

Computational challenges for ELIXIR and other Life Sciences Research Infrastructures

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Summary

The need for robust computational and information infrastructure became clear at the beginning of the Human Genome Project (HGP) over 20 years ago. Since then, the life sciences have joined the community of Big Science –the projects that followed HGP have entered the Peta- and are approaching Exa-scale for data management, sharing and computing. The European computing infrastructure ELIXIR has been established to manage and safeguard the massive amounts of data being generated. ELIXIR will provide the facilities necessary for life science researchers to make the most of our rapidly growing store of information about living systems, which is the foundation on which our understanding of life. In my talk I will discuss the computational challenges of ELIXIR and other life sciences research infrastructures.

Description

Alvis Brazma studied mathematics at the University of Latvia, Riga, and obtained a PhD in computer science from the Moscow State University. In 1997 he joined the European Bioinformatics Institute and in 1999 he founded the Microarray Gene Expression Data society and raised funding to start a microarray database at EBI –ArrayExpress, which is now one of the major international repositories for functional genomics data. His main research interests concern integrative data analysis to reveal patterns of gene and protein expression in normal and diseased state. He has over hundred scientific publications and is a principal investigator on several large collaborative genomics and biomedical projects, including the kidney cancer project of the International Cancer Genome Consortium.

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