

# Rajasekar Krishnamurthy

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## Education

- **Ph.D. in Computer Sciences**, University of Wisconsin-Madison: May 2000 - present  
(expected May 2004)  
Advisor: Professor Jeffrey F. Naughton  
Dissertation: XML to SQL Query Translation
- **M.S. in Computer Sciences**, University of Wisconsin-Madison: August 1998 - May 2000
- **B.Tech. in Computer Science and Engineering**, Indian Institute of Technology, Madras: July 1994 - May 1998

## Professional Experience

- **Research Assistant**, University of Wisconsin, August 2000 - present
- **Summer Intern**, IBM Almaden Research Center, May 2000 - August 2000
- **Summer Intern**, Hughes Research Labs, May 1999 - August 1999

## Teaching Experience

- **Teaching Assistant**, University of Wisconsin, August 1998 - May 2000
- **Teaching Assistant**, Indian Institute of Technology, Madras, July 1997 - May 1998

## Publications

- *Recursive XML Schemas, Recursive XML Queries, and Relational Storage: XML-to-SQL Query Translation*, Rajasekar Krishnamurthy, Raghav Kaushik, Jeffrey F. Naughton, Venkatesan T. Chakaravarthy: International Conference on Data Engineering (ICDE) 2004 (to appear).
- *XML-SQL Query Translation Literature: The State of the Art and Open Problems*, Rajasekar Krishnamurthy, Raghav Kaushik, Jeffrey F. Naughton: International XML Database Symposium, XSym 2003.
- *On the Difficulty of Finding Optimal Relational Decompositions for XML Workloads: a Complexity Theoretic Perspective*, Rajasekar Krishnamurthy, Venkatesan T. Chakaravarthy, Jeffrey F. Naughton: International Conference on Database Theory (ICDT) 2003.
- *Mixed Mode XML Query Processing*, Alan Halverson, Josef Burger, Leonidas Galanis, Ameet Kini, Rajasekar Krishnamurthy, Ajith Nagaraja Rao, Feng Tian, Stratis Viglas, Yuan Wang, Jeffrey F. Naughton, David J. DeWitt: International Conference on Very Large Data Bases (VLDB) 2003.
- *The Problem of Context Sensitive String Matching*, Venkatesan T. Chakaravarthy, Rajasekar Krishnamurthy: Combinatorial Pattern Matching (CPM) 2002.
- *A General Technique for Querying XML Documents using a Relational Database System*, Jayavel Shanmugasundaram, Eugene J. Shekita, Jerry Kiernan, Rajasekar Krishnamurthy, Stratis Viglas, Jeffrey F. Naughton, Igor Tatarinov: SIGMOD Record 30(3), 2001.

- *The Niagara Internet Query System*, Jeffrey F. Naughton, David J. DeWitt, David Maier, Ashraf Aboulmaga, Jianjun Chen, Leonidas Galanis, Jaewoo Kang, Rajasekar Krishnamurthy, Qiong Luo, Naveen Prakash, Ravishankar Ramamurthy, Jayavel Shanmugasundaram, Feng Tian, Kristin Tufte, Stratis Viglas, Yuan Wang, Chun Zhang, Bruce Jackson, Anurag Gupta, Rushan Chen: IEEE Data Engineering Bulletin 24(2), 2001.
- *Active Query Caching for Database Web Servers*, Qiong Luo, Jeffrey F. Naughton, Rajasekar Krishnamurthy, Pei Cao, Yunrui Li: International Workshop on the Web and Databases, WebDB 2000.
- *Probabilistic Data Structures for Priority Queues*, Sridhar Ramachandran, K. Rajasekar, C. Pandu Rangan: Scandinavian Workshop on Algorithm Theory (SWAT) 1998.

## Under Submission

- *Efficient XML-to-SQL Query Translation: Where to Add the Intelligence?*, Rajasekar Krishnamurthy, Raghav Kaushik, Jeffrey F. Naughton: Submitted to PODS 2004.
- *The Tradeoff between Horizontal and Vertical Representations of Sparse Data Sets*, Jennifer Beckham, Rajasekar Krishnamurthy, Jeffrey F. Naughton: Submitted to SIGMOD 2004.
- *On the Integration of Structure Indexes and Inverted Lists*, Raghav Kaushik, Rajasekar Krishnamurthy, Jeffrey F. Naughton, Raghu Ramakrishnan: Submitted to SIGMOD 2004.

## Academic Awards and Honors

- Stood All-India 31<sup>st</sup> in the IIT (Indian Institute of Technology) Joint Entrance Examination, 1994 among about 100,000 candidates.
- Recipient of the National Talent Search Examination Scholarship in India, 1992.

## Service Activities

- Member, Graduate Admissions Committee, UW-Madison Computer Sciences Department, 2002 & 2003
- External reviewer: ICDE, ICDT, VLDB Journal

## References

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| <ol style="list-style-type: none"> <li>1. Professor Jeffrey F. Naughton<br/><i>Professor</i><br/>Department of Computer Sciences<br/>University of Wisconsin<br/>1210 West Dayton Street<br/>Madison, WI 53706<br/>Phone: (608)262-8737<br/>naughton@cs.wisc.edu</li> </ol>                    | <ol style="list-style-type: none"> <li>3. Professor Raghu Ramakrishnan<br/><i>Professor</i><br/>Department of Computer Sciences<br/>University of Wisconsin<br/>1210 West Dayton Street<br/>Madison, WI 53706<br/>Phone: (608)262-9759<br/>raghu@cs.wisc.edu</li> </ol>      |
| <ol style="list-style-type: none"> <li>2. Professor David DeWitt<br/><i>Chair and John P. Morgridge Professor</i><br/>Department of Computer Sciences<br/>University of Wisconsin<br/>1210 West Dayton Street<br/>Madison, WI 53706<br/>Phone: (608)263-5489<br/>dewitt@cs.wisc.edu</li> </ol> | <ol style="list-style-type: none"> <li>4. Professor Jayavel Shanmugasundaram<br/><i>Assistant Professor</i><br/>Department of Computer Sciences<br/>Cornell University<br/>4105A Upson Hall<br/>Ithaca, NY 14853<br/>Phone: (607) 255-4117<br/>jai@cs.cornell.edu</li> </ol> |