

# Principais Metadados

- IEEE 1484.12.1 - 2002
- Dublin
- OAI

# RDF – Resource Description Framework

- Recomendado pela W3C desde 1999
- Cria um modelo simples de dados, com uma semântica formal
- Três componentes básicos:
  - Recursos
  - Propriedade
  - Indicação
- RDFa – Resource Description Framework attributes



# Exemplos

- Open Michigan
- Udacity
- Coursera
- Class2Go – Stanford
- Edx – plataforma Fundada por Harvard e MIT



all academic units

information

- > resources
- > si / coursera - internet history, technology, and security
- > si / coursera - social network analysis
- > si 110 - introduction to information studies
- > si 410 - ethics and information technology
- > si 502 - networked computing: storage, communication, and processing
- > si 507 / 703 - information policy analysis and design
- > **si 508 - networks: theory and application**
- > si 510 - special topics: data security and privacy: legal, policy and enterprise issues
- > si 519/pubpol 688 - intellectual property and information law
- > si 521 - special topics: open educational resources and the university of michigan
- > si 523 - information and control
- > si 529 - ecommunities: analysis and design of online interaction environments
- > si 532 / si 732 - digital government 1: information technology

home > find > information > si 508 - networks: theory and application > materials >



## SI 508 - Networks: Theory and Application

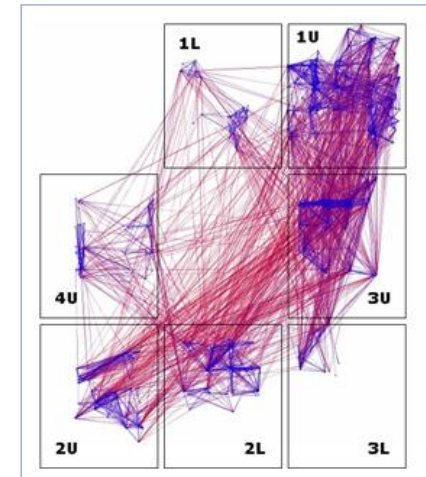
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Overview Materials Sessions

Term: Fall 2008      Published: January 28, 2009  
 Download all materials      Revised: April 4, 2013

- > Assignments
- > Data
- > Demos
- > Exams
- > Handouts
- > Labs
- > Lectures
- > Student Projects

Keywords: [information networks](#) [information retrieval](#) [network analysis](#)  
[network theory](#) [social networks](#) [software analysis](#)



### Assignments

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Document Title	Creator	Download	License
Week 01: Assignment 1 - Network Basics Pajek Tutorial	Lada A. Adamic		
Week 02: Assignment 2 - Network Measurement & Sampling	Lada A. Adamic		
Week 03: Assignment 3 - Prestige and Small Worlds	Lada A. Adamic		



# Class2Go Take Stanford Online Classes. Anywhere.

## Class2Go is Merging with the EdX Platform!

We are now working together with edX to build the world's best open education platform. EdX will be released under the AGPL license by June 1st. Class2Go is now in maintenance mode. Check out the [announcement](#) and the [forum post](#).

Welcome to Class2Go! We're Stanford Online's internal platform, designed to be an open platform for online learning and research.

We have offered three classes, free to the world:

- **Introduction to Databases** with Jennifer Widom
- **Computer Networking** with Nick McKeown & Philip Levis
- **Solar Cells, Fuel Cells, & Batteries** with Bruce Clemens

### Here's what you will like about Class2Go:

**Videos from Stanford professors** with interactive in-video quizzes give you a chance to learn from Stanford professors and then practice what you've learned.

**Formative and summative exercises** as well as in-video

### It's open.

The platform is open source so that anyone who wants to can collaborate with us. We would love to have others use the platform, or to work together with similar efforts in other places.

### It's portable.

We believe strongly that valuable course content shouldn't be tied to any one platform. Documents are already portable; the videos are outside our system (on YouTube) and the assets themselves can be repurposed as faculty see fit.

### It's interoperable.

We don't want to build or maintain more than we have to. We're standing on the shoulders of developments from Piazza, YouTube, MySQL, Python Django, Amazon AWS, Opscode, Github,

# Motivation and Overview

INTRODUCTION ▾

RELATIONAL DATABASES ▾

XML DATA ▾

JSON DATA ▾

RELATIONAL ALGEBRA ▾

SQL ▾

RELATIONAL DESIGN THEORY ▾

QUERYING XML ▾

UNIFIED MODELING LANGUAGE ▾

INDEXES ▾

TRANSACTIONS ▾

CONSTRAINTS AND TRIGGERS ▾

Prerequisite: SQL

▶ Motivation and Overview

▶ Constraints

▶ Referential Integrity

▶ Triggers Introduction

▶ Triggers Demo part 1

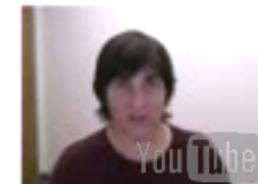
## Constraints & Triggers

### Constraints and Triggers

- For relational databases
- SQL standard; systems vary considerably

(Integrity) Constraints  
constrain allowable database states

an integrity constraints, and they



**Constraints and Triggers**

- For relational databases
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(Integrity) Constraints  
constrain allowable database states

0:24

**Constraints and Triggers**

- For relational databases
- SQL standard; systems vary considerably

(Integrity) Constraints  
constrain allowable database states

Triggers  
monitor database changes,  
check conditions and initiate actions

0:33

**Integrity Constraints**

Impose restrictions on allowable data, beyond those imposed by structure and types

Examples

0:52

**Integrity Constraints**

Impose restrictions on allowable data, beyond those imposed by structure and types

Examples

```
0:0 < GPA < 4.0
constraint < 30000 <= 70000
decision: 'y' 'x' null
major < 'cs' => decision < null
0:0 < 300 => not admitted else > 30000
```

2:54

3:0

Problems watching the video? [Download it](#)

### Additional Content for Motivation and Overview

[Motivation and Overview Slides \(Annotated\)](#)

# Vídeo

- OER



# Motores de Buscas existentes para OER

- Motor de Busca Personalizado do Google
  - OER Dynamic Search Engine
  - Zaid Ali Alsagoff – Universiti Tun Abdul Razak
    - 136 locais (Open Courseware, Podcasts, Repositórios, outros) - <http://goo.gl/LSnnp>
    - CS Curriculum Search
- OpenDOAR – Reino Unido
- OpenCourseWare Finder
- Didactalia
  - OER para o idioma espanhol

# Iniciativa do Instituto ISKME

- A Internet é rica em recursos educacionais abertos para professores e alunos. No entanto, encontrar esses recursos é muitas vezes demorado.
- **ISKME criou OER Commons (2007)**
  - **É um sistema onde** ajuda os usuários encontrar Recursos Educacionais Abertos na qual eles podem pesquisar, navegar e avaliar os recursos.

# OER Commons

- Criou alianças com mais de 500 grandes parceiros de conteúdo, a fim de fornecer um único ponto de acesso a conteúdo de qualidade de todo o mundo.
- Os usuários podem pesquisar em mais de 42.000 OER controlados.

# Iniciativa do Instituto ISKME

- OER surge como uma fonte de redução de custos de currículo, oportunidade de oferece práticas de ensino e aprendizagem de uma forma flexível, equitativo, colaborativa e participativa.

## DiscoverEd - CC

- É um protótipo experimental do Creative Commons, que tenta fornecer uma solução escalável para a busca e descoberta de recursos educativos na web.
- A CC está particularmente interessada em REA e estão a colaborar com outros projetos para melhorar as capacidades de busca .
- DiscoverEd é construído sobre o Nutch



# Apache Nutch



- Projeto de software para pesquisa na web
- Open source
- Desenvolvido em Java

# Objetivo

- Criar um mecanismo eficiente para encontrar OER na Web.

# Principais Referências

- **An Empirical Study on Performance Comparison of Lucene and Relational Database** - Yinan Jing, Chunwang Zhang, Xueping Wang
- **Building a Business Plan for DSpace, MIT Libraries' Digital Institutional Repository** - MIT Libraries, DSpace Project - Mary R. Barton and Julie Harford Walker
- Enhanced Search for Educational Resources – A Perspective and a prototype from – ccLearn – v1, 2009
- Towards a Global Component Architecture for Learning Objects: An Ontology Based Approach- Katrien Verbert, Katholieke Universiteit Leuven
- **The Learning Objects Literature\*** - **Cap. 29.** *David A. Wiley* - Utah State University, Logan, Utah
- INTERNET DISCUSSION FORUM, 13 November – 1 December 2006, UNESCO
- Improving Relevance Prediction for Focused Web Crawlers - Mejdil S. Safran – 2012 – IEEE/ACIS International Conference on Computer and Information Science

# Udacity

“O ensino superior é cada vez mais custoso para os alunos e para nossa sociedade em geral.

Educação não é mais um evento único, mas uma **experiência ao longo da vida.**

A educação deve estar menos passivamente (sem longas palestras) e mais ativo (fazendo).

A educação deve capacitar os alunos para o sucesso não só na escola, mas na vida.”

**Udacity**

# Web

- Web ou "World Wide Web"
  - Tim Berners-Lee
    - Físico britânico
    - Inventou a web no CERN em 1989.
    - O projeto foi concebido e desenvolvido para atender a demanda de troca de informações entre os físicos em universidades e institutos de todo o mundo.
    - 30 Abril (1930) a tecnologia ficou disponível para todo mundo, em uma base livre de royalties.

