BIG DATA
IN COLOGNE

In many fields of study, the amount of measured data or produced simulation results grows faster than it can be processed and analyzed with established methods. The associated challenges in the form of generation, analysis and storage of large data sets are often referred to as Big Data and considerably influence modern scientific practice. The conference BIG DATA IN COLOGNE provides a platform for scientists of the University Cologne and the Research Alliance Cologne to present their work and the problems they encounter when dealing with large data sets. The conference aims at indentifying common interests and also problems in the field of Big Data to encourage the researchers to find interdisciplinary solutions. The research potentials cover topics such as intelligent scientific data archiving, efficient generation of simulation results, faster algorithms, and also legal aspects of handling large data sets, particularly in medicine.

ORGANIZATION

Prof. Dr. Joachim Saur
Institut für Geophysik und Meteorologie
E-mail: saur@geo.uni-koeln.de

Coordinator of Competence Area III:
Quantitative Modeling of Complex Systems
Dr. Michael von Papen
E-mail: vonpapen@geo.uni-koeln.de

Picture © Victoria | fotolia.com
Design: Martina Markus | Abt. 82 | Marketing
Print: In-house print shop | University of Cologne

9. FEBRUARY 2015

BIG DATA
IN COLOGNE

RESEARCH POTENTIALS IN PROCESSING LARGE DATA SETS

Neuer Senatssaal
Universität zu Köln
Albertus-Magnus-Platz
50923 Köln

9:00 a.m. – 6:30 p.m.

www.complexsystems.uni-koeln.de

QMCS
Quantitative Modeling of Complex Systems

EXCELLENT
Funded in the Excellence Initiative of the German federal and state governments

University of Cologne

9. FEBRUARY 2015
BIG DATA IN COLOGNE

PROGRAM

9:00–9:05
Greeting

9:05–10:00
Big Data - Overview and Characteristics
Ulrich Lang (*RRZK)*

10:00–10:30
Big data analytics for repositories of numerical simulations in industry
Jochen Garcke (*Fraunhofer SCAI)*

10:30–11:00
Coffee break

11:00–11:15
Future Earth Observation and Big Data
Susanne Crewell (*Meteorology)*

11:15–11:40
Concepts towards working with big data in geosciences at HPSC TerrSys
Stefan Kollet (*FZ Jülich)*

11:40–12:05
Production and use of big data in fully coupled highresolution modelling at HPSC TerrSys
Klaus Görgen (*FZ Jülich)*

12:05–1:30
Lunch break

1:30–2:00
Data Mining & Big Data in Earth and Planetary Sciences
Dominik Hezel (*Geology)*

2:00–2:30
Big Data Challenges in Radio-Astronomy
David Champion (*MPIfR Bonn)*

2:30–3:00
Big Data Challenges in Submm / FIR Astronomy
Jürgen Stutzki (*I. Physik. Institut)*

3:00–3:30
Coffee break

3:30–4:00
Big Data in the Life Sciences
Andreas Beyer (*CECAD)*

4:00–4:30
Data management in research on patient care: how can we get informatics to help make dialysis treatment better?
Gero von Gersdorff (*Nephrology)*

4:30–5:00
Large Medical Datasets in Cloud Computing Environments
Ali Sunyaev (*Economics)*

5:00–5:30
Big Data Analytics vs. Data Protection
Norbert Nolte (*Law)*

5:30–5:55
Big Data in der EU-Forschungsförderung (Überblick)
Monika Goergen (*KoWi)*

5:55–6:30
Discussion