



The joint virtual event of the
African Light Source AfLS-2024 (7th)
and the
African Physical Society AfPS2024



NEPHEWS

funding and training opportunities for students and researchers

Big Science and Big Goals for Africa, AfLS-2024 / AfPS2024
19th November 2024, University of Johannesburg

Prof. Cormac McGuinness
*European Synchrotron and FEL Users
Organisation (ESUO)*
& *TCD - Trinity College Dublin, Ireland*

On behalf of NEPHEWS project



nepheWS

Neutrons and Photons
Elevating Worldwide Science

coordinated by SOLARIS



What is NEPHEWS?

NEPHEWS - **N**eutrons and **P**hotons Elevating **W**orldwide **S**cience

An international collaboration that fosters:

- A way to access leading **photon** and **neutron** research infrastructures (RI) of Europe via Trans-National Access (TNA) funds
- Tailored training for young researchers
- Personalized twinning with experienced users of the RIs



HORIZON-INFRA-2023-SERV-01-03 - Research infrastructure services advancing frontier knowledge: co-fund pilots with pan-European RIs and/or national RIs



EU Funding: HORIZON COFUND: 4,7M €

Funding rate: 70%

Project budget: 6,8M €

Timeframe: 01/2024 – 12/2026

Who are NEPHEWS?

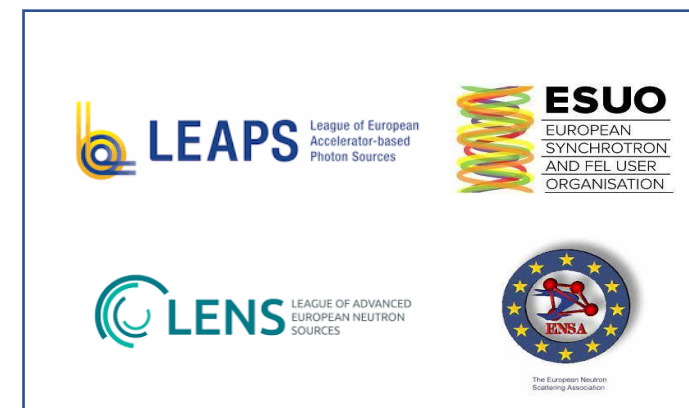
Consortium: 23 Partners (18 infrastructures)

NEPHEWS uniquely

- combines the **synchrotron (SR)**, **free-electron laser (FEL)** and **advanced neutron (N) facilities** of Europe together with
- the **European Users Organisations, ESUO** and **ENSA** representing national user communities,

with the goals:

- Advancement of European science for the benefit of global society
- Support and fast-track access through trans-national access (TNA) for excellent scientists, no matter their origin
- Development of early stage researchers
- Widening of user communities



Actions under NEPHEWS

- NEPHEWS was kicked-off at the beginning of February
- **Actions in Europe:** The selection process of 8 targeted countries within Europe was conducted (widening and non-facility countries). User communities from 13 countries submitted the „Expression of interest”
- NEPHEWS actions status:
 - a/ TNA* (**38290 h**) – already activated in all 14 neutron and photon RIs
 - *Access for user groups with a majority of users not working in a EU Member State or Horizon Europe associated country is limited to 20% of the total amount of units of access provided under the grant
 - b/ User-Twinning programme
 - c/ Early-stage researchers support
 - d/ Virtual training – open access at the project website

e/ Opportunities for Africa

- Project website (platform) is available at
- Contact to project coordinator: nepheWS@uj.edu.pl



Targeted countries of nepheWS

www.beamtime.eu



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Community building Actions in Africa Opportunities for Africa within NEPHEWS

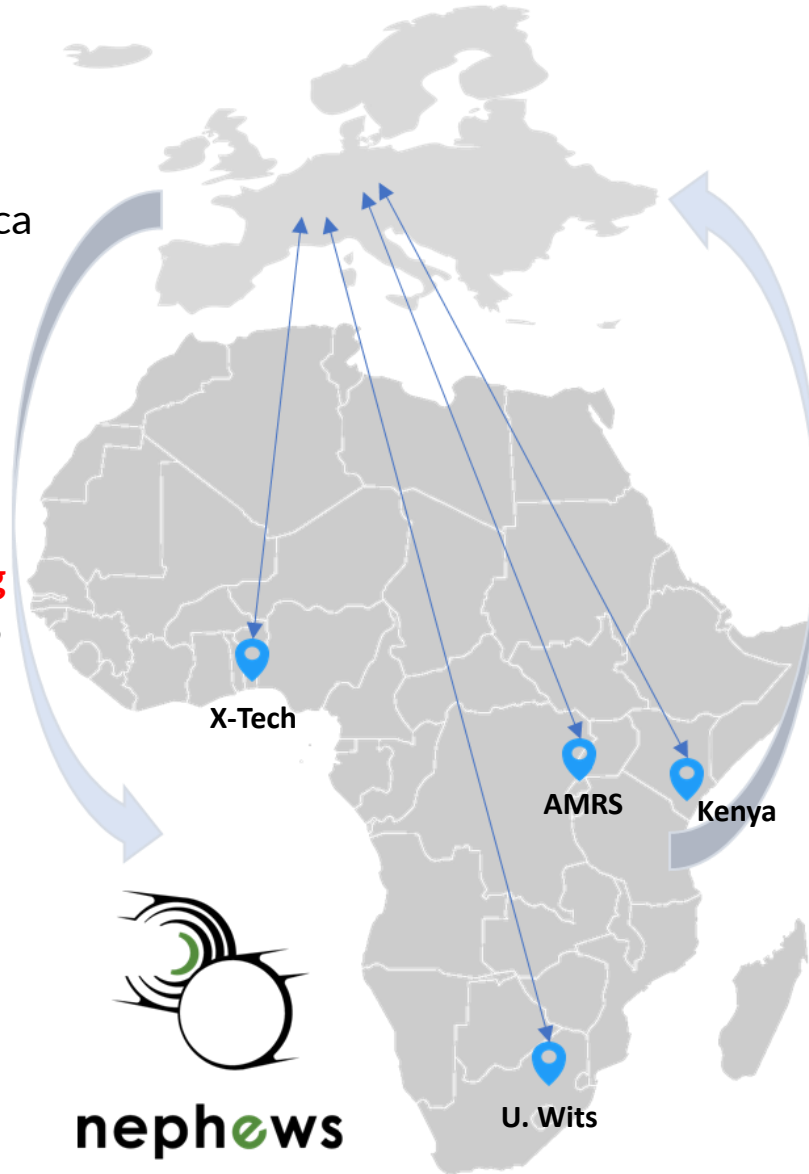
➤ Actions

- Visits to 4 regions in Africa
- Promotion and dissemination of the information on TNA to local/regional scientific communities
e.g. at **AfLS/APS meeting** and at 2024 African MRS meeting, Rwanda.

➤ Access

- See NEPHEWS website

www.beamtime.eu



➤ Twinning Opportunities

Next year 8 experienced researchers can be selected, acting as future ambassadors of SR/FEL- and N-based science in their regions

➤ Training Opportunities

Next Year selected PhD students from 4 African regions will participate in the 2026 HERCULES school Hercules-school.eu

HERCULES
European School

➤ Virtual Training Opportunities

Online training in techniques, methods; and in developing proposals for access

Community building Actions in Africa Opportunities for Africa within NEPHEWS

➤ African MRS, Kigali, Rwanda



➤ Satellite Pre-conference Workshop,
Sunday 1st December, Saturday 14th & Sunday 15th December

Visit: <https://africanmrs.net/rwanda-2024/pre-conference-workshops/>

➤ Scientific User Facilities and Proposal Writing Skills for Access

➤ Access to scientific facilities in Europe and the US is based on proposals for beamtime to be awarded based on scientific excellence. This workshop – limited to 24 participants is aimed at participants learning to write effective and successful proposals

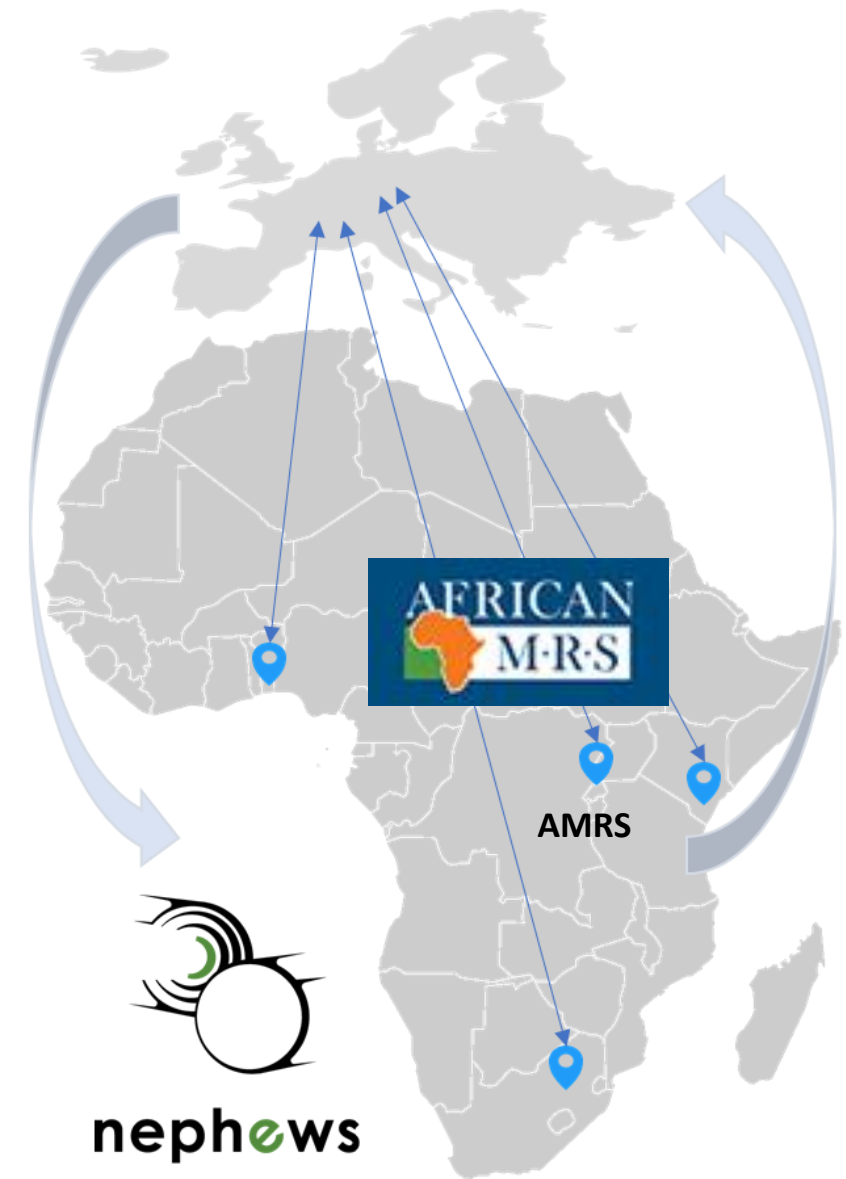
Organising partners

Argonne National Laboratory (www.anl.gov)

Wake Forest University (www.wfu.edu)

NEPHEWS (www.beamtime.eu)

ESRF (www.esrf.eu)



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www.beamtime.eu

NEPHEWS Twinning Programme

General questions? Missing experience?
How and where to start?
How to find international partners?

Get to know us
Join an experiment of an experienced group
Become part of the large scale facility family



Twining brings
together
experienced large
scale facility users
with newcomers



Free access to the light/neutron source
Coverage of your travel and subsistence costs
Training in how to use our facilities
Experience in executing a beamtime

Tailor made twinning teams according
to your research field
Discussion and support in writing your proposals
Possibility to start long term cooperations

Changes start with ideas



In the twinning program we invite you to participate in a beamtime of an experienced user group

Confidence gives new ideas



Ideas grow with networks



Experience creates confidence



Networks start with information...



Twinning builds experience

Opportunities for Training: HERCULES 2026

NEPHEWS has funding for **4 African PhD researchers** registered with an African university to participate in the renowned **HERCULES EUROPEAN SCHOOL**:

- **A five week-course** coordinated by the Université Grenoble Alpes providing training in the field of **Neutrons, X-ray Synchrotron Radiation, and Free Electron Lasers** for Biology, Chemistry, Physics, Materials Science, Geosciences, Industrial applications.
- **Lectures, practicals, tutorials, and visits to: ALBA** in Barcelona, **KIT** in Karlsruhe, **DESY** and **European XFEL** in Hamburg, **Elettra** and **FERMI** in Trieste, **ESRF** and **ILL** in Grenoble, **SOLEIL** in Paris-Saclay and **PSI** in Villigen.
- The language of the course is **English**.



Held annually in early Spring. Applications from young African researchers for the NEPHEWS bursaries will open in April 2025, closing in mid May 2025 for the course in Spring 2026.



Snowshoe outing – HERCULES 2020

Opportunities for Training: HERCULES programme March – April 2026

DISCIPLINES Biology, Chemistry, Materials Science, Geosciences and more

Programme insights: In-depth knowledge of neutron and synchrotron radiation techniques for research in condensed matter

Offer: An unparalleled learning experience for **4 PhD positions for African students** sponsored by NEPHEWS

Applications: open early April 2025; closing mid May 2025; shortlisting and interviews June



HERCULES
European School



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**HERCULES
NEPHEWS
TRAINING
PROGRAMME 2026**



SPECIALIZED COURSES, HANDS-ON PRACTICAL, TUTORIALS AND FACILITY TOURS ARE COMBINED IN THIS INTENSIVE PROGRAMME.

DISCIPLINES

Biology, Chemistry, Physics, Materials, Science, Geosciences and more

PROGRAMME INSIGHTS

In-depth knowledge of neutron & synchrotron radiation techniques for research in condensed matter

OFFER

An unparalleled learning experience for students, postdocs and scientists worldwide

CALLS FOR APPLICATIONS

APRIL 2025
(TO BE ANNOUNCED)

4 PHD FROM AFRICA
SPONSORED BY NEPHEWS

[HTTPS://BEAMTIME.EU](https://beamtime.eu)

PRACTICAL INFO

The training programme will be hosted by Université Grenoble Alpes and Grenoble INP.

Applications are welcome from PhD students who are registered with an African University or Research Institute.





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by SOLARIS

Questions about NEPHEWS



Happy to answer questions anytime today

... or in the future

Leave name and email in chat

Prof. Cormac McGuinness

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