DOI:10.1145/1536616.1536621 David Roman

The New Searchers

Behind Google's simple search box are a complex set of algorithms. Search experts say they are updated constantly, but the same old search page and the listed results don't hint at the work being done to improve search. That work can be tracked on the *Communications* Web site, which uses the Google Search Appliance.

Google executives discuss a major change in the company's approach to search in an interview series by *Digital Daily's* John Paczkowski posted under the Opinion bar on *Communications*' site: http://cacm.acm.org/opinion/interviews/30077-google-and-the-evolution-of-search-whats-next-in-search-much-much-better-search/fulltext. The company now uses an unspecified number of individuals called Quality Raters located around the world to evaluate and improve results. They've added a human touch to the search process. That's just the start.

Researchers are looking to apply spectral graph theory to improve Google's PageRank algorithms, as reported by Kirk L. Kroeker (http://cacm.acm.org/magazines/2008/9/5305-finding-diamonds-in-the-rough/fulltext), and Google is trying to index and add Deep Web pages to the billions it searches today, notes Alex Wright (http://cacm.acm.org/magazines/2008/10/535-searching-the-deep-web/fulltext).

The unchanged Google page doesn't hint at any of this, but the changes are evident to experts when they plug the same terms into Google and perform a search repeatedly over time. When the search is over the results are different.

A more contemporary face of search is Cornell Professor Jon Kleinberg, whose efforts to determine relevant, trusted sources were embedded into the Hubs and Authorities algorithm. Kleinberg was awarded the 2008 ACM-Infosys Foundation Award in the Computing Sciences, cited for his contributions to improving search techniques employed by billions of users worldwide (http://cacm.acm.org/news/25188-network-pioneer-cited-for-revolutionary-advances-in-web-search-techniques/fulltext).Searchers' tendency to click the top item on a search page reinforces the primacy of sources identified by Kleinberg's linkage-based algorithms, which may prompt further refinement (http://cacm.acm.org/magazines/2008/2/5454-are-people-biased-in-their-use-of-search-engines/fulltext).

Kleinberg lecturing at Cornell.

KLEINBERG PHOTOGRAPH BY MARC SMITH

ACM Member News

HABERMANN AND WILLIAMS WIN SIGSOFT INFLUENTIAL EDUCATOR AWARD

The late A. Nico Habermann, founding dean of Carnegie Mellon University's School of

Computer Science, and Laurie Williams (left), associate professor of computer science at North Carolina State University, were honored by SIGSOFT with its inaugural Influential Educator Award.

Habermann was cited "for significant and lasting contributions to the field of software engineering as a teacher and mentor." His widow, Marta Habermann, accepted the award from William Griswold, SIGSOFT chair, at the International Conference on Software Engineering, in May.

In recognizing Williams for her significant contributions to software engineering and computer science education, particular notice was paid to her outstanding work in propagating pair programming as a widely adopted educational practice, her work in establishing an open seminar environment for software engineering, and in creating an agile software engineering curriculum.

The SIGSOFT Influential Educator Award will be presented annually to an educator who has made significant contributions to, and impact on, the field of software engineering with his or her accomplishments as a teacher, mentor, researcher (in education or learning), author, and/or policymaker.

SIGCOMM 2009

The premier conference on data communications, SIGCOMM 2009 will be held in Barcelona, Spain from August 17–21, 2009. The conference will include sessions on wireless networking, data center network design, novel aspects to networking, and other topics. Jon Crowcroft, a professor of computer science at the University of Cambridge and winner of the 2009 SIGCOMM Award, is the keynote speaker. For more info, visit http://conferences.sigcomm.org/sigcomm/2009/.