



14 March 2024

young High Energy Physicist association

Annual Meeting 2024
DPG Spring conference, Karlsruhe/Gießen

Michael Lupberger, Ruth Jacobs, Meike Küßner, Leonel Morejon, Felipe Peña, Srijan Sehgal, Dima El Khechen, Farah Afzal

Young High Energy Physicist Association



- Representing early career scientists (everybody w/o permanent contract)
Phd students, Postdocs, Junior Research-Group Leaders, etc.
 - Founded in 2015, currently >~300 members
- Sections → Related to committees
 - Particle physics → [KET](#)
 - Astroparticle physics → [KAT](#)
 - Physics of Hadrons and Nucleons → [KHuK](#)
 - Accelerator physics → [KfB](#)
- yHEP with one ex-officio member in KET, KAT, KHuK, (KfB now upcoming)
- [Charter](#)

- Goals

- Assessing and improving situation of non-permanent scientists
- Shaping the future of physics
- Improvement of environmental sustainability in science
- Networking

Contact & Info:

yhep-info@desy.de

[Webpage](#) [LinkedIn](#)

Become a member?

Sign-up to the mailing list

yHEP Management Board



- Elected by members every year in November/December
 - 2 representatives per section

Particle Physics



Michael
Lupberger

Postdoc
Uni Bonn

Astroparticle Physics



Srijan Sehgal

PhD student
Uni Wuppertal

Hadrons & Nuclei



Farah Afzal

Chair

Postdoc
Uni Bonn

Accelerator Physics



Felipe Peña

PhD student
Uni Hamburg/
DESY



Ruth Jacobs

Postdoc
DESY



Leonel
Morejon

Postdoc
Uni Wuppertal



Meike Küßner
Dep. Chair

Postdoc
Uni Bochum



Dima El
Khechen

Postdoc at KIT

Objectives



Short term

- Transparency
 - Compile statistics
 - Perform surveys
 - Gather opinions
 - Etc.
- Representation
 - Involvement of young scientists into decisions
 - Increase responsibilities
 - Realizing own ideas
 - Etc.

Structural approaches

- Working conditions
 - Payment
 - Contract duration
 - Workload balance
 - Etc.
- Environmental conditions
 - Sustainable research
 - Travel culture
 - Etc.

Work of yHEP in the past year



- Section reports
 - KET
 - KAT
 - KHuK
 - KfB
- Relation to European representations
 - ECFA-ECR, NuPECC
- General yHEP activities in the past year
 - Working situation of early career researchers: CERN, BMBF
 - Involvement in organization committees
 - Recognition of teaching
 - Environmental sustainability in Science
 - yHEP appearance online / on social media
 - Networking and events

Work triggered by/Based on:

- Requests from KET/ECFA and/or the corresponding other committees: KAT, KHuK, KfB + European counterparts
- Providing young scientists' view in the committee work
- Our own agenda

KET Report



<https://www.ketweb.de>

- KET = Committee for elementary particle physics
 - Representation of the German particle physicists, working at more than 20 universities, at CERN, at DESY, 2 Max-Planck institutes and non-European research centres
 - Participation of yHEP representatives in ~monthly KET meetings
 - Elections this year! Information on KET and elections via dhep&yHEP mailings list in May
 - Eligible for election & to vote: Community members with PhD employed at CERN or Ger. inst.
- On European level: European Committee for Future Accelerators (ECFA)
 - German representatives in [Early-Career Researcher Panel](#) (ECR) appointed by yHEP
 - Regular interaction between yHEP-KET and German ECFA-ECR
- yHEP-KET activities of the last year
 - Participation in *Strategy discussions* with BMBF on new funding periods → Notifications (✓?)
 - First discussions on long-term positions in HEP within KET with BMBF
 - Involvement in evaluation of the ErUM funding programme
 - Co-organization of this DPG conference (extra slides), workshops (extra slide)
 - FC@CERN Event (extra slide)
 - CERN70 (extra slide)

New yHEP
representative in
KET: Ruth Jacobs



KAT report



- KAT Strategy Meeting: Dec 2023
 - Good support of yHEP (Earlier funding decisions, recognition of teaching, sustainability)
- Regular meetings ~4 times per year (Members meeting tomorrow)
- Other topics:
 - DZA activities ramping up (site chosen: Lusatia)
 - Ongoing seismic studies of the Lusatia granite block
 - ErUM-Data:
 - Organizes several trainings on Deep Learning ([Program 2024](#))
 - New Funding application cycle, end of 2024
 - APPEC: New midterm [roadmap](#) update, ACME funded
 - Einstein Telescope
 - Site selection still under review, latest discussion [Maastricht, 23-25/01/2023](#)
 - Noise studies (Seismic & Newtonian) ongoing
 - No change in BMBF allocation for the funding period 2023-26 upcoming
 - New strategy paper being prepared with RdS

- yHEP representative is an ex-officio member of KHuK
- Regular KHuK committee meetings (4 per year)
- New brochure for KHuK in final stage
 - yHEP wrote two chapters (Young researchers in academia & industry; sustainability in science)
- Since Dec. 2023: Newly elected chair and co-chair of KHuK
 - **Michael Block (Uni Mainz, GSI), Anton Andronic (Uni Münster)**
- Potential changes in the KHuK-Satzung regarding voting
 - Discussion on whether or not PhD students should be allowed to vote
 - Our recommendation: Keep PhD students in the list of KHuK voters according to survey results:
 - 80% want to cast their vote directly in the KHuK elections
 - Request: Candidates should make short statements
- Next KHuK annual meeting: 5th/6th December 2024 in Bad Honnef
 - Joint meeting planned with NuPECC 4th December in Bad Honnef
 - Translation of [NuPECC brochure](#) “Nuclear Physics in Everyday Life” to German
- KHuK also involved in CERN70, ErUM funding programme 2025-2028



KfB report



- KfB = Komitee für Beschleunigerphysik
- General assembly of the KfB members was held on the 31st of January 2024
- We joined the regular meeting on the 1st of March and we will join them on a regular basis
- A strategy brochure 2035 is in preparation and a workshop will follow to discuss the status
- Important dates:
 - Strategy meeting with the BMBF on the funding period 2025-2028 ErUM-Pro “Matter”
 - Tuesday, March 26, 2024

Introduction to ECFA-ECR

ECFA

European Committee for Future Accelerators



- On European level: European Committee for Future Accelerators (ECFA)
 - [Early-Career Researcher Panel](#) (ECR) introduced in July 2020
 - yHEP-KET nominates members from Germany & DESY (3+1 representatives)
 - Currently looking for one more representative for Germany, starting in June 2024



- Regular meetings (~3/year targeted) between yHEP-KET and German ECFA-ECR representatives to exchange news and coordinate where needed
- As a panel member:
 - Regular meetings (~3+1/year) between ECFA-ECR members
 - Participation in working groups to discuss topics of interest (e.g. diversity in physics programme or career prospects, etc)

Previous members:

Laura Moreno (Uni Muenster) Younes Otariid (DESY)
Jeanette Lorenz (LMU) Alexander Mann (LMU)
Hendrik Jansen (DESY)

ECFA-ECR report

ECFA

European Committee for Future Accelerators



- about the work of the ECFA-ECR panel
 - annual reports of the ECFA-ECR panel
 - 2023 version in preparation
 - 2020-2022 report can be found at [arXiv:2212.11238](https://arxiv.org/abs/2212.11238)
 - organization inside topical working groups
 - career prospects and diversity in physics WG
 - survey conducted and analysed, soon to be published on arxiv
 - future colliders WG
 - organized [ECR workshop](#) at CERN last year, results to be published soon
 - triggering further national events on future colliders started by ECRs
 - SW+ML for instrumentation WG
 - preparation of survey for gathering input on needs from the community
 - regular updates via [ECFA newsletter](#), via webpage or via mailing list
 - please sign up for our mailing list: ecfa-ecr-announcements@cern.ch
 - or contact your German representatives!

yHEP interaction with NuPECC



- yHEP wrote a letter to chair of NuPECC, the Nuclear Physics European Collaboration Committee (<http://www.nupecc.org>) in 2022
 - proposed to also include representatives from young researchers in their committee
→ positively received
- yHEP submitted in 2022 [contribution](#) for NuPECC LRP 2024:
 - 10 working groups with >200 co-authors, 27 steering committee members
 - 250 page draft almost complete, to be released soon
 - Received invitation to be part of thematic working group (Nuclear Science - People and Society) to help draft recommendations
 - A. Thiel involved in working group since 2023 and helped draft recommendation to e.g. include early career researchers in the NuPECC committee
 - Latest news Feb. 2024: Early career researchers will be included in NuPECC committee (on-going effort by NUPECC leaders) and is no longer part of the draft recommendation
- Town Meeting for LRP will take place in Bucharest on April 15 - 17, 2024
 - All relevant information is available under <https://indico.ph.tum.de/event/7593/>
 - NuPECC offers to cover the local expenses for a few Early Career Researchers!

Potential reform of the WissZeitVG

- Act on Fixed-Term Employment Contracts in Academia (WissZeitVG)
 - [Original proposal for reform](#) published on 17.03.2023 → Huge objections from different sides
 - [Statement by yHEP](#) published on our [webpage](#) on 26.05.2023
 - [Possibility for endorsement](#) shared on 16.06.2023
 - In parallel: Updated BMBF proposal: [Expert draft \(Referenten-Entwurf\)](#) on 06.06.2023
 - [Collection of various statements](#) on BMBF proposal (incl. yHEP) on webpage of Network for Decent Labour in Academia (Netzwerk für gute Arbeit in der Wissenschaft - NGAWiss)
 - Also interesting: [NGAWiss argumentation help](#)
 - Suggestion by NGAWiss, supported by yHEP: Contact your local MP! - See [instructions](#)
 - In case of questions, feel free to contact us!
 - Interesting study by the Scientific/Legal Advisory Body (Wissenschaftlicher Dienst) of the German Parliament (Bundestag) investigating the possibility of a maximum quota for universities for non-permanent contacts ([in German](#))

Environmental sustainability in science

- yHEP campaign: “**Know your footprint**”
 - Idea: Calculate your private and professional CO₂ footprint to identify the biggest contributors
 - Core team: Naman Bhalla, Simran Gurdasani, Pardis Niknejadi, Valerie Lang
 - Work ongoing in 4 categories of the professional footprint:
 - Experiment/Collaboration, Institute/Research centre, Computing, Travel

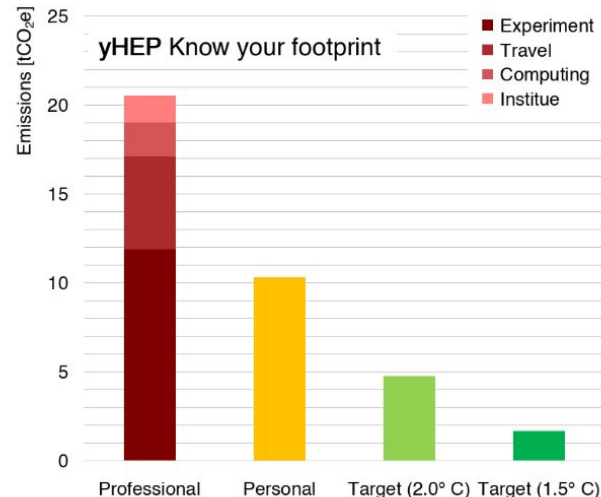
Paper



Paper is published: <https://arxiv.org/abs/2403.03308>

Category	Emissions [tCO ₂ e]
Large LHC experiment	11.91
University (German electricity mix)	1.54
Computing (medium)	1.91
Travel (2xT, 1xF(E), 1xF(C))	5.20
Total	20.56

Table 10: Professional CO₂ footprint of a benchmark doctoral researcher, working on one of the large LHC experiments, employed by a German university, with medium computing usage level and two intra-Germany travels by train (T), one intra-Europe flight travel (F(E)) and one cross-continental flight travel (F(C)) per year.



Calculator



How large is your carbon footprint?

→ Know-your-footprint calculator

<https://limesurvey.web.cern.ch/863499?lang=en>

<https://desy-yhep.desy.de/sustainability/>

Environmental sustainability in science



- Continued lobbying by yHEP for more environmental sustainability in science
 - At annual meetings in Bad Honnef, at the strategy discussion with BMBF, etc.
- yHEP involved in organization of workshops:
 - Sustainability in the Digital Transformation of Basic Research on Universe and Matter
 - [Workshop 30.05.-02.06.2023 in Meinerzhagen](#) (DIGUM with support from ErUM-Data-Hub)
 - Publication released on arXiv on 2 November 2023: [Resource-aware Research on Universe and Matter: Call-to-Action in Digital Transformation](#)
 - [Sustainable HEP Workshop 2024](#) from 10th - 12th June 2024, 14:00 - 17:30 CET

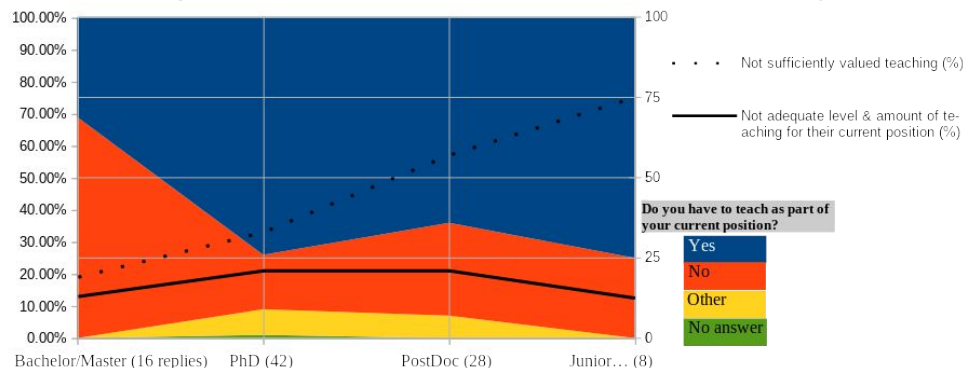
Recognition of teaching

- Outcome of yHEP survey: Recognition of teaching seen as problematic
 - Dissatisfaction of young researchers with teaching situation observed → in particular for junior research group leaders, etc.
 - From the survey - how could the value of teaching be improved?

46 replies with suggestions

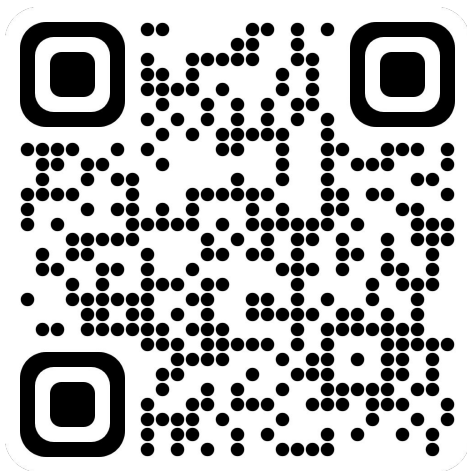
- Recognition of teaching responsibilities for applications
- Proper training in teaching
- Honest time allocation and inclusion in job profile
- Discussion at [2022 annual KET meeting](#) ([yHEP points](#), [additional points](#) - not discussed for organizational reasons)
- yHEP started gathering further input on regulations regarding teaching at German universities: FILL THE [SURVEY](#):

- Training for teaching! → Active encouragement needed or mandatory
- For PhDs, teaching as part of the examination requirements needed or paid separately (particularly relevant for people on stipends)



Problems with Residence Permits

- Triggered first during yHEP annual meeting (DPG Dresden 2023)
 - Increasing problems in obtaining / extending the residence permits
 - Several members have shared personal anecdotes with similar issues since last two years
 - Community eager to write a combined letter directly from KET, KAT, KfB, KhuK to BMBF
 - Survey prepared to assess the scope of the issue and looking for possible solutions
 - [Survey](#)
 - Preparing a web resource with information to advice newcomers and existing members



Link for the Survey

yHEP involvement in past/upcoming events



- Workshop of ErUM-data-hub / DIG-UM
- DPG conference
- Future Collider event
- CERN70

Workshop of ErUM-data-hub / DIG-UM



Sustainability in the Digital Transformation of Basic Physics Research

- Part of the Program Committee (Pardis, Michael), requested by M. Erdmann
- 30.05. - 03.06.2023 Landhaus Nordhelle, Meinerzhagen, 37 participants
- Goal: Develop strategic concepts for sustainability in the digital transformation of basic research on universe & matter - from the funding applications on.
- Concept: Keynote speakers → working sessions, 12 subjects related to
Hardware & Research Data (Wed.),
Algorithms & Mindset (Thursday)
- <https://indico.desy.de/event/37480/>
- Outcome: Paper published
<https://arxiv.org/pdf/2311.01169.pdf>

Resource-aware Research on Universe and Matter: Call-to-Action in Digital Transformation

Ben Bruers¹, Marilyn Cruces², Markus Demleitner³, Guenter Dücke⁴,
Michael Düren⁵, Niclas Eich⁶, Torsten Enflin⁷, Johannes Erdmann⁶,
Martin Erdmann^{6*}, Peter Fackeldey⁶, Christian Felder⁸, Benjamin Fischer⁶,
Stefan Fröse⁹, Stefan Funk¹⁰, Martin Gasthuber¹, Andrew Grimshaw¹¹,
Daniela Hadasch^{9,12}, Moritz Hannemann⁸, Alexander Kappes²,
Raphael Kleinemühl¹³, Oleksiy M. Kozlov¹⁴, Thomas Kuhr⁴,
Michael Lupberger¹⁵, Simon Neuhaus¹³, Pardis Niknejadi¹, Judith Reindl¹⁶,
Daniel Schindler¹⁷, Astrid Schneidewind⁸, Frank Schreiber¹⁸,
Markus Schumacher¹⁹, Kilian Schwarz¹, Achim Streit²⁰, R. Florian von Cube²⁰,
Rodney Walker⁴, Cyrus Walther⁹, Sebastian Wozniowski¹⁷, Kai Zhou²¹

DPG Karlsruhe/Gießen organisation



- Part of the Program Committee for particle physics in Karlsruhe (Michael) and hadron physics in Gießen (Farah)
- General organisation: Invited Speakers, Parallel session
- this->yHEP annual meeting
- Industry session jointly organised with jDPG on Tuesday evening with beer and pretzels and invited speakers:
≈220 participants in Karlsruhe and ≈60 participants in Gießen :)

Future collider



- Future collider → will be operated by the younger generation
 - Ideas of the young generation important for the success of any future project
 - yHEP started gathering input on: “What Future Collider would excite you?” or “*What criteria would a Future Collider have to fulfill such that you would be enthusiastic about it?*”
 - Collection of input still ongoing → a few important points already
 - Physics case important; sustainability essential for political and societal acceptance
 - Timescale: Operations starting before current ECRs retire!
 - Either build something with existing technology soon (~10 years),
 - Or when game-changing technology at hand (plasma acceleration, room-temperature superconductors, muon collider, etc.)
 - Personal prospects: Needs to allow for a career (towards a permanent position)
- Put your opinion into this [document](#) (until 8th of March!)

Future collider



- Upcoming event: Future Collider at CERN
 - Mark in your calendar: Bonn, Wednesday, 22.05. - Friday 24.05.2024 (Pentecost break)
 - Purpose: Information and discussion on a future collider AT CERN and German contribution
 - Highly relevant event for the next decade. Start of discussion to German input to UESPP
 - Input from young researchers explicitly requested
 - Wednesday afternoon (from ~13:30) dedicated to preparing young researchers (yHEP orga)
 - Travel support by Terascale Allianz
 - Michael is in the organization committee
 - Planning is still in an early phase
- More information: Particle Physics DPG Division meeting
- Several follow-up events within the next two years

- 70th anniversary of CERN
 - Events at CERN
 - Central German national event in Berlin 02. - 04. September 2024
 - National event week in different places 16. - 22. September 2024, Netzwerk Teilchenwelt
 - yHEP organized (hybrid) event foreseen at DESY
 - First idea: Podium discussion on the next 70 years of CERN, Special yHEP edition of Science Cafe Outreach event (e.g. Science Slam on future of particle physics)
 - In very early phase, bring in ideas, get in touch!

More official information to come! See Particle Physics DPG Division meeting

yHEP appearance online / on social media



- New yHEP web page and logo design
 - Launched in Dec 2022
- Idea for new [webpage](#)
 - Better represent the interests of yHEP and its members
 - Community and Sustainability are now two central topics
 - Feel free to send us feedback
- Follow us on [LinkedIn](#):



Ongoing work and plans for this year



- Further analysis and publication of yHEP survey results on the situation of young researchers in Germany
- Sustainability campaign: Know your footprint!
- Panel discussion on the topic of mental health
- Driving further the discussion on better recognition of teaching

Other ideas?

Open discussion



- Anything you would like to bring up?
 - Comments, feedback, suggestions, ideas, etc.

Backup



- Other topics still in the back of our heads
- More background from past meetings

DPG Karlsruhe organisation

Part of the Program Committee for particle physics (Michael)

- General organisation: Parallel session, invited speakers, Symposium Future, balance
⇒ Feedback during section meeting (Thursday evening)/now welcome
- this->yHEP annual meeting
- Industry session on Tuesday evening with beer and pretzels (and invited speakers) ≈ 220 participants :)

DPG 2024: Zeitplan

	Montag 04.03.24	Dienstag 05.03.24	Mittwoch 06.03.24	Donnerstag 07.03.24	Freitag 08.03.24
9:00	jDPG: Tutorien	Plenar (1) Haupt (2)	Haupt (3)	Haupt (3)	Parallel 5
10:00	Kaffee	Kaffee	Kaffee	Kaffee	Kaffee
11:00	jDPG: Tutorien	Haupt (3)	Festvortrag Schopper	Eingeladen (6)	Haupt (2)
12:00	Registrierung	Mittag	Mittag	Mittag	Plenar (1)
13:00	Eröffnung				Abschluss Mittag
14:00	Plenar (1 Vortrag)	Eingeladen (6)	Symposium Future	Eingeladen (6)	
15:00	Kaffee	Kaffee	Kaffee	Kaffee	
16:00	Parallel 1	Parallel 2	Parallel 3	Parallel 4	
17:00					
18:00			Theater play		
19:00	Begrüßungsabend		yHEP	Fachverband T	
20:00		Abendvortrag Industriesession jDPG/yHEP			
21:00					
	Anzahl Vorträge:	3 Plenar 13 Haupt 3x6=18 eingeladen (5x9x25)+(6x25)			>900 parallel

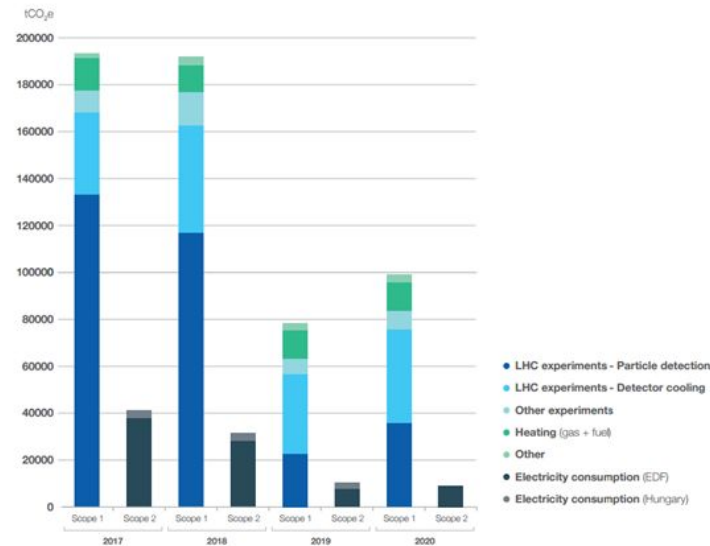
yHEP involvement with DPG



- Representative from yHEP MB in DPG programme committee
 - For DPG 2022 Heidelberg: Valerie Lang (KET)
 - Since DPG 2023 Dresden: Michael Lupberger (KET)
 - Since DÜG 2024 Giessen: Farah Afzal (KHuK)
- Industry session
 - Jointly organized with jDPG and Working group Industry & Economy (AIW)
 - DPG 2023 Dresden: 3 speakers, ≈300 participants, Beer & Pretzels (thanks to FV T)
 - For DPG 2024 Karlsruhe: again organised by Michael Lupberger (KET)
 - For DPG 2024 Giessen (HK): organised by Farah Afzal (KHuK)
- yHEP annual meeting(s)
 - Taking place as hybrid meeting at DPG spring conferences
 - Now organized as part of the programme of the respective section, e.g. Particle Physics
 - Not an official DPG event, but a contribution to the conference by abstract submission

Environmental sustainability in science

- Continued lobbying by yHEP for more environmental sustainability in science
 - At annual meetings in Bad Honnef, at the strategy discussion with BMBF, etc.
- Support of other workshops/forums in 2022
 - [Sustainable HEP Workshop - 2nd edition](#) in Sept
 - [Town hall: CERN Year of Environmental Awareness: outcome and future perspectives](#) in Sep
 - [CERN and the Environment](#) in Oct
 - [ATLAS sustainability](#) and [DESY sustainability](#) forums
- Support of [initiative for HECAP](#)
 - High energy, cosmology and astroparticle physics
 - Spin-off from first [Sustainable HEP Workshop](#), 2021
- yHEP campaign: “Know your footprint”
 - Planning still ongoing - if interested to help, feel free to get in contact



Source: [Vol 2: CERN Environment Report](#)

Workshop of ErUM-data-hub / DIG-UM

Sustainability in the Digital Transformation of Basic Physics Research

- Part of the Program Committee (Pardis, Michael), requested by M. Erdmann
- 30.05. - 03.06.2023 Landhaus Nordhelle, Meinerzhagen
- Goal: Develop strategic concepts for sustainability in the digital transformation of basic research on universe & matter - from the funding applications on.
- Concept: Keynote speakers → working sessions, 12 subjects related to Hardware & Research Data (Wed.), Algorithms & Mindset (Thursday)
- Registration is open
- <https://indico.desy.de/event/37480/>



Working Sessions Sustainability in ErUM-Data

Wednesday: Hardware & Research Data

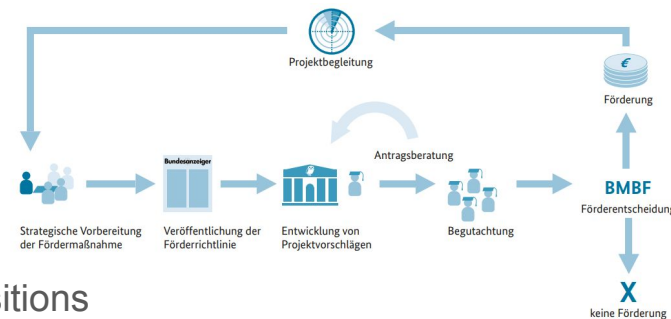
1 Footprint: Construct a comprehensive mental picture of the footprint of all ErUM-Data related activities. Where does quantitative knowledge exist or is lacking? What resource needs do you see, what opportunities for savings? What innovations are needed to keep sustainable use of resources in balance with demands? To what extent does continuing education play a role? How feedback can reduce a footprint through ML methods.

2 [Dynamic] Energy Supply: Where to locate & operate computing systems incl. storage. How could a dynamic energy supply look like, which covers the needs of ErUM-Data related activities with renewable energies to a large extent? What information flows would be required for this? What mechanisms and what dynamics are required on a supra-regional basis to create compensation possibilities for windless/sunless periods?

3 Hardware Lifetime: How could prolonged/optimized usage of hardware resources in view of technology

Involvement in discussion on BMBF funding

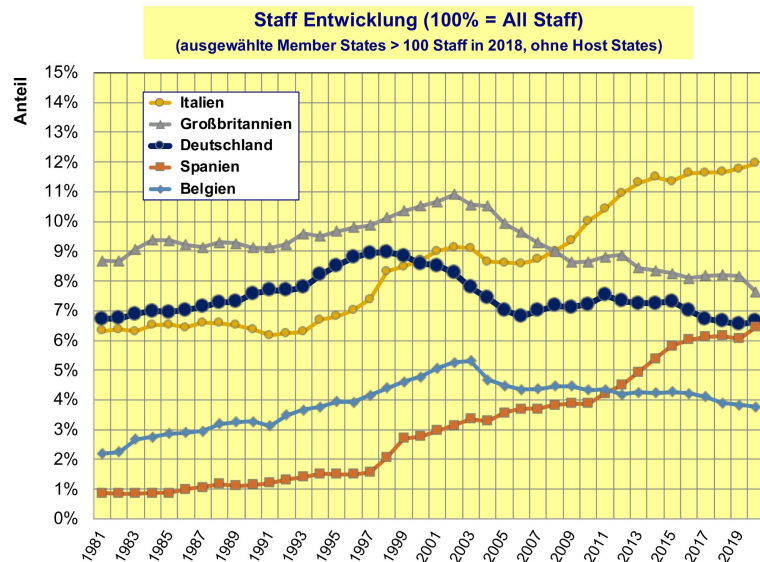
- Recap: Funding notifications from BMBF tended to arrive late
 - Particularly bad situation for the funding period 2021-2024 (at/after end of funding period)
 - Protest letter from yHEP sent to the BMBF in November 2021, pointing out the implications for non-permanent researchers → Coordinated with KET and KHuK, also informed KAT
 - Reply from BMBF received → discussions via DESY-PT how to improve next time
 - Joint call from yHEP, KET & KHuK: Move funding process 3 months earlier, so that notifications arrive ≥ 3 months before start of new funding period
- Next funding period 2024-2027
 - First step: Prisma-Strategy discussion → Took place beginning of February in Hamburg (3 months earlier)
 - Topics addressed by yHEP at the meeting:
 - Future of our research fields in Europe
 - Importance of adequate PhD payment with 2/3 positions
 - Sustainability considerations in research and funding
 - Better daycare coverage for business trips, etc



Source: [BMBF Aktionsplan ErUM-Pro](#)

Situation of German employment at CERN

- Issue: Germans significantly under-represented among CERN staff
 - Mismatch between Germany's CERN budget contribution (~21) and German CERN staff (7 %)
 - CERN-Germany working group (WG) founded to address the problem
- Contact of BMBF with KET (incl. yHEP)
- Mini-survey performed by yHEP
 - Interviews with 3 engineers/hardware-related researchers to identify potential issues
 - Presentation at CERN-Germany WG in Sep 2022
 - Positively received by BMBF
 - Hopefully systemic issues can be addressed



Source: [DAC webpage](#)