

*The University of Alabama
Department of Computer Science
Colloquium Series Speaker*

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"ROLEX: A System for Tightly-Integrated XML Publishing"

**Monday, November 22nd
11:00 a.m., HO 108**

Abstract:

An increasing number of applications use XML data published from relational databases. For speed and convenience, such applications routinely cache this XML data locally and access it through standard navigational interfaces such as DOM, sacrificing the consistency and integrity guarantees provided by a DBMS for speed. The ROLEX system is being built to extend the capabilities of relational database systems to deliver fast, consistent and navigable XML views of relational data to an application via a virtual DOM interface. This interface translates navigation operations on a DOM tree into execution-plan actions, allowing a spectrum of possibilities for lazy materialization. The ROLEX query optimizer uses a characterization of the navigation behavior of an application, and optimizes view queries to minimize the expected cost of that navigation. I will discuss the architecture of ROLEX, including its model of query execution and the query optimizer.

If time permits, I will give an overview about related work in automatically designing XML storage mappings based on workloads and/or more recent work in which we investigate synergies between ROLEX and popular XML tools like XSLT which may commonly be run on exported data.