shared stories from his work in geophysics, including life-saving applications in landslide detection, tunnel safety, and CO₂ storage. At Grants Day he represented the center discussing valuable insights on effective grant writing, emerging funding trends, and practical tips for crafting competitive proposals.

Svemin Autumn Summit

The center had several members participating in this leading annual forum for mining, minerals and metals, including CEO Ronne Hamerslag and Johan Högnas from Nordic Iron, Axel Sjöqvist from University of Gothenburg, and Iain Pitcairn and PhD student Laurens Tromp from Stockholm university. Laurens was awarded by Svemin the Janne Kempes stipendium in Economic Geology 2025 for his MSc thesis "Metasomatically induced hydrothermal REE mineralization in the Olserum-Djupedal area, SE". Well done Laurens!



UPDATES

MOOC SUCCESS!

Two Massive Open Online Courses (MOOC's) were conducted during the autumn. Almost 400 registered to the *Distributed Acoustic Sensing (DAS) using fibre-optic cables and Exploration, Mining and Extraction of Critical Raw Materials: basic and practical knowledge*. The courses were given in cooperation with *Learning 4 Professionals* and the presentations will soon be available online.

Safety reporting system

A new safety statistics sheet has been created to better track all the center members "out of office" activities. The document is a tool to capture and compile the HSE statistics across all the hubs and can be found in the SERC internal SharePoint, a site launched during the autumn with a growing number of users.

New Honorary Associate Researchers!

We are delighted to welcome Dr. Erik Jonsson and Dr. Mehrdad Bastani, both at SGU, as Honorary Associate Researchers at the Smart Exploration Research Center. Both have recently served as Adjunct Professors at the Department of Earth Sciences in Uppsala and bring outstanding expertise in critical raw materials and their geological and geophysical exploration.

FIELD PROJECTS

Blötberget

The work in the forests outside Ludvika continues tirelessly. In September-October a field course was conducted for training and research purposes including surface-downhole DAS in two deep boreholes and gravity/magnetic exploration searching for magnetite. In November a 16 km long seismic transect was done targeting the upper 10 km of the crust. This to better understand the geological architecture surrounding the mineral systems in the area. A vibrator truck from GEUS was used as the source. Our core partner Nordic Iron has recently applied for an additional exploration permit due to promising results from recent exploration near Blötberget.

Canada

Prof. Chris Julin and research engineer Grzegorz Paletko participated in a successful international collaboration in the field of mine tailing characterization in the world-class Abitibi gold belt using distributed acoustic sensing (DAS). The work was led from Université du Québec en Abitibi-Témiscamingue with support from the Natural Sciences and Engineering Research Council of Canada (NSERC) demonstrated the power of combining expertise across borders (Transatlantic) to advance scientific and technological innovation in this era of energy transition and critical raw materials demands.

Viscaria

We have, together with our partners from BitSimNOW/Prevas and Viscaria, been awarded the NAVIS project, supported by the Swedish Energy Agency under Impact Innovation Swedish Metals & Minerals program. This collaboration brings together expertise from academia, mining, and technology providers, a powerful trio for innovation. The focus is deep targeting in Viscaria, further unlocking its potential as a major Cu(Fe) producer despite complex ore body geometries and logistical challenges associated with the ongoing construction phase of the mine re-opening. Using advanced downhole array development and sensing, the team is aiming for detailed mapping of mineralized zones, reducing mining risks and enhancing cost-effectiveness.

UPCOMING

Svemin Exploration Day, Stockholm!

This Svemin forum, held December 9, highlights the importance of exploration as the foundation of the mining and minerals value chain, bringing together leaders from industry, government, and academia. Alireza Malehmir, Director of SERC, will present some of our initiatives and findings for the exploration of critical raw materials.

SERC at the Nordic Geological Winter Meeting in Turku!

The Smart Exploration Research Center will be Silver sponsor and exhibitor at the NGWM 2026 in January 13-15 in Finland with our own booth and several active members on site. Make sure to reach out if you are there!

SERC next Progress meeting!

In January 22-23 2026 our next annual Progress meeting, PM26, will be held in Gothenburg. Thomas Zack will host us at the university Wallenberg conference center.

CONFERENCES ETC.

REE Symposium Stockholm

A successful day focusing on REE was organised by Iain Pitcairn et al. at Stockholm university with 75 participants on-site, more than 50 online and 11 invited presenters from both industry and academia.

Naples, Italy

Members from Uppsala University (Viktor Stender, Stefanos Sykitis, Michael Westgate and Myrto Papadopolou) presented at the EAGE Near Surface Conference in Naples in September.

Colorado, USA

Robert Dunst and Iain Pitcairn from Stockholm university represented SERC at the 18th biennial SGA meeting. Robert by presenting his second PhD paper and Iain by co-presenting a short course on orogenic gold deposits.

Welcome to SERC!

Two new young professionals have joined SERC: Samuel Zappalà who will explore REE-rich alkaline and carbonatite systems in Sweden, and Jolanta Putnaitė a PhD candidate who will explore Ni-Cu-PGE systems in the Bergslagen-Sala area.

