

# Karl Gyllstrom

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Department of Computer Science  
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<http://www.cs.unc.edu/~karl>  
see website  
see website

**Research Interests** Information retrieval, personal information management, user interfaces.

## Education

**University of North Carolina, Chapel Hill, NC**

**Ph.D.** in Computer Science, October 2009

**M.S.** in Computer Science, 2005

*Thesis:* Activity-based task context in personal information management

*Advisor:* David Stotts

**University of Georgia, Athens, GA**

**B.S.** in Computer Science, 2002, *Phi Beta Kappa*.

## Work

### Experience

**Katholieke Universiteit Leuven, Post-doctoral researcher, 2010**

Collaborating in the design and implementation of an open source search engine for children as part of the PuppyIR project. PuppyIR is an FP7 European project, the largest and most competitive of projects in Europe. Research spans wide range from usability to content acquisition. Collaborating with several IR institutions including universities of Glasgow, Strathclyde, Twente, and Delft.

**Google, Research intern, October 2008 - June 2009**

Researched algorithms for automated detection of web research tasks among search users in order to determine when to provide more advanced organization features via the user interface.

**University of North Carolina, Chapel Hill, Assistant researcher, 2008 - 2009**

Worked with Diane Kelly on a query recommendation study. Researched algorithms to automatically generate recommended search queries to users. Implemented web-based search system using recommended queries, and deployed large scale study involving more than 100 users.

**Hewlett-Packard Labs, Research intern, 2007**

Designed and implemented the SeeTrieve system, a personal document retrieval tool which uses activity as a search attribute; traces users' document interaction via both the file system and user interface. Designed and implemented user study involving 16 participants.

**Hewlett-Packard Labs, Research intern, 2006**

Designed and implemented the Confluence system, an extension to an existing search tool that identifies document similarity through task commonality; traces users' document interaction via both the file system and user interface. Designed and implemented long term user study (3-6 months) involving 6 participants.

**University of North Carolina, Chapel Hill, Assistant researcher, 2003 - 2006**

Lead engineer on the FaceTop system, a system supporting remote collaboration via a video-conferencing system combined with a shared desktop workspace. Project featured in Wired, Slashdot, and a number of conference publications.

**IBM, Software engineer intern, 2003**

Developer on BPEL-Lite project, enabling suspension and resumption of Java processes in WebSphere. Presented work to IBM CEO Sam Palmisano.

**Mentisys, Software engineer intern, 2001**

Developed testing software for large, distributed, enterprise Java application.

## Teaching Experience

**Katholieke Universiteit Leuven**, *Co-instructor*, 2010-2011  
Co-instructor in graduate level course on text-based information retrieval.

**University of North Carolina, Chapel Hill**, *Instructor*, 2009  
Designed and taught course on introductory programming in Java for a class of 48 undergraduate students.

**University of North Carolina, Chapel Hill**, *Teaching assistant*, 2002  
Graded and designed assignments for a introductory computing class of over 50 students.

## Reviewed full papers

Diane Kelly, **Karl Gyllstrom**. *An Examination of Two Delivery Modes for Interactive Search System Experiments: Remote vs. Face-to-Face*. To appear in CHI, 2011.

**Karl Gyllstrom**, Marie-Francine Moens. *Clash of the Typings: Finding controversies and childrens topics within queries*. To appear in ECIR, 2011.

**Karl Gyllstrom**, Marie-Francine Moens. *Wisdom of the Ages: Toward Delivering the Children's Web with the Link-based AgeRank Algorithm*. In CIKM, 2010.

Diane Kelly, Amber Cushing, Maureen Dostert, Xi Niu, **Karl Gyllstrom**. *Effects of popularity and quality on the usage of query suggestions during information search*. In CHI, 2010. *Nominated for best paper award*.

[**Short paper**] Elin Rønby Pedersen, **Karl Gyllstrom**, Shengyin Gu, Peter Jin Hong. *Automatic Generation of Research Trails in Web History*. In IUI, 2010.

Diane Kelly, **Karl Gyllstrom**, Earl Baily. *A Comparison of Query and Term Suggestion Features for Interactive Searching*. In SIGIR, 2009.

**Karl Gyllstrom**. *Passages through time: chronicling users' information interaction history by recording when and what they read*. In IUI, 2009. ACM Press.

**Karl Gyllstrom**, Craig Soules, Alistair Veitch. *Activity Put in Context: Identifying implicit task context within the user's document interaction*. In IiiX, 2008. ACM Press.

**Karl Gyllstrom**, Craig Soules. *Seeing is retrieving: Building information context from what the user sees*. In IUI, 2008. ACM Press.

**Karl Gyllstrom**, Dorian Miller, and David Stotts. *Techniques for improving the visibility and "sharability" of semi-transparent video in shared workspaces*. In ACM-SE 45, 2007. ACM Press.

Dorian Miller, **Karl Gyllstrom**, David Stotts, and James Culp. *Semi-transparent video interfaces to assist deaf persons in meetings*. In ACM-SE 45, 2007. ACM Press.

Kanyamas Navoraphan, Edward F. Gehringer, James Culp, **Karl Gyllstrom**, and David Stotts. *Next-generation dpp with sangam and facetop*. In Eclipse, USA, 2006. ACM Press.

David Stotts, Jason McC. Smith, and **Karl Gyllstrom**. *Facespace: endo and exo-spatial hypermedia in the transparent video facetop*. In Hypertext '04, 2004. ACM Press.

David Stotts, Jason McC. Smith, and **Karl Gyllstrom**. *Support for distributed pair programming in the transparent video facetop*. In XP/Agile Universe, 2004. *Best paper award*.

**Reviewed posters, workshops, and demos** [Demo paper] Carsten Eickhoff, Tamara Polajnar, **Karl Gyllstrom**, Sergio Duarte Torres, Richard Glassey. *Title withheld*. Submitted to ECIR, 2011.

[Position paper] **Karl Gyllstrom**, Elin Rønby Pedersen. *Not gone, but forgotten: Helping users re-find web pages by identifying those which are most likely to be lost*. In SIGIR Desktop Search Workshop, 2010.

[Poster] **Karl Gyllstrom**, Marie-Francine Moens. *A Picture is Worth a Thousand Search Results: Finding Child-Oriented Multimedia Results with collAge*. In SIGIR 2010.

[Poster] Earl Bailey, Diane Kelly, **Karl Gyllstrom**. *Undergraduates Evaluations of Assigned Search Topics*. In SIGIR, 2009.

[Doctoral consortium] **Karl Gyllstrom**. *Tracing, indexing, and retrieving desktop activity with the Passages system*. In UIST Doctoral Consortium, 2008.

[Poster] **Karl Gyllstrom**, Craig A. N. Soules, Alistair Veitch. *Confluence: enhancing contextual desktop search*. In SIGIR, 2007.

## Patents

*Methods for Merging Text Snippets for Context Classification*.

**Karl Gyllstrom**, Craig Soules. Pending.

*Methods for Pairing Text Snippets to File Activity*.

**Karl Gyllstrom**, Craig Soules. Pending.

*Using Interface Events to Group Files*.

**Karl Gyllstrom**, Alistair Veitch, Henri J. Suermondt, Pankaj Mehra. Pending.

**Academic Service** ACM SIGIR – Program committee (Paper, poster)

SIGIR Desktop Search Workshop – Program committee (Paper)

ECIR Desktop Search Workshop – Program committee (Paper)

ACM CHI – Reviewer for Works-in-Progress

## Awards

Best paper award XP/Agile Universe 2004

Best paper nomination CHI 2010

Doctoral consortium UIST 2008

SIGIR travel award 2007