## Computer Science Seminar

## Understanding and Supporting People in Dynamic Information Environments

#### Sue Dumais

**Abstract:** The Web is a dynamic, ever-changing collection of information, yet most of the tools that we have for interacting with Web content, such as browsers and search engines, focus on a single snapshot of the information. In this talk, I will present descriptive analyses of how web content changes over time, how people re-visit web pages over time, and how re-visitation patterns are influenced by user intent and changes in content. These results have implications for browser and site design, search algorithms, and crawling. I will describe a new prototype that supports people in understanding how information they interact with changes over time, by highlighting how a Web page has changed since your last visit. Finally, I will describe a new retrieval model that represents and use features about the temporal evolution of web pages to improve ranking and inform crawl policy.

Susan Dumais is a Principal Researcher and manager of the Context, Learning and User Experience for Search (CLUES) Group at Microsoft Research. She has been at Microsoft Research since 1997 and has published widely in the areas of human-computer interaction and information retrieval. Her current research focuses on personal information management, user modeling and personalization, novel interfaces for interactive retrieval, and implicit measures of user interest and activity. She has worked closely with several Microsoft groups (Bing, Windows Desktop Search, Live Search, SharePoint Portal Server, and Office Online Help) on search-related innovations. Prior to joining Microsoft Research, she was at Bellcore and Bell Labs for many years, where she worked on Latent Semantic Indexing (a statistical method for concept-based retrieval), combining search and navigation, individual differences, and organizational impacts of new technology.

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