

Programme

Clickable Programme

Below you will find the programme overview of both the workshop part and the conference part of the event.

The workshops will take place on 5th & 6th May and the conference part will run on 7th & 8th May.

You will be able to see a brief description of the relevant workshop / session by clicking the session name, and the same goes for the bios of the individual speakers / session chairs as they become available.

Tuesday, 5 May 2015					
08:00 - 09:00	Arrivals				
	WS Track 1	Room: Aleksis	WS Track 2	Room: Tage	WS Track 3
09:00 - 10:30	WS: AAI Session chair: David Simonsen		WS: E-infrastructures for Environmental Research Session chair: Thomas Röblitz		WS: Gala Session chair: Thomas Röblitz
10:30 - 11:00	Coffee Break				
11:00 - 12:30	WS: Accelerators Session chair: Ole Widar Saastad		WS: E-infrastructures for Environmental Research (cont'd) Session chair: Thomas Röblitz		WS: Gala Session chair: Thomas Röblitz
12:30 - 13:30	Lunch				
	WS Track 1	Room: Aleksis	WS Track 2	Room: Tage	WS Track 3 Room: Solveig
13:30 - 15:00	WS: Sensitive Data Session chair: Gard Thomassen		WS: Coding Session chair: Gerd Behrmann		WS: Accounting Session chair: Dejan Vitlacil
15:00 - 15:30	Coffee Break				
	WS Track 1	Room: Aleksis	WS Track 2	Room: Tage	WS Track 3
15:30 - 17:00	WS: Sensitive Data (cont'd) Session chair: Gard Thomassen		WS: Coding (cont'd) Session chair: Gerd Behrmann		WS: Accounting Session chair: Dejan Vitlacil
18:00 - 20:00	NeIC Kayak Tour (max 38 persons) - Hanasaari				

Wednesday, 6 May 2015

	WS Track 1	Room: Aleksis	WS Track 2	Room: Tage	WS Track 3	Room: Solveig
09:00 - 10:30	WS: Security Session chair: Leif Nixon		WS: User Support Session chair: Torben Rasmussen		WS: Competition: Centre Operation Best Practices, and Distributed Computation and Data. Session chair: Ulf Tigerstedt	
10:30 - 11:00	Coffee Break					
11:00 - 12:30	WS: Security (cont'd) Session chair: Leif Nixon		WS: User Support (cont'd) Session chair: Torben Rasmussen		WS: Competition: Centre Operation Best Practices, and Distributed Computation and Data (cont'd) Session chair: Ulf Tigerstedt	
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18:00 - 21:00	Opening Get-Together & Barbeque					

Thursday, 7 May 2015

07:00 - 07:45

NeIC Run

08:00 - 09:00

Registration

Conference

09:00 - 10:30

Opening Session

Session chair: [Mille Millnert](#)

Welcome from Ministry of Education and Culture

Riitta Maijala

Science is global, even though it is supported mostly by national and local funding, via national education efforts. In addition to advancement of science and research, the national innovation system is critical for the sustainable development of the Government Programme stresses the role of science, research and innovation as the foundation of knowledge-based sustainable economic growth and immaterial as well as material welfare. To foster the research system towards better quality, an open operational model is needed. Open science and research can significantly increase the quality of research and innovation systems. By increasing openness in research, we will simultaneously be improving reliable research. Openness also creates new opportunities to participate in scientific advancement, and enables easier access to research results and supports citizen science. The Nordic collaboration within NeIC provides added value to research. Another example of such collaboration is NORDUnet and the area of computer networks, where Nordic collaboration through NORDUnet has enabled the Nordic research and education community to work closely together with the international research community. Open science and research requires not only extensive involvement from the research community, but also national coordination, exploring new ways of working, and developing research environments, researcher services and research infrastructure. We offer a significant and valuable input by taking national efforts in open collaboration one step further within the NeIC.

Welcome from CSC

Kimmo Koski

Kung Fu NeIC

Gudmund Høst

What are the most fruitful avenues for Nordic collaboration on e-Infrastructure and how can successful outcomes be achieved? I will share my understanding of the context in which NeIC is operating, as well as our strategy to take the opportunities and meet the e-Infrastructure issues. Based on engagement and competence from an extensive virtual team, I will share some suggestions and suggest further steps.

Trends in HPC Environments

Paul C. Messina

Abstract: The HPC computing ecosystem will be more encompassing than today's. As high-end computers approach exascale in the next few years, the scientific and engineering computing ecosystem will need to enable not only more accurate and efficient usage will evolve as well, requiring expansion of the software ecosystem typically found on supercomputers. Through uncertainty quantification, and validation will constitute an increasing fraction of the workload in HPC facilities. Data analysis will resort to in situ and streaming data analysis. Archives of simulation and experimental data will be made available posing challenges in security and policies for longevity of the data. Achieving good performance, especially strong scaling, is more important because all systems will feature massive parallelism, less bytes of memory per flop, and a deeper memory hierarchy. Performance is more important as well as more difficult to achieve, given the differences in the leading hardware architectures as well as programming models and much of the software stack.

10:30 - 11:00

Coffee Break

11:00 - 12:30

E-Infrastructures for Extreme Research Data Factories

Session chair: [Oxana Smirnova](#)

Data and Computing infrastructure for LHC in Run2 and future

Mattias Wadenstein

The Large Hadron Collider at CERN is back after a long upgrade, and with plans for further upgrades ahead. In this presentation, I will give an overview of the current data and computing infrastructure and how plans are made to meet future requirements.

The Plans for the European Spallation Source's Data Management and Software Centre

Thomas Holm Rod

During the next couple of years the European Spallation Source (ESS) will be constructed in Lund, Sweden. This project involves partner countries including the two host countries Sweden and Denmark. From the outset of the planning for ESS, integrated software, and hardware, infrastructure for instrument control, data acquisition, data reduction and data management have been recognized. The Data Management and Software Centre (DMSC), located in Copenhagen, is responsible for delivering and working closely with collaborators from facilities, and universities, in the ESS partner countries to leverage existing software in order to achieve this. In this presentation I will describe how data acquisition will take place once ESS is operational and the data processing and management infrastructure that DMSC will deliver for the ESS instruments in the coming years.

eInfrastructure for HPC and Data at a Local, UK and European level: a Scottish perspective

Alison Kennedy

EPCC is a major HPC and Data Centre and services provider based at the University of Edinburgh in Scotland. It is not only for modelling and simulation, which generates large volumes of data, but also as a tool for analysis of large datasets from other instruments. This presentation looks at the differing requirements and challenges of providing large scale computing services at regional, national and European level and at the role of major eInfrastructures like PRACE in supporting a growing demand for large scale data analytics.

12:30 - 13:30

Lunch

13:30 - 15:00

Services for Sensitive Data

Session chair: [Antti Pursula](#)

e-Infrastructure for Sensitive biomedical data

Antti Pursula

Public registers, biobanks, health register and research projects collect and store vast amounts of data that has h research. A prime example is the biomedical research aiming to improve human health. Naturally the data needs integrity and privacy of individuals is secured. This talk introduces a collaboration in ELIXIR Nordic nodes and Ne produce means for sharing, combining and processing sensitive biomedical data across Nordic countries.

TSD: a Secure and Scalable Service for Sensitive Data and eBiobanks

Gard Thomassen

In the last decade the demand for services for sensitive data – subjected to the Norwegian Personal Data Act §2, membership and prosecutions) - has significantly increased. The massive usage of video, MR-imaging and DNA-strong need for storage and computing resources for sensitive data, by far exceeding the traditional available res computer”. The University Center for Information Technology (USIT) at the University of Oslo (UiO) took on the ta secure, user friendly and scalable. The solution designed and implemented by USIT, namely Services for Sensitiv platform for all kinds of IT-services for research. USIT launched the TSD service in May 2014, and offers virtual s computing (HPC) and data collection within this secure environment. The system hosts the research projects on v strong firewall with a 2-factor authentication gateway. Each project is assigned to a private sub-net, and secure st storage resource “Astrastore” at UiO. A dedicated HPC-resource is installed inside the secure environment to me encrypted version of the UiO web-questionnaire (Nettskjema) allows secure data harvesting, e.g. from surveys ar governmental ID-portal is enabled for use with authentication to Nettskjema, thus allowing time-point studies with from the general population. Physical access to the TSD hardware is very restricted. In the Nordics, TSD is prese most advanced services for sensitive data in operation and maintained by a public research institution. Gard Thor

BBMRI-ERIC ELSI Common Service and Applying Privacy Rights as well as rights to medical treatment for large cohorts

Mats Hansson

The ELSI Common Service of the European infrastructure BBMRI-ERIC officially started 1 February. Regarding t to consider, this ELSI-CS aims to facilitate and support cross- border exchanges of human biological resources a collaborations and sharing of knowledge, experiences and best practices among Member States. This will be dor Fundamental Rights of the EU, with the aim of promoting excellence in international biobank-based research. The privacy and medical treatment and I will suggest how these should be balanced in large cohorts using personal d

Four years of safe and secure access

Richard Welpton

The UK Data Service Secure Lab began providing secure remote access to confidential and sensitive microdata t these data were only possible by visiting an ‘on-site safe room’. Only researchers located within the vicinity of the travel budgets and few departmental responsibilities, could access data and successfully complete projects. For a Secure Lab heralded a new age of convenient access to confidential data, within a secure setting. In this present: Secure Lab: our beginnings and how we operate the service. I’ll also provide information on how we accredit rese safe settings; and how we manage the release of ‘safe’ results generated from confidential sources.

15:00 - 15:30

Coffee Break

15:30 - 17:00

Software as an Infrastructure

Session chair: [Dan Still](#)

Glenna - The Nordic Cloud

Dan Still

The sharing of the cloud resources in the Nordic countries enables an easier form of collaboration for researchers: data between countries, the analysis can be done where the data is. Sharing also evens out the peaks and valley capacity in the individual sites/countries. The talk introduces the Glenna effort, where the goals are to share know managing cloud services aiming at creating a Nordic federated cloud service, driven by the need of the Nordic res

A Secure Hybrid Cloud Infrastructure for Scientific Applications

Salman Toor

The cloud paradigm allows building a scalable computational and storage infrastructure for a variety of application are based in a single datacenter facility. This model serves well as it allows efficient resource management and s building large computational islands still requires communication and coordination between them. The DII-HEP pi OpenStack cloud suite and the Gluster file system, is designed to provide a scalable and secure private infrastruc infrastructure is evaluated with the Compact Muon Solenoid (CMS) data analysis framework, a highly challenging computational, storage and network resources. For handling security issues, we have used the Host Identity Prot portable (vendor agnostic), tenant oriented and thus can be deployed in any IaaS cloud. In DII-HEP, the HIP base building a secure multi-tenant and hybrid environment

The Science Gateways Program: From Inception to the Present Day

Nancy Wilkins-Diehr

Science gateways, also known as web portals, are having a tremendous influence on access to high performance the launch of science gateways in the US TeraGrid program in 2004 through the use of XSEDE resources today. generally, for example the International Workshop on Science Gateways and a new workshop beginning in Austr: from a recent 29,000 person US-based survey on gateway use, development activities and the need for a commu

Big Data Meets HPC

Dan Reed

In science and engineering, a tsunami of new experimental and computational data and a suite of increasingly ub problems in data analysis, transport, visualization and collaboration. Cloud computing and "big data" are extendin science and engineering, bringing technical, political and economic challenges. What are the hardware and softw best exploit these capabilities and economics while providing application compatibility and community continuity? world of big data and HPC and how can they best co-exist? How do we optimize performance and reliability? How Internet of Things and ubiquitous sensors for multidisciplinary fusion, while also managing security and privacy? the social, technical, political and economic attributes of big data software and hardware with those of high-perfor implementation lessons and suggesting opportunities for research and deployment.

17:30 - 18:30

Boat trip to the Restaurant Saaristo

19:00 - 23:00

Conference Dinner at Restaurant Saaristo, on the Island Klippan Return boat from the Restaurant will be

Friday, 8 May 2015

Conference

09:00 - 10:30

Services for Climate and Environmental Research

Session chair: [Jostein K. Sundet](#)

Introduction to Services for Climate and Environmental Research

Jostein K. Sundet

A brief introduction to the session

Climate Scenarios for Decisions and Policies

Markku Rummukainen

Our understanding of the Climate/Earth system builds on a wealth of present-day and historical observations as well as our understanding of the laws of nature and experimentation with climate models. By combining these different sources we are able to find out about how climate has varied and changed in the course of time and possible reasons behind, as well as today, in our own time. For the present-day world, this knowledge is also needed to investigate how alternative decisions affect the future climate and how the observed global warming trend continues to unfold. The future is unobservable, and the actions and climate change remain to be taken during the next years and decades. This constitutes an uncertainty on our future. We can choose between different alternatives, such as a two-degree global warming or a four-degree world by the end of the century. Our models have very high HPC-requirements, but in return offer scientific means of projecting the outcome of near- and long-term greenhouse gas emissions (and thus the underlying policy, investment, energy, technology, population and consumption) and thus the underlying policy, investment, energy, technology, population and consumption. This presentation highlights the utility of climate model results for policy decisions.

European and international collaboration in Climate and Environmental research

Sanna Sorvari

Observations of climate and environmental quantities are in intimate relationship with eInfrastructure. To do measurements based on automatic systems, with computers, storage, networks as the backbone. Measurements at a single location are not enough, insights, and networks of observations are necessary. In Europe the largest, and most important, networks are part of the European Forum on Research Infrastructures) roadmap. In addition, important international observational networks as GAW (Global Climate Observing System), are also found. These networks and collaborations are dependent upon eInfrastructures.

Nordic-Baltic collaboration on eInfrastructures for Biodiversity and Ecosystem Research

Frank Hanssen

Large European research infrastructures are presently being developed on the Roadmap of the European Strategy for Research Infrastructures (ESFRI). The Nordic countries have followed the European LifeWatch ESFRI initiative closely on their way towards the realization of LifeWatch ERIC in 2015. In 2012-2013 the Nordic LifeWatch consortium (representative of the national institutions) performed a LifeWatch pilot project with financial support from NordForsk. The pilot project identified and developed strategies for future construction of a common Nordic- Baltic eInfrastructure dedicated to enhance science-policy interface between the individual countries. A Nordic-Baltic collaboration can support and improve the eInfrastructure initiatives, provide a common Nordic-Baltic interface at the European level; and develop overarching Virtual Research Environments (VRE) for the benefit of improved Biodiversity and Ecosystem Research both at national and European level. Through the collaboration with the national stakeholders and the Nordic eInfrastructure Collaboration (NeIC) at the NeIC 2015 Environment Workshop.

10:30 - 11:00

Coffee Break

11:00 - 12:30

The future Nordic E-Infrastructure ecosystem

Session chair: [Sven Stafström](#)

Panel

Kimmo Koski

Alison Kennedy

Rob Pennington

Maria Häll

Thorvaldur Sigurdsson

Peter Løvgreen

René Buch

Gudmund Høst

Gunnar Bøe

Conclusions and prizes

12:30 - 13:30

Lunch

