

DFG NFDI Letter of Intent

PAHN-PaN Proposal Planning
Meeting
DESY Hamburg

Kilian Schwarz, GSI, August 22, 2019

idea of the funding

- dealing with data in a standardised way
- interdisciplinary meta standards
- interoperable measures for data management and corresponding services
- sustainability
- networking
- consortia need to provide access to their research data and guarantee their usage in a sustainable way by providing a fitting data management concept

who can apply

- consortia consisting of
 - universities
 - research centres
 - academies/colleges
 - ...
 - institution needs to be non-profit making, needs to have its seat in Germany or needs to have a German funding body

funding criteria

- professional relevance
- quality of measures
- excess value of meta data standards and corresponding services
- including of relevant topical partners
- efficiency and sustainability
- international connectivity
- fitting model for data access and usage following the FAIR principles
- fitting operational model

funding volume

- up to 30 consortia will be funded
- 70 million € per year for 5 years for projects
- 1.6-3.9 million € per year for individual consortia
- 22% „Programmpauschale“ excluded

time line

- March 29, 2019
 - deadline for extended abstracts
- May 13-14, 2019
 - NFDI conference
- June 6, 2019
 - public announcement
- July 4, 2019
 - deadline for binding and non binding Letters of Intent
 - binding PAHN-PaN Letter of Intent in time submitted

NFDI conference

- application only when ready for it
- NFDI directorate in Karlsruhe
- 57 consortia took part, but only 30 will be funded
- submit date of applications October 2019
 - 5-8 consortia have been expected
 - now a lot more are expected in first round
- more criteria
 - consortia need to accept more partners later on
 - community needs have to be presented well
 - requirements of data providers and data consumers
 - user base must be well known
 - size of consortium
 - consortium must not be too specialised but also not too heterogeneous
- potential partnerships created with
 - Astronomy, NFDI4HPC, RSE-4-NFDI, MAT4NFDI

Letter of Intent

- applicant institution: DESY
- spokesperson: Thomas Schörner
- co-applicant institutions: 20
 - (Freiburg, Wuppertal, FIAS, Erlangen-Nürnberg, Göttingen, GSI, Mainz, KIT, LMU, Bonn, Heidelberg, Aachen, Darmstadt, Dortmund, Bielefeld, Hamburg, Köln, Regensburg, Münster, TUM)
- participant institutions: 15
 - (CERN, DPG, Jena, HIJ, HZDR, Frankfurt, Würzburg, Gießen, MPI München, MPI Heidelberg, Bochum, Braunschweig, Dresden, TIB, Siegen)
- research area:
 - primary: Nuclear and Elementary Particle Physics, Quantum Mechanics, Relativity, Fields
 - secondary: Astrophysics & Astronomy, Mathematics, Computer Science

Letter of Intent – infrastructure, data sources

- > 3000 scientists with PhD
- large international collaborations at large research facilities
- int. data sources: LHC/HL-LHC, Belle II, CTA, IceCube, KM3NET, Pierre Auger
- nat. data sources: KATRIN, FAIR, MAMI, MESA, S-DALINAC
- additional data source: theoretical Physics
- infrastructures: WLCG, Helmholtz centres and NAFs, universities, Max-Planck institutes, opportunistic resources

Letter of Intent – Task Summary

- strategies to harvest, manage, analyse data, publish results, provide open access
- interdisciplinary cloud-enabled data workflows for heterogenous and distributed environment following FAIR principles
- establishment of relevant services
- life cycle of scientific data
- development of sustainable and open source software & analysis solutions
- structures to exploit synergies within consortium and with other communities
- training and education and documentation
- bring everything in international context

Letter of Intent – resulting task areas

- task areas
 - 1: Developing Workflows and tools for data management
 - 2: FAIR data management infrastructures and open data
 - 3: Data analysis procedures and services
 - 4: Online analysis and data reduction
- cross-cutting topics:
 - A: Synergies, knowledge transfer and collaboration
 - B: Services
 - C: Training, education and outreach

Letter of Intent - interfaces

- interfaces to other proposed NFDI consortia
 - ASTRO-NFDI, DAPHNE, PAHN-PaN have already a link via ErUM-Data
 - Close collaboration with ASTRO-NFDI: big data management, data reduction, open data. Astroparticle physics is participating in both
 - field of mathematics (MaRDI): common concepts of data integration and meta data annotation, viable analysis methods using mathematician's expertise and PAHN-PaN's wealth in data
 - work with cross section working group „Software & Online applications, Software curation“
 - DPG: cross cutting topics and synergy effects among NFDI Physics consortia

Letter of Intent – cross cutting topics

- Cross Cutting Topics:
 - A) Synergies
 - ML training on data sets in order to develop new algorithms
 - big data tools (dCache, XRootD, ...)
 - software (standards, publication, sustainability, career paths for developers)
 - training & education
 - usage of HPC centres
 - B) Services
 - services from task areas with synergy potential
 - C) Training & Education
 - bundling across all consortium partners and open for other consortia

application

- next step:
 - October 15, 2019
 - deadline for applications of first round
 - still lots of work to be done