

# Program Fourth Annual Meeting

## Wednesday 24/4

12:00	<b>Lunch</b>
13:00	<b>Welcome and Opening</b> (Dan Henningson, SeRC director, KTH)
13:15	<b>Data Visualization in Flow Analysis: State-of-the-Art and Challenges</b> (Hans-Christian Hege, Zuse institute Berlin)
14:00	<b>Multiscale Modeling</b> (Björn Enquist, University of Texas, Austin)
14:45	<b>Presentation of SeRC Application Experts</b>
15:15	<b>Coffee Break and Poster Session</b>
16:00	<b>High Performance Computing and the Inventor's Dilemma: How you Abandon 15 years of work and move to GPUs, and why there might not be any alternative</b> (Erik Lindahl, Stockholm University)
16:45	<b>A Tour of the Universe in 3D</b> (Anders Ynnerman, co-director and meeting host, LiU)
17:30	<b>Break for Hotel Check In</b>
18:30	<b>Dinner at the Visualization Center</b> (Center Exhibits and Cash Bar Open until 22:00)

## Thursday 25/4

08:30	<b>eScience Infrastructure</b> (Erwin Laure, director PDC, KTH) (Patrick Norman, director NSC, LiU)
09:15	<b>eScience Strategy</b> (Anders Ynnerman, chair of SRC eScience investigation)
09:30	<b>Panel debate on the future of SeRC</b> (Panelists: Advisory board) (Moderator: Dan Henningson)
10:30	<b>Coffee Break</b>
10:45	<b>Presentation of Innovation Offices</b>
11:15	<b>Mummy Visualization– eScience in the public space</b> (Daniel Antoine, British Museum, London) (David Hughes, Interactive Institute, UK)
12:00	<b>Closing Remarks</b> (Dan Henningson, SeRC director, KTH)
12:15	<b>Lunch</b>



# Annual Meeting Report

Visualiseringscenter C, Norrköping, April 24-25, 2013

Dan Henningson  
Director SeRC

# Swedish e-Science Research Centre

- Leading e-Science center funded SRA-initiative
- Strong consortium **KTH** – LiU – SU – KI
- Research budget of 30 millions/year
- HPC-centers PDC and NSC part of SeRC
- Kick-off in April 2010



# What is SeRC doing?

- Recruiting faculty within strategic research areas
- Forming e-Science communities; collaboration between
  - e-Science applications
  - core e-Science
  - application experts at computer centers (PDC/NSC)
- Forming strategic collaboration between PDC and NSC
  - national responsibility for largest computer infrastructure
  - strong partner in European collaborations
- Interfacing with industry and society

# Activities 2012-2013

- Newsletter
- SeRC seminars: Paul Fischer och Sean Hill
- Community Follow-up
- Application experts meet with SeRC Faculty
- Strategy meeting with SeRC Steering Group
- Affiliated faculty



# Newsletter

Individualised cancer prevention and eCPC  
- can e-Science tools be used to save lives and reduce costs?  
pages 3-4



# SeRC seminars: Paul Fischer and Sean Hill



## SeRC Seminar

September 3, 2012, 17:10 Apéro, 17:20  
Auditorium F2, KTH Main Campus

[SeRC FLOW](#)  
[KCSE](#) (KTH Computer Science)

### *PDE-Based Simulation*

Paul Fischer  
Mathematics and  
Argonne National Laboratory

High-performance computing platforms with million-way parallelism are coming online this summer and it is anticipated that exascale computers having billion-way concurrency will be deployed by 2018. In this talk, we explore fundamental computational complexity considerations that will drive algorithmic design choices for PDE simulation codes scaling to petascale and beyond.

Our focus is primarily on computational fluid dynamics and the approach and analysis, however, is applicable to other physics-based problems that are addressed using grid-based methods coupled with domain-decomposition-based parallelism. We discuss the performance benefits of high-order numerical methods for multiscale phenomena in problems with a strong hyperbolic character. (or substeps), we present analysis and performance results and strategies that yield small iteration counts ( $< 20$ ) for systems composed of unknowns.



# SeRC Community follow-up 2013

-Minutes from the community meetings

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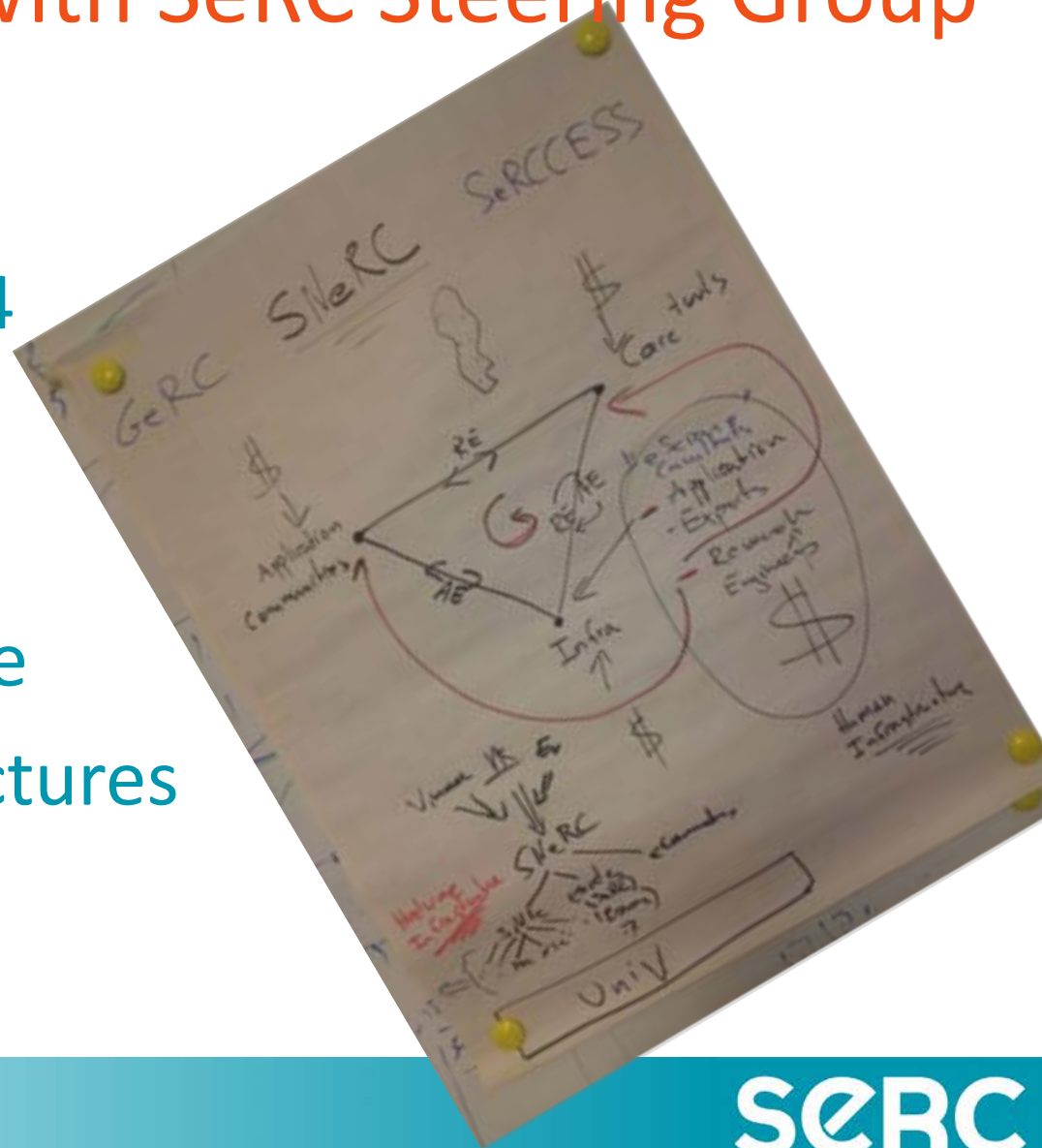


# Application experts meet SeRC Faculty

- More long-term projects for the application experts
- The application-experts should integrate into communities; attend community-meetings, etc.
- The community coordinators, together with NSC/PDC directors prioritize between projects

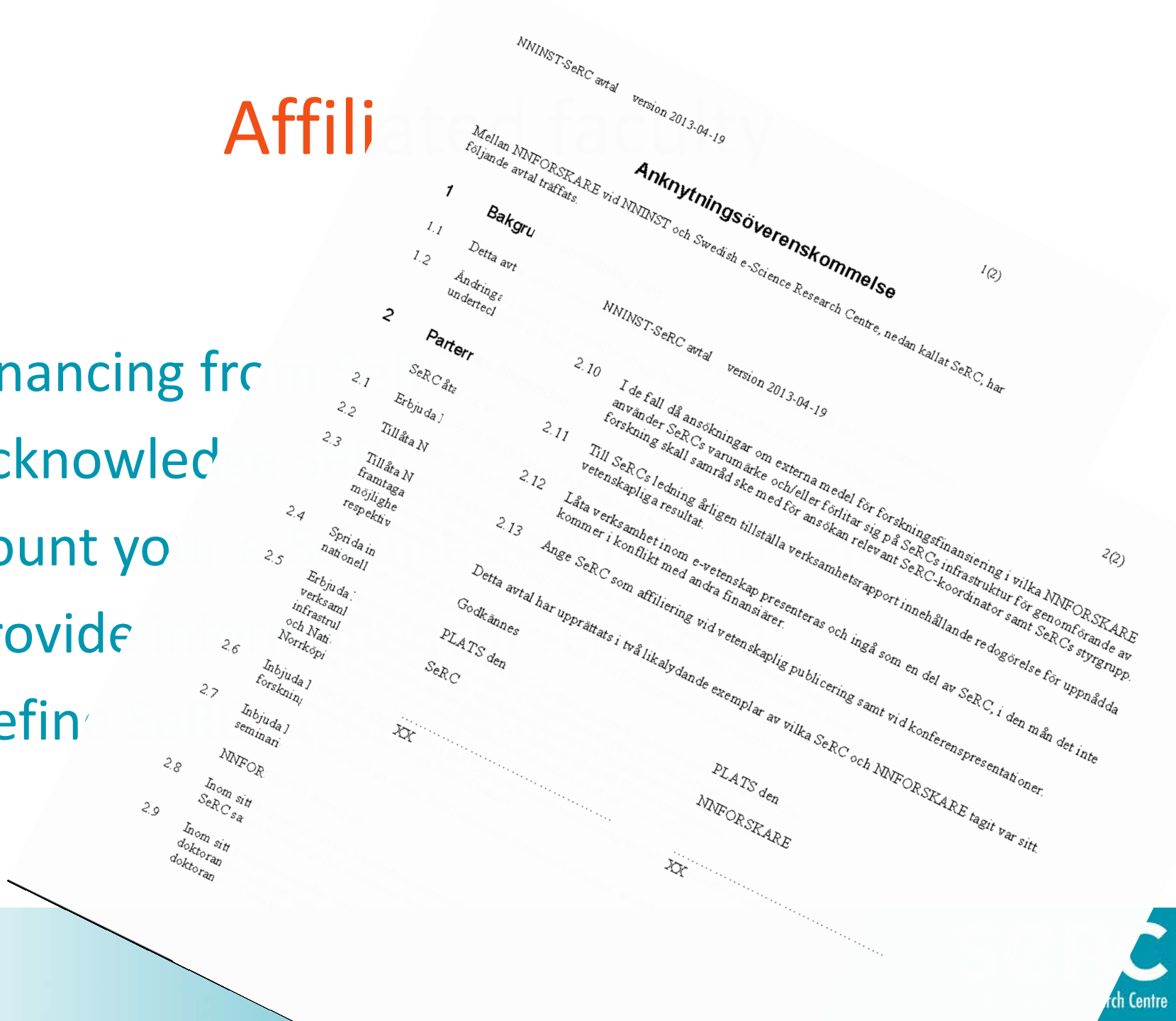
# Strategy meeting with SeRC Steering Group

- Future of SeRC and vision beyond 2014
- National scope
- Focus on excellence
- Integrate infrastructures
- Human e-cloud



# Affili

- Financing fr
- Acknowled
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# http://www.e-science.se/

**SeRC**  
Swedish e-Science Research Centre

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**Community manager**

You must [login](#) in order to post into this group.

**In focus**



2011-09-05  
7th IEEE International Conference on e-Science  
[Read more](#)



2011-02-16  
New supercomputer for research in sustainable energy  
[Read more](#)



2011-02-23  
Cray supercomputer upgraded at KTH  
[Read more](#)

Home » Communities » **FLOW**

**FLOW**



The intricate behaviour of flowing fluids in both nature and technical applications has fascinated scientists and laymen alike for centuries. Complex phenomena such as turbulence are ubiquitous in fluid flows, and studying them is of major relevance not only for industrial applications, but also, e.g., for a better understanding of the earth climate system. As such, turbulence has been described as "the last unsolved problem of classical physics".

Watch a [video](#) of the above visualisation.



2011-05-10  
**Open Position as "Application Expert" in Numerical Fluid Dynamics at KTH Mechanics**  
KTH, The School of Engineering Sciences (SC) announces a position as application expert in computational fluid dynamics (CFD) at the Mechanics Department.



2011-04-13  
**PRACE Project granted for KTH Mechanics**  
KTH Mechanics was awarded 46 million core hours within PRACE



2011-03-29  
**Three PhD positions at KTH Mechanics/FLOW**  
Three open positions as PhD students at KTH Mechanics in "Numerical Fluid Mechanics"

**Latest news**

2011-11-09  
Physics Nobel Laureate Brian P. Schmidt will deliver a keynote address at e-Science 2011  
[Read more](#)

2011-11-07  
Call for participation, Fourth Swedish Workshop on Multi-Core Computing  
[Read more](#)

2011-09-05  
7th IEEE International Conference on e-Science  
[Read more](#)

2011-07-13  
Post-doctoral position in meteorology  
[Read more](#)

2011-07-13  
Post-doctoral position  
[Read more](#)

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