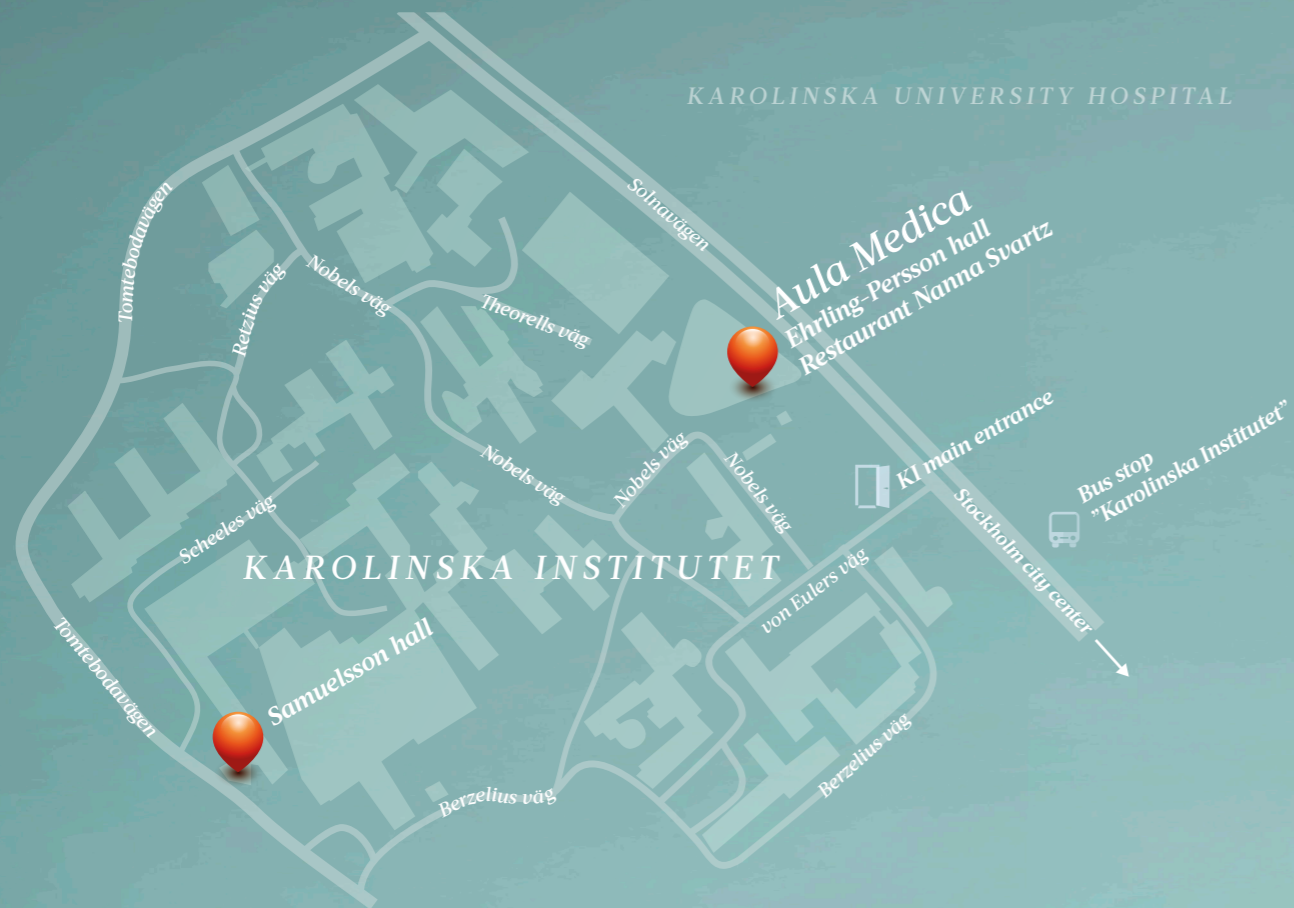


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Big Data and e-Science in Medical Science

PROGRAMME

The Swedish e-Science Research Centre (SeRC)

Advanced computer based research, such as the handling of large data sets and the use of high performance computers for simulations and calculations, is an integral part of scientific research today, commonly known as e-Science. e-Science is complementary to the traditional means of doing research by experiments and theoretical reasoning.

SeRC is a national center for e-Science in Sweden formed by the four universities Kungliga Tekniska högskolan (KTH), Stockholms universitet (SU), Karolinska institutet (KI) and Linköpings universitet (LiU) around the largest high performance computing centers and visualization centers in Sweden. Funded by the Swedish Research Council, SeRC brings together a core of nationally leading IT research teams and scientists in strategic application areas. SeRC consists of several communities, some of which are focusing on core e-Science methodology, like numerical analysis, distributed and parallel techniques, visualization and data management, whereas other focus on some area of application of this methodology, like complex diseases, bioinformatics, molecular simulations, electronic structure, computational fluid dynamics or climate research. Key aims of SeRC are to perform core e-Science research and to connect applied groups with core e-Science groups and computer experts.

For more information on SeRC, see www.e-science.se



Aula Medica
Karolinska Institutet
23 & 24
April, 2014

Graphic design: Memell (www.memell.se)

Wednesday – April 23

Venue: Ehrling-Persson hall, Aula Medica, Karolinska Institutet

- 12.00–13.00 **Registration and buffet lunch**, level 3 outside Ehrling-Persson hall
- 13.00–13.15 **Opening**
Anders Hamsten, Vice-Chancellor Karolinska Institutet
Dan Henningson, SeRC Director
- 13.15–14.00 **Making Big Data work for the medical sciences**
Gilean McVean, Director Oxford Big Data Institute, Oxford, UK
- 14.00–14.30 **The new era of European life-science infrastructure: Data, Computing and Services to Communities**
Niklas Blomberg, Director ELIXIR
- 14.30–15.00 **Coffee**
- 15.00–15.30 **The new Danish infrastructure for health surveillance and research**
Mads Melbye, Director, National Health Surveillance and Research, Statens Serum Institut
- 15.30–16.00 **e-Science for Cancer Prevention and Control, eCPC**
Juni Palmgren, Karolinska Institutet
- 16.00–16.15 **e-Science challenges in the neuroscience field**
Jeanette Hellgren Kotaleski, Royal Institute of Technology & Karolinska Institutet
- 16.15–16.30 **e-Science in medicine – challenges and opportunities. Illustration through examples**
Jesper Tegnér, Karolinska Institutet & Karolinska University Hospital
- 16.30–17.00 **Integration and visualization of NGS data - the Swedish 1000 genome project and massive single cell analysis**
Joakim Lundberg, Science for Life Laboratory, Stockholm, Sweden
- 17.00–18.00 **Drinks**, outside of Ehrling-Persson hall
- 18.00 **Dinner**, Nanna Svartz, Aula Medica

Connected meetings:

April 23, 10.00–12.00 SeRC Steering Board meeting • April 24, 13.30–16.00 SeRC Advisory Board meeting

Thursday – April 24

Venue: Samuelsson hall, Karolinska Institutet

- 09.00–09.45 **An agenda for e-Science and e-Infrastructure in Sweden**
Anders Ynnerman, Linköping University
- 09.45–10.15 **Visualization within SeRC - Status of the Flagship Project**
Timo Ropinski, Linköping University
- 10.15–10.45 **Towards a Virtual Wind Tunnel - Fluid Simulations in the SeRC Exascale Flagship**
Matthew de Stadler, Royal Institute of Technology
- 10.45–11.15 **Coffee**
- 11.15–11.45 **Towards bigger data**
Mattias Andersson, Senior Data Scientist, King.com
- 11.45–12.15 **Big Data in science**
Jim Dowling, Royal Institute of Technology
- 12.15–12.30 **Swedish e-Science Education (SeSE)**
Anders Hast, Uppsala University
- 12.30–13.30 **Buffet lunch**, outside Samuelsson hall

