

**Venkatesan Chakaravarthy**  
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**Education**

- Ph.D (Computer Science) – 2004  
University of Wisconsin, Madison.  
Advisor: Prof. Jin-Yi Cai.
- Master of Technology (Computer Science) – 1997  
Indian Institute of Technology, Madras.
- Bachelor of Engineering (Computer Science) – 1995  
Anna University, Madras.

**Research Interests:** Theory of computing, database systems, program analysis.

**Work Experience**

- *Current employment:* Research Staff Member, Database management group, IBM India Research Lab, New Delhi.
- Senior Software Engineer, Future Software, Madras. (1997 - 1998)  
Designed and implemented a framework for developing SNMP network management agents.

**Publications**

- V. Chakaravarthy, S. Roy.  
Oblivious Symmetric Alternation.  
23rd Symposium on Theoretical Aspects of Computer Science, (STACS) 2006.
- J. Cai, V. Chakaravarthy.  
A Note on Zero Error Algorithms Having Oracle Access to One NP Query.  
11th International Computing and Combinatorics Conference, (COCOON) 2005.
- J. Cai, V. Chakaravarthy, D. van Melkebeek.  
Time-Space Tradeoff in Derandomizing Probabilistic Logspace.  
21st Symposium on Theoretical Aspects of Computer Science, (STACS) 2004.  
(Invited to a special issue of *Theory of Computing Systems*)
- R. Kaushik, R. Ramakrishnan, V. Chakaravarthy.  
Synopsis for Query Optimization: A Space-Complexity Perspective.  
23rd ACM Symposium on Principles of Database Systems, (PODS) 2004.  
(Invited to a special issue of *ACM Transactions on Database Systems*)
- R. Krishnamurthy, V. Chakaravarthy, R. Kaushik, J. Naughton. Recursive XML Schemas, Recursive XML Queries, and Relational Storage: XML-to-SQL Query Translation.  
20th International Conference on Data Engineering, (ICDE) 2004.

- J. Cai, V. Chakaravarthy, L.A. Hemaspaandra, M. Ogihara.  
Competing Provers Yield Improved Karp–Lipton Collapse Results.  
20th Symposium on Theoretical Aspects of Computer Science, (STACS) 2003.
- V. Chakaravarthy.  
New Results on the Computability and Complexity of Points-to Analysis.  
30th ACM Symposium on Principles of Programming Languages, (POPL) 2003.
- R. Krishnamurthy, V. Chakaravarthy, J. Naughton. On the Difficulty of Finding Optimal Relational Decompositions for XML Workloads: a Complexity Theoretic Perspective.  
9th International Conference on Database Theory, (ICDT) 2003.
- V. Chakaravarthy, R. Krishnamurthy.  
The Problem of Context Sensitive String Matching.  
13th Symposium on Combinatorial Pattern Matching, (CPM) 2002.
- V. Chakaravarthy, S. Horwitz.  
On the Non-Approximability of Pointer Analysis.  
*Acta Informatica* 38(8), 2002.
- J. Cai, V. Chakaravarthy, R. Kaushik, J. Naughton.  
On the Complexity of Join Predicates.  
20th ACM Symposium on Principles of Database Systems, (PODS) 2001.
- V. Radhakrishnan, V. Chakaravarthy, K.Krithivasan.  
Pattern Matching in Matrix Grammars.  
*Journal of Automata, Languages and Combinatorics* 3(1), 1998.
- K. Krithivasan, V. Chakaravarthy, R. Rama.  
Array Splicing Systems.  
New Trends in Formal Languages, LNCS 1218, 1998.
- V. Chakaravarthy, K.Krithivasan.  
A Note on Extended H Systems with Permitting/Forbidden Contexts of Radius One.  
Bulletin of the EATCS, Vol 62, 1997.

### Academic Awards

- Prof. H. N. Mahabala prize for the best M. Tech project in computer science. Title: Studies on Splicing Systems. Advisor: Prof. Kamala Krithivasan. I.I.T, Madras, 1997.