



## Words from the Director Stephen Hall

Now we are properly into autumn with a great schedule of activities coming up! As things stand, we are cautiously optimistic about forging ahead with more physical events, as society opens up. However, we will also try to maintain some events in digital or hybrid format to facilitate wider participation.

As part of opening up again, we are very pleased to welcome our first guest researcher for some time! Prof. Adam Hitchcock from McMaster University, Canada, is visiting within the framework of the Soil Science working group and in collaboration with MAX IV. Prof. Hitchcock has already been working actively with the SoftiMAX team at MAX IV in the start-up phase of the beamline and will give a [seminar on his research relating to chemically sensitive imaging with soft X-ray STXM and ptychography](#).



One event not to miss is the [panel debate on how MAX IV and ESS can become engines for breakthrough science with incoming LINXS Director Trevor Forsyth, incoming Director General of ESS, Helmut Schober, and MAX IV Life Sciences Director, Marjolein Thunnissen](#).

We are also delighted to invite you to a [LINXS Town Hall meeting in December](#) where we hope to bring the LINXS community together after a hiatus due to Covid-19 and to update you on the current status of LINXS plus recent activities and developments. This will also be the first opportunity to hear from the new LINXS Director, Trevor Forsyth, who will start 1<sup>st</sup> December.

Our newest theme, Northern Lights on Food, is about to kick-start its activities and the New Material theme is forging ahead with exciting events in the next coming months. At the same time, we are busy discussing how to conclude and document our first three themes: Imaging, Dynamics and Integrative Structural Biology.

In other news, we have an exciting project to share with you! This summer LINXS hosted a collaborative project with ESS and LTH to help prepare for the future neutron beamlines and, in particular, the imaging beamline, ODIN. The project builds on a kitchen-built (yes you read that correctly!) light-based tomograph (KBLT), designed to teach tomography techniques to students. In this collaboration with ESS, the KBLT concept of Emanuel Larsson is used as part of a test-bed for how ESS beamlines could work. By using visual light we can get important insights into how the neutron instruments can be controlled and operated once they are in place at ESS.

Take care and stay safe!



### **From kitchen tomography to a cutting edge neutron imaging beamline**

A late Friday night in December 2018, Emanuel Larsson, who was working at RISE Research Institutes of Sweden at the time, started to assemble a small-scale tomography scanner in his kitchen, made up by everyday objects such as a camera, a water bottle, lego pieces, and a flash light. Why? To be able to better teach tomographic imaging to Swedish industry representatives and students. Today, his model is used as a prototype to help prepare for future neutron beamlines at ESS - as part of a collaborative project between LTH and ESS, hosted by LINXS during summer 2021.

– I had noticed that it was quite hard for people to grasp the basic principle of tomographic imaging. That made me want to build a model where you can actually show what is going on. I used stuff I found in the house, and I realised that they worked well to illustrate how one can scan, reconstruct and render a sample in 3D, says Emanuel Larsson, Method Expert in X-ray and Neutron Imaging at the Division of Solid Mechanics and Application Expert in Tomographic Imaging and Image Analysis at LUNARC, the Center for Scientific and Technical Computing at Lund University.

[Read an article about the project at linxs.se](https://linxs.se)

## LINXS is on Twitter

LINXS has created an account on Twitter to further disseminate news and events from our institute. Please follow us there to get regular updates on our activities. Please also tag us if you want us to share news from your own organisation or to share other news on x-rays and neutrons!

We are also on LinkedIn!

[@LINXS\\_Sweden](#)

[LINXS - Lund Institute of advanced Neutron and X-ray Science at LinkedIn](#)



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## LINXS events and related events

Here is a list of all the current events and activities taking place at LINXS, in partnership with LINXS or related to LINXS.

Events are open to all researchers from academia and industry.

[LINXS Event - Webinar: Science at Large Scale Research Facilities – with Laurent Chapon and Dave Stuart, Diamond Light Source, UK, 13 October](#)

[LINXS Related Event - AIMday Big Science & Technology, 13 October](#)

[LINXS Related Event - Joint ESS-MAX IV Science Colloquium - Climate change, roots and neutrons - is there a link?, 13 October](#)

[LINXS Related Event - ESS/MAX IV Online Summit, 14 October](#)

[LINXS Event - Seminar with LINXS Guest fellow Prof. Adam Hitchcock, McMaster University, Canada, 14 October](#)

[LINXS Related Event - ILL Workshop on Innovative Inelastic Neutron Scattering, 18 - 20 October](#)

[LINXS Partner Event - Workshop on synchrotron tomography for future MAX IV experiments, 20 October](#)

[LINXS Event - Webinar: Science at Large Scale Research Facilities – Science at the research neutron source Heinz Maier-Leibnitz \(FRM II\), with Peter Müller-Buschbaum, Munich neutron source FRM-II & Heinz Maier Leibnitz Zentrum MLZ, Germany, 20 October](#)

[LINXS Event - MAX IV and ESS as engines for breakthrough science, 20 October](#)

[LINXS Related Event - MAX IV User Meeting, 25 - 27 October](#)

[LINXS event - Catalysis workshop, 28 October](#)

[LINXS Event - LINXS XAS-School 2021, 1-5 November](#)

[LINXS Event – 2<sup>nd</sup> Northern Lights on Food Masterclass, 15-19 November](#)

[LINXS Related Event - Virtual ISIS Reflectivity Training Course, 16 - 25 November](#)

[LINXS Event – LINXS Town Hall meeting, 3 December](#)

[LINXS Event – 2<sup>nd</sup> Membrane Proteins workshop, 7-8 December](#)

[LINXS Related Event - SCIENTIFika, January 2020 - December 2021](#)

[LINXS Related Event - Nordic Workshop on Scattering from Soft Matter | Aalto University, 10 - 11 January, 2022](#)

[LINXS Partner Event - SXNS conference, 10-14 January, 2022](#)

[LINXS Event – Amyloid workshop: Mind the Gap, 3-4 March, 2022](#)

[LINXS Partner Event - 18th Food Colloids conference: Structure, Dynamics and Function, 10-13 April, 2022](#)

[LINXS Event - Billayers 2021, 13-15 June, 2022](#)