Web Dynamics

http://www.mpi-inf.mpg.de/departments/d5/teaching/ss10/dyn/
Lecturers

PD Dr.-Ing. Ralf Schenkel
Group Leader, MMCI
Associated Senior Researcher, MPI-INF

Dr. Marc Spaniol
Postdoc, MPI-INF
Organization

• **Lecture**: Thursday 14-16 in E1.7/0.01  
  first on April 15th, last probably on July 15th  
  12 lectures

• **Assignments:**  
  – only paper assignments, no project  
  – Mon 14-16 in E1.7/0.01  
  – starting approx. May 10th

• **Requirements for obtaining 6 credit points:**  
  – You **must** successfully participate in an oral exam at the end of  
    the semester (probably July 26/27)  
  – You **must** present at least one convincing solution of an  
    assignment  
  – You **should** actively participate in the exercise group
Planned Outline

(1) Introduction (today) [RS]
   • Dimensions of dynamics on the Web
   • Application examples

(2) Modeling static and evolving graphs (2 lectures) [RS]
   • The Web graph and its static properties
   • Generative models for random graphs
   • Measures of node importance

(3) Searching the dynamic Web (2 lectures) [RS]
   • Crawling and recrawling policies
   • Accessing the Hidden Web
(4) Preserving the Past: Web Archiving (1 lecture) [MS]
   • Architecture of a large-scale archive
   • Archive consistency, coherence, coverage
   • Challenges of long-term preservation

(5) Searching the Past (2 lectures) [RS]
   • Time-travel Problems
   • Efficient Time-Travel Search
   • Temporal measures of page importance

(6) Web Spam (1 lecture) [MS]
   • Definitions and Examples
   • Countermeasures

(7) Human Behaviour on the Web (2 lectures) [RS]
   • Recommendation
   • Personalized Search
   • Social Networks
(7) Knowledge Evolution (1 lecture) [MS]
   • Recent results from current research
(8) Summary and Outlook [RS/MS]
Selected Literature

- Mark Levene, Alexandra Poulouvassilis (Eds.): *Web Dynamics*, Springer, 2004

The lecture mostly relies on scientific papers (a list of references will be provided in the slides)