

CONNECT

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**DIGITAL
INFRASTRUCTURES**
for **RESEARCH 2017**

DI4R2017: CONNECTING THE BUILDING BLOCKS FOR OPEN SCIENCE

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DI4R 2017: CONNECTING THE BUILDING BLOCKS FOR OPEN SCIENCE

Researchers, developers and service providers are joining Europe's leading e-infrastructures in Brussels for the second edition of the Digital Infrastructures for Research (DI4R) conference. Held this year at the SQUARE meeting centre from 30 November to 1 December, the event is jointly organised by EGI, EUDAT, GÉANT, OpenAIRE, PRACE and RDA Europe. DI4R 2017 builds on the success of the inaugural DI4R event in 2016, a joint booth presence at TNC17 in Linz earlier this year, and an ever-closer working relationship that will benefit research communities.

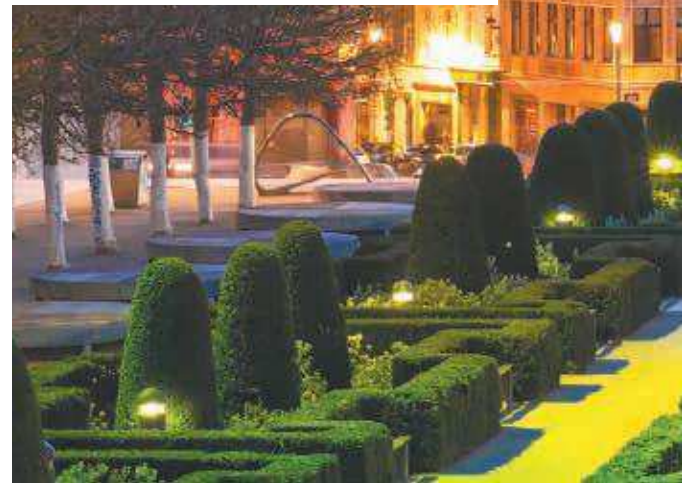
Under the theme of "Connecting the building blocks for Open Science", DI4R 2017 will showcase the policies, processes, best practices, data and services that, leveraging today's initiatives – national, regional, European and international – are the building blocks of the European Open Science Cloud (EOSC) and European Data Infrastructure (EDI).

With a packed programme of 25 sessions, 5 demonstrations, 8 lightning talks and over 40 posters, the conference will not only demonstrate how open science, higher education and innovators can benefit from these building blocks, but will drive open dialogue between user communities and the e-infrastructure partners.

Annabel Grant of GÉANT comments, "The DI4R event is gaining real traction, with significant interest from the research community in how the e-infrastructures can jointly support their needs, and work with them to improve open science and collaboration for all. GÉANT is proud to be one of the major organisers, with DI4R 2017 following on from a successful joint e-infrastructure booth at TNC17 earlier this year."

Who is behind DI4R?

The DI4R Programme Committee (PC) is responsible for defining a balanced



programme based on the event objectives and targets. In addition, the PC is responsible for defining the type of sessions that will make up the programme (e.g. workshops, presentation-lead sessions, posters, demonstrations), defining the content of the Call for Abstracts, reviewing the proposals submitted, making final decisions regarding acceptance of proposals, defining the content of plenary sessions and the list of keynote speakers and defining the event's timetable.

The PC consists of 16 members representing end users and senior members of the organising partners, and this year is chaired by Franciska de Jong of CLARIN ERIC, the European Research Infrastructure for Language Resources and Technology, ensuring the programme is very much user-led.



GÉANT AT DI4R 2017

As well as a joint booth presence, GÉANT will deliver two sessions, three presentations and a lightning talk. Please see the DI4R programme for full details.

Wednesday 29th

Half day AEGIS group meeting

Thursday 30th

Full Sessions:

- AAI for Researchers
- EDI capabilities, architecture and complementarity with EOSC

Presentations:

- Monitoring of Virtual infrastructures using PerfSONAR
- Challenges for Data Loss Prevention at Research Infrastructures

Friday 1st

Presentation:

- Procurement of commercial services for research communities

Lightning talk:

- AEGIS group

DI4R is jointly organised by EGI, EUDAT, GÉANT, OpenAIRE, PRACE and RDA Europe, with the common objective to best support and facilitate science and research across Europe. CONNECT spoke with representatives from the organisers for their expectations.

Natalia Manola, Managing Director, OpenAIRE



What does DI4R mean to you?

DI4R is the perfect place to showcase OpenAIRE's existing services, to reach and connect with all potential stakeholders, and to involve user communities to gather their suggestions and feedback to extend and improve OpenAIRE's services according to their needs. Furthermore, DI4R is a highly valuable occasion to liaise with individuals and projects interested in collaborating with OpenAIRE.

What are your hopes for this year's DI4R?

This second edition of DI4R is an occasion to pursue fruitful collaboration with the other organisations and institutions involved in the conference. In addition to this, as the event brings together all the important actors associated with the EOSC, the hope is that DI4R will strengthen the partnership and help to build an effective environment for European researchers.



How does this event help to support Europe's researchers?

DI4R brings together all the participants of the research life cycle, and it gives the chance to present projects and results and to discuss future perspectives and expectations with peers. The DI4R 2017 revolves around research communities and promotes European digital infrastructure services for researchers. Because of this focus DI4R presents the unique opportunity to connect technology to the people using it and consequently to provide better, user-centred solutions and services based on community input.



"We will join efforts to support the needs of European researchers and international collaborations and EGI is proud of having been one of the main promoters of this new series of events."

Tiziana Ferrari, Technical Director,
EGI Foundation



"The second edition of DI4R will consolidate collaboration between the major European e-infrastructures, highlighting the outcome of work underway, how we jointly support research communities in need of seamless access to network, data and computing resources and how we proactively contribute to the establishment of the European Open Science Cloud (EOSC). DI4R 2017 will also provide a perfect chance for researchers, developers and service providers to help shape the future of Open Science."

Damien Lecarpentier, Project Director,
EUDAT and EUDAT CDI



“We see significant interest from the research community in how e-infrastructures can jointly support their needs and work with them to improve open science and collaboration for all. DI4R is an important event and GÉANT is proud to be one of the major organisers.”

Cathrin Stöver, Chief Collaboration Officer, GÉANT



“Digital infrastructures providing services from basic network, CPU and storage up to those populating the dynamic knowledge integration will determine our ability to extract knowledge from the data floods.”

Peter Wittenburg, Executive Director, RDA Europe

Serge Bogaerts, Managing Director, PRACE



What does DI4R mean to you?

DI4R is an excellent possibility to extend the reach of PRACE to researchers not aware of the possible relevance of HPC for their research, and to further enhance collaboration with partners to improve support to research through a consistent set of services offered. We already work together with all the organising partners in other ways, and the event is an opportunity to deepen that collaboration, as well as expand it to others present.

What are your hopes for this year’s DI4R?

This is the second year for DI4R and the first edition that PRACE supports as an organiser. I hope that this will be the start of a long-term cooperation with the other organising partners.



How does this event help to support Europe’s researchers?

Bringing so many actors together, and allowing them to present their projects and results, will foster links between stakeholders and will hopefully lead to new partnerships and networks that would otherwise be (much) harder to achieve.

As the main HPC provider in Europe, PRACE continues to intensify its connections to the scientific and industrial communities. Collaborations with partners in the ecosystem, via initiatives such as DI4R, help improve these links.

Q&A WITH KEYNOTE SPEAKER DR. KATRIN AMUNTS OF THE HUMAN BRAIN PROJECT

Dr. Amunts leads the sub-project 2 *Human Brain Organization* of the European Flagship Project, *The Human Brain Project (HBP)*, and in 2016 was elected as the *Chair of the Scientific and Infrastructure Board (SIB)* of the HBP.



Why do you think the DI4R events are beneficial for the European research community?

Bringing together researchers from data-intensive fields with representatives of the European e-infrastructures creates an important forum for insightful discussion and new ideas for working together. Very different research communities have made the step to using these

powerful infrastructures, and there is a large methodical overlap between them. While the subject matters might be different, we can definitely learn or at least draw inspiration from each other, when it comes to dealing with enormous data size and ways of leveraging e-infrastructures for it. Embracing digitalization in this way is important to encourage the community-based open science approach in neuroscience that we strive for, and I think we can learn from other fields like astronomy or particle physics who previously experienced this shift.

How does e-infrastructure/ digital infrastructure enhance or support your work?

It is absolutely instrumental for our work in the Human Brain Project (HBP). Understanding the brain through an ICT-infrastructure specifically for neuroscience is at the core of our project. Data size in neuroscience has grown to levels where the use of high-performance computing is inevitable. The brain is an enormously complex system of approximately 86 billion nerve cells, each connected to around 10,000 others. We have a wealth of data on many different levels of this system, that are gathered in different research communities. But to really understand the system as a whole, much more integration of this knowledge and linking of insights would need to happen. For this the HBP develops a new ICT-based research infrastructure that is supported by four of the most powerful supercomputing centers in Europe.

What concrete results do you hope to see after DI4R 2017?

I hope that we will all come back from it with a lot of fresh ideas and insights for our projects and maybe some contacts to consult for best practice examples, or even new partnerships.



AEGIS WORKSHOP: NEED TO KNOW

The AARC Engagement Group for Infrastructures (AEGIS) is running a workshop at DI4R2017 for those that are interested in accessing and sharing digital resources using federated identities. CONNECT spoke with Christos Kanellopoulos of GÉANT, to better understand the role of AEGIS.

What is AEGIS and why is it a relevant topic to discuss during a conference such as DI4R?

AEGIS brings together representatives from research and e-infrastructures, which are implementing authentication and authorisation services that support federated access, to enable research collaboration.

Currently, AEGIS has members from 5 e-infrastructures (EGI, EUDAT, GÉANT, PRACE and XSEDE) and from 2 domain-specific research infrastructures (ELIXIR and DARIAH).

AEGIS is an initiative of the AARC project, could you explain why this initiative was set up and how it will help AARC to achieve its goals?

AARC, the Authentication and Authorisation for Research and Collaboration project, has made the strategic choice to entrust the implementation and the operations of AARC results to existing research infrastructures and e-infrastructures. This choice is based on the consideration that existing infrastructures are better positioned to deploy and operate services and thus to implement the AARC recommendations and best practices in order to guarantee sustainability and support for the scientific communities. For this reason, the AARC project is committed to working with the research infrastructures and e-infrastructures, which will act as the delivery channel between AARC and the user communities they represent.

AEGIS establishes a bi-directional channel between AARC and the infrastructures, to advise each other on the developments and production integration aspects of the AARC results. The group is composed of representatives of e-infrastructures and well-established research infrastructures as well as the AARC work package leaders and will be supported by the AARC outreach and communication activity.

The group will ensure that:

- the AARC results are known to all research infrastructures and e-infrastructures;
- infrastructures and the AARC team can discuss sustainability models, implementation aspects and approaches to use-cases;
- all key parties share the same vision and the same information about the AARC objectives and developments in the trust and identity area – even if they may be in different deployment phases.

What advantages would the e-infrastructures community gain from participating in AEGIS?

The way researchers collaborate within scientific communities can vary significantly from community to community. On the one side of the spectrum there are large, highly structured research communities, while on the other side there can be small fragmented research communities with very loose structures. What all of them commonly share, is the need to access and share resources, which is a crucial aspect for the success of their collaborations.

AARC has delivered a blueprint architecture that champions federated access and defines technical components and policy aspects for research and e-infrastructures to build interoperable AAls. This is a major achievement. However, the implementations of the blueprint is the responsibility of the research and e-infrastructures. AEGIS helps participating infrastructures understand the importance of adopting AARC frameworks, as well as unveiling aspects that may emerge during the deployment phase that may still be unknown.

Who should definitely not miss out and how can they get involved?

Members of research communities and digital infrastructures that are interested in accessing and sharing digital resources using federated identities should attend the AEGIS workshop on the 29th November from 13:00 to 17:00.

This workshop will offer an interactive session where researchers and research infrastructures present their use-cases and, more generally, describe how they do their daily work and which obstacles they face in accessing and sharing resources using federated identities. Some solutions will be presented in light of the benefits they bring to researchers and research infrastructures if adopted, and maturity and service models.

See also:

AARC <https://aarc-project.eu/>

AEGIS <https://aarc-project.eu/communities/aegis/>