CS 3550: Advanced Topics in Management of Data (Spring 2003)  
Department of Computer Science, University of Pittsburgh

Course Reference Number (CRN): 37933  
Term: Spring 2003 (03-2)  
When: Tuesdays & Thursdays, 2:30 pm - 3:45 pm  
Where: Room 6516, Sennott Square Building  
Instructor: Prof. Alexandros Labrinidis  
    Email: labrinid@cs.pitt.edu  
    Office: 6105 Sennott Square, Phone: 412-624-8843  
    Office hours: Tuesdays & Thursdays, 4:00 pm - 6:00 pm  

Course Description: This seminar course aims to expose participants to emerging approaches and techniques for efficient data management in the context of the Web.  

Prerequisites: Graduate status and familiarity with graduate level database/OS courses, or permission of the instructor.  

Class Web Page: http://db.cs.pitt.edu/courses/cs3550/03-2  
All handouts, class notes, and papers will be published on the class web page. You are expected to check this page frequently (at least twice a week).  

Note on Email Communication: In order to receive the highest priority, you must include the keyword cs3550 in the subject line of all your email messages to the instructor.  

Class Mailing List: All students must subscribe to the class mailing list, so that they receive time-sensitive information from the instructor. Subscription instructions will be posted on the web page.  

Textbook: There is no textbook for this class. Instead, we will examine research papers from recent conferences and journals. The papers will be made available on the web page.  

Course Grading:  

- **Class Participation (10%)** students are expected to participate actively in the discussion of the paper(s).  
- **Two Presentations (15% + 15%)** students will be responsible for presenting the assigned paper(s) and lead the discussion on two different occasions.  
- **Day Quizes (20%)** we will have a very short quiz on the papers of the day at the beginning of every class (about 5 minutes).  
- **Term Project (40%)** the term project will involve a combination of programming, running experiments, writing a report or a paper and presenting your results to the class. Group projects of two-person teams are strongly encouraged.  
- There will be no final exam.  

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**Topics:** A detailed reading guide will be published on the web page, along with the papers. We will tentatively cover the following topics:

1. Web Caching (proxy caching, dynamic web caching, edge caching)
2. Update Propagation on the Web
3. Caching Approximate Values
4. Web Consistency
5. Continuous Queries
6. Web Data Replication
7. Stream Data Management
8. Hidden Web / Search Engines
9. Peer-to-Peer Data Management
10. Web Request Distribution
11. XML Data Management
12. Web Services