

CURRICULUM VITAE
of
Nagarajan Prabakar (Prabu)
School of Computing and Information Sciences

EDUCATION

Ph.D.	University of Queensland, Australia	Computer Science	1985
M.E.	Indian Institute of Science, India	Automation	1979
B.E.	Annamalai University, India	Electrical & Electronics Engineering	1977

FULL-TIME ACADEMIC EXPERIENCE

FIU	Associate Professor	Computer Science	Aug 1991 - present
FIU	Assistant Professor	Computer Science	Aug 1985 – Aug 1991
FIU	Visiting Assistant Professor	Computer Science	Aug 1984 – Aug 1985

NON-ACADEMIC EXPERIENCE

Indian Telephone Industries, Bangalore Assistant Executive Engineer Nov 1979 – Jul 1981

PUBLICATIONS IN DISCIPLINE

- R. Rangaswami, S.M. Sadjadi, **N. Prabakar**, and Y. Deng: ‘Automatic generation of user-centric multimedia communication services’. *Proceedings of the 26th IEEE International Performance Computing and Communications Conference (IPCCC)*, New Orleans, April 2007.
- V. Hristidis, P.J. Clarke, **N. Prabakar**, Y. Deng, J.A. White, R.P. Burke: ‘A Flexible Approach for Electronic Medical Records Exchange’. *Proceedings of the International Workshop on Health Information and Knowledge Management (HIKM)*, in conjunction with ACM CIKM, pp. 33-40, 2006.
- Y. Deng, S.M. Sadjadi, P.J. Clarke, C. Zhang, V. Hristidis, R. Rangaswami, and **N. Prabakar**: ‘A communication virtual machine’. *Proceedings of the 30th Annual International Computer Software and Applications Conference (COMPSAC 2006)*, Chicago, pp. 521-531, September 2006.
- P.J. Clarke, V. Hristidis, Y. Wang, **N. Prabakar**, and Y. Deng: ‘A Declarative Approach for Specifying User-Centric Communication’. *Proceedings of the International Symposium on Collaborative Technologies and Systems (CTS 2006)*, Las Vegas, pp. 89-98, May 2006.
- G. Paschos, I. Radev, and **N. Prabakar**: ‘Image Content-Based Retrieval Using Chromaticity Moments’. *IEEE Trans. on Knowledge and Data Engg.* Vol. 15, No. 5, pp. 1069-1072, 2003.

- N. Rische, S-C. Chen, **N. Prabakar**, M. Weiss, W. Sun, A. Selivonenko, and D. Davis-Chu: 'Terrafly: A High-Performance Web-Based Digital Library System for Spatial Data Access', *Proceedings of the 17th International Conference on Data Engineering*, April 2-6, Heidelberg, Germany, pp. 17-19, 2001.
- D. Davis-Chu, **N. Prabakar**, and N. Rische: 'A System for Continuous, Real-Time Search and Retrieval of Georeferenced Objects', *Proceedings of the ISCA (International Society for Computers and Their Applications) 2nd International Conference on Information Reuse and Integration*, November 1-3, Honolulu, Hawaii, pp. 82-85, 2000.
- A. Selivonenko, **N. Prabakar**, N. Rische, and D. Davis-Chu: 'Dynamic Mosaicking of Heterogeneous Digital Images', *Proceedings of the ISCA (International Society for Computers and Their Applications) 2nd International Conference on Information Reuse and Integration*, November 1-3, Honolulu, Hawaii, pp. 86-90, 2000.
- **N. Prabakar**, J. Vidal, and Y. Gu: 'A System for Interactive Visualization of Medical Images Over a TCP/IP Network', *Proceedings of the International Conference on Imaging Science, Systems, and Technology (CISST'2000)*, June 26 - 29, Las Vegas, pp. 137-142, 2000.
- D. Davis-Chu, **N. Prabakar**, and N. Rische: 'Client-Server Based Real-Time Integration of Remotely Sensed and Digital Data', *Proceedings of the International Conference on Imaging Science, Systems, and Technology (CISST'2000)*, June 26 - 29, Las Vegas, pp. 499-505, 2000.
- **N. Prabakar**, Q. Jin, and N. Rische: 'Variation Assessment of Large Entities Using Spatial Data', *Proceedings of the International Conference on Imaging Science, Systems, and Technology (CISST'2000)*, June 26 - 29, Las Vegas, pp. 571-576, 2000.
- **N. Prabhakaran**, V. Maddineni, and N. Rische: 'Spatial Overlay of Vector Data on Raster Data in a Semantic Object-Oriented Database Environment', *Proceedings of the International Conference on Imaging Science, Systems, and Technology (CISST'99)*, June 28 - July 1, Las Vegas, pp. 100-104, 1999.
- **N. Prabhakaran**, S. Sridhar, and N. Rische: 'A Two Phase Digital Ortho Photo Mosaicking System', *Proceedings of the International Conference on Imaging Science, Systems, and Technology (CISST'99)*, June 28 - July 1, Las Vegas, pp. 151-154, 1999.
- T. Ho, E. Alvarez, **N. Prabhakaran**, D. Barton, N. Rische, and S. Graham: 'Integration of a GIS and a Semantic Database System', *Proceedings of the International Conference on Geospatial Information in Agriculture and Forestry*, June 1-3, Orlando, pp. 629-636, 1998.
- N. Rische, D. Barton, **N. Prabhakaran**, M. Gutierrez, M. Martinez, R. Athauda, A. Gonzalez, and S. Graham: 'Landsat Viewer: A Tool to Create Color Composite Images of Landsat Thematic Mapper Data', *Proceedings of the International Conference on Geospatial Information in Agriculture and Forestry*, June 1-3, Orlando, pp. 529-536, 1998.
- N. Rische, D. Barton, **N. Prabhakaran**, M. Gutierrez, E. Alvarez, R. Athauda, J. Rodriguez, and A. Gonzalez: 'Landsat Data Visualization via the Internet', *Proceedings of the International Symposium on Spectral Sensing Research*, December 13-19, San Diego, 1997.
- **N. Prabhakaran**, N. Rische, and R. Athauda: 'Tracking Hurricane Paths', *Proceedings of the Image Registration Workshop, NASA GSFC*, November 20-21, Maryland, pp. 357-360, 1997.

- **N. Prabhakaran**, M. Palakkat, and D. Yang: 'Neural Network Based Auto Tag Identification System', *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, October 12-15, Orlando, pp. 3582-3584, 1997.
- D. Yang and **N. Prabhakaran**: 'A Simplified Approach to Desktop 3D Scanning', *Proceedings of the International Conference on Imaging Science, Systems, and Technology (CISST'97)*, June 30 - July 3, Las Vegas, pp. 508-511, 1997.
- L. Yan, W. Sun, **N. Prabhakaran**, S. Guo, Y. Deng, and N. Rische: 'A Dynamic Hypermedia Model for Interactive Video', *Proceedings of the 2nd International Conference on Multimedia Information Systems*, April 3-5, Illinois, pp. 79-85, 1997.
- J. Penagos, **N. Prabhakaran**, and S. Wunnavva: 'An Efficient Scheme for Dynamic Signature Verification', *Proceedings of IEEE SOUTHEASTCON'96*, April 11-14, pp. 451-457, 1996.
- **N. Prabhakaran**, P. Sharma, and W. Subbarao: 'Orientation Recognition of a Signature Pattern', *Proceedings of IEEE International Workshop on Emerging Technologies and Factory Automation*, Melbourne, Australia, Aug 11-14, pp. 11-14, 1992.
- **N. Prabhakaran**, K. Yen, and W. Subbarao: 'Local and Distributed Intelligence Systems for Fault Tolerance', *Proceedings of the IEEE Southcon'92*, Orlando, FL, Mar 10-12, pp. 115-118, 1992.
- J. Mookherje and **N. Prabhakaran**: 'Spatial Decomposition of a Tumor into a Minimum Number of Spherical Components', *Proceedings of the 1992 ACM/SIGAPP Symposium on Applied Computing*, Kansas City, MO, Mar 1-3, pp. 988-992, 1992.
- W. Sun, **N. Prabhakaran**, and X. Zhou: 'Automatic Identification of Semantic Integrity Constraints in Object-Oriented Databases', *Proceedings of 1991 IEEE International Conference on Systems, Man, & Cybernetics*, Charlottesville, VA, Oct 13-16, pp. 1667-1672, 1991.
- **N. Prabhakaran**, L. Wang, and J. Mookherje: 'An Efficient Radiation Treatment of a Brain Tumor', *Proceedings of IEEE TENCON International Conference*, New Delhi, Aug 28-30, Vol. 2, pp. 75-80, 1991.
- M. Palaniswami, **N. Prabhakaran**, S. Thacore, and W. Subbarao: 'Signature Identification using Neural Networks', *Proceedings of IEEE TENCON International Conference*, New Delhi, Aug 28-30, Vol. 2, pp. 149-152, 1991.
- R. Ghaly and **N. Prabhakaran**: 'A rule-based object-oriented approach for modeling real-time systems', *Journal of Information and Software Technology*, Vol. 10, No. 4, pp. 250-258, 1991.
- **N. Prabhakaran**, W.V. Subbarao, and J. Penagos: 'An Expert System Approach for Optical Image Processing and Analysis', *Proceedings of 7-th IASTED International Conference on EXPERT SYSTEMS Theory & Applications*, Los Angeles, Dec 12-15, pp. 5-6, 1990.
- W.V. Subbarao, F. Gonzalez, and **N. Prabhakaran**: 'Micro Computer Network Based Image Storage and Retrieval System (ISRS) Development', *Proceedings of ISMM International Multiconference on Microcomputer Applications*, Los Angeles Dec 12-15, pp. 16-18, 1990.
- L. Wang and **N. Prabhakaran**: 'Optimal Orientation of a set of Paths for the Radiation Treatment of a Tumor', *Proceedings of the 9-th Southern Biomedical Engineering Conference*, Miami, Nov 17-18, 1990.

- **N. Prabhakaran** and L. Wang: 'Synthesis of an Arbitrary Cross Sectional View from 2-D CTScan Images', *Proceedings of the 12-th Annual International Conference IEEE Engineering in Medicine and Biology Society*, Philadelphia, Nov 1-4, pp. 1239-1240, 1990.
- R. Ghaly and **N. Prabhakaran**: 'A Knowledge-Based Approach to Real-Time Systems', *Proceedings of the 28-th ACM SERC*, Greenville, South Carolina, Apr. 18-20, pp. 198, 1990.
- J. Mookherje and **N. Prabhakaran**: 'An Object-Oriented Representation of Semantic and Graphic Interrelationships', *Proceedings of the 28-th ACM SERC Greenville*, South Carolina, Apr. 18-20, pp. 199, 1990.
- **N. Prabhakaran**: 'The Outstanding Problem for Today's Database Technology', *Proceedings of PARBASE-90: International Conference on Databases, Parallel Architectures, and their Applications*, IEEE Computer Society Press, pp. 268-273, 1990.
- **N. Prabhakaran**, D. Tal and M. Lenart: 'A Semantic Database Approach for Tilings', *Proceedings of PARBASE-90: International Conference on Databases, Parallel Architectures, and their Applications*, IEEE Computer Society Press, pp. 447-452, 1990.
- R. Ghaly and **N. Prabhakaran**: 'Modeling of a Real-Time Object-Oriented Database Schema', *Proceedings of the 2nd Annual Conference on Productivity through Computer Integrated Engineering & Manufacturing*, Orlando, Florida, Nov. 13-15, pp. 83-86, 1989.
- **N. Prabhakaran** and E. Falkenberg: 'Representation of dynamic features in a conceptual schema', *Australian Computer Journal*, Vol. 20. No. 3. pp. 98-104. 1988.
- **N. Prabhakaran** and G. Sen: 'THERMBAR: A Pascal program for calculating pressure and temperature of mantle rocks', *International Journal of Computers & Geosciences*, Vol. 14, No. 4, pp. 527-539, 1988.
- D. Tal, N. Rishe, D. Barton and **N. Prabhakaran**: 'High-throughput Highly-parallel Database System', *Proceedings of the 26-th ACM SERC*, Mobile, Ala. Apr. 20-22, pp. 682-686, 1988.
- A. Pelin, **N. Prabhakaran** and M. Slifker: 'Automatic Program Generation from Specifications', *Third International Conference on Systems Research, Information and Cybernetics*, Baden-Baden, Federal Republic of Germany, Aug. 19-24, 1986.
- **N. Prabhakaran** and M. Palaniswami: 'Semantical Database for Analysis and Control of Power Systems', *International Journal of Computers & Electrical Engineering*, Vol. 11, No. 4, pp. 233-238, 1984.
- **N. Prabhakaran** and D. Vermeir: 'On the Generation of Database Schemata', *Australian Computer Journal*, Vol. 15, No. 3, pp. 91-102, 1983.
- **N. Prabhakaran** and D. Vermeir: 'A Compiler for Conceptual Schemata', *10th Australian Computer Conference Proceedings*, Melbourne, Australia, Sep. 26-30, pp. 284-296, 1983.

Grant Proposals (list title of project, agency receiving proposal, and date of submission)

FUNDED RESEARCH

- "High Performance Database Management with Application to Earth Science" proposal (IRA cont) to NASA with N. Rishe
Role: Co-Investigator
Amount: \$1.5M

Period: 1999-2002

- “High Performance Connection for Florida International University” proposal (I2) to NSF with N. Rishe
Role: Senior Investigator
Amount: \$253.3K
Period: 1999-2001
- “Spatial Data Visualization Using a Heterogeneous Distributed Database Management System” proposal ("KDI Supplement" to CREST) to NSF with N. Rishe
Role: Senior Investigator
Amount: \$510K
Period: 1998-2001
- “Active Database Management Systems for Monitoring Complex Situations” proposal (Operational Phase) to Florida High Technology and Industry Council with U.S. Chakravarthy.
Role: Co-Investigator
Amount: \$4,200
Period: 1991-1992
- “Computer Modeling of Chemical and Thermal Processes in Earths Mantle” proposal to Academic Affairs, FIU
Role: Principal Investigator
Amount: \$10,618
Period: 1990 Summer-B
- “High-throughput Parallel Database Machine” proposal to Florida High Technology and Industry Council with N. Rishe, D. Barton and D. Tal.
Role: Principal Investigator
Amount: \$26,000
Period: 1990-1991
- “High-throughput Highly-parallel Database System” proposal to Florida High Technology and Industry Council with N. Rishe and D. Barton.
Role: Co-Investigator
Amount: \$20,000
Period: 1988-1989

PROPOSALS SUBMITTED BUT NOT FUNDED

- “A Unified Model for On-Demand User-Centric Communications” proposal to NSF with Y. Deng
Role: Senior Investigator
Amount: \$1.4M
Period: 2005-2008
- “Integrating, Querying, and Browsing Petabyte-scale Scientific Datasets ” proposal to DOE with N. Rishe
Role: Senior Researcher
Amount: \$14.1M

Period: 2001-2006

- “ITR/IM: Universal Access to Scientific Data using Semantic Clustering” proposal to NSF with N.Rishe
Role: Co-PI
Amount: \$4.84M
Period: 2000-2005
- “Center for High-tech Education in Science and Engineering” proposal to DOEd with S-C. Chen
Role: PI
Amount: \$300K
Period: 2000-2003
- “A Heterogeneous Scientific Database for the National Park Service” proposal to NSF with N.Rishe
Role: Senior Investigator
Amount: \$1.18M
Period: 2000-2003
- “A WWW Spatial Data Browser for Education” proposal to NASA with N.Rishe
Role: Co-Investigator
Amount: \$900K
Period: 1999-2002
- “A Wide Area Distributed Data System for the Management of Large-scale Scientific Data Sets” proposal to DOE with N.Rishe
Role: Senior Investigator
Amount: \$1.2M
Period: 1999-2002
- “Using Remote Sensing in Decision Information Systems for Citrus” proposal to UF/NASA with N.Rishe
Role: Senior Investigator
Amount: \$100K
Period: 1999-2002
- “Planning for Incorporating Meta-Data into a Semantic Object-Oriented Database for Research and Observations at Everglades National Park” proposal to NSF with N. Rishe
Role: Senior Investigator
Amount: \$50K
Period: 1998-1999
- “NASA Southern Regional Earth Science Applications Center” proposal to NASA with N. Rishe
Role: Senior Investigator
Amount: \$2.55M
Period: 1998-2001
- “Automated Collision Notification” proposal to DOT with S.Wunnava
Role: Co-PI
Amount: \$2.8M
Period: 1995-1998

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

- School of Computing and Information Sciences Excellence-in-Service award, 2011
- Teaching Incentive Program award at Florida International University, 1995
- University of Queensland M.I.M. Holdings Ltd. prize for attaining the highest level of academic achievement in Computer Science Postgraduate Studies, 1982 and 1984
- University of Queensland Postgraduate Research Scholarship, 1981 - 1984
- Gold medal for securing the first rank in B.E. at Annamalai University, 1977

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

Professional Service:

- Reviewer for Second International conference on Multimedia Information Systems, 1997
- Reviewer for IEEE Computer Journal and Transputer Communications (1994).
- Reviewer for Tools USA'93 conference
- Chair of the session on *Fault Tolerant/Prediction/Correction Schemes (FTPC) for Industrial Automation and Communications*, IEEE Southcon'92 at Orlando, FL in March 1992.
- Chair of the session on *Expert Systems I*, ACM/SIGAPP Symposium on Applied Computing at Kansas City, MO in March 1992.
- Chair of the session on *Neural Network Theory*, IEEE Region 10 International Conference at New Delhi in August 1991.
- Co-Chair of the publicity committee and a member of the organizing committee of *PARBASE-90: International Conference on Databases, Parallel Architectures, and Their Applications* (Miami, March 1990):
 - the publicity for the conference in journals
 - call for paper announcement preparation, typesetting, printing and distribution
- Programming Committee member of PARBASE-90 conference.
- Reviewed 10 full papers and 8 short papers for this conference.
- Chair of the panel session on *The Outstanding Problem for Today's Database Technology*, PARBASE-90 conference at Miami in March 1990.
- Chair of the paper session on *Databases: The Logical Level/Languages and Design*, PARBASE-90 conference at Miami in March 1990.
- Judge for the ACM Southeast Regional Programming Contest (Miami, November 1989).
- Responsible for choosing a programming problem for the contest and evaluating about 40 teams from several universities in the Southeast region of the nation.
- Reviewer for Western Multiconference Object-Oriented Simulation, 1991.
- Reviewer for the following Journals:

ACM Transactions on Database Systems

- IEEE Computer
- Information Systems
- Information and Software Technology
- Reviewed the following Books:
 - Principles of Relational Database Systems, Mishra, Prentice-Hall, Englewood Cliffs, 1989
 - Integrated Databases: Concepts, Design and Practice, E. Ozkarahan, Prentice-Hall, Englewood Cliffs, 1988

School wide:

Human Resources Committee Chair: 1992 – 1993, 1994 – 1995, 1999 – 2001

Responsible for requesting nominations for promotion/tenure, conducting evaluations of the Director and Associate Director, and school committee elections, and preparing evaluation letter for the Director.

Equipment Committee Chair: 1993 – 1994, 2002 – 2004

Responsible for the allocation of new computers to faculty members, prioritize faculty requests for resources, and to assign old computers for cluster nodes.

Graduate Committee Chair: 1996 – 1999

Responsible for evaluating graduate admission applications, short listing graduate applicants for assistantships, and planning and coordinating qualifier exam.

Graduate Advisor: 1996 – 1999

Responsible for advising all graduate students and potential graduate applicants, and verifying student files for graduate certification.

Subject area coordinator: 2003 - present

Responsible to review and revise the syllabi, update textbooks, and review instructor evaluations & students' feedback, and write assessment summary for the courses.

IT Database area: 2003 - present

COP-4703 (Information Retrieval and Storage Concepts)

CTS-4408 (Database Administration)

COP-4722 (Survey of Database Systems)

IT Systems area: 2003 - present

CGS-3767 (Computer Operating Systems)

COP-3348 (Introduction to Using Unix/Linux Systems)

COP-4343 (Unix System Administration)

CS Computer organization area: 2010 - present

CDA-3103 (Fundamentals of Computer Systems)
CDA-4101 (Structured Computer Organization)
COP-4610 (Operating Systems Principles)

Undergraduate Committee Chair: 2006 – present

Responsible for the undergraduate curriculum of both Computer Science and Information Technology programs including review of new courses, degree programs, and dependencies among courses, and make recommendations on assessment reports.

In Spring 2010, restructured the IT Curriculum to meet ABET requirements and in Fall 2011 coordinated several curriculum changes to the CS curriculum.

Compensation: One course release per year

College wide:

College Curriculum Committee Representative for SCIS: 2008 - present

Coordinated and submitted the following curriculum proposals on behalf of SCIS:

- Ten new courses
- New graduate program (MS in IT)
- Program changes to BS in CS, SDD Track, BS in IT, PhD in CS, MS in TCN
- Twenty seven course changes

College Curriculum Committee Vice Chair: 2009 - 2010

Coordinated the curriculum interaction for the college with the Faculty Senate office

College Curriculum Committee Chair: 2010 – present

Created a web site for the College Curriculum Committee at

<http://users.cis.fiu.edu/~prabakar/ccc> and streamlined the meeting process. Further, this enabled transparency of the entire committee operations (documents, minutes, resolutions) for the entire college and drastically cut down the number of paper copies made for the meetings.

University wide:

Faculty Advisor for Panther Linux User Group: 2009 – present

Established the student Linux club in Summer 2009

Facilitated students to present about Linux features in several presentations

Organized Linux Installation Festivals to promote Linux system to new users in FIU

I gave two presentations on “Automated Backup for Linux Systems” (3/31/11) and on “Virtual Linux” (9/6/11).

Activities of PLUG are disseminated through the google group pantherlug@googlegroups.com and the web site <http://plug.cis.fiu.edu>

Undergraduate Studies Global Learning Foundation Courses Committee Chair: 2010 – present

Created a web site for the Global Learning Foundation course proposals at <http://users.cis.fiu.edu/~prabakar/glfcc> and coordinated feedback from the committee members and authors of the course proposals and got five Global Learning courses approved.

University Curriculum Committee Chair: 2010 – present

- Corrected the security feature of curriculum proposal forms (pdf files) that are fillable and now saveable using the standard Acrobat Reader. This simplifies the process of correcting any error in curriculum proposals.
- Designed curriculum bulletin calendars for 2011-2012 and 2012-2013.
- For each university curriculum bulletin,
 - Reviewed all UG and grad curriculum proposals
 - Scheduled hearing for all new programs/majors/tracks
 - Chaired the hearing and coordinated revisions to proposals
 - Presented curriculum related motions at the senate meetings
- Initiated the Paperless Curriculum Project in coordination with the Vice Provost of Academic Planning, UTS IT Specialist, Faculty Senate Administrative Assistant, and Registrar Coordinator.

Faculty Senator: 2011 – present

Faculty Senate Nominating Committee Member: 2011 – present

Judge for FIU Graduate Student Scholarly Forum: Mar 28, 2011 and Feb 27, 2012

Community wide:

Judge for ACM High School Programming Competition

Reviewed and evaluated 12 teams on Mar 18, 2005

Judge for South Florida Regional Science and Engineering Fair

Reviewed and evaluated 24 Science projects on Jan 22, 2011 and Jan 21, 2012
Miami-Dade College, North Campus

Open Access Online Tutorial for Computer Science and Engineering Courses

Compiled online video lectures for most of the computer science and engineering related courses and made them available at <http://motivatemyself.org> for all students in College of Engineering and Computing in Fall 2010 and in Fall 2011. Since July 2010, the total number of visits to this site is 49,372 (<http://motivatemyself.org/log>).

Raised fund (\$1,245) for Haiti Earth-quake Relief Efforts

By participating ING Marathon in Jan 2010 (<http://motivatemyself.org/running>)

Raised fund (\$1,175) for Children in Africa

By participating ING Marathon in Jan 2011 (<http://motivatemyself.org/running>)