

Seminar Algorithms for Database Systems

Michael Böhlen
Peter Widmayer
Przemysław Uznański

February 23, 2018

Agenda

- Goals of the Seminar
- Logistics
- Topics
- Next Steps
- Grading

Goals of the Seminar

- Get a deep understanding of an advanced topic/paper in algorithms for database systems
- Focus on one technical paper/topic (**NOT**: an overview of ten papers!)
- Give a talk on this paper, write a manuscript, lead the discussion
- Act as a buddy to another student (read paper, read report, give feedback)

Prerequisites

- Good understanding of database systems and of algorithms

Attendance Limitation

- Total seminar attendance will be limited to 18
- If more than 18 students want to take the seminar (**unlikely**), we **might** consider assigning extra topics.

Topics Preference

- You will get the chance to submit your preferences on topics
- We will use RSD to assign 1) topics and 2) buddies

Topics

- dimensionality reduction,
- sketching, embedding,
- similarity search,
- curse of dimensionality,
- nearest neighbors,
- data streams

Conferences:

- SODA+STOC+FOCS
- VLDB+SIGMOD+PODS
- ICML

Next steps (1/3): topics

- Until Sunday (25.2.2018), 23:59, send an email to: `przemyslaw.uznanski@inf.ethz.ch` containing the following information:
 - ▶ Name
 - ▶ Student number (ETH/UZH)
 - ▶ preferences for topics (cf. seminar page)
- We use RSD to assign topics to students
- We assign advisors (topic-based) and dates (random/common sense)
- We publish/send you the list of all assigned topics and advisors

Next steps (2/3): buddies

- We assign buddies (using common sense), on 01.4.2018.
- Buddy is responsible for quality of his partner talk/manuscript.
- We will make sure to balance speakers/buddies among two Saturdays.

Next steps (3/3): preparing manuscript + talk

- Read your paper (and related papers)
- Write manuscript (4 – 8 pages) on how would you present it: motivation, formal model, interesting proofs, main results
- Send your manuscript to buddy + the advisor 3 weeks before your talk
- Meet with the advisor and buddy ~ 2 weeks before the talk
- submit final version of manuscript 1 week before the talk (STRICT)
- prepare talk, rehearse with buddy
- talks: blackboard talk (30min) + lead discussion (10min) on:
 - ▶ Saturday April 28 at UZH
 - ▶ Saturday May 19 at ETH
- NO SLIDES

Grading

In order of importance:

- Presentation
- Manuscript
- Buddy
- Active Participation

Useful link on how to read papers and give talks:

<http://cs.stanford.edu/~rishig/courses/s14.html>