Re:Search

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Project Overview

- Easier way to find professors to work with
- Crawl directory biographies
- Create search engine for faculty directory
- Provide user friendly interface with contact information
Inspiration for Re:Search

- Inconsistency in faculty information
- University directory not user friendly
- No existing alternatives for students to use
Examples
Research

Architecture, Compilers, and Parallel Computing

Topics

Architecture and compiler research focuses on hardware design, programming languages, and their compilers for next-generation computers and computing components.

Parallel Computing research includes the entire spectrum, from extreme scale computing to new ways to bring parallel computing to mainstream devices and human-centered applications.

Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Research Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marc Snir</td>
<td>large-scale parallel systems, architecture</td>
</tr>
<tr>
<td>Laxmikant Kale</td>
<td>numerical, parallel, and scientific computing</td>
</tr>
<tr>
<td>Clara Nairitied</td>
<td>multimedia middleware, QoS, pervasive computing</td>
</tr>
<tr>
<td>Santu Adve</td>
<td>parallel computing, architecture, low-power systems</td>
</tr>
<tr>
<td>William Gropp</td>
<td>parallel computing</td>
</tr>
<tr>
<td>Wei-mei Han</td>
<td>architecture, HPC and parallel systems, compilers</td>
</tr>
<tr>
<td>Vikram Adve</td>
<td>compilers, software reliability, architecture</td>
</tr>
<tr>
<td>Guihong Chen</td>
<td>distributed systems</td>
</tr>
<tr>
<td>David Padua</td>
<td>parallel computing, compilers, architecture</td>
</tr>
</tbody>
</table>

Prospective Students

Current Students

Courses

Alumni

Research

News

Corporate Partners

About Us

Faculty Candidates

Staff Positions

Directory

Giving

Marc Snir

Michael Faiman and Saburo Muroga Professor
(217) 244-6568
snir@illinois.edu
4231 Siebel Center for Comp Sci

Education

Ph.D., Hebrew University of Jerusalem (supervisor: Professor El Shamir), 1979

Academic Positions

- 2007-2012, Lead Architect, Blue Waters system software, NCSA
- 2007-2011, Co-director, UPCRC
- 2007-2011, Professor (tenured), Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign
- 2001-present, Richard Farber and Saburo Muroga Professor, Department of Computer Science, University of Illinois at Urbana-Champaign

For more information

Marc Snir's home page

Related Stories

- Calvin Reaves, Blue Waters Graduate Fellowship for Work on Algebraic Multigrid
- CS@ILLINOIS has strong showing at SC15
- Illinois Symposium on Parallel Computing: a Tradition of Innovation
- Jon Brunvand, 2013 IEEE Computer Society Seymour Cray Memorial Award winner
- Marc Snir wins ACM Award for Excellence in Scalable Computing
- Snir named HPC Person of the Year
Weng Cho Chew  
Professor

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Elec & Comp Eng
378 Everitt Lab
1406 W Green
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(217) 244-7245 (fax)
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College of Engineering

Education
PhD Electrical Engineering Massachusetts Institute of Technology June 1996

For more Information
Prof. Chew's Home Page

Teaching Statement
Prof. Chew teaches undergraduate courses and graduate courses. Throughout his career at UUC, he has taught a large variety of undergraduate courses, ranging from electrical machines, linear systems, electronic devices, electromagnetic fields and waves, to quantum mechanics for electrical engineers. He also teaches graduate courses in fundamental electromagnetics, waves and fields in inhomogeneous media, and theory of microwave and optical waveguides. He seeks to explain difficult concepts in a simple way so that one can obtain good physical insight from the complicated mathematics. He often supplements his lectures with supplementary lecture notes. He believes in the adage, "Once the mind is stretched, it does not regain its original dimension," and, "If you can't explain something simply, you don't really understand it." He is in the winner of IEEE Graduate Teaching Award, the UUC Campus Award for Excellence in Graduate and Professional Teaching, and IEEE AP Chen-To Tai Distinguished Educator Award.

Research Statement
Prof. Chew's research interests lie in computational electromagnetics and fast computational algorithms for solving electromagnetic scattering and multiphysics problems. His recent research interest is in adding modern physics and multi-physics concepts to computational works. This includes developing models for solar cells, nano-electronics, quantum transport, and Colloid science. He also works on the area of directivity at the University of Hong Kong on "Theory, Modeling, and Simulation of Emerging Technologies".

His past areas of research interest have been in wave propagation, scattering, inverse scattering, complex boundary value problems for microstrip circuits, and inhomogeneous media for geophysical subsurface sensing, non-destructive testing applications. Previously, he has...
Implementation

- Crawled a list of netIDs with useful information
- Output the web pages into XML format
- Solr indexes the XML documents
- Velocity provided a nicer user interface
Scraper and Crawler
Solr Administrator Pages
Solr Search
Experiments

- Tested Okapi BM25, Dirichlet-Prior, and Jelinek-Mercer against simple keyword matching
- All returned similar results
- Okapi was slightly faster
“Cell Biology”
Obstacles

- Lack of consistency in information provided
- Solr's documentation is lacking
Future Work

- Creating an independent search engine
- Expanding our corpus (WINACS)
- Perform more tests for optimization
- Include custom similarity function
Questions?