



## Greetings from the Director Stephen Hall

The advancement of science requires discussion and interaction, which is the basis of LINXS. The current situation with covid-19 has, unfortunately, limited face-to-face interactions, but we have all been finding new ways to communicate and engage with others. At LINXS we had a full program of scientific activities set for 2020, but little did we know that we would find ourselves in the midst of a corona pandemic that continues into the summer. Consequently, we have been developing our working practices to find new (digital) ways of meeting and collaborating plus we have invested in equipment to facilitate digital discussions. Some activities are, of course, hard to run via internet discussions and so a number of events have been postponed until the autumn or 2021. Events that have taken a digital form include a new initiative, the [LINXS Webinar Series, "Let's Dive Into the Atoms!"](#), which aims to provide new users with an introduction to x-rays and neutrons from a methods perspective. We hope that this will encourage many new users to join our community, in particular early stage researchers. The ["Masterclass on food"](#) will also switch to digital - this will be a great opportunity for food scientists to learn more about how x-ray and neutron methods can aid in understanding food structure and help in addressing pressing sustainability challenges.



Whilst we hope to begin interacting again soon in person, the exploration of new digital activities does provide new opportunities for LINXS to engage with researchers from all over the world in a more sustainable way. We look forward to incorporating such activities in our future development.

Keep an eye on the [events](#) and [news](#) pages to find out what is happening at LINXS. We are looking forward to a somewhat different, but as exciting, autumn at LINXS, even if, to some extent, it has to be in the virtual world. In the autumn we will also begin planning the program for 2021, including activities in a new theme, more details on which we hope to announce after the summer.

In this newsletter you can read about some of the things that have been happening in and around LINXS in recent months plus upcoming events and some relevant funding opportunities. Our [Annual Report for 2019](#) is also now available, where you can read about what our community achieved during last year.

I hope to meet many of you in person or in the virtual world in the coming months and I also hope that we can soon get back to the discussions and interactions that we all need to further our research goals together.

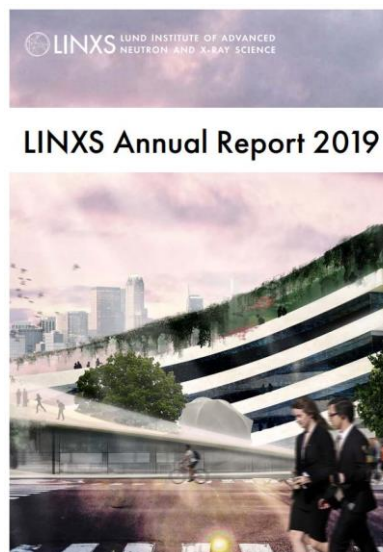
## LINXS Annual Report 2019

In our latest Annual Report, we share news, stories, events and highlights from 2019.

In 2019, LINXS made strong progress in its mission to become a nucleus for x-ray and neutron based research. This was achieved through a significant number of successful, high quality scientific activities, including hackathons, workshops, symposia and conferences, as well as a solidification and extension of the LINXS scientific portfolio within and between the existing themes, including new working groups (WGs) and the development of “research programmes”. LINXS activities gathered more than 900 participants, and the visibility and identity of LINXS was strengthened by participation in strategic outreach events at the local and national level.

We would like to say a big thank you to everyone who has been involved in LINXS so far!

[Download LINXS Annual Report](#)

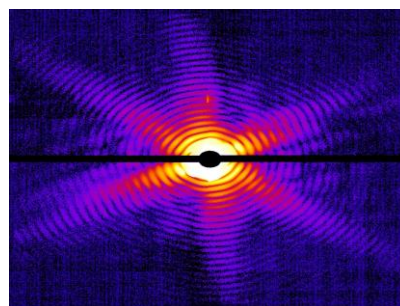


## LINXS Webinar Series - Let's Dive Into the Atoms!

LINXS is launching a new webinar series introducing x-rays and neutrons from a methods perspective. The aim is to create a fundamental understanding of how you as a researcher can use the techniques offered by MAX IV and ESS in your own research.

Areas that will be covered:

- Fundamental knowledge of different x-ray and neutron methods and applications.
- Guidance on how to complement laboratory-based experiments with experiments at large scale research facilities such as MAX IV and ESS.
- Information on how to write a proposal for beamtime at large scale research facilities, and pre-proposal experiments.



The webinars will run from 3rd June to 29th June. New webinars will be added to the series in September based on interest.

X-ray Webinars:

**3rd June 2020, 14.00pm:**

[An introductory lecture on synchrotron-based X-rays, possible experiments at different beamlines,](#)

Speaker: Jens Uhlir – Synchrotron Experiments, Chemical Physics Lund University

**5th June 2020, 14.00pm:**

[How to exploit chemical sensitivity in X-ray spectroscopy](#)

Speaker: Pieter Glatzel, HERFD-XAS and RIXS (ESRF)

**8th June 2020, 14.00pm:**

[Beyond the E0 state of nitrogenase: Spectroscopic studies of Intermediates in biological dinitrogen reduction](#)

Speaker: Serena DeBeer, Max Planck Institute for Chemical Energy Conversion in Muelheim an der Ruhr, Germany

## Neutron Webinars

15th June 2020, 14.00pm:

### [Data Analysis and Reduction Software at ESS](#)

Speaker: Thomas Holm Rod, ESS

22nd June 2020, 14.00pm:

### [Small Angle Scattering Data Analysis with SasView](#)

Speaker: Wojciech Potrzebowski, ESS

29th June 2020, 14.00pm:

### [EasyDiffraction: new easy-to-use software for analysis of diffraction data](#)

Speaker: Andrew Sazonow, ESS

[Read an article about the webinar series and register](#)

## **Towards healthier, better tasting and more sustainable foods – Masterclass on Food in August**

LINXS is launching a Masterclass on Food to introduce researchers to the possibilities of using neutrons and x-rays to develop food and food research. The aim is to highlight how the techniques offered at MAX IV and ESS can give knowledge and insights on food structure in relation to storage qualities, uptake and nutritional value as well as texture, perception and packaging.

– We created this course because food production and food systems are at a crossroads: a growing population, climate change and the need to provide a healthy, sustainable and affordable diet for all are all key challenges of our present time. We think that some of these challenges could be solved by making use of the techniques offered by MAX IV and ESS, says Selma Maric, researcher at MAX IV, and one of the people responsible for the course.



[Read more and register for the Masterclass on Food](#)

## **LINXS hackathons solves image analysis challenges and builds community**

LINXS hackathons bring scientists and clinicians from a wide range of backgrounds together with experts in 3D image visualization and quantification to identify solutions to the scientists' diverse 3D image analysis challenges. The goal? To create a strong user community with capabilities and passion to push research frontiers forward through the use of x-ray and neutron imaging data.

– We like to set different challenges for each hackathon to bring different groups of researchers together, and to highlight different types of techniques. By organising the hackathons in this way, we are slowly building a user community around the world, says Stephen Hall, Director of LINXS.



[To the news article](#)

## **Funding opportunities in x-rays and neutrons for Swedish researchers**

We wish to notify you about the following funding opportunities:

- [Vinnova: industriella pilotprojekt för 2020](#)

- [Vetenskapsrådet: Industriella pilotprojekt för användning av neutron- och fotonbaserade tekniker vid storskalig forskningsinfrastruktur – 2020](#)
- [Stiftelsen För Strategisk Forskning: Sök till Adjungerad professor](#)

### Hold digital dissertations and meetings at LINXS during the corona outbreak

LINXS can provide a digital meeting space for dissertations, seminars or workshops during the current outbreak of corona. This service is free to use for any researchers, institutions or faculties. The facilities are also free for any larger theme or working group meetings.

The room at LINXS can hold up to 40 people and is equipped with videoconference equipment such as microphones, projectors, webcams and a camcorder. It is suited to occasions where some of the meeting participants are present on Zoom/video and others are in the room itself. Note that you have to bring your own technical support.

To book the room, or to find out more, please contact LINXS scientific activities manager, Åsa Grunning ([asa.grunning@linxs.lu.se](mailto:asa.grunning@linxs.lu.se))

### LINXS events and related events - June 2020 - 2021

Here is a list of all the current events and activities taking place at LINXS, or in partnership with LINXS, from June 2020 and onwards. Due to the current corona outbreak, many activities have had to be postponed to autumn. We will inform you once we have new dates for our events and activities.

Events are open to all researchers from academia and industry.

[LINXS Related Event - EUGLOH Summer School on Large-Scale Facilities for Global Health - Opportunities, Project Writing and Career Orientation, 29 June - 2 July](#)

[LINXS Event - Masterclass on Food - August](#)

[LINXS Related Event - The 6th International Summer School - CINEMAX, 23 - 27 August](#)

[LINXS Partner Event - Northern Lights on Food 2 - 7-9 October](#)

LINXS Event - BioSAXS data analysis workshop, **18-20 November**

LINXS Event - Time Resolved workshop, **23-25 November**

LINXS Event - Amyloid Workshop: User-friendly analysis of spectroscopy data with Quasar - multivariate statistics and machine learning, **13-15 January 2021**

LINXS Event - Amyloid Workshop: Heart and Mind, **4-5 March 2021**

LINXS Event - Bridge the gap in amyloid Analysis, **22-23 March 2021**

