

## Big Data: Finding the Needle in the Data Stack

Analysis of Big Data in Science to Be in the Focus of the International Symposium  
“The Challenge of Big Data in Science“ at KIT

As in daily life, data volume in science is increasing rapidly. Experiments and simulations produce enormous amounts of data. From this capital, researchers extract new findings using sophisticated analysis tools. On September 24, 2013, leading experts worldwide will meet at the second international symposium “The Challenge of Big Data in Science” at Karlsruhe Institute of Technology (KIT).

“Data analysis has long been established as the fourth pillar in science next to theory, experiment, and simulation,” says Professor Achim Streit, Director of the KIT Steinbuch Centre for Computing (SCC). Cutting-edge research in particle physics, earthquake science, biotechnology, and in the humanities is impossible without big data processing. “The discovery of the Higgs particle, to which KIT’s GridKa contributed, is the spearhead of the development only.” About 25 petabytes, the data volume stored on 5 million DVDs, are stored and constantly analyzed at GridKa, the German tier-1 computing and data center for the LHC at CERN.

Experience in handling big data is pooled in the “Large Scale Data Management and Analysis” (LSDMA) project at KIT. “High-performance software tools are developed to prevent the search for relationships and scientific findings in big and complex data inventories from becoming a search for the needle in a haystack,” Dr. Christopher Jung, manager of the LSDMA project, explains. “The symposium with its lecturers from natural sciences and humanities as well as from companies like Google will reflect the different facets of the topic.”

### Symposium “The Challenge of Big Data in Science”

Tuesday, September 24, 2013, 9.00 hrs,  
Auditorium of FTU on KIT Campus North,  
Hermann-von-Helmholtz-Platz 1,  
76344 Eggenstein-Leopoldshafen, Germany.

The following persons will be among the lecturers of the symposium:

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**Beth Plale**, Indiana University, will speak about the future trends of big data and open access and their potential symbiosis.

**Sayed Choudhury**, Johns Hopkins University, will sum up ten years of data management for scientific large-scale projects, such as the Sloan Digital Sky Survey.

**Alexander Hall**, Google, will explain algorithms to efficiently analyze trillions of datasets.

The complete program can be found at:  
<http://www.helmholtz-isdma.de/Symposium2013>

**Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. Research activities focus on energy, the natural and built environment as well as on society and technology and cover the whole range extending from fundamental aspects to application. With about 9000 employees, including nearly 6000 staff members in the science and education sector, and 24000 students, KIT is one of the biggest research and education institutions in Europe. Work of KIT is based on the knowledge triangle of research, teaching, and innovation.**

This press release is available on the internet at [www.kit.edu](http://www.kit.edu).