

# European Neutron Scattering Association



# Who is ENSA

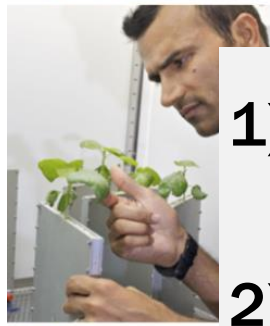


The European Neutron Scattering Association (ENSA) consists of national delegates, and the board (chair, vice chair, secretary and executive officer).

Chair	Henrik Rønnow
Vice Chair	Lambert van Eijck
Secretary	Natalie Malikova
Executive Officer	Evgenii Velichko
delegate Austria	Hartmut Abele
delegate Belgium	Kristiaan Temst
delegate Czech Republic	Jan Saroun
delegate Denmark	Kim Lefmann
delegate Estonia	Jörg Pieper
delegate France	Natalie Malikova
delegate Germany	Frank Schreiber
delegate Greece	Konstantina Mergi

delegate Hungary	Ferenc Mezei
delegate Ireland	Antonio Benedetto
delegate Italy	Fabio Bruni
delegate Netherlands	Lambert van Eijck
delegate Norway	Stefano Deledda
delegate Poland	Wojciech Zajac
delegate Romania	Ion Ionita
delegate Russia	Sergey Grigoriev -> Andrey Gubkin
delegate Spain	Maria Teresa Fernandez Diaz
delegate Sweden	Maths Karlsson
delegate Switzerland	Marc Janoschek
delegate United Kingdom	David Barlow

# European Neutron Scientists awarded at ICNS

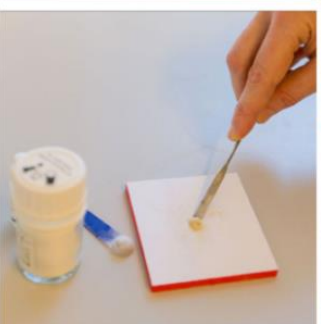
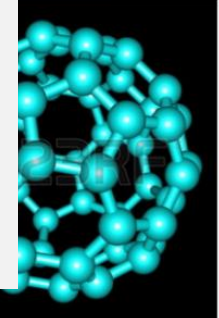
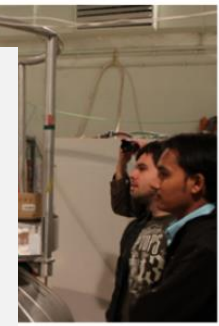


1) Walter Hälg prize



2) Erwin Felix Lewy Bertaut

3) Neutron Instrumentation and Innovation Award



The European Neutron Scattering Association - ENSA  
awards the 2021

## Walter Hälg prize

sponsored by SwissNeutronics  
to

Prof. Peter Böni

*in recognition of his many ground-breaking contributions in the fields of superconductivity and magnetism – most recently embodied by the discovery of topological skyrmions in MnSi; and for his contributions to neutron optics and instrumentation, which have played a significant role in the success of both the SINQ and FRM2 neutron facilities, as well as all the facilities benefitting from advances neutron super mirrors.*

*Awarded at ICNS 2021 in Buenos Aires, August 23<sup>rd</sup> 2022,*

*President of ENSA  
Prof. Henrik M. Rønnow*



*SwissNeutronics*  
Neutron Optical Components  
& Instruments

# Walter Hälgl



Photo: H.R. Bramaz

Walter Hälgl 1917-2011

A pioneer of reactor technology and neutron scattering in Switzerland

- Phd University Basel 1943
- BBC (now ABB) 1946-1960: DEORIT reactor @ PSI
- 1960 Prof ETH Zurich
- 1974 Proposed SINQ spallation source at PSI
- 1984 Retired
- 1996 Swiss neutron source moved from SAPHIR to SINQ
- Missed but remembered in the community since 2011

## Walter Haelgl Prize:

- donation from Walter to ENSA in 1999
- Since 2019 sponsored by Swiss Neutronics

Past prize recipients:

Ferenc Mezei (1999), Jane Brown (2001), Roger A Cowley (2003), Albert Furrer and Hans Ueli Güdel (2005), Jeff Penfold (2007), Dieter Richter (2009), Gerry Lander (2011), Giuseppe Zaccai (2013), Helmuth Rauch (2015) Juan Colmenero (2017), Kell Mortensen (2019)

# Prof. Dr. Peter Böni

1983 Ph.D. ETH Zürich

1983-1988 Brookhaven Natl. Lab.

1988-2000 PSI and ETH Zurich

SINQ start 1996

2000-2021 Prof. TU Munchen

FRM2 start 2004

1999 Co-founder of SwissNeutronics



Lattice instability and soft phonons in single-crystal $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$	Böni, P., Axe, J.D., Shirane, G., (...), Picone, P.J., Thurston, T.R.	1988	Physical Review B 38(1), pp. 185-194
Development of Ni/Ti multilayer supermirrors for neutron optics	Elsenhans, O., Böni, P., Friedli, H.P., (...), Söchtig, J., Anderson,	1994	Thin Solid Films 246(1-2), pp. 110-119
Advanced geometries for ballistic neutron guides	Schanzer, C., Böni, P., Filges, U., Hils, T.	2004	Nuclear Instruments and Methods in Physics Research,
Skyrmion lattice in a chiral magnet <i>Open Access</i>	Mühlbauer, S., Binz, B., Jonietz, F., (...), Georgii, R., Böni, P.	2009	Science 323(5916), pp. 915-919

1989		1 Event, 67 km	
29.07.1989	<a href="#">Swiss Alpine Marathon (SUI)</a>		67km
6:27:54 h	Böni, Peter	*Rekingen	Overall: 57 Of 1169 participants

The European Neutron Scattering Association – ENSA  
and the European Crystallography Association - ECA  
awards the 2021

## **Erwin Felix Lewy Bertaut Prize**

sponsored by Mirrotron

to

Dr. Ellen Fogh

*in recognition of multiple early career scientific achievements including her pioneering work in the application of highest available magnetic fields – static and pulsed – to elucidate the complex links between magnetoelectricity and field-dependent magnetic structures*

*Awarded at ICNS 2021 in Buenos Aires, August 23<sup>rd</sup> 2022,*

*President of ENSA*

*Prof. Henrik M. Rønnow*



**MIRR•TRON**

# Erwin Felix Lewy Bertaut



Erwin Felix Lewy Bertaut 1913-2003

[www.iucr.org/news/newsletter/volume-13/number-1/lewy-bertaut-1913-2003](http://www.iucr.org/news/newsletter/volume-13/number-1/lewy-bertaut-1913-2003)

A pioneer in crystallography and neutron scattering. He invented methods for extracting grain size distribution from diffraction, and introduced the notion of group theory to predict magnetic structures

- 1913 born in Leobschütz, named Erwin Lewy
- First studied law and philosophy in Freiburg
- 1933 Emigrated to France, takes name Felix Bertaut
- 1949 PhD CNRS Grenoble
- Together with Louis Neel decide to establish neutron scattering in Grenoble, Went to Brookhaven to learn the technique
- 1958-1979 founder and director of Laboratoire Diffraction Neutronique
- 1971-1982 director Laboratoire de Cristallographie, CENG (now CEA)
- 1979 Member of French Academy of Sciences
- 1963 first ICNS in Grenoble, Neel and Bertaut prime promoters of joint French-German high flux reactor - > ILL



**Erwin Felix Lewy Bertaut prize** established jointly by ENSA and European Crystallography Association - ECA

Past winners:

HMR, Lukáš Palatinus, Tom Fennell, Christian Ruedg, Pavel V. Afonine, Johan Chang, Giorgio Schiro, Linda Reinhard, Matthias Zschornak, Ellen Fogh (2021 - ENSA), Lukas Gajdos (2022 - ECA)



# Dr. Ellen Fogh

2019 Ph.D. Danish Technical University

2019- Ecole Polytechnique Federale de Lausanne



Magnetic order, hysteresis, and phase coexistence in magnetoelectric  $\text{LiCoPO}_4$

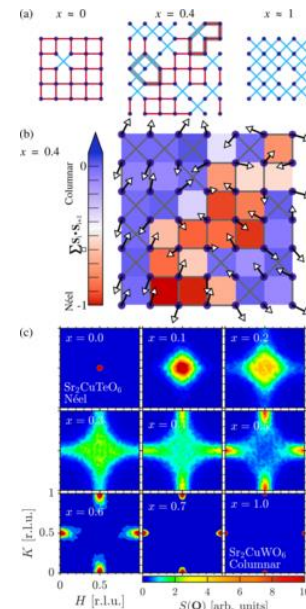
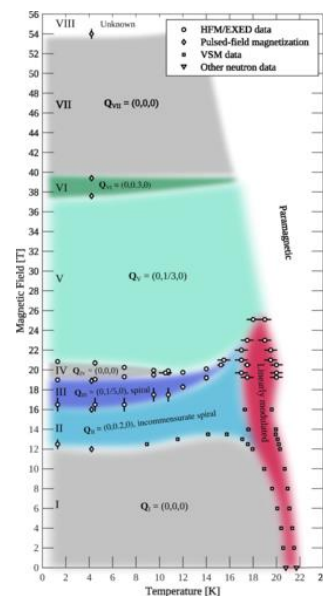
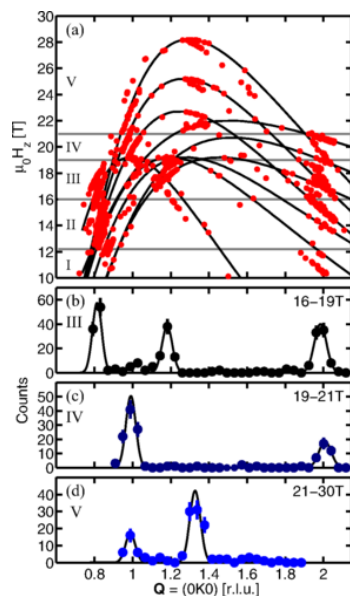
Fogh, E., Toft-Petersen, R., Ressouche, E., (...), Vaknin, D., Christensen, N.B. 2017

Magnetic structures and quadratic magnetoelectric effect in  $\text{LiNiPO}_4$  beyond 30 T

Fogh, E., Kihara, T., Toft-Petersen, R., (...), Nojiri, H., Christensen, N.B. 2020

Randomness and frustration in a  $S=12$  square-lattice Heisenberg antiferromagnet

Fogh, E., Mustonen, O., Babkevich, P., (...), Normand, B., Rønnow, H.M. 2022



The European Neutron Scattering Association - ENSA  
awards the 2021  
**Neutron Instrumentation and Innovation Award**  
sponsored by Mirrotron  
to  
Dr. Mads Bertelsen

*in recognition of his original contributions to extending capabilities of the neutron ray-tracing package McStas in particular by authoring the packages Guide-bot and Union, and for his work towards making these tools efficient to use by the community, which has already impacted design of many new instruments across different facilities.*



*Awarded at ICNS 2021 in Buenos Aires, August 23<sup>rd</sup> 2022,*

*President of ENSA  
Prof. Henrik M. Rønnow*

**MIRRO•TRON**

# Neutron Instrumentation and Innovation Award Prize 2021\*



The Prize is awarded in recognition of ground-breaking contributions in neutron instrumentation or method innovation, thereby enabling advances in neutron science and technology.

## Criteria

- Young scientist (3 to 10 years after finishing the PhD thesis).
- To have a clear association with ENSA scientific communities.

- Inaugurated by ENSA in 2019 as the “enabler” counterpart to Lewy Bertaut prize
- Sponsored by Mirrotron
- 2019 Winner Markus Abel, ILL  
“For ground-breaking advances of the neutron back-scattering technique leading to extended dynamic range, higher resolution and better signal-to-noise on the IN16B spectrometer at ILL”.

# Dr. Mads Bertelsen

2017 Ph.D. University of Copenhagen

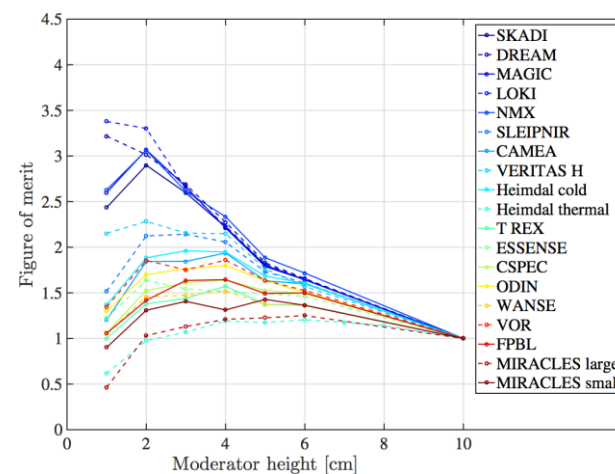
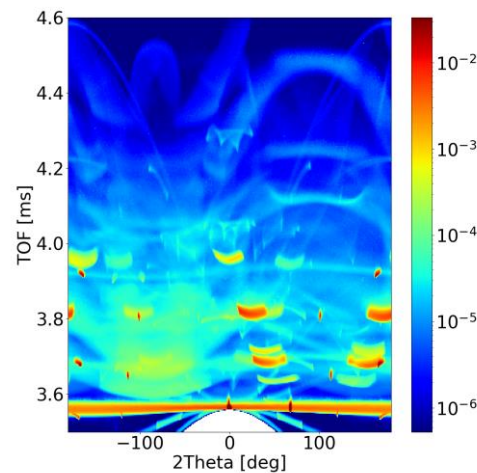
2017-2018 Protdoc University of Copenhagen

2019 – Postdoc ESS Data Management Center



The automatic neutron guide optimizer guide_bot	Bertelsen, M.	2017
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The instrument suite of the European Spallation Source <i>Open Access</i>	Andersen, K.H., Argyriou, D.N., Jackson, A.J., (...), Scionti, G., Schreyer, A.	2020
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# Walter Hälg Prize 2023

Call for nominations



The European Neutron Scattering Association (ENSA) invites nominations for the Walter Hälg Prize 2023 (sponsored by SwissNeutronics).

The prize will be awarded for outstanding efforts and achievements in neutron scattering with a long-term impact on scientific and/or technical neutron scattering applications.

#### Criteria

- Development of a novel technique in neutron scattering allowing innovative experiments
- Development and application of (known) neutron scattering techniques to study novel effects or phenomena
- Systematic work in neutron scattering providing a basic improvement in the understanding of materials, effects or phenomena
- Development of (novel) instrument components leading to substantial improvements in the performance of neutron scattering techniques
- Development of (novel) concepts in the understanding or interpretation of neutron scattering experiments (theoretical work, data analysis, etc.)

#### Nominations

- Submitted by individual European scientists (self-nomination excluded) or on behalf of a Division, Section or Group.
- Nominators may be members of ENSA or any of the national organizations represented by ENSA
- The nominator must ensure a signed acceptance of the nomination by the nominee.

#### Nomination documents

- Letter of motivation for the award.
- Brief curriculum vitae of the nominee and a short list (max. 10) of major publications.
- Letters of support from authorities in the field are accepted.
- A description or publication describing the nominated work.
- Nominations must be sent to ENSA Chair at the address: [henrik.ronnow@epfl.ch](mailto:henrik.ronnow@epfl.ch).

#### Deadline

**January 15<sup>th</sup>, 2023**

#### Award Venue

European Conference on Neutron Scattering 2023 in Garching, Germany.  
**ECNS 2023**, March 20-23, 2023.

Nominations for the prize will be treated in confidence and, although they will be acknowledged, there will be no further communication.



Sponsored by

# Neutron Instrumentation and Innovation Award



## Prize 2023



Call for nominations

The European Neutron Scattering Association (ENSA) invites nominations for the Neutron Instrumentation and Innovation Award 2023 (sponsored by Mirrotron).

The Prize is awarded in recognition of ground-breaking contributions in neutron instrumentation or method innovation, thereby enabling advances in neutron science and technology.

#### Criteria

- Young scientist (3 to 10 years after finishing the PhD thesis).
- To have a clear association with ENSA scientific communities.

#### Nominations

- Submitted by individual European scientists (self-nomination excluded) or on behalf of a Division, Section or Group.
- Nominators may be members of ENSA or any of the national organizations represented by ENSA
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# ENSA is you !



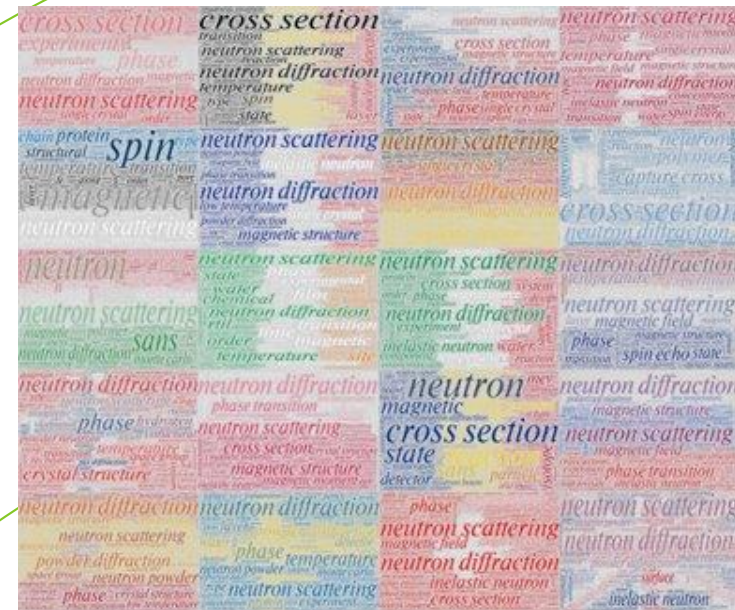


# Neutron community needs

Lambert van Eijck, Evgenii Velichko,  
ENSA & TU Delft, Netherlands

Henrik Rønnow  
EPFL, Switzerland

Final General Assembly 13/14 June 2022



# D2.3



## NLP analysis + web survey

Step 3 of 4

### Future needs (facility related)

In this block of questions, we would like to collect your thought and expectations for the future of the neutron-based experiments and the way they are organized.

#### At which stages of neutron-based research would you like to see improvements?

- Before the experiment
- During the experiment
- After the experiment

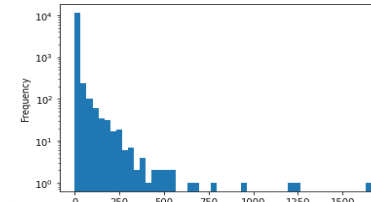
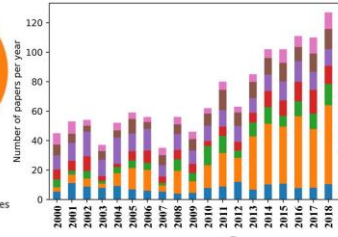
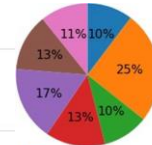
#### What would be your dream scenario in regard to future neutron science?

Text input field for dream scenario.

#### How can the European Spallation Source (ESS) help in realizing this dream?

Text input field for ESS help.

Previous Next



## Survey responses

Step 3 of 4

### Future needs (facility related)

In this block of questions, we would like to collect your thought and expectations for the future of the neutron-based experiments and the way they are organized.

#### At which stages of neutron-based research would you like to see improvements?

- Before the experiment
- During the experiment
- After the experiment

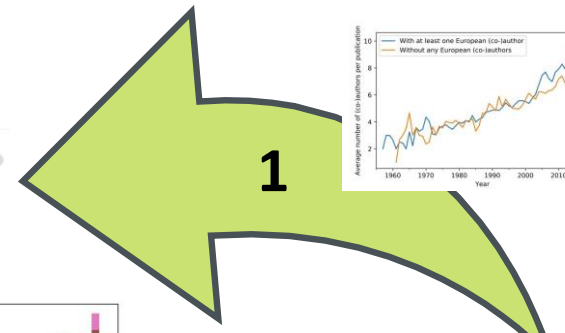
#### Which aspects of the pre-experimental stage should be improved?

- Proposal system
- Contact with the facility staff members
- Access options
- Possibilities for sample transportation to the instrument
- Education in neutron science
- Instrument-related training
- Something else

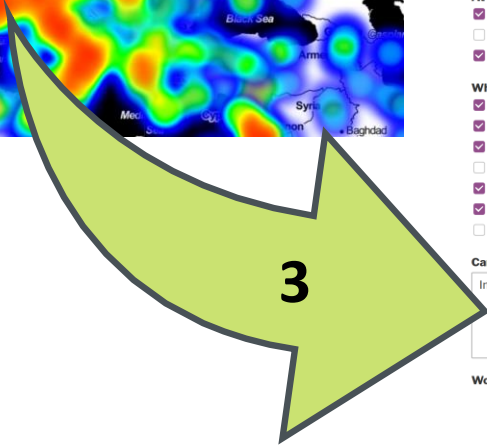
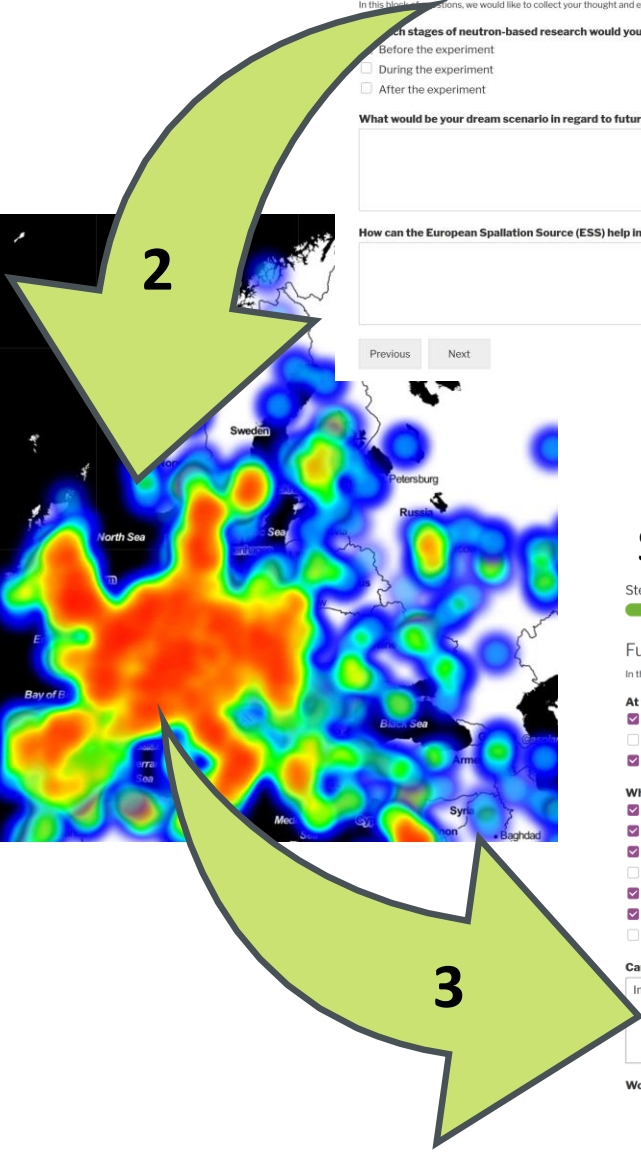
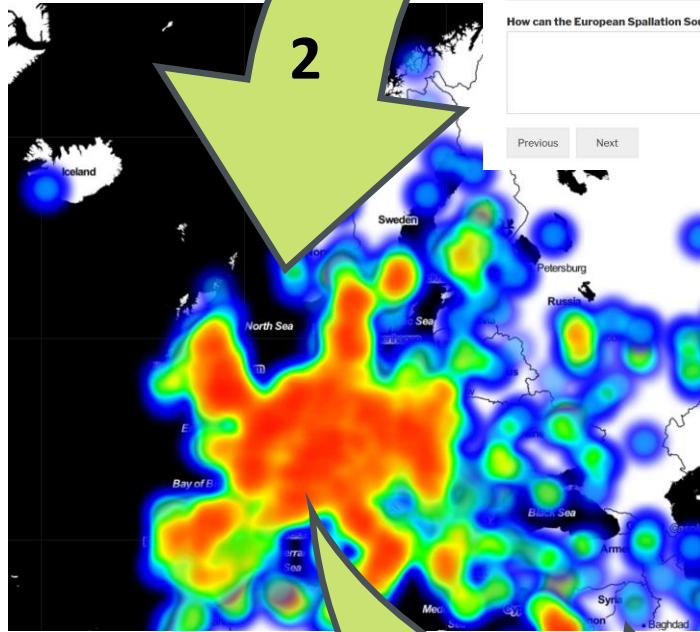
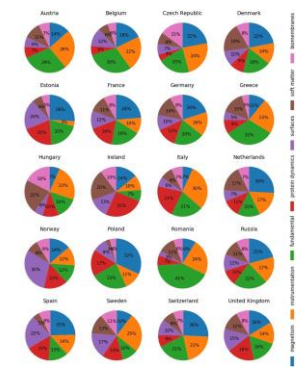
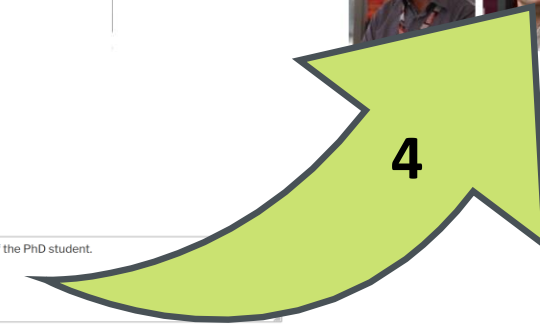
#### Can you elaborate on the proposal system improvements?

In PhD projects, the risk of not getting beam time awarded has a large impact on the progress of the scientific work of the PhD student.

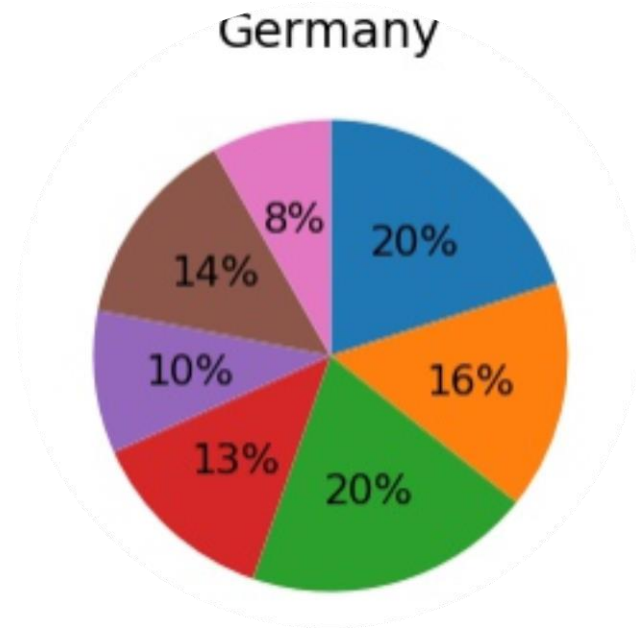
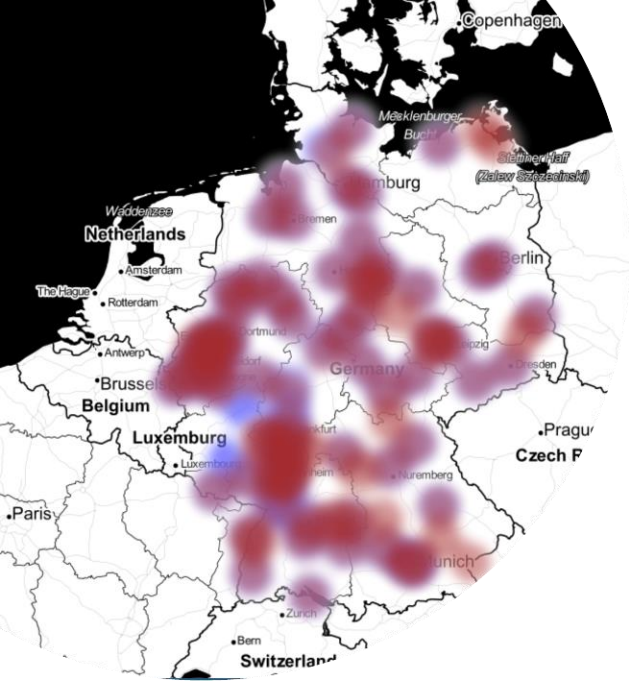
Would you like to have a European single access proposal system (nonspecific to an instrument, or a neutron source; beamtime can be granted at an instrument X in



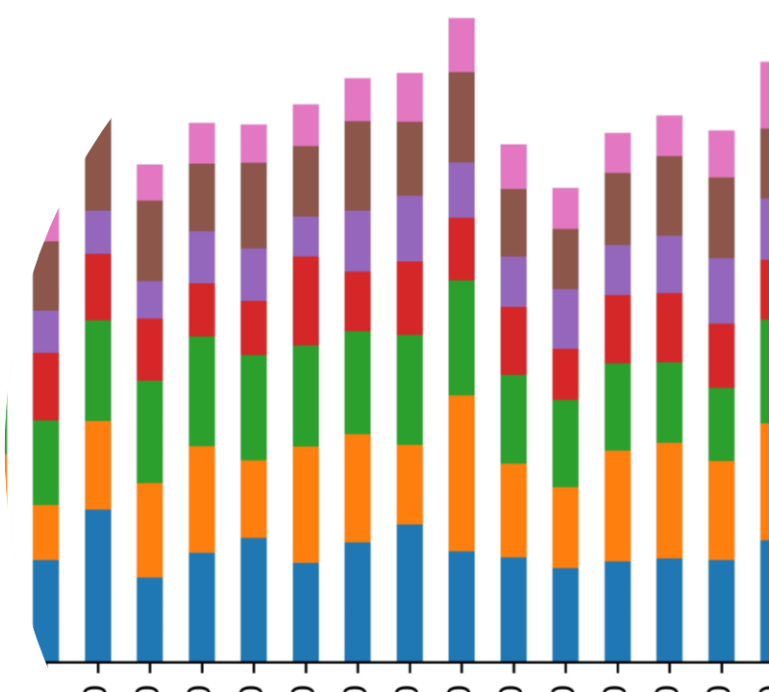
ENSA delegates





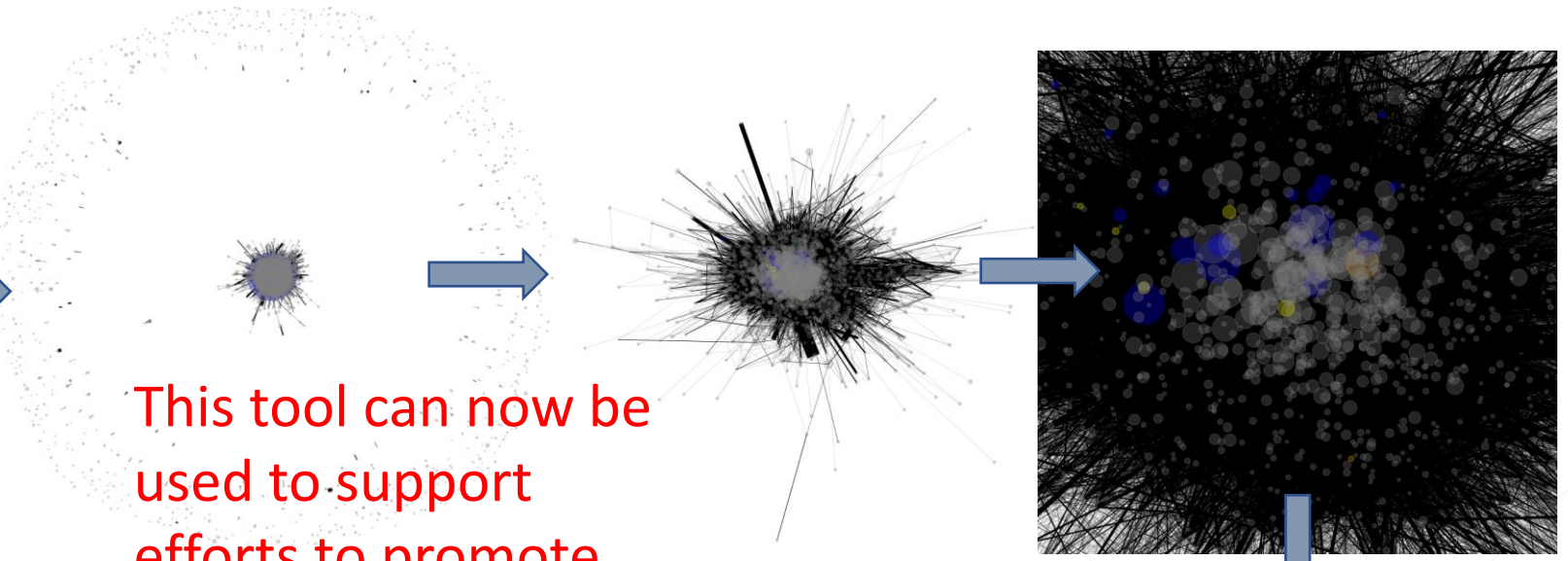
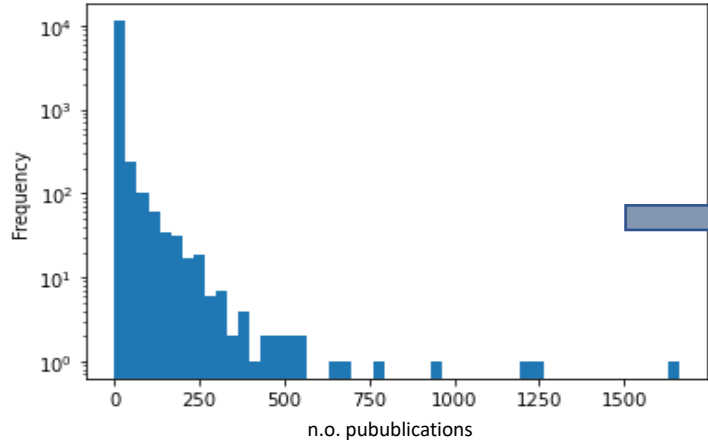


Science per topic, per year, per region

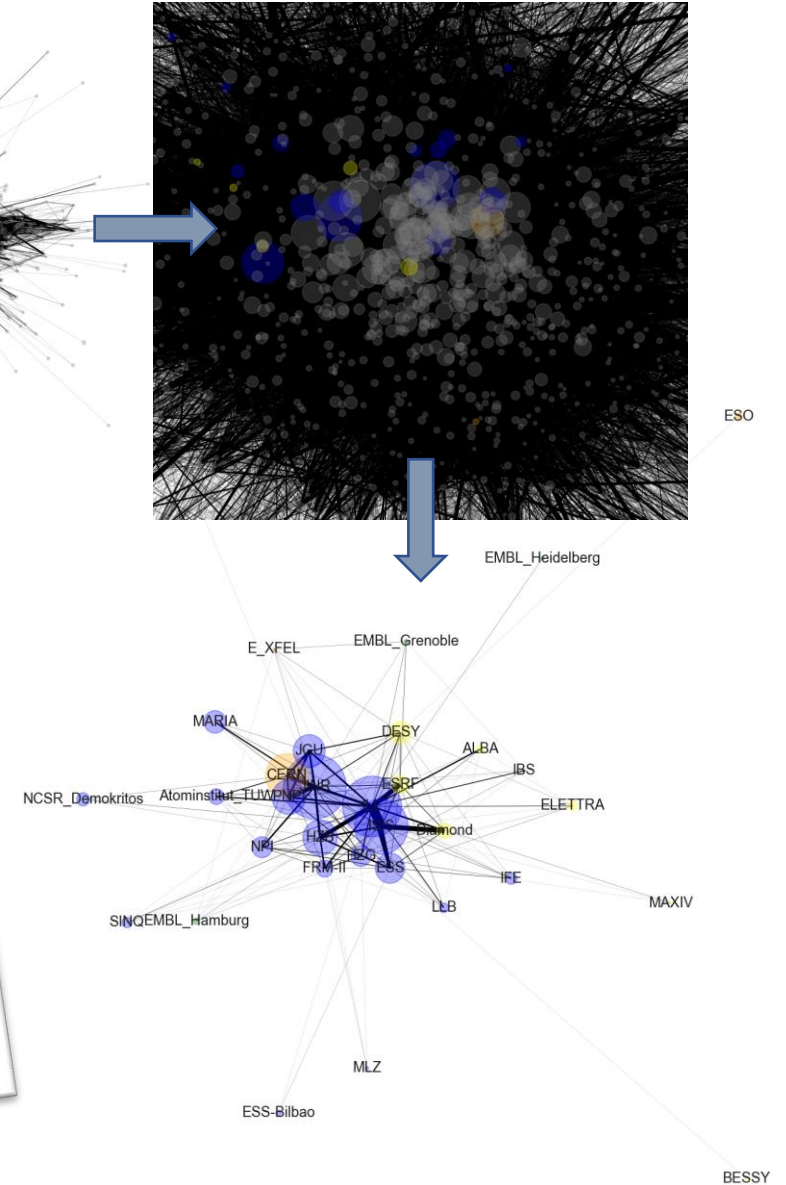
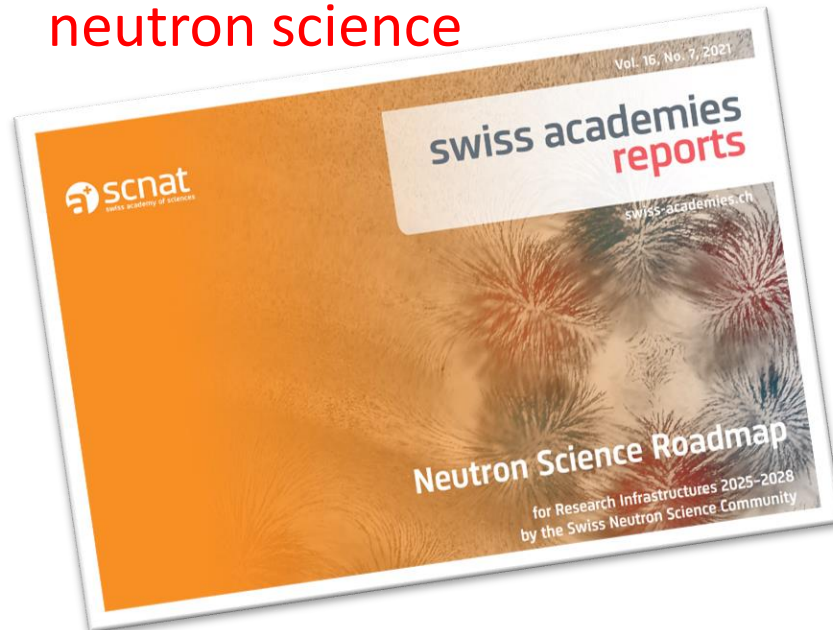
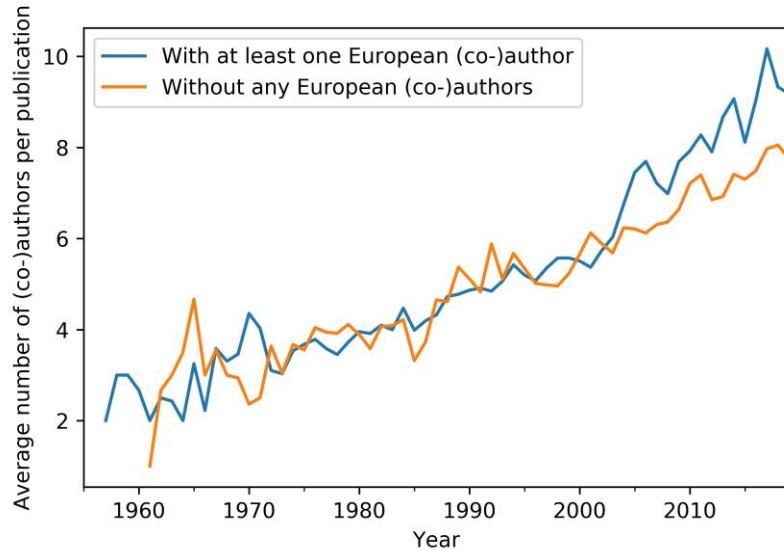




# D2.9

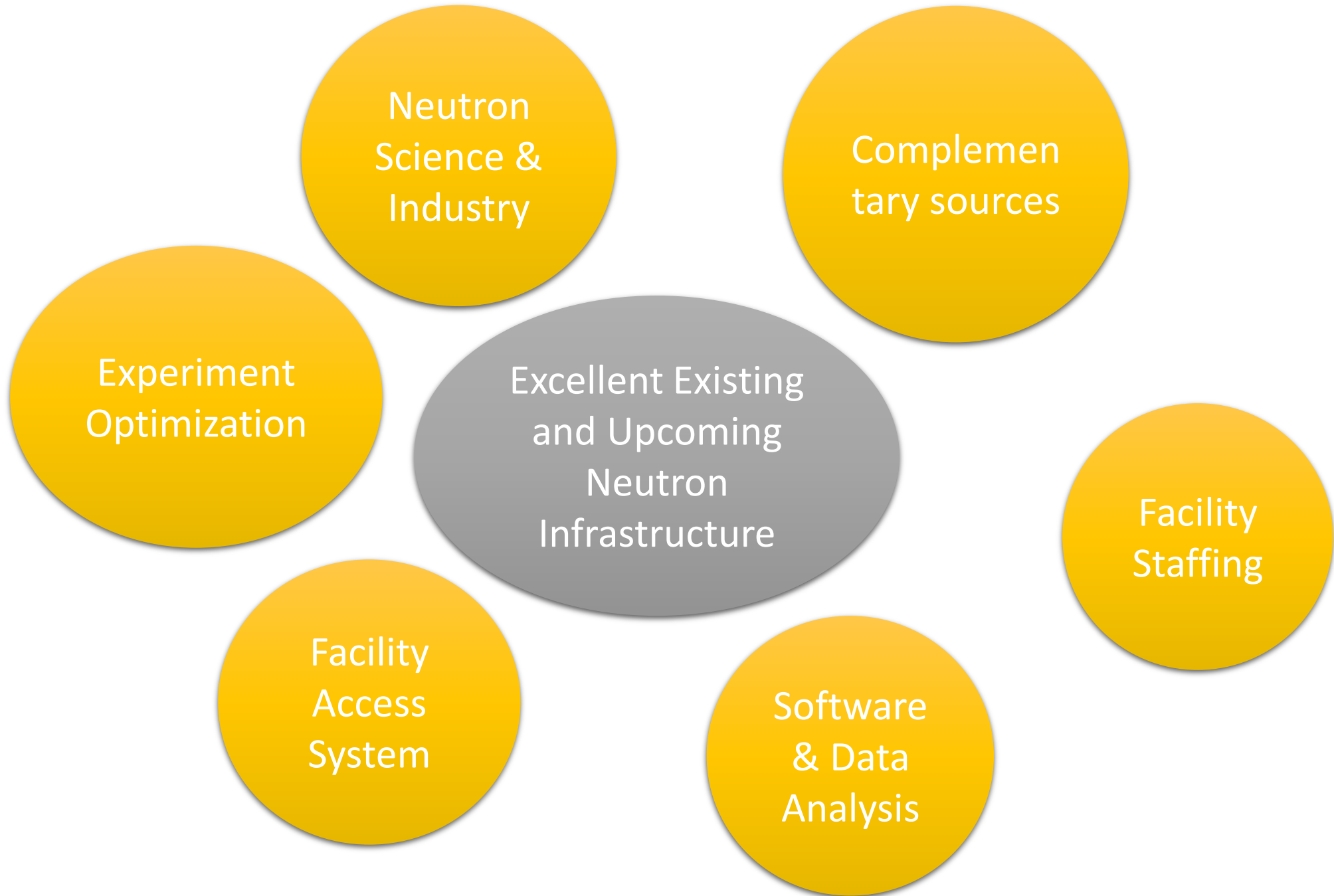


This tool can now be used to support efforts to promote neutron science



Survey  
Written  
Responses +  
Comments

Interpreted  
By ENSA  
delegates

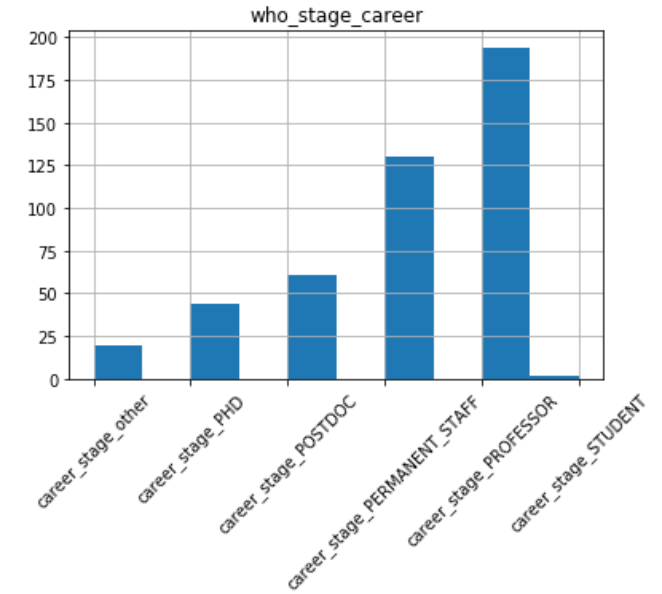
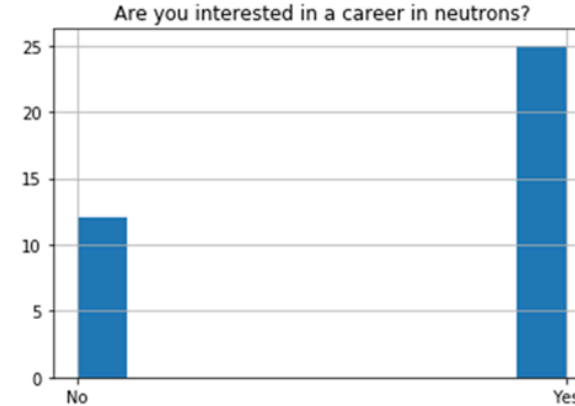


# Outcome of survey

13500 inter-related answers + comments

Questions relate to:

Career stage, expertise, methods used, complementary methods used, instruments used, future needs before experiment, future needs after experiment, instrument needs, needs for training/expertise, funding needs, etc.

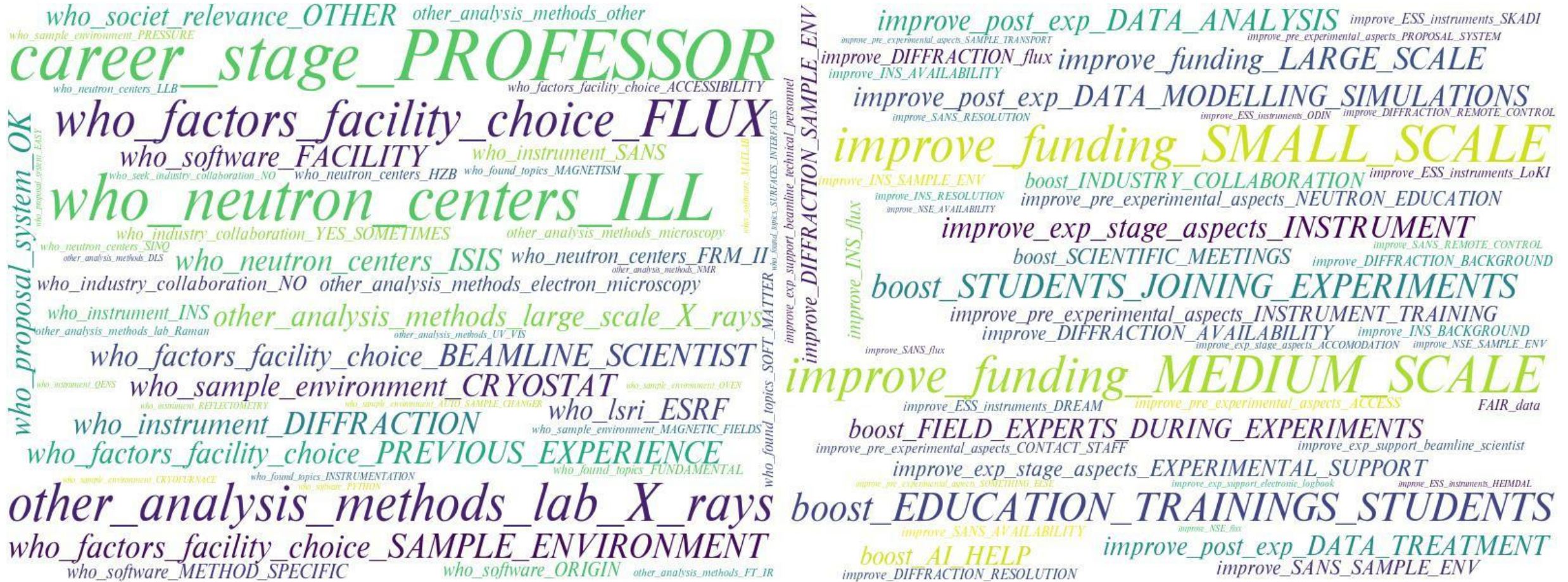


Inter-relations between questions/answers are depicted in 'wordclouds'





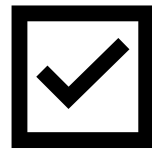
# Projection on the 'career axis'



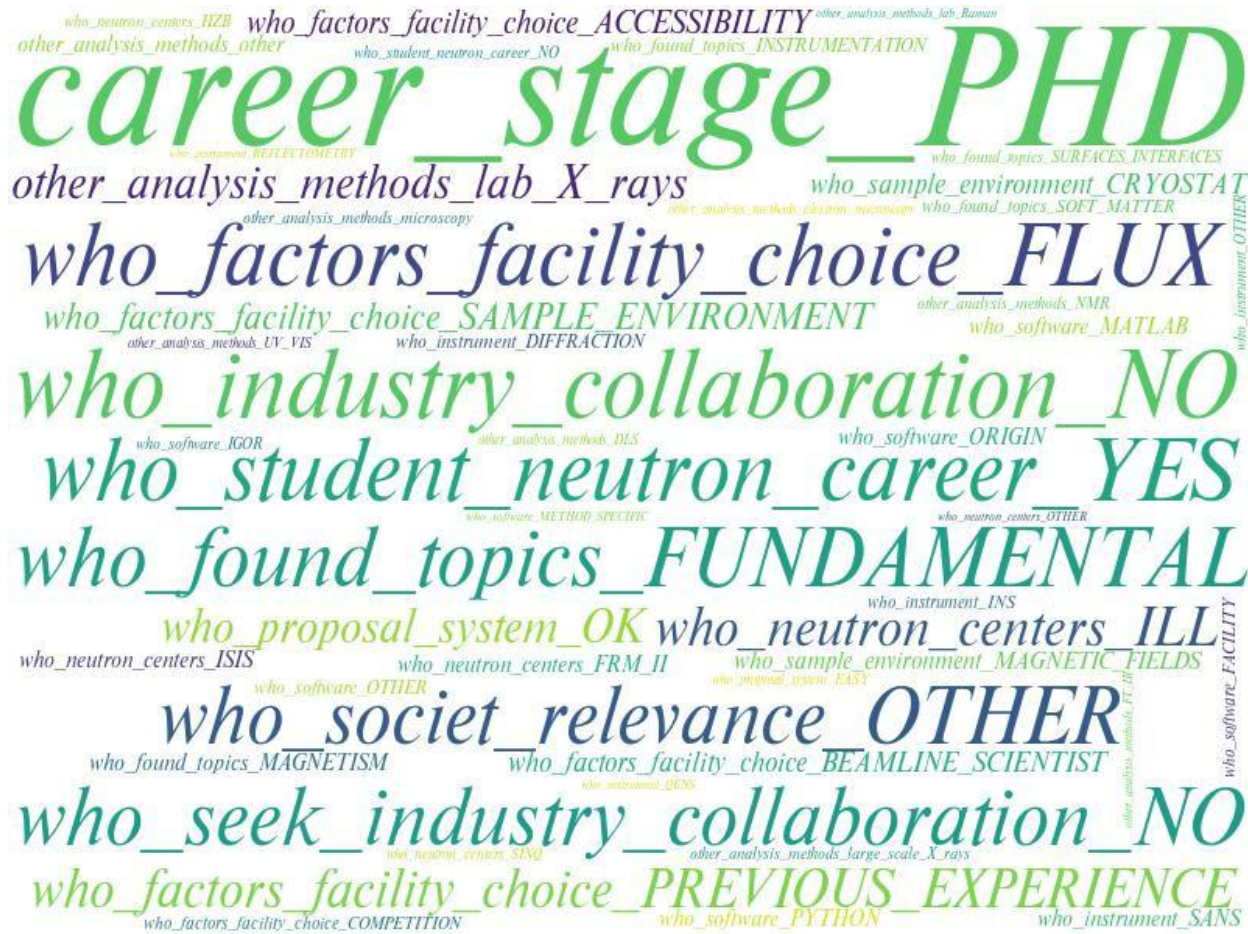


# Projection on the 'career axis'





# Projection on the 'career axis'



# ENSA's role in neutron education?

- Do we need more neutron schools?
- Should we try to coordinate neutron schools?
- Repository for neutron teaching material?





Novel tools were developed to analyze the scientific activities of the neutron community, resulting in the two Brightness<sup>2</sup> deliverables

Through Brightness<sup>2</sup> participation, ENSA contributed to the Vision Paper of the League of advanced European Neutron Sources

The neutron and X-ray user communities, European and national, are teaming up to express their needs in solving the future societal challenges.

# HORIZON-INFRA-2023-SERV-01-03 → conditions

## Call conditions: - selected excerpts

Specific conditions	
Expected EU contribution per project	The Commission estimates that an EU contribution of <b>between EUR 2.00 and 5.00 million</b> would allow these outcomes to be addressed appropriately. Nonetheless, <b>this does not preclude submission and selection of a proposal requesting different amounts.</b>
Type of Action	Programme Co-fund Action
Eligibility conditions	<p>...: <b>given the specific nature of this topic, access provision activities must be included in the proposal.</b></p> <p>Considering the Union's interest to make accessible to its researchers the most advanced research infrastructures, wherever they are in the world, legal entities established in Australia, Brazil, Canada, Chile, India, Japan, Mexico, New Zealand, Republic of Korea, Russia, Singapore, Switzerland, <b>United Kingdom</b> and USA, which provide, under the grant, access to their research infrastructures to researchers from Member States and Associated Countries, are exceptionally eligible for funding from the Union under this topic.</p>
Award criteria	<p>The following additions to the general award criteria apply: For the 'Excellence' criterion, in addition to its standard sub-criteria, the following aspects will also be taken into account:</p> <ol style="list-style-type: none"><li><b>The extent to which the access activities (trans-national and/or virtual access) will offer access to the state-of-the-art infrastructures of European interest in the field, high quality services, and will enable users to conduct excellent research.</b></li><li><b>The extent to which the project will contribute to facilitating and integrating the access procedures, to improve the services the infrastructures provide and to further develop their on-line services.</b></li></ol>



The European Neutron  
Scattering Association

ENSA European Neutron Scattering Association

Paris, July 8<sup>th</sup>, 2022

Dear colleagues,

### RE: ENSA call for ICNS 2025 in Europe

the European Neutron Scattering Association (ENSA) hereby opens the call for the International Neutron Scattering Conference (ICNS) to be held in Europe throughout 2025. **ICNS 2025** will be the 13<sup>th</sup> conference in a series of meetings held every four years since 1982 and alternating between Europe, the Americas and Asia-Oceania, with the most recent ICNS conferences being hosted by Argentina (Buenos Aires, 2022), Korea (Daejeon, 2017) and the United Kingdom (Edinburgh, 2013).

Candidate institutions are encouraged to submit their proposals to the ENSA Board prior to **15<sup>th</sup> January 2023**. Following a presentation for all ENSA members, the successful candidate institution shall be announced at the European Neutron scattering conference in Garching (20-23 March 2023).

Yours sincerely, the ENSA Board.

Prof. Henrik M. Rønnow  
ENSA Chair  
[henrik.ronnow@epfl.ch](mailto:henrik.ronnow@epfl.ch)

Dr. Lambert van Eijck  
ENSA Vice-Chair  
[L.vanEijck@tudelft.nl](mailto:L.vanEijck@tudelft.nl)

Natalie Malikova  
ENSA Secretary  
[natalie.malikova@sorbonne-universite.fr](mailto:natalie.malikova@sorbonne-universite.fr)

See you next year!

**ECNS 2023**



**March**  
**20<sup>th</sup>-23<sup>rd</sup>**



**Garching**



**[ecns2023.eu](https://ecns2023.eu)**

**Register  
& submit**