General Information

Course Organization

Lecturer: Andreas Pieris (apieris@inf.ed.ac.uk)

Course Page: http://homepages.inf.ed.ac.uk/apieris/courses/atfd2017/

Lecture: Wednesday, 9:00 – 10:50
Room 2.14, Appleton Tower

Assessment: Essay 1 (15%), due 3 February, ITO before 4pm

Essay 2 (15%), due 3 March, ITO before 4pm

Essay 3 (15%), due 24 March, ITO before 4pm

Final Project (40%), due 14 April, ITO before 4pm

Project Presentation (15%), in class, to be scheduled

General Information

- **This is a demanding course**
- Highly condensed lectures that you need to supplement by a lot of reading
- **Goal of lectures:** tell you about some hot topics in foundational research on data management
- **Goal of your work:** make sure you can follow and understand what's hot
- Read papers and present a summary (essays), and for one paper you should show that you **really** understand all the details (final project + presentation)

Essays and Final Project

- **Guidelines for essays:**
  - Between 5 to 7 pages (excluding references)
  - Should present a summary of a paper understandable to someone who has not read the paper
  - Definitions and statements must be formal and complete
  - Proper citations are expected
  - No copy-and-paste – it is your essay. It is crucial that you present your own thoughts and/or analysis

- **Guidelines for final projects:**
  - Between 7 to 9 pages (excluding references)
  - Similar to essays, but in more depth – don't forget, you should show that you understand all the details in the paper
  - **In addition, a piece of your own work is expected:**
    - Extend some of the results
    - Close an open problem
    - Implement an algorithm and analyze its performance
    - Isolate special cases that improve existing solutions
    - Etc. (the list is not exhaustive)

Main Topics

1. Foundations of relational query languages	**Essay 1**
2. Scale Independence 3. Approximation of conjunctive queries 4. Semantic optimization of conjunctive queries	**Essay 1**
5. Foundations of XML 6. Graph databases (data model + query languages) 7. Semantic Web data (RDF + SPARQL)	**Essay 2**
8. Ontology-based data access (OBDA) 9. Query rewriting in OBDA 10. Consistent query answering in OBDA	**Essay 3**

Main Topics

1. Foundations of relational query languages
2. Scale Independence
3. Approximation of conjunctive queries
4. Semantic optimization of conjunctive queries
5. Foundations of XML
6. Graph databases (data model + query languages)
7. Semantic Web data (RDF + SPARQL)
8. Ontology-based data access (OBDA)
9. Query rewriting in OBDA
10. Consistent query answering in OBDA

Final Project

(but, on a different topic)

DATASCIENCE

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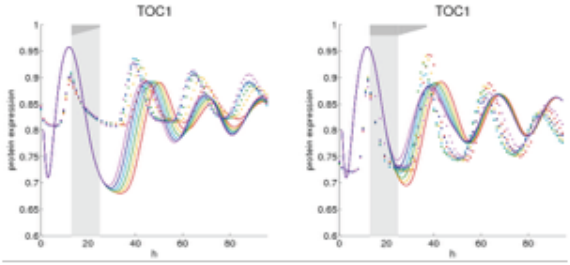

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