

Curriculum Vitae
CHAITANYA K. BARU
San Diego Supercomputer Center
University of California San Diego
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EDUCATION

- 1983 – 85** Doctor of Philosophy (*Ph.D.*) in Electrical Engineering, University of Florida, Gainesville, FL, 1985.
- 1981 – 83** Master's in Engineering (*M.E.*) in Electrical Engineering, University of Florida, Gainesville, FL, 1983 (*Outstanding Master's Thesis Award*).
- 1974 – 79** Bachelor of Technology (*B.Tech.*) in Electrical Engineering, Indian Institute of Technology, Madras, India, 1979.

EMPLOYMENT

- 2004 –** *Division Director*, Science R&D, San Diego Supercomputer Center, University of California, San Diego, La Jolla, CA.
- 2001 – 04** *Program Co-Director*, Data and Knowledge Systems, San Diego Supercomputer Center, University of California, San Diego, La Jolla, CA.
- 2000 – 01** *Assistant Director*, Data Intensive Computing Group, San Diego Supercomputer Center, University of California, San Diego, La Jolla, CA.
- 1996–2000** *Senior Principal Scientist*, Data Intensive Computing Group, San Diego Supercomputer Center, General Atomics, La Jolla, CA.
- 1992 – 96** *Advisory Programmer*, Database Technology Institute, IBM Almaden Research Labs, San Jose, CA and *Advisory Development Analyst*, Database Technology Group, IBM Toronto Labs.
- 1985 – 92** *Assistant Professor*, Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI 48109-2122.
- 1979 – 81** *Programmer Analyst*. Tata Engineering and Locomotive Company, Ltd., Pune, India.

COMMITTEE MEMBERSHIPS

- Member, Biomedical Informatics Research Network (BIRN, www.nbirn.net) Leadership Team, 2004–.
- Co-Lead, Earth Science CyberInfrastructure (ES-CI) Task Force (with Lee Allison and Tom Jordan), 2003–.
- Lead, TeraGrid Data Working Group, 2001–2002.
- Member of Editorial Review Board, Journal of Database Management, 2001–2002.
- Member of Review Committee, Canada Research Chairs program, Natural Sciences and Engineering Research Council (NSERC) of Canada, 2000–2002.
- Member of the Architecture Working Group, California Digital Library, University of California, Office of the President, Oakland, CA, 1998–2000.
- Member of the *Grants Selection Committee (GSC)* for Computer and Information Sciences, Natural Sciences and Engineering Research Council (NSERC) of Canada, 1994-97. (The GSC

is responsible for annually reviewing grant proposals from computer science faculty in Canada and making funding decisions).

- IBM representative on the Transaction Processing Council's TPC-D Benchmark Standard Subcommittee, 1993-95. Participated in drafting the original TPC-D specification.

INVITED TALKS / WORKSHOPS

- Invited attendee, NSF Workshop on Responding to the Unexpected, February 27-March 1, 2002, New York City.
- Invited speaker, monthly meeting of FedStats (Federal Statistical agencies), March 21st, 2002, Arlington, VA.
- Invited speaker, NSF Earthscope Computer Science and Information Technology workshop, March 25-28, 2002, Snowbird, Utah.
- Invited speaker, NSF Workshop on Biogeophysical Fields, April 9th, 2002, San Diego, CA.
- Invited attendee, IBM Almaden Institute on Autonomic Computing, April 11-12, 2002, San Jose, CA.
- Invited speaker, Global Biodiversity Information Facility, Data interoperability and Database Standards Scientific and Technical Advisory Group meeting, June 27th, 2002, San Diego, CA.
- Invited speaker, National Academy of Sciences Committee on Beyond Mapping: The Role of Information Technology in the Mapping Sciences, August 22nd, 2002, Washington, DC.
- Invited speaker, NSF Workshop on Chronostratigraphic Information Systems, August 28-30, 2002, Silver Springs, MD.
- Invited speaker, NIH Workshop on Data Collaboratories, September 16-17, 2002, Arlington, VA.
- Invited attendee, NSF Workshop on Cyberinfrastructure for Environmental Research and Education, October 29-30, 2002, Boulder, CO.
- Invited panelist, Panel on High End Information Technology Requirements for Homeland Security, Supercomputing 2002, Nov. 16-22, 2002, Baltimore, MD.
- Invited speaker, NSF Digital Government Consortium meeting, Oct. 19, 2000, Arlington, VA.
- Invited speaker, Excellence in Government 2000, July 11-13, 2000, Washington, DC.
- Invited speaker, Digital Government 2000, July 10-12, 2000, Washington, DC.
- Invited speaker, Computer Science Seminar Series, May 14, 1999, Lawrence Livermore National Labs, Livermore, CA.
- Invited speaker, LIGO Database Workshop, Oct. 22-23, 1998, California Institute of Technology (Caltech), Pasadena, CA.
- Invited speaker, FedWeb Workshop on Digital Libraries, Aug. 13-14, 1998, Bethesda, MD.
- Invited speaker, HPSS Users Group meeting, July 28-29, Dallas, TX.
- Invited speaker, Strategic Directions of Data Warehousing and Data Mining, RCI-NASA Workshop, April 20-21, 1998, Santa Barbara, CA.
- Invited talk on "Introduction to parallel database systems," in the CSC434 Data Management Systems course, Dept. of Computer Science, Univ. of Toronto, Oct. 1995, Toronto, Canada.
- Talk on "An Overview of DB2 Parallel Edition," in the Industrial Talks Session, *International Conference on Parallel and Distributed Information Systems (PDIS)*, September 28-30, 1994, Austin, TX.

- Talk on "TPC-D: An Industry Standard Decision Support Systems Benchmark," in the Systems Seminar Series, Dept. of Computer Science, University of Toronto, March 1994, Toronto, Canada, March 1994.
- Talk on "Data placement in shared-nothing parallel database systems," in the Database Seminar Series, Dept. of Computer Science, University of Toronto, Nov. 1992, Toronto, Canada.

TUTORIALS

- Tutorial on "Warehousing Scientific Data," NASA Workshop on Data Mining and Data Warehousing, August 19-20, 1997, Silver Springs, MD.
- Tutorial on "Managing Large Data Sets," CASCON'96, November 12-14, 1996, IBM Toronto Labs, Toronto, ON.
- Tutorial on "Parallel Database Systems: The First Generation Products," *International Conference on Parallel and Distributed Information Systems (PDIS)*, September 28-30, 1994, Austin, TX.

PH.D. COMMITTEES CHAIRED

- Ophir Frieder. Dissertation title: "*Database processing on a cube-connected multicomputer system*," EECS Dept., University of Michigan, Dec. 1987. Recipient of IBM Graduate Fellowship Award. Currently, Chaired Professor, Illinois Institute of Technology, Chicago, IL.
- Piyush Goel. Dissertation title: "*Dataflow query processing and optimization*," EECS Dept., University of Michigan, May 1992. Co-Founder Everypath.com, San Jose, CA.
- Sriram Padmanabhan. Dissertation title: "*Data placement in shared-nothing parallel database systems*," EECS Dept., University of Michigan, July 1992. Recipient of IBM Graduate Fellowship Award. Currently, group manager at IBM T.J. Watson Research Center, Hawthorne, NY.

U.S. PATENTS

1. Method and apparatus for achieving uniform data distribution in a parallel database system, (with F. Koo), Patent No. US5970495, IBM, Oct. 19, 1999.
2. Method and apparatus for implementing partial declustering in a parallel database system, (with G. Fecteau, J. Kirton, L. Kollar, F. Koo), Patent No. US5878409, IBM, March 2, 1999.

PUBLICATIONS: SOFTWARE

1. One of the designers and developers of IBM's DB2 Parallel Edition Version 1.0. Product was released commercially in December 1995.
2. One of the designers of the SDSC Storage Resource Broker (SRB). First version was released in September 1997.

PUBLICATIONS: TECHNICAL JOURNALS

1. "An extensible information model for shared scientific data collections," (with A. Gupta), *Journal on Future Generation Computer Systems*, 1999.
2. "DB2 Parallel Edition," (with Fecteau et al), *IBM Systems Journal*, April 1995.
3. "Site selection and query scheduling policies for a multicomputer database system," (with O. Frieder), *IEEE Transactions on Knowledge and Data Engineering*, August 1994.
4. "Inter-subcube routing in hypercubes," (with S. Padmanabhan), accepted for publication in the *IEEE Transactions on Parallel and Distributed Systems*, 1993.

5. "Join and data redistribution algorithms for hypercubes," (with S. Padmanabhan), *IEEE Transactions on Knowledge and Data Engineering*, June 1993.
6. "Squashed embedding of E-R schemas in hypercubes," (with P. Goel), *Journal of Parallel and Distributed Computing*, Vol.8, No.4, April 1990, pp.340-348, Academic Press.
7. "Database operations in a cube-connected multicomputer system," (with O. Frieder), *IEEE Trans. on Computers*, Vol. 38, No. 6, June 1989, pp.920-927.
8. "The Architecture of SM3: A dynamically partitionable multicomputer system," (with S.Y.W. Su), *IEEE Trans. on Computers*, Vol. 35, No. 9, Sept. 1986, pp.790-802. Also appeared in the IEEE Tutorial on Parallel Architecture for Database Systems, IEEE Computer Society Press, 1989.
9. "Dynamically partitionable multicomputers with switchable memories," (with S.Y.W. Su), *Journal of Parallel and Distributed Computing*, Vol. 1, No. 2, Academic Press, Nov. 1984, pp.152-184.

PUBLICATIONS: BOOK CHAPTERS

1. "Data Intensive Computing," (with Moore, R., Marciano, R., Rajasekar, A., and Wan, M.), in *The Grid: Blueprint for a New Computing Infrastructure*, edited by Ian Foster and Carl Kesselman, January 1999, Morgan Kaufmann.
2. "Virtualization Services for Data Grids" (with Moore, R.), to appear in, *Grid Computing: Making the Global Infrastructure a Reality*, edited by Fran Berman, Geoffrey Fox, and Tony Hey, to be published February 2003, Wiley.

PUBLICATIONS: CONFERENCE PAPERS

1. "Information Integration Technologies for Current Research Information Systems," *CRIS 2000 Conference*, May 25-27, 2000, Helsinki, Finland.
2. "Xviews: XML views of relational schemas," in *Database and Expert Systems Applications (DEXA'99)*, Sept. 2, 1999, Florence, Italy.
3. "Integrating GIS and Imagery through XML-Based Information Mediation," (with Gupta, Marciano, Zaslavsky), NSF International Workshop on Integrated Spatial Databases: Digital Images and GIS, June 14-16, 1999, Portland, Maine.
4. "The SDSC Storage Resource Broker," (with R. Moore, A. Rajasekar, M. Wan), in the *Proceedings of CASCON'98*, Nov.30-Dec.3, 1998, Toronto, ON.
5. "A Hierarchical Access Control Scheme for Digital Libraries," (short paper, with A. Rajasekar), in the *Proceedings of the ACM Digital Libraries Conference 1998*, June 24-26, 1998, Pittsburgh, PA.
6. "Data Handling Architecture for a Prototype Federal Application," (with Choi et al), *Proceedings of the IEEE Mass Storage Systems Conference*, March 1998, College Park, MD.
7. "Metadata to Support Information-Based Computing Environments," (with Moore et al), *IEEE Conference on Metadata, Metadata-97*, September 10-11, 1997, Silver Springs, MD.
8. "Data reorganization in parallel database systems," (with Daniele C. Zilio, *IEEE Workshop on Advances in Parallel and Distributed Systems*, October 6, 1993, Princeton, N.J.
9. "Data placement in shared-nothing parallel database systems," (with S. Padmanabhan), *Proceedings of the Conference on Information and Knowledge Management*, November 1992, Baltimore, MD.

10. "Query scheduling and site selection algorithms for a cube-connected multicomputer system," (with O. Frieder), *Proceedings of the International Conference On Distributed Computer Systems*, June 1988, San Jose, CA.
11. "Join on a cube: Analysis, simulation, and implementation," (with O. Frieder, D. Kandlur, and M. Segal), *Proceedings of the 5th International Workshop on Database Machines*, Oct. 1987, Karuizawa, Japan, pp.74-87.
12. "Data distribution and query scheduling policies for a cube-connected multicomputer system," (with O. Frieder), *Proceedings of the 2nd International Conference on Supercomputing Systems*, San Francisco, CA. May 1987.
13. "Issues in query processing on a cube-connected multicomputer system," (with O. Frieder), *Proceedings of the 6th IEEE Phoenix Conference on Computers and Communications*, Scottsdale, AZ., Feb. 25-27, 1987, pp.315-319.
14. "Implementing relational database operations in a cube-connected multicomputer system," (with O. Frieder), *Proceedings of the 3rd IEEE International Conference on Data Engineering*, Los Angeles, CA., Feb.2-6, 1987.
15. "Matrix multiplication on a multicomputer system with switchable main memory modules," (with A. Thakore and S.Y.W. Su), *Proceedings of the 1st International Supercomputing Systems Conference*, Tarpon Springs, FL., Dec.17-20, 1985, pp.650-659.
16. "Performance evaluation of the statistical aggregation by categorization in the SM3 system," (with S.Y.W. Su), *Proceedings of the ACM-SIGMOD International Conference on Management of Data*, Boston, MA., June 18-21, 1984, pp.77-89.
17. "SM3: A dynamically partitionable multicomputer system with switchable main memory modules," (with T. Fei and S.Y.W. Su), *Proceedings of the IEEE International Conference on Data Engineering*, Los Angeles, CA., April 24-27, 1984, pp.42-49.

PUBLICATIONS: OTHER CONFERENCE PAPERS/POSTERS

1. "GEON: The Geoinformatics Network," (with Krishna Sinha), Annual Meeting of the Geological Society of America, October 26-30, 2002, Denver, CO.
2. "Data Access and Management Services on the Grid," (with Raman, V., Narang, I., Crone, C., Haas, L., Malaika, S., Mukai, T., Wolfson, D.), Global Grid Forum 5, July 21-24, 2002, Edinburgh, Scotland.
3. "Information integration of geospatial information", Demo, NSF Digital Government Conference, May 19-21, 2002, Redondo Beach, CA.
4. "XML-based information mediation for digital libraries," (with Papakonstantinou, Gupta, Marciano, Ludaescher, Velikhov), demo at *ACM Digital Libraries'99*, Berkeley, CA, August 1999.
5. "XML-based information mediation with MIX," (with Papakonstantinou, Gupta, Marciano, Ludaescher, Velikhov), demo at *ACM-SIGMOD'99*, Philadelphia, PA, June 1999.
6. "Querying Web Mediators," (with Chu, Gupta, Ludaescher, Marciano, Papakonstantinou, Velikhov), demo at the *Internet2* meeting, Washington, DC, April 1999.
7. "Managing Very Large Scientific Data Collections," (poster), *5th International Conference on High Performance Computing (HiPC'98)*, Dec.17-20, 1998, Chennai, India.
8. "Features and requirements for an XML view definition language: Lessons from XML information mediation," (with Ludaescher, Papakonstantinou, Vianu), position paper in *QL'98-The Query Languages Workshop*, World Wide Web Consortium, Dec.3-4 1998, Boston, MA.

9. "Integrating DB2 with HPSS," (poster, with M. Lo, S. Padmanabhan, and V. Gottemukalla) to be presented at *Supercomputing'98*, Nov.10-12, Orlando, FL.
10. "Archiving Metadata," (poster), *European Conference on Digital Libraries, EuroDL'98*, September 21-23, 1998, Crete, Greece.
11. "Information Based Computing," (with Moore, Karin, Rajasekar) *Proceedings of the Workshop on Research and Development Opportunities in Federal Information Services*, March 1997.
12. "An Overview of DB2 Parallel Edition," (with G. Fecteau et al), *ACM SIGMOD-95, International Conference on the Management of Data*, San Jose, CA, May 1995.
13. "TPC-D: Analysis of an industry standard decision support systems benchmark," (with P. Larson, T.S. Liu, B. Schiefer, and S. Retnasena), *Proceedings of DB/EXPO-94*, San Francisco, May 1994.
14. "Routing between subcubes in a hypercube," (with S. Padmanabhan), *Proceedings of the 6th Distributed Memory Computing Conference*, Portland, OR, April 1991.
15. "A comparison of join algorithms for hypercubes," (with S. Padmanabhan, Q. Stout, and B. Wagar), *Proceedings of the 4th Hypercube Conference*, Monterey, CA., March 1989.
16. "Mapping E-R schema graphs onto hypercubes," (with P. Goel), *Proceedings of the 4th Hypercube Conference*, Monterey, CA., March 1989.
17. "Study of dynamic data redistribution for database processing," (with O. Frieder), *Proceedings of the 3rd Hypercube Conference*, Pasadena, CA., Jan. 1988.
18. "Analyzing Claims Dependencies in Patent Documents," technical report, DOCT project, July 1997.

CONFERENCE / WORKSHOP ORGANIZATION

- Co-organizer, Long-Term Ecological Research (LTER) Geographic Information Systems (GIS) Workshop, October 10, 2002, San Diego, CA.
- Co-PI, NSF Workshop on Scalable Information Networks for the Environment (SINE), October 29-31, 2001, San Diego, CA.
- Co-chair, Local Arrangements, *IEEE International Conference on Data Engineering (ICDE2000)*, Feb. 2000, San Diego, CA.
- Member of the Program Committee, *ACM First International Workshop on Data Warehousing and OLAP*, Nov.7, 1998, Washington, DC.
- Member of the Panel on Heterogeneous Information Sources, *CASCON'97*, IBM Toronto Labs, Nov. 10-13, 1997, Toronto, Canada.
- Member of Program Committee, *IEEE Knowledge and Data Engineering Exchange Conference (KDEX-97)*, Aug. 1997, Newport Beach, CA.
- Chair, Panel Session on Performance of Future Database Systems, *International Conference on Very Large Data Bases (VLDB'96)*, Sept.3-6, 1996, Bombay, India.
- Member of the Program Committee, *International Conference on Parallel and Distributed Information Systems*, Dec.1996, Miami Beach, FL.
- Program Committee Vice-Chair for Parallel and Distributed Database Systems, *IEEE 12th International Conference on Data Engineering*, Feb. 27 - Mar. 3, 1996 New Orleans, LA.
- Co-Chair of Workshop on Parallel Computing and Database Systems, *CASCON'95*, November 5, 1995, Toronto, Canada (Chair: Prof. Guang Gao, Dept. of Computer Engineering, McGill University, Montreal, Quebec, Canada).
- Member of the Program Committee, *High Performance Computing Symposium - HPCS'95*, July 10-12, 1995, Montreal, Canada.

- Co-Chair of Workshop on Emerging Applications of Database Systems, *CASCON'94*, November 2, 1994, Toronto, Canada (Chair: Prof. Sham Navathe, College of Computing, Georgia Institute of Technology, Atlanta, GA).
- Chair, Panel Session on Database Systems in the Year 2000, *CASCON'94* (Panelists: David DeWitt, Sham Navathe, Bruce Lindsay, Paul Larson), Nov. 1, 1994, Toronto, Canada.
- Co-Chair of Workshop on Design, Implementation, and Performance of Parallel Database Systems, *CASCON'94*, November 1, 1994, Toronto, Canada. (Chair: Prof. David DeWitt, Dept. of Computer Science, University of Wisconsin, Madison, WI).
- Organizer of Workshop on Object and Data Integration in Heterogeneous Database Environments, *OOPSLA'94*, October 1994, Portland, Oregon.
- Chair of Workshop on Parallel Database Systems, *CASCON'93*, October 27, 1993, Toronto, Canada. (Co-chairs: Prof. Paul Larson, University of Waterloo and Prof. Abraham Silberschatz, University of Texas, Austin.)
- Co-chair of Workshop on Data Integration and Multidatabase Database Systems, *CASCON'93*, October 28, 1993, Toronto, Canada (Chair: Prof. Paul Larson, University of Waterloo).
- Organizer of Workshop on Object and Data Integration in Heterogeneous Database Environments, *OOPSLA'93*, September 27th, 1993, Washington, D.C.
- Member of the Program Committee, *IEEE Workshop on Advances in Parallel and Distributed Systems*, October 6, 1993, Princeton, N.J.
- Member of the Program Committee, *CIKM'93 2nd International Conference on Information and Knowledge Management*, November 1-5, 1993, Arlington, VA.
- Member of the Program Committee, *PARBASE-90 International Conference on Databases, Parallel Architectures, and their Applications*, March 7-9, Miami Beach, FL, 1990.
- Member of the Program Committee, *The Entity-Relationship Conference*, 1991.
- Organizer of a Mini-symposium on Databases, *4th Hypercube Conference*, Monterey, CA., March 1989.

RESEARCH PROJECTS—CURRENT

- (1) *GEON: The Geosciences Network—A Research Project to Create Cyberinfrastructure for the Geosciences* (SDSC PI). www.geongrid.org. Collaborative project among 12 institutions..
Funding: \$5,987,927 (UCSD share. Total grant amount for the entire project is \$11,600,000), October 2002—September 2007, National Science Foundation
- (2) *Data Intensive Grid Benchmarks* (PI). <http://grail.sdsc.edu/projects/grasp/>.
Funding: \$749,999, October 2002—September 2005, National Science Foundation
- (3) **Title:** Enabling the Creation and Use of GeoGrids for Next Generation Geospatial Information (co-PI)
Funding: \$448,717, September 2001—August 2004, National Science Foundation
- (4) **Title:** INGREIN Phase II: Integrated Georeferenced Environmental Information Network (PI).
Funding: \$250,000, September 2002-September 2003, University of California Life Science Informatics Program, and Environmental Systems Research Institute (ESRI) Inc.

(5) Title: INGREIN: Integrated Georeferenced Environmental Information Network (**PI**)
Funding: \$250,000, May 2001-April 2002, University of California Life Science Informatics Program and Environmental Systems Research Institute (ESRI) Inc.

(6) Title: I2T: An Information Integration Testbed for Digital Government
Sponsor: National Science Foundation
Amount: \$720,000
Duration: 3 years. July 2000-June 2003
Role: *Principal Investigator* (co-PIs: Robert Hollebeek, Univ. of Pennsylvania; Richard Rockwell, Univ. of Michigan; Yannis Papakonstantinou, Amarnath Gupta, UCSD).

(7) Title: Information Integration Architecture for a National Statistical Data Infrastructure
Sponsor: National Science Foundation
Amount: \$38,000
Duration: 4 months. April 2000-July 2000
Role: *Principal Investigator* (co-PI: Amarnath Gupta, SDSC).

(8) Title: Current Research Information Systems
Sponsor: Community of Science, Inc., Baltimore, MD.
Amount: \$200,000
Duration: 1 year. January 2000 to December 2001
Role: *Principal Investigator*.

(9) Title: Evaluation of the ArcXML Specification
Sponsor: ESRI Inc., Redlands, CA.
Amount: \$124,000
Duration: 1.5 years. June 2000 to December 2001
Role: *Principal Investigator*.

(10) Title: Data management for electronic commerce applications
Sponsor: Center for Advanced Studies, IBM Toronto Labs
Amount: \$100,000
Duration: 4 years. January 1997 to December 2000
Role: *Co-Principal Investigator* (PI: Yannis Papakonstantinou, University of California, San Diego)

(11) Title: Study of performance monitoring and evaluation techniques for parallel database systems
Sponsor: Center for Advanced Studies, IBM Toronto Labs
Amount: \$100,000
Duration: 4 years. January 1995 to December 1998
Role: *Co-Principal Investigator* (PI: Jeffrey Naughton, University of Wisconsin)

(12) Title: Experimental facility for research in PARallel Database Systems (PADS)
Sponsor: AT&T Foundation
Amount: \$40,205

Duration: One-time, equipment grant

Role: *Principal Investigator*

(13) Title: Multicomputer system for parallel database processing

Sponsor: National Science Foundation

Amount: \$94,728

Duration: One-time, equipment grant

Role: **Principal Investigator** (Co-PI: Quentin Stout, Professor, EECS)

(14) Title: Database processing on a cube-connected multicomputer system

Sponsor: National Science Foundation

Amount: \$59,650

Duration: 2.5 years. September 1987 to February 1990

Role: *Principal Investigator*

(15) Title: Parallel architecture features for supporting efficient database computation

Sponsor: Rackham Graduate School, University of Michigan

Amount: \$9,930

Duration: 1 year. May 1986 to April 1987

Role: *Principal Investigator*

TEACHING EXPERIENCE

- *Undergraduate:* Courses in Data Structures and Algorithms, Logic Design, and Database Management Systems, EECS Dept., University of Michigan, Ann Arbor.
- *Graduate:* Courses in Database Machine Architecture, Database Management Systems, and Advanced Topics in Database Systems, EECS Dept., University of Michigan, Ann Arbor.

OTHER ACTIVITIES

- Organized University of Toronto/IBM Toronto Labs Joint Database Systems Seminar Series, Jan.- May 1995.
- Member of the Advanced Computer Architecture Laboratory (ACAL), EECS Department, University of Michigan, Ann Arbor, MI, 1986-1992.
- Member of the Software Systems Research Laboratory (SSRL), EECS Department, University of Michigan, Ann Arbor, MI, 1989-1992.
- Member of the Executive Committee of the University of Michigan Human Genome Center, 1990-1992.
- Chief Program Advisor for the Computer Engineering (CE) Undergraduate Program, Dept. of EECS, 1989-91.
- Reviewer for the National Science Foundation, IEEE Transactions on Computers, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Parallel and Distributed Systems, Journal of Parallel and Distributed Computing, IEEE Computer, International Journal on Information Sciences, ACM International Symposium on Computer Architecture, ACM Symposium on Parallel Algorithms and Architectures, McGraw-Hill, and W. C. Brown Publishers, and several other conferences related to database systems and parallel processing.