

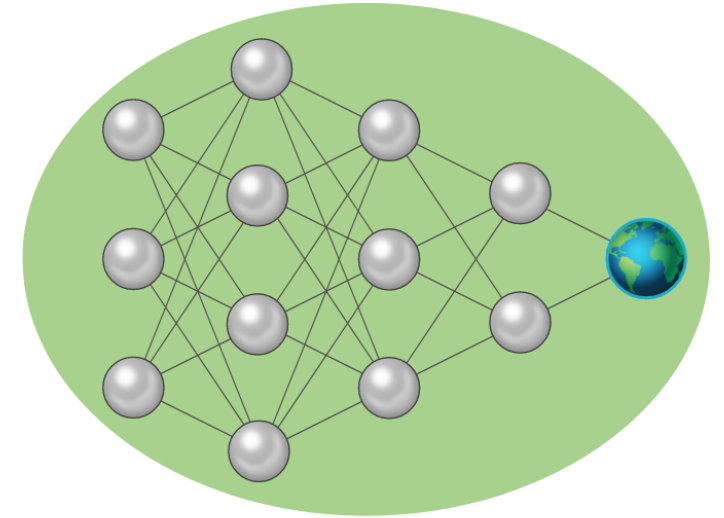
Status at the University of Freiburg

Valerie Lang

University of Freiburg

PEARLS days, 22-24 September 2026

22.09.2026



PEARLS

Precision in Energy-aware AI Research
for Low-carbon Solutions

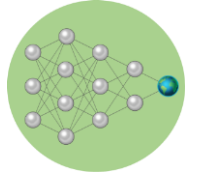
With funding from the:



universität freiburg



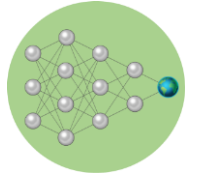
Personnel in Freiburg



- Postdoc: Naman Kumar Bhalla
 - Employed: August 2026 - January 2027 (6 months)
 - Working on setting up the Know-your-footprint webpage and calculator again
- Postdoc: Komal Taukeer
 - Employed: As soon as visa is approved → Hopefully from Oct/Nov 2026 for 2 years
 - Working on the carbon calculator, the uncertainty estimate of machine learning algorithms and the implementation and tests in ATLAS and elsewhere
- Project lead: Myself
 - Currently still employed in ATLAS – from November employed directly on PEARLS
 - Working on the overall organisation, and hopefully later also together with Komal on the actual research
- Still need to see whether the funding allows for more people
 - Also thinking about possible student projects

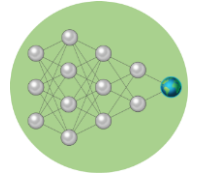


PEARLS Webpage and e-mails



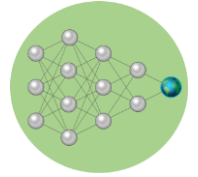
- First webpage available: <https://pearls.erumdatahub.de>
 - Hosted through ErUM-Data Hub, Aachen
 - ErUM = Erforschung von Universum und Materie → Our funding line at the Federal Ministry for research, technology and space (BMFTR)
 - New PEARLS members still need to be added: <https://pearls.erumdatahub.de/our-story/>
 - Please send me a picture of you to upload on the webpage
 - Also trace any PEARLS-related publications on the webpage → Send me an e-mail with links to your publication and/or conference presentations once publically available
- E-Mail lists set up through RWTH Aachen (Hosting institute for ErUM-Data Hub)
 - pearls-info@lists.rwth-aachen.de → Reaches PEARLS funding applicants – for questions regarding PEARLS from the outside
 - pearls-desy@lists.rwth-aachen.de → Contact Pardis Niknejadi, if you would like to be added
 - pearls-unifr@lists.rwth-aachen.de → Contact myself, if you would like to be added
 - pearls@lists.rwth-aachen.de → Combines both mailing lists above

Know-your-footprint webpage & calculator



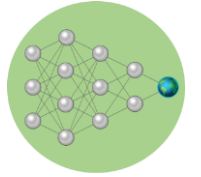
- Original Know-your-footprint (Kyf) calculator
 - Hosted with CERN limesurvey → But support for limesurvey at CERN was deprecated
 - Newer tools do not have same functionality and capability of limesurvey
- Funding for own Kyf webpage through PEARLS
 - Decided on hosting independently of DESY and University of Freiburg
 - More information on the status here: See Naman's talk later today
- Plan
 - 1) Get Kyf calculator as published previously up and running again
 - 2) Update Kyf calculator to version 2.0 to update CERN footprint and include the Belle II experiment

Short-Term-Association for ATLAS

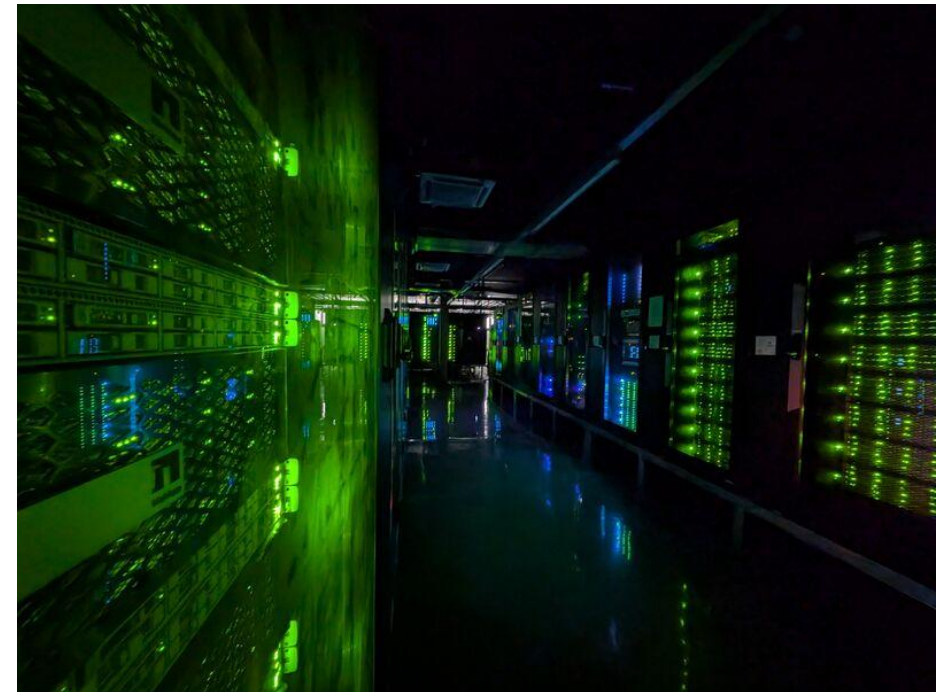


- Somewhat complicated ATLAS membership under PEARLS in Freiburg
 - Standard ATLAS authorship → requires 50% of research time work dedicated to ATLAS
 - Still under discussion whether this is possible
 - But CERN User status with primary experiment: ATLAS approved, i.e. access to ATLAS internal information should be possible
 - Alternative: Short-Term-Association (STA) for ATLAS authorship
 - Proposed project: Measurement of luminosity via track-counting at the HL-LHC with the ATLAS detector → See dedicated talk for the proposal content
 - Currently still under review/discussion in ATLAS → Needs to be approved by the ATLAS Executive Board (EB) → Next meeting: 2 October 2026
 - Would imply authorship as exceptional author only for publications that we directly worked on → Fine from my side

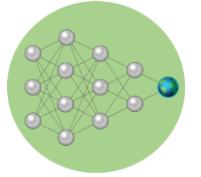
Computing access



- For ATLAS-related project parts:
 - Access to ATLAS infrastructure: World-wide LHC Computing Grid (WLCG), ATLAS internal documentation (twiki pages, CDS, gitlab, etc.) hopefully possible
 - Access to CERN infrastructure as CERN user possible: e-mail, own gitlab, CERNbox, etc.
- For non-ATLAS-related project parts:
 - Computing project at bwForCluster NEMO2 registered: <https://www.bwhpc.de/cluster.php>
 - Cluster dedicated to research in Neuroscience, Elementary Particle Physics, Microsystems Engineering
 - Available free of charge for members of universities in Baden-Württemberg
 - Funded by DFG and Ministry of Science, Research and the Arts of Baden-Württemberg
 - Currently waiting for confirmation about the registration

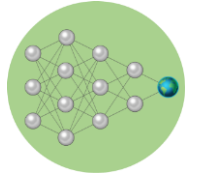


Extension: PEARLS-CRAFT



- Hop-On Fellowship Funding from the Federal Ministry of Research, Technology and Space (BMFTR)
 - Was only announced to project leads of existing ErUM projects
 - Allows project extension with a fellow, originating from the US, and having been affiliated with the US in recent years → Our candidate: Dr. Rachel Rosten
 - Maximum duration → Until project end, i.e. applied for Dec 2026 until Oct 2028 → 23 months
 - Passed the first round of evaluation & handed in full proposal for the second round
 - Decision hopefully in about 8 weeks → Will be a tight start in Dec if successful
- Topic: PEARLS-CRAFT = PEARLS - Configuration Research for AI Footprint Tuning
 - For more details see talk from Rachel Rosten on Thursday

Conclusion



- Personnel
 - Hiring process required significant time & is still ongoing → Hopefully converging soon
- PEARLS webpage and e-mail lists
 - For PEARLS members: Please send pictures for webpage to me
 - For everyone: Please send emails to Pardis or myself if you want to be added to our mailing lists
- Know-your-footprint webpage
 - Work ongoing → See dedicated talk by Naman
- Short-Term-Association (STA) for ATLAS
 - Relevant for Komal and myself (and any further members of PEARLS in Freiburg) → Discussions still ongoing
- Computing access
 - ATLAS-related parts → Through ATLAS: CERN User status and ATLAS STA
 - Non-ATLAS parts → Computing project at NEMO2 registered → Setup in process
- Extension: PEARLS-CRAFT
 - Full proposal submitted for second evaluation round → Decision expected in ~8 weeks
 - See dedicated talk by Rachel