

# LENS-ENSA :

## a Close Coordination with the Neutron Users

**A new inspiring, compelling and innovative way to work together**



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**European Neutron Scattering Association**



<http://www.neutrons-ensa.eu/>



# ENSA some key numbers

## About 7000 scientists registered in the associations

- More than 8000 frequent users in Europe
- 25 years of collaboration (1994)
- Between 1900 -2300 articles a year
- Addressing society's grand challenges, basic or applied research wide range of disciplines physicists, chemists, biologists, and metallurgists, archeologists, geologists....
- A direct link to universities and Laboratories



Neutron scattering: an essential tool for science



The 2019 Walter Hälg Prize of ENSA sponsored by SwissNeutronics

The inaugural 2019 Neutron Instrumentation and Innovation Award sponsored by Mirrotron

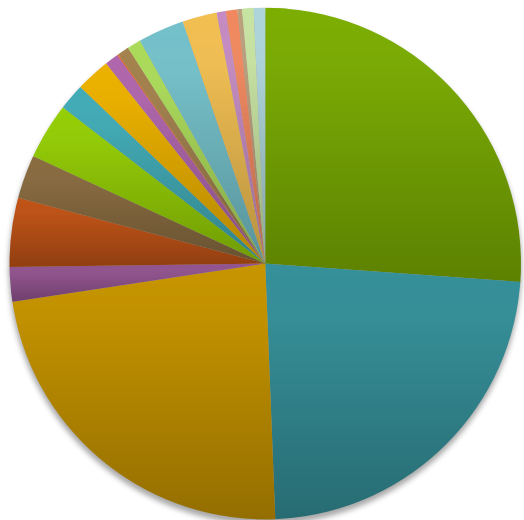
"Neutrons for Science and Technology"

<http://www.neutrons-ensa.eu/>

- International conferences, sponsor for prizes



# ENSA and EUROPE



**20 National Societies  
with membership in ENSA**

- Germany
- France
- UK
- Italy
- Spain
- Hungary
- Russia
- Danemark
- Austria
- Czech
- Slovakia
- Greece
- Poland
- Swiss
- Sweden

	<b>delegate</b>
Austria	H Abele
Germany	A. Schneidewind
France	N Malikova
Hungary	F Mezei
Spain	MT Fernandez-Diaz
Switzerland	H Rønnow
Norway	S.Deledda
Netherlands	L van Eijck
Russia	S Grigoriev
Czech Rep	P Mikula
Slovak Rep	P Mikula
Danemark	K Mortensen
Greece	Dina Mergia
Italy	Fabio Bruni
Romania	Ion Ionita
Poland	Wojciech Zajac
Sweden	Matts Karlsson
UK	Don Paul
Belgium	Kristian Temst
Ireland	Ant. Benedetto
<b>observer</b>	
Dubna	A. Belushkin
Estonia, Portugal	J.Pieper

# What is specific to this community and the research done?

**Multidisciplinarity** and interfaces of various fields → multiple probes and methods  
**huge number of questions**

**Dispersion** over space (regions and states) → **collaboration and networks**  
research being conducted in a large number of institutions, universities, R&D centers,

No do oppose Big Science and Small Science !

## Different timescales :

Basic research is not (always) planned; Applied research @ shorter time scale  
at variance

the construction of facilities requires very long periods of time

# European Neutron Landscape Recipe for success

## Neutron scattering centres in Europe

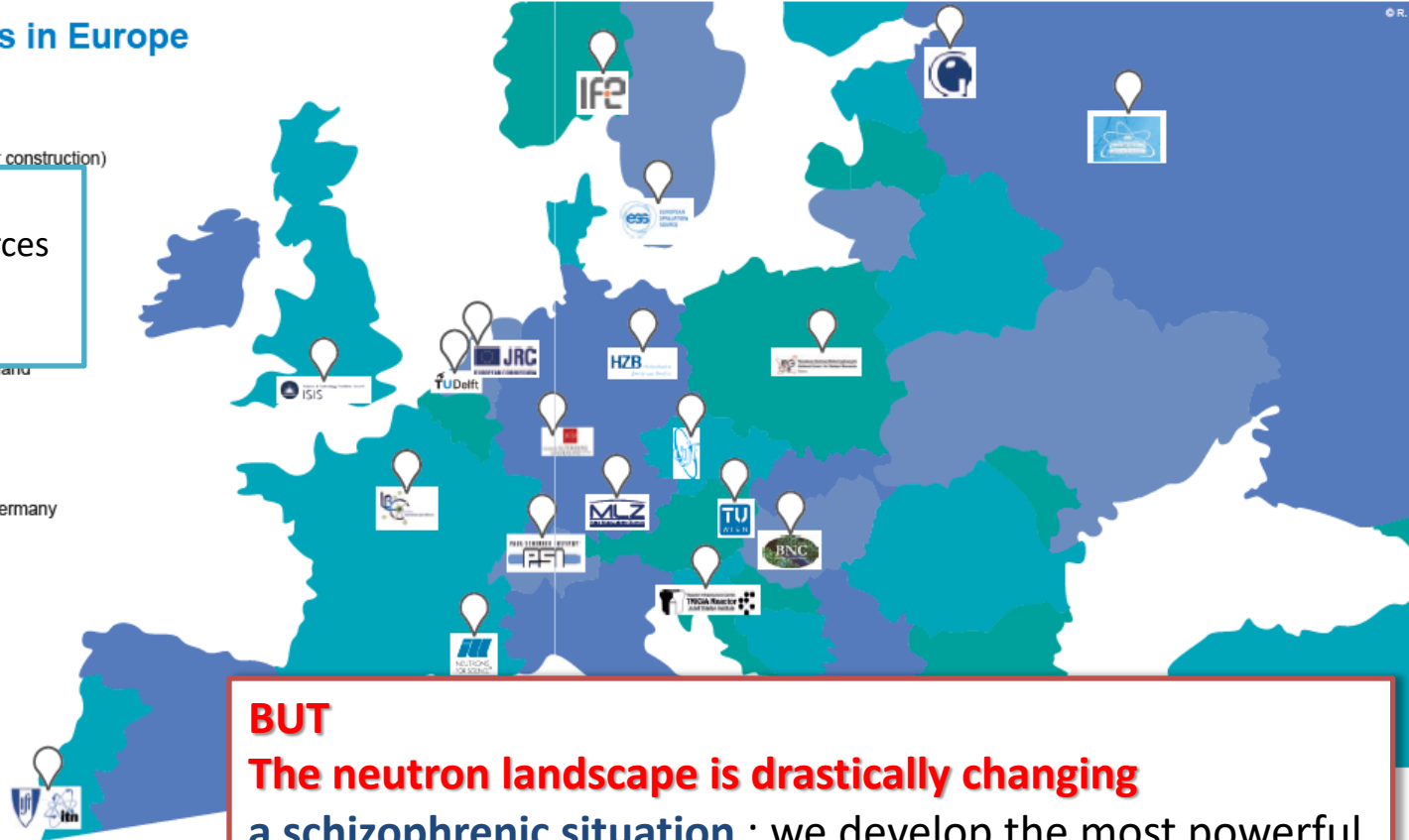
- Budapest Neutron Centre (BNC), Hungary
- Demokritos, Greece (under extended shutdown)
- European Spallation Source (ESS), Sweden (under construction)
- Frank
- Heinz
- Helmi
- Institut
- Institut
- ISIS F
- Joint
- Labor
- National Centre for Nuclear Research (wWIRIA), Poland
- Nuclear Physics Institute (NPI), Czech Republic
- Petersburg Nuclear Physics Institute, Russia
- Portuguese Research Reactor (RPI), Portugal
- Reactor Institute Delft – TU Delft, Netherlands
- SINQ – Paul Scherrer Institute, Switzerland
- TRIGA Facility, Johannes Gutenberg-Uni. Mainz, Germany
- TRIGA Mark II Reactor – TU Vienna, Austria
- TRIGA Reactor Infrastructure Centre, Slovenia

→ **High flux centers**

→ **medium flux sources**

→ **low flux sources**

at universities



**BUT**

**The neutron landscape is drastically changing**

a schizophrenic situation : we develop the most powerful source and destroy its user basis

# Current progresses at large scale facilities (to be supported)

More rapid data collection

New experimental opportunities (polarisation analysis, ...)

More complex materials with a broader dynamic range in Q and E

Small sample dimensions

Instruments adapted to the samples and the scientific question



Users asking for more or different...





# European User Wish List

Promote multi- and **interdisciplinarity**, create networks, **integrate smaller groups**, with  
**Trans National Access for the European user communities**  
Supporting associations and promoting gender policy

Establish the basis for a **pan-European network for education and training** of future generations

- *maximizing synergies in instrumentation software and training.*
- *maximizing availability and performance of beamtime to users achieved with the global European neutron budget.*

Promoting science at large-scale (neutron) facilities for the general public.

The evolution of the European community is correlated to **a better geographical distribution of neutron sources**, by **Integrating current small neutron sources** and by **conceiving and building new international network** of small and regional sources with dedicated research topics and flexibility (accelerator based neutron sources).



## ENSA partner of the WP2 with ILL and ESS

### ENSA Workgroup defining the different numbers

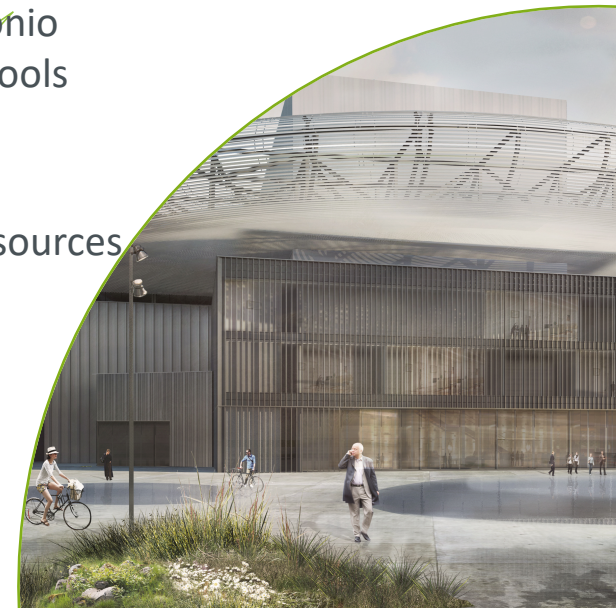
Lambert, Astrid, Teresa, Henrik ; Define the communities, new scientific trends,

**ENSA Working group education&training**, Natalie, Kell, Sergey, Antonio  
Lectures (Master, Bachelor), publication of text books, PhD prize, schools

### ENSA Working group on European NS landscape

maximizing availability and performance of beamtime to users, new sources

ENSA Prizes and conferences





# Opening opportunities for thriving European Neutron Research

- An efficient trans-national collaboration and an adequate level of investment is essential for Europe to secure its world leadership in the area of neutron research infrastructures (RI).
- The neutron user community plays a significant role in thriving the discipline as equal partners with source operators.

## To be emphasized in Horizon Europe

- increase of the budget for neutron RI (as opposed to current plans for a reduced budget),
- fund neutron RI operation costs together with transnational access for scientists from Member States and other countries,
- fund the transition to the future neutron RI landscape.

## The signatories :

Astrid Schneidewind, Sebastian Jaksch, Stephan Förster

For ENSA, Ch. Alba-Simionesco, Chair

## On behalf of the 20 neutron scattering societies

H Abele, A. Schneidewind, N Malikova, F Mezei, MT Fernandez-Diaz, H Rønnow, S.Deledda, L van Eijck, S Grigoriev, P Mikula, K Mortensen, D Mergia, F Bruni, I Ionita, W Zajac, M Karlsson, D Paul, K Temst, A Benedetto, A. Belushkin, J. Pieper.

Austria, Germany, France, Hungary, Spain, Switzerland, Norway, Netherlands, Russia, Czech Rep, Slovak Rep, Danemark, Greece, Italy, Romania, Poland, Sweden, UK, Belgium, Ireland, Estonia, Portugal.



# Welcome to St. Petersburg at the ECNS 2019

First Announcement

## European Conference on Neutron Scattering ECNS 2019

July 1-5, 2019  
St. Petersburg  
RUSSIA



Thank you  
for your attention

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## UCANS 8 in Paris July 8-11 2019

UNION FOR COMPACT ACCELERATOR-BASED  
NEUTRONS SOURCES



**PARIS**  
July 8-11<sup>th</sup> 2019

**ucans**  
UCANS8.science

**TOPICS**

- CANS Projects
- Innovative instrumentation
- Accelerators and beam optics
- Target
- Moderator neutronics
- Optical devices
- Computer simulations

**Neutron detection**

- Material character
- Nuclear Data
- Education
- Medical applicatio

**Important deadlines**

- March 1<sup>st</sup> Abstract submission opening
- April 1<sup>st</sup> Abstract submission deadline
- April 30<sup>th</sup> Notification of acceptance
- May 1<sup>st</sup> Registration opening
- June 1<sup>st</sup> End of early bird registration
- July 8<sup>th</sup> 15<sup>th</sup> Conference in Paris
- July 11<sup>th</sup> Vols. Day

**Friendships to sponsors:**

- EPJ Web of Conferences

**Local organizing committee**

- Christiane Abo-Simoneau
- Markward Anagnoster
- Alain Chauvin
- Karim Fakhriani
- Stéphane Hennele
- Flu. Nguyen
- Andreas Ott
- Hedwig Schwarding
- Oliver Straupe

**SCIENTIFIC COM**

- David Baxter, Indiana
- Sven Bulowfjord, ES-S
- Jaciek Dawidowski, CN
- Arnaud Desmet, CNRS
- Juan Espósito, INFN, It
- Thomas Gijbels, J. J.
- Ferenc Mezei, Miroslav
- Yoshio Otake, RIKEN, J
- Eréndico Ott, CEA, Fran
- Uwe-Rüdiger T. J. J. J.
- Hiroshige Shimizu, Nag
- Shang Wang, X. an. Jia

**Event venue:**  
FAP Jean Monnet, Paris

**UNION FOR COMPACT ACCELERATOR-BASED NEUTRONS SOURCES**

Logos for IAEA, CERN, INFN, EPJ, and other organizations are visible at the bottom.