CURRICULUM VITAE

Personal Data

Name: **SARDA, Nandlal L.**

Date of birth: May 2, 1948

Address : Dept of Computer Science & Engineering
Indian Institute of Technology, Bombay
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Rank & department :
Professor, Department of Computer Science and Engineering,
Indian Institute of Technology, Bombay, India.

Education :
B.E.(Electrical), 1970, Nagpur University, India
M.Tech(Comp.Sci.), 1972, Indian Inst. of Tech., Bombay.
Ph.D.(Comp.Sci.), 1981, Indian Inst. of Tech., Bombay.

Special course: Executive Development Programme,
At Kellogg School of Management, Northwestern University, USA

Area of interest:
Database Management Systems, spatio-temporal databases
Software Engineering

Positions held at I.I.T. Bombay :

1972-present : **Professor**, Dept. of Computer Science & Engineering,
I.I.T. Bombay.
Special positions held at IIT Bombay
: **Head**, Dept of Computer Science & Engg., 1994 -1997
: **Dean** of Academic Programmes, 2001 - 2004
: **Professor-in-Charge**, Innovation & Entrepreneurship, Octo. 2004 - Feb. 2006
: **Head**, Shailesh J. Mehta School of Management, Aug. 2006 to Feb. 2007

Position at University of New Brunswick, Saint John, N.B., Canada
(on lien from IIT Bombay) :
Sept. 1986- Octo. 1988   :   Associate Professor, Division of Mathematics, Engineering and
Computer Science

Awards and honors (selected list only)

1. Founder Director, Collcraft Technologies Pvt Ltd. (www.collcraft.com), a company
    incubated at SINE (www.sineiitb.org), IIT Bombay, 2006-2010.

2. Director, Board of Directors, Union Bank of India, Mumbai (from July 2003-June 2009)
3. Director, Board of Directors, Clearing Corporation of India, (from July 2005 --)
4. Member of THE COMMITTEE ON TECHNOLOGY INNOVATION AND VENTURE CAPITAL set up by Planning Commission, Government of India, 2006
5. Awarded Patron, Computer Society of India, Mumbai Chapter, 2005
6. Awarded Fellow of Computer Society of India, 2006
7. Chairman, Technical Advisory Committee, The Clearing Corporation of India (2002..ongoing)
8. Member, Technical advisory Committees of NSE, SIDBI, RBI, SEBI, NSDL, NPCI for their various projects
9. Director, Board of Directors, IDBI Intech Limited, Mumbai (2000-2004, 2010---)

Professional Activities (selected list only)

1. Chair of the Special Interest Group in Databases (SIGDATA) for Computer Society of India (2009--)
2. Organized a 2-day workshop on Standards and Technologies for Spatial Data Infrastructure, Jan. 24-25, 2011, IIT Bombay (http://www.gise.cse.iitb.ac.in/index.php/events/workshops/stsdi)
3. Organized 3-day Indo-US workshop (jointly with Dr Shashi Shekhar, U. of Minnesota) on Geospatial Technologies and Applications, Dec. 16-18, 2010, IIT Bombay (http://www.gise.cse.iitb.ac.in/old/workshop.html)
4. PC member, IIWeb 2011, Eighth International Workshop on Information Integration on the Web, March 28, 2011, Hyderabad, India
5. Programme Chair for the Annual Convention of Computer Society of India held in Dec. 2004 at Mumbai
6. PC Member, ISEC 2011, 4th India Software Engineering Conference, Thiruvananthapuram, Feb. 23-26, 2011
7. PC member, 20th International Conference on Database and Expert Systems Applications DEXA 2010, http://www.dexa.org, August 30 – September 3, 2010, Bilbao, Spain
8. Program Chair of the 12th International Conference on Management of Data (COMAD), held Nov. 2008, Mumbai.
9. PC member, 13th International Conference on Database Systems for Advanced Applications (DASFAA 2008), March 19-21, 2008, New Delhi
10. PC member, 8th International Conference on Electronic Commerce and Web Technologies, E C - W e b 2007, Regensburg, Germany, 3-7 September 2007
11. PC Member, 6th International Conference on Data Warehousing and Knowledge Discovery, from September 1-3, 2004, Zaragosa, Spain
12. PC member, Intl Conf on Very Large Data Bases, 2001
13. PC member, 2nd International Conference on Electronic Commerce and Web Technologies (EC-Web 2001) September 4-6, 2001 Munich, Germany
14. Region/Country Chair, The First International Conference on Human.Society@Internet, July 4-6, 2001, Education Culture Center, Seoul, Korea
15. PC Member, First International Conference on Electronic Commerce and Web Technologies (EC-Web 2000) September 4-6, 2000 Greenwich, U.K.

16. PC member, 6th International Conference on Database Systems for Advanced Applications (DSAFAA'99) April 19-22, 1999, Taiwan, ROC
17. PC member on Intl Workshop on New Database Technologies for Collaborative Work Support and Spatio-Temporal Data Management (NewDB'98) Singapore, Nov. 19 - 20, 1998
18. Member of PC for VLDB'97 held at Greece, Sept. 1997.
19. Member of PC for Intl Conference DASFAA'97, Australia, April 1997
20. Co-chair (Australia-Asiai region), Programme Committee, 20th Intl Conference on Very Large Data Bases, 1996 (VLDB'96), Mumbai

Sponsored R&D Projects

1. From DST, Advanced Research Lab in Geospatial Information Science & Engineering (GISE), www.gise.cse.iitb.ac.in, a 5-year research grant (Rs. 11.85 Crores), 2010--
2. From DST, "Extending Framework for WFS-based Inter-operability of GIS Sources", March 2007, for 2 years, funding Rs. 17.70 lakhs
3. From Dept of Science & Technology (DST) on 'Ontology-based framework for inter-operability in GIS', Feb. 2005 (for 2 years)
4. MHRD Project of Informatics, 1988-1991.

Journal Editorship

1. Publications Chair, Computer Society of India, from 1998-2000
2. Member, Editor Board, Distributed and Parallel Databases – An International Journal, Kluwer Academic publishers, (from 1998 - 2006)
3. Member, editorial board, World Wide Web : Internet and Web Information Systems, Kluwer Academic publishers (from May 2001 - 2005) (www.wkap.nl/journals/wwwj)
4. Publications Chair, CSI from 1998-2000

BOOKS/Proceedings

1. "Ontology-Enabled Database Management Systems" by N. L. Sarda, in "Ontologies in the Context of Information Systems", edited by Rajiv Kishore, Ram Ramesh, and Raj Sharman, Springer Verlag (2007)
2. T. M. Vijayraman, A. Buchmann, C. Mohan, N. L. Sarda, 'VLDB'96, Proceedings of 22nd International Conference on Very Large Data Bases', Sept 3-6, 1996, Mumbai (Bombay), Morgan Kaufmann 1996.
3. Sarda N.L. (ed) : Proceedings of CISMOD 93, International Conference on Information Systems and Management of Data, New Delhi, Octo. 6-8, 1993, Published by INSDOC, New Delhi
4. Sarda N.L., `HSQL : A Historical Query Language', Chapter 5 in `Temporal Databases : Theory, design and Implementation', Tansel et al (ed), Benjamin/Cummings, New York, 1993.
5. Structured COBOL Programming with Business Applications, 5th ed.1995.
6. Programming in Pascal, 1984.

7. Programming in BASIC, 1984, Revised edition, 1986.
   (The above 3 books are published by Pitambar Publishing Co., New Delhi)

Consultancy Projects (selected list)

1. Advisor, Core Banking and IT Solutions, Central Bank of India, 2008-ongoing
2. Advisor, Core Banking and IT Solutions, Corporation Bank, 2010-ongoing
3. Advisor, Core Banking and IT Solutions, Dena Bank, 2007-09
4. Reserve Bank of India, Data Warehouse System (1999-2002)
5. State Bank of India, Bank Computerization Project, 1993-1997.
6. Maharastra Police, Crime-Criminal database system, 1992-1996.
7. Origin Technology Ltd, Review of Status Display System Design, Jan.1997.
8. Strategic Planning for IT, Life Insurance Corporation of India, 1995-97.
8. Union Bank of India, Advise on selection of solutions for total banking automation (2001-2003)
9. Reserve Bank of India, Advise on automation of currency management system (2004)
10. Review of design and implementation of a software application for Tata Infortech Limited, Mumbai (2004)
11. Guidance on selection and implementation of an ERP solution for Rashtriya Chemicals and Fertilizers Limited (2004)

Research Publications
A. Journal papers (selected list)

1. Joshi, Anirudha, Sarda N.L., and Tripathy Sanjay, Mwasuring Effectiveness of HCI Integration in Software Development Processes, Journal of Software Systems, 2010.
2. Vishnu A. Subash, N. L. Sarda, A. Subash Babu, 'SCM Enablers and Goals Impact Modeler (SEGIM) : An eTrainer', Intl Journal of Information and Operations Management Education, Vol. 1(1), 2005 (Inagural Issue)
3. N.L. Sarda and P.V. Siva Prasada Reddy, 'Handling of Alternatives and Events in Temporal Databases', International Journal of Knowledge and information Systems (KAIS), Springer-Verlag (Vol. 1, No 3, 1999)
4. Sarda N. L., 'Design of a Historical Database Management System', in The Computer Jour., (1990).
5. Sarda N. L., 'Extensions to SQL for Historical Databases', IEEE Tran. on Knowledge and Data Eng. , vol. 2, No. 2, June 1990, pp. 220-230.
6. Sarda N. L., 'Time Rollback Using Logs in Historical Databases', Information & Software Technology, Vol 35, no 3, March 1993, pp. 171-180.
7. Mohania M.K. and Sarda N.L., ``A Selective Enumeration Based Heuristic for Rule Allocation'', in Journal of Information and Software Technology, Vol 36, No 10, Octo. 1994, pp 625-636.

8. Jensen C.S. et al (ed) : `A consensus Glossary of Temporal Database Concepts', SIGMOD RECORD, Vol 23(1) March 1994, pp. 52-64. (Includes N.L. Sarda as one of the co-authors).
9. Mohania M.K. and Sarda N.L., ``Rule Allocation in Distributed Deductive Database Systems'', Journal of Data and Knowledge Engineering, Vol 14, No 2, Dec. 1994, pp 117-141.
10. Mohania M.K. and Sarda N.L., ``A Framework for Cooperative Deductive database Systems'', Journal of Computers and Artificial Intelligence, Vol 14, No 2, 1995, pp. 147-171.
11. Chaudhari, N. S., Phatak, D. B. and Sarda, N. L., `An Invariant for a Subspace of the Finite Dimensional Vector Space and Automorphism Partition of a Real Symmetric Matrix', Indian Journal of Pure and Applied Mathematics, Vol. 19(3), pp. 217-249, Mar. 1988.
12. Sarda N. L. and Isaac J. R., `Computer-aided Design of Database Internal Schema', Intl. Jour. of Comp. and Inform. Sci., 10(4), pp. 219-234, 1981.
13. Sarda N. L. and Isaac J. R., `Automatic Analysis and Design of Information Processing Systems', The Comp.Jour. (UK), (1), pp. 90-94, Feb. 1980.

B. Conference papers (selected list)

1. Anirudh Joshi, Sarda N. L., Do Teams Achieve Usability Goals ? Evaluating Goal Achievement with Usability Goal Setting Tool, (accepted), 13th IFIP TC13 Conference on Human-Computer Interaction INTERACT 2011, Lisbon, Portugal, Sept. 5-9, 2011.
2. Mukta Paliwal, Patwardhan A, Sarda N. L., Analyzing Tropical Cyclone Tracks of North Indian Ocean, 2nd Intl Conf on Computing for Geospatial Research & Applications, COM.Geo 2011, Washington DC, May 23-25, 2011.
3. Sarda N.L., GIS-based Framework for Campus Infrastructure Management and Research, invited talk at Conference on Infrastructure, Sustainable Transportation and Urban Planning (CISTUP@CiSTUO 2010, IISc Bangalore, Octo. 18-20, 2010.
4. Kavita VV Ganeshan, Sarda N.L., and Sanchit Gupta, Keyword Search in Geospatial Databases, Demo paper, 18th ACM SIGSPATIAL Intl Conf on Adv in Geographic Information Systems, 2010, Nov. 2-5, San Jose, California, USA.
5. Joshi Anirudha and Sarda N.L., Evaluating Relative Contributions of Various HCI Activities to Usability, Intl. Conf. on Human-Centred Software Engineering. – Reykjavik, Iceland, 2010.
6. Sumit Sen, Dolphy Fernandes, N. L. Sarda: Optimal Learning of Ontology Mappings from Human Interactions. OTM Conferences (1) 2007: 1025-1033
7. Joshi, Anirudha and Sarda N.L., HCI and SE : Towards a Truly Unified Waterfall Process, HCI International Conf, Beijing, 2007.
8. Sen, S., Suman, S. and Sarda, N.L. Class structures and Lexical similarities of class names for ontology matching. In Proc of VLDB Workshop on Ontologies-based techniques for DataBases and Information Systems, Seoul, Korea, 2006.
9. Sen, S., Suman, S. and Sarda, N.L. Sivakumar, R. Schema Matching as a step towards Interoperability: Experiments in Indian NSDI. In Proc of Beyond Spatial Data Infrastructures International Workshop at the GIScience 2006, Munster.

10. Sen, S., Suman, S. and Sarda, N.L. Resolving Semantic Heterogeneity in the Indian NSDI: An Ontology Mapping Approach. In Proc of 9th International Conference and Exhibition on Geographic Information Science, Technology and Applications, MapIndia, New Delhi, 2006.
11. ."Web Service Based Dynamic Business Process Composition for Interoperability" by Venkatesh Ramteke, N. L. Sarda has been accepted as a full paper at iiWAS2005. Intl Conf on Info Integration and Web based Applications and Services, Sept 19-21, 2005, Kaula Lumpur, Malaysia.
12. "Execution Model for Outsourced Corrective Maintenance" Baru S. Rao; N. L. Sarda The 5th International Conference on Computer and Information Technology (CIT2005) September 21-23, 2005, Shanghai, China
13. Abhishek Sugandhi, Sumit Sen, Sarda N.L., :Rule Mining with Spatial Relations for Facility Planning', CIKM'05, Octo. 31-Nov. 5, 2005, Bremen, Germany.
14. Baru Rao, N. L. Sarda, Knowledge Ontology in Software Maintenance Outsourcing', Proc. of 1st Intl Conf on Knowledge Eng and Decision Support, July 21-23, 2004, Portugal, pp. 223-231
15. Baru Rao, N. L. sarda, 'Impact of Application Knowledge on Perfective Maintenance Outsourcing - A Case Studt', Proc. of 17th Intl Conf on Software and Systems Engineering & Their applications, Nov. 30, 2004, Paris, France.
16. S. Baru Rao, N. L. Sarda, 'Applicability of IEEE maintenance process for corrective aintenance outsourcing - An empirical study', Intl. Conf. on Software Maintenance, Montreal, canada, 3-6 Octo. 2002
17. Sarda N. L. (Invited paper), "Temporal Issues in Data Warehouse Systems', 1999 International Symposium on Databases for Non-Traditional Environments (DANTE'99) November 28-30, 1999, Heian Shrine, Kyoto, Japan
18. N. L. Sarda, 'A Framework for Application Evolution Management', 10th Australasian Database Conference ADC'99, University of Auckland, New Zealand, 18th - 21st January, 1999 (as part of the Australasian Computer Science Week (ACSW'99))
19. N.L. Sarda and S. Srinivas, 'An Adaptive Algorithm for Incremental Mining of Association Rules', International Workshop on Data Warehouse Design and OLAP Technology DWDOT'98Workshop proceedings published by IEEE Computer Society Press August 28, 1998.
20. Sarda N.L., 'New paradigms for application development', invited talk as part of symposium on 'Frontiers in Information Technology', at 84th Indian science Congress held at New Delhi, Jan 3-8, 1997.
21. Sarda N.L., 'Modeling Valid Time : An Efficient Representation', Proc. of the Intl Conf on Database Systems for Advanced Applications(DASFAA"97), Melbourne, Australia, April 1-4, 1997.
22. Mohania M.K. and Sarda N.L., ``Some Issues in Design of Distributed Deductive Databases", in 20th International Conf. on Very Large Databases, (VLDB'94) Santiago, 1994, pp 60-71.
23. Mohania M.K. and Sarda N.L., ``A Heuristic for Rule Allocation in Distributed Deductive Database Systems", 1st International Conf. on Rules in Database Systems, Edinburgh, Springer-Verlag Computing Series, pages 385-400, 1993.

24. Sarda N.L., `New Paradigms for Design of Information Systems', Key-note address at International Conference on Management of Data (COMAD'93), Dec.16-19, Calcautta.
25. Sarda N.L., `New Paradigms for Design of Information Systems', Key-note address at International Conference on Management of Data (COMAD'93), Dec. 16-19, Calcutta.
26. Sarda, N. L., `Modelling of Time and History Data in Database Systems', Proc. of CIPS Congress `87(Winnipeg, May 12-14, 1987), pp. 15-20.
27. Sarda, N. L., `Design of an Information System Using a Historical Database Management System', Proc. of 8th. Annual International Conf. on Information Systems, Pittsburgh, Dec. 6-9, 1987. pp. 86-96.
28. Sarda, N. L., `Handling of Time in Database Systems', Intl. Computer Symposium, Taipei, Taiwan (ROC), Dec.1984
29. Sarda, N. L. and Isaac, J. R., `An Approach for Automatic Design of Information Processing Systems', Convention Informatique, Paris, Sept. 1978.

Invited Talks :

1. 'Technologies for National and State Data Infrastructures', NSDI-10: National Geospatial Eco-system – The Road Ahead, Dec. 23-24, 2010, New Delhi
2. 'GIS-based Smart campus System using 3D Modeling', jointly with Dr Smita Sengupta, invited talk in Geospatial Science Forum, held as part of Geospatial World Forum – Dimensions and Directions of Geospatial Industry, Jan. 18-21, 2011, Hyderabad.
3. 'Modeling Events and Future time', University of South Australia, Adelaide, April 7, 1997
4. 'Modeling Events and Alternatives in Temporal Databases', National University of Singapore, April 10, 1997.
5. 'The Year 2000 Problem : Challenge & Strategies' for Tata Infotech Ltd., Chennai (Madras), India, June 7, 1997.
6. 'Temporal Information Systems', International Conf. on Management of data (COMAD'97), Chennai, India, Dec. 97.
7. 'Temporal Database Systems : models and languages', University of Tokyo, Japan, 1999
8. 'New paradigms for application development', invited talk as part of symposium on 'Frontiers in Information Technology', at 84th Indian science Congress held at New Delhi, Jan 3-8, 1997.