

# Seminar

# Database and the Cloud

Winter Term 2013/14

Lehrgebiet Informationssysteme

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**AG Datenbanken und  
Informationssysteme**



**AG Heterogene  
Informationssysteme**

- a) Familiarize yourself with a scientific topic independently
- b) Find scientific literature on web or in the library, cite correctly
- c) Prepare a written composition, presentation, and discussion
- d) Time Management, Deadline!
- e) Warm-up for your bachelor/master thesis

## **Task 1: Searching for Literature (2 weeks later, November 4<sup>nd</sup>)**

- Read the basic papers provided by your supervisor
- Understand your topic
- You have to search for further papers
- Collect a list of related papers and send it to your supervisor

## **Task 2: Annotated Table of Contents (TOC) (2 weeks later, November 18<sup>th</sup>)**

- Prepare an annotated TOC for your supervisor (approx. 1.5 pages)
- Consists of chapter, section and comment

**For finding related scientific papers  
(download free only in university network):**

## **ACM Digital Library**

- <http://dl.acm.org/>

## **DBLP**

- <http://www.informatik.uni-trier.de/~ley/db/>

## **CiteSeerX**

- <http://citeseerx.ist.psu.edu/index>

## **Task 3: Written Composition (again 2 months later, January 17<sup>th</sup>)**

- Arrange sub-deadlines with your supervisor
- LNCS Layout, PDF Format required
- Length: 6000–8000 Words (net.)  $\cong$  15–20 Pages
- Correct and complete bibliography
- Don't copy and paste directly from e.g. papers or web articles!

## **Task 4: Presentation (January 24<sup>th</sup>, 27<sup>th</sup>, 31<sup>th</sup>)**

## Standard template for seminar written composition:

### LNCS

- <http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>

- a) Length: 60 Minutes
  - 45 minutes for the presentation
  - 15 minutes for the discussion
- b) First talks are scheduled for
  - Friday, January 24<sup>th</sup>
  - Room 36/336
- c) Presentation:
  - ❖ Projector (private or one of our notebooks)
- d) You must submit your presentation electronically, one week after you gave your talk

- **All certificates will be graded!**
- **“Basic Requirements (i.e. 4.0)”:**
  - Meet the deadlines!
  - Don't copy and paste!
  - Decent presentation
  - Be present when others give their talks (must explain reasons in case one cannot attend certain talks)
  - Get involved in the discussions (at least one question)
- **“Criteria for grading”**
  - Quality of your written composition
  - Quality of your presentation (animate slides! no dead read!)
  - Quality of your answers to the questions raised by others in the discussion part of your presentation
  - Be active in discussion
  - Overall impression of your supervisor



- 1) Consistency model (ACID, Eventual consistency/BASE)
- 2) F1: a distributed SQL database that scales
- 3) In-memory database HANA vs. Dynamic in-memory DB2 BLU
- 4) Internal sorting techniques for databases\*
- 5) External sorting techniques for databases\*
- 6) Answering queries using views\*
- 7) Right-time ETL
- 8) Incremental recomputations in materialized data integration
- 9) Data stream processing\*
- 10) Graph query languages
- 11) Multi-parallel query execution on new hardware (GPU, FPGA, Multicore)
- 12) Elastic cloud-storage/database solutions\*
- 13) Crowdsourcing\*
- 14) Database as a Service(Cloud)\*

- Thursday, October 17<sup>th</sup>: Kick-off meeting
- Monday, November 4<sup>th</sup>: Deadline for literature list
- Monday, November 18<sup>th</sup>: Deadline for annotated TOC
- Friday, January 17<sup>th</sup>: Deadline written composition
- Final presentations:
  - ❑ Friday, January 24<sup>th</sup>: 9:30-12:30 & 14:00-16:00
  - ❑ Monday, January 27<sup>th</sup>: 9:30-12:30 & 14:00-16:00
  - ❑ Friday, January 31<sup>th</sup>: 10:00-12:00 & 14:00-16:00

**All deadlines are strict!**

Questions

A large, light grey question mark is centered on the slide, positioned behind the word 'Questions'.

- 1) Consistency model (ACID, Eventual consistency/BASE)
- 2) F1: a distributed SQL database that scales
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