Web Dynamics

http://www.mpi-inf.mpg.de/departments/d5/teaching/ss09/dyn/
Lecturers

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Organization

• **Lecture:** Thursday 14-16 in E1.4/024
  first on April 23rd, last probably on July 23rd
  12 lectures

• **Assignments:**
  – both theoretical and practical (details in May)
  – date/time/location for excercise group needs to be determined
  – starting approx. May 13th

• **Requirements for obtaining 6 credit points:**
  – You **must** successfully participate in an oral exam at the end of
    the semester (probably July 30/31)
  – You **must** successfully solve the practical assignments
  – You **should** actively participate in the excercise 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
   • Properties of dynamic graphs
   • Generative models for random graphs

(3) Searching the dynamic Web (2 lectures) [RS/MS]
   • Crawling and recrawling policies
   • Search engine coverage
   • Accessing the Hidden Web
Planned Outline (ctd.)

(4) Preserving the Past: Web Archiving (2 lectures) [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 queries
   • Temporal inverted indexes and query processing
   • Temporal measures of page importance

(6) Human Behaviour on the Web (2 lectures) [RS]
   • Modeling browsing behaviour
   • Access Log Mining
   • Personalization
(7) Web Spam (1 lecture) [MS]
   • Definitions and Examples
   • Countermeasures

(8) Recent Results (1 lecture) [RS/MS]
   • Interesting papers from SIGMOD‘09 and SIGIR‘09

(9) Summary and Outlook [RS/MS]
Selected Literature

• Julien Masanes (Ed.): *Web Archiving*, Springer, 2006
• 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)