Rajendra M Sonar: Brief CV

Present status

Professor of Information Systems/Technology,
Shailesh J Mehta School of Management,
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LinkedIn: https://in.linkedin.com/in/rmsonar
Co-founder, WKA Technologies Pvt Ltd, SINE, IIT Bombay

Education

Ph.D. (Computer Science, AI/ML), 1997-2000, Department of Computer Science, University of Pune.

Thesis Topic: Hybrid Intelligent Systems and applications to Investment Decision Making. Developed and implemented a framework integrating artificial neural network, expert system and database management systems.

Master of Computer Science (M.C.S.), 1990-92
First Class, from University of Pune

Bachelor of Computer Science (B.C.S.), 1986-89
First Class, from University of Pune

Research Interest

Knowledge-based Systems, Hybrid AI and Intelligent Systems (especially integrated architectures of neural networks, case-based reasoning, genetic algorithms and rule-based expert systems) and business applications of AI, Role of AI in BI/KM, Business Intelligence for Personalized Experiences.

Experience

Currently Professor of Information Systems/Technology at SJMSOM, IIT Bombay since December 2018 (pay scale level 14A)

Total of 33+ years of mixed experience: teaching, research, consulting, administrative, entrepreneurship, software leadership and development, architecting, mentorship and software product development.

IT Bombay: 19+ years

(was on long leave for around 3 years from Jan 2013 till Oct 2015 as Director, iKen Solutions Pvt Ltd)

Associate Professor of IT/IS, SJMSOM, Indian Institute of Technology Bombay (IITB) from July 2008 to November 2018 (Assistant Professor from May 2003 to June 2008).

Teaching

IT courses to M.Mgt. (Master of Management): Information Systems, Management Information Systems, Management of Information Technology, Intelligent Systems in Management, Digital Product Management, Digital Transformation, System Analysis and Design, etc.

Coordinated various MDPs on AI, Personalization and Recommendation systems, Digital Transformation on Coursera platform. Delivered lectures in AI Master Classes by Economics Times.

Received *the best teacher in management* award of IIT Bombay twice in 2008 and 2013 *MDP/CEPs*

Administrative

Played role of IT, Placement, MDP and Admissions Coordinators-School of Management, IIT Bombay and part of various committees at school as well as IITB level.

Entrepreneurial Efforts

WKA Technologies Pvt Ltd: since Nov 2016 and iKen Solutions Pvt Ltd (2005-2015)

Co-founded company WKA Technologies Pvt Ltd in November 2016. WKA has come out with world's fastest hyper app development platform to build web-based software, responsive web-apps and mobile apps powered by GenAI (https://youtu.be/vXVQVp2XJxU).

iKen Solution Pvt Ltd: 2005-2015 as Promoter, Director and Mentor (2005-2015)

Co-founded a software product and solution company: iKen Solutions Pvt Ltd (now iKen Personics) at SINE (IIT Bombay's Technology Business Incubator) in 2005. iKen got numerous awards including ET Best telecom software award, NASSCOM innovation award etc. Exited form company in 2016 with entire IPR (software platform *having half millions of lines of code*) back to IRCC, IIT Bombay developed over a decade, the cost of development itself is more than INR 3 crore. At the time of my exit, iKen was powering *INR 200 crores* of business to Airtel and *handling volume of 20 crore individual subscriber profiles* pan India deployed on 32 servers.

NIBM Experience: 7 years

As an Assistant Professor in Information Technology Area Group from January 2001 to April, 2003; and, as a Research Officer from March 1996 to December 2000 at National Institute of Bank Management (NIBM), Pune.

<u>Consultancy Projects worked</u> (worked with 12 public sector banks)

- Implementing Asset and Liability Management (ALM) solution for Public Sector Banks:

  Central Bank of India,
  Punjab and Sind Bank,
  Punjab National Bank,
  Allahabad Bank,
  UCO Bank,
  J&K Bank Ltd,
  Oriental Bank of Commerce,
  Bank of Maharashtra

- Reserve Bank of India (Central Bank) Sponsored Consultancy Project (Integrating IT
- Strategy of the Banks with their Business Strategy) Technology
- IT upgradation plan for State Bank of Saurashtra
- Operationalizing the ALCO Mandate for State Bank of India
- Developing DSS for Investment Decision Making for Indian Overseas Bank Investment Analysis aimed at optimization of Yield and Liquidity Management for Punjab and Sind Bank
- Hardware/Software Policy and IT plan for Punjab and Sind Bank

  <u>MDPs:</u> Coordinated and taught in several MDPs, some of the topics MDPs Coordinated

  o Design and Development of Banking Applications using Client/Server Technology
  o Design and Development of Web-Based (Internet/Intranet) Banking Applications
  o Design and Development of MIS and DSSs
  o Computer Based Information Systems
  o Data mining and Data warehousing

  <u>Administrative work</u>

  Coordinator, IT Area Group
  Coordinator and Member,
  IT Committee
  Member, Infrastructure Development Committee
  Development of NIBM's Intranet and Internet

Prior experience (before March 1996): 5 years

- 2 years of <u>software development</u> at Directorate of Water Management Research (now Indian Institute of Water Management: *Indian Council of Agricultural Research*), MPKV Vidyapeeth Campus, Rahuri-413 722. Developed various in-house and scientific and publishing related software.

- 2 years of <u>teaching</u> experience to B.C.S. (Bachelor of Computer Science) courses at various colleges (SSVPS Science College, Dhule, RC Patel Science College, Shirpur) affiliated to Pune University. Taught data structures, programming languages, system analysis and design courses.

- 1 year of <u>software development</u> experience at Network Associates, Tapinagar, Bhusawal-425 201. Developed various in-house and lift irrigation related software.

Research/Publications

Ph.D. guidance: 7 Ph.D. Scholars completed, 4 ongoing.
Research papers
- International Journal Papers: 17+
- International conference proceedings peer reviewed papers: 30+

Articles on information systems/technology in Computer Society of India
          Communications
Book written: Next Generation Business Intelligence: A knowledge-based approach
IPR creation: created IPR (software products and platforms)

Visiting/Professional Assignments

Guest/invited speaker/expert/reviewer/thesis examiner:

- Was invited to deliver lectures in Master Classes on AI, Economics Times many times
- Panel Member, IT Advisory, Stock Holding Corporation of India
- Research Review Committee, Computer Studies, Symbiosis International University
- Faculty Development & Evaluation Committee (FDEC), IIM Vizag
- On various Board of studies related to IT/IS/CS, North Maharashtra University, Pune University, KK Wagh College of Engineering, Nashik, etc.
- Chief Editor, CSI (Computer Society of India) Knowledge Digest, April-2011-2014
- National Institute of Bank Management (NIBM), Pune
- Administrative Staff College of India (ASCI), Hyderabad
- National Institute of Construction Management and Research (NICMAR), Pune
- Research Review Committee, Computer Studies, Symbiosis International University

- o Various firms like ICICI Bank (Analytics division), Wipro etc. o Various National/International Conferences and Seminars
- o Various selection panels of BSRB/SEBI/NICMAR/Symbiosis etc.
- o Journals: IIM-B, NICMAR, SCIT and other national journals.
- o Member, board of studies of various universities and colleges.
- o Advisory board member: CEDI: Centre for Entrepreneurship Development and Incubation, NIT, Trichy Etc.

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Software Development Experience

Extensive experience in software design and development on Microsoft plat-forms, programming languages, operating systems, databases, development environments and productivity tools. Web-based application development, database modelling and design, developing expert systems, modelling business problems using neural networks and spread-sheets like Excel, etc. ASP.NET, Oracle, MS-SQL, MySQL, C#, C/C++, Matlab, Python, Prolog, Visio, etc.

Journal publications

1. Anand S., Sonar, Rajendra M. and Jain, K. (2024). "Strategic Mapping of Measures for Ensuring Effective Protection of Traditional Knowledge: Learning from the Mistakes of the Past", *European Intellectual Property Review*, 46, 10, 661-672.

2. Abdul Razak Honnutagi and Rajendra Sonar (2016). "Achieving quality excellence in Indian engineering education: modelling and analysis using system dynamics". *International Journal of Business Excellence*, Vol. 10, No. 1, 2016, 90-119.

3. R. M. Sonar (2013). "Towards automation of business intelligence services using hybrid intelligent system approach". *International Journal of Business Intelligence Research (IJBIR)*, 4(4), 61-92.

4. Vinod Pathari and Rajendra M Sonar (2013). "Deriving an information security assurance indicator at the organizational level", *Information Management and Computer Security:* 21(5), pp. 401-419.

5. Honnutagi, A. R., Sonar, R., & Babu, S. (2012). "Quality Accreditation System for Indian Engineering Education Using Knowledge Management and System Dynamics", *International Journal of Quality Assurance in Engineering and Technology Education (IJQAETE)*, 2(3), pp. 47-61.

6. Vinod Pathari and Rajendra M Sonar (2012). "Identifying linkages between statements in information security policy, procedures and controls", *Information Management & Computer Security*, Vol. 20(4), 2012, pp. 264-280.

7. Rao, Kasina V. and Sonar R.M. (2012). "A review of methods for assessing socio economic development projects using mobile ICT applications and services", *Journal of Global Communication*, Vol. 5(2), 2012, pp. 130-140.

8. Razak, A., Sonar, R.M. and Subash Babu, A (2011). "Criterion Weights for Knowledge Management Integrated Quality Accreditation System For Indian Engineering Education Using Analytical Hierarchy Process", *World Journal of Social Sciences*, 1(5), November 2011, pp. 159-174.

9. Anil Jadhav and Rajendra Sonar (2011). "Framework for Evaluation and Selection of the Software Packages: A Hybrid Knowledge Based System Approach", *Journal of Systems and Software*, 84(8), August 2011, pp. 1394-1407.

10. Manish Godse, Umesh Bellur and Rajendra Sonar (2011). "A taxonomy and classification of web service QoS elements", *International Journal of Communication Networks and Distributed Systems* (IJCNDS), Vol. 6, No. 2, 2011, pp. 118-141.

11. R. M. Sonar (2009). "Business Intelligence for N=1 Analytics using Hybrid Intelligent System Approach", *World academy of science, engineering and technology,* 55, July 2009, pp. 1091-1104

12. M. Chandrasekhar and Rajendra M Sonar (2009). "Driving and Risk Factors of Technology Implementation in the Indian Banking Sector", *Journal of Managerial Finance and Research, Vol.5*, No.1, Jan-June, 2009, pp. 7-25.

13. M. Chandrasekhar and Rajendra M Sonar (2009). "An Analysis of the Impact of Information Technology on the Productivity of Indian Banks", *Prajnan: Journal of Social and Management Sciences, Vol XXXVIII*, No.1, April-June, 2009, pp. 7-25.

14. Anil Jadhav and R. M Sonar (2009). "Evaluating and Selecting Software Packages: A Review, *Information and Software Technology*, 51, 2009, 555-563.

15. Chandrasekhar, M and Sonar, R.M. (2008). "Impact of Information Technology on the Efficiency and Total Factor Productivity of Indian Banks", *South Asian Journal of Management,* Association of Management Development Institutes of South Asia, Vol 15, Issue No.3, July-Sep 2008, pp. 74-100.

16. R.M. Sonar, An Enterprise Intelligent System Development and Solution Framework, *World Academy of Science, Engineering and Technology*, 25:34-39, 2007.

17. R.M. Sonar, Integrating Intelligent Systems using an SQL-database, *Expert Systems with Applications: an international journal*, Vol 17, Issue 1, pp 45-49, July, 1999.

Refereed conference papers

1. M. A. Zamir, R. M. Sonar (2024), "Smart Agri-Warehouse: A Need of the hour" 2024 in 9th PAN IIM World Management Conference, organised at Indian Institute of Management, Sambalpur from January 22-24, 2024.

2. M. A. Zamir, R. M. Sonar (2024), "Agri-Warehousing in India: Scope, Challenges and Opportunities" 2024 in Management Education and Research Colloquium (MERC 2024), held at Indian Institute of Management Kashipur from May 31st-2nd June 2024.

3. K. Pandey, M. A. Zamir and R. M. Sonar (2024), "Managing Incidents: A Case Study of AIOps" in International Conference on Emerging Trends in Business Analytics & Management Sciences, organised at Indian Institute of Technology, Bombay from December 12-14, 2024.

4. M. A. Zamir, R. M. Sonar, "Application of Internet of Things (IoT) in Agriculture: A Review" 2023 in 8th International Conference on Communication and Electronics Systems (ICCES 2023), held at PPG Institute of Technology, Coimbatore, India from June 1-3, 2023.

5. Piyush Pandey, Vinish Kathuria, Prof. Rajendra Sonar, Bankruptcy Prediction for Micro, Small and Medium (MSME) Enterprises using Statistical and Artificial Intelligent Techniques: An Empirical Study for Manufacturing firms in India, 9th Annual Conference of Multinational Finance Society, Paphos, Cyprus, July 2-5, 2023

6. Zamir, M. A., Sonar, R. M. "Technology based Entrepreneurship in Agriculture: Study based on Bibliometric Analysis" 2022 in International Conference on Stimulating Development through Entrepreneurship (ICSDTE 2022), held at Aligarh Muslim University, India, on 11 June, 2022. 2.

7. Zamir, M. A., Sonar, R. M. "Application of Internet of Things (IoT) and Artificial Intelligence (AI) for Smart Agriculture to achieve SDG-2" 2023 in International Conference on Sustainable Business Management (SBM 2023), held at Indian Institute of Technology Roorkee from March 23-25, 2023.

8. Momaya, K.S.; Pandey, P.; Vallaturu, V.K.; Sonar, R.M.; Bodduri, A.K.S. (2020) Fintech platforms, and competitiveness: Exploring role of MoT as a differentiator for firms of Indian origin (FIOs). In Proceedings of the 29th International Conference on Management of Technology, Cairo, Egypt, 13 September 2020.

9. Kasina V. Rao and R.M. Sonar. (2012). "Conceptual View on Mobile Business Models for Rural Consumers in Emerging India: A Study", *The 10th Globelics International Conference* November 9-11, 2012, Hangzhou, China

10. Kasina V. Rao, Krithi Ramamritham and R.M. Sonar (2012). "ICT Intervened Agri Advisory Services: A comparative study of four projects from India", *8th Asican Conference on Information Technology in Agriculture*, 3-6, September 2012, Taipei, Taiwan

11. Kasina V. Rao and R.M. Sonar (2012). "SMSOne: Social Networking of Rural India with mobile sms newsletter innovation", *Proc. Of M4D2012 (The 3rd International Conference on Mobile Communication Technology for Development)*, Feb. 28-29, 2012, New Delhi, India, pp. 145-149

12. Sonar R.M. (2011). "Modelling and automating business intelligence services", *WITS 2011, Proceedings of 21st Annual Workshop on Information Technologies and Systems (Theme: Business Intelligence and Cloud Computing),* Shanghai, CHINA, on December 3-4, 2011, pp. 13-18.

13. Abdul Razak A. Honnutagi, Rajendra M. Sonar and A. Subash Babu (2011). "Criterion Weights for Knowledge Management Integrated Quality Accreditation System for Indian Engineering Education Using Analytical Hierarchy Process", *14th International Business Research Conference*, 28-30 April 2011, Dubai.

14. Kasina V. Rao, Krithi Ramamritham and R.M. Sonar (2010). "Examining the viability of mixed framework for evaluating mobile services impact in rural India", *The 4th IEEE/ACM ICTD2010 conference*, December 13-16, 2010, University of London, London.

15. Kasina V. Rao, Krithi Ramamritham and R.M. Sonar (2010). "Agrocom: Agriculture knowledge poverty alleviation through innovative mobile SMS intervention", *The 8th Globelics international conference*, November 01-03, 2010, University of Malaya, Kaula Lumpur, Malaysia.

16. Kasina V. Rao and R.M. Sonar (2010). "RML: Market intelligence with mobile SMS intervention", *1st ACM International conference on services in emerging markets*, September 23-24, 2010, ISB, Hyderabad. India (Emerald's Best Case award).

17. Manish Godse, Umesh Bellur and Rajendra Sonar (2010). "Automating QoS Based Service Selection"*, IEEE 2010 International Conference on Web Service*, IEEE Proceedings, pp. 534-541, July 4-5, 2010, Florida, USA

18. Kasina V. Rao and R.M. Sonar (2010). "Mobile intervention for development: Value judgment", *19th International conference on Management of Technology*, March 08-11, 2010, Cairo, Egypt.

19. Anil Jadhav and Rajendra Sonar (2009). "Analytic Hierarchy Process (AHP), Weighted Scoring Method (WSM), and Hybrid Knowledge Based System (HKBS) for Software Selection: A Comparative Study", *2nd International Conference on Emerging Trends in Engineering & Technology, ICETET - 2009*, Dec 16-18, 2009

20. M. Chandrasekhar and Rajendra M Sonar, "Critical success factors of IT initiatives in the Indian Banking Sector", *Proc. 3rd International Conference on Global Interdependence and Decision Sciences (ICGIDS),* 28-30 Dec 2009, Hyderabad, India, pp 297-311.

21. Anil Jadhav and Rajendra Sonar (2009). "An Integrated Rule-based and Case-based Reasoning Approach for Selection of the Software Packages", *Communications in Computer and Information Science*, Springer, Volume 31, Pages 280-291, 2009.

22. Manish Godse, Rajendra Sonar and Anil Jadhav (2009). "A hybrid approach for knowledgebased product recommendation", *Communications in Computer and Information Science,* Volume 31, Pages 268-279, 2009.

23. Kasina V. Rao and R.M. Sonar (2009). "Farmers Needs and the Use of Mobile Services & Applications: A Study on Indian Pilots", *International Conference on Knowledge Management and Intellectual Capital 2009*, IMT Ghaziabad on 26-27 Feb., 2009.

24. M. Suresh, Pankaj Dutta, R. M. Sonar and K. Jain (2009). "A DSS for multi resource constrained project scheduling problem using genetic algorithms", *2nd International Conference on Decision Sciences in Global Enterprise Management (ISDSI 2009)*, January 3-5, 2009, Mumbai, India, Macmillan Publishers, ISBN 023-063-725-6

25. Manish Godse, Vinod Pathari, Shrikant Mulik and Rajendra Sonar (2009). "Comparing AHPANP Models for Web Service Selection in Global Enterprise Applications", In: Karuna Jain,
Rahul Patil (eds.), *2nd International Conference on Decision Sciences in Global Enterprise Management (ISDSI 2009)*, pp. 299-311, January 3-5, 2009,

26. Manish Godse, Rajendra Sonar and Shrikant Mulik (2008). "Web Service Selection based on Analytical Network Process Approach", In: (eds.), The 2008 International Symposium on Modeling, Assembly and Management for Service Oriented Engineering (MamSOE 2008) in conjunction with *The 3rd IEEE Asia-Pacific Service Computing Conference (APSCC 2008)*, IEEE Proceedings, December 9-12, 2008, Yilan, Taiwan

27. Manish Godse, Rajendra Sonar and Shrikant Mulik (2008). "The Analytical Hierarchy Process Approach for Prioritizing Features in Selection of Web Services", In: Claus Pahl, Siobh n Clarke, Rik Eshuis (eds.), *6th IEEE European Conference on Web Services (ECOWS 2008)*, IEEE Proceedings, pp. 41-50, November 12-14, 2008, Dublin, Ireland

28. Kasina V. Rao, Sonar R.M. and Kirthi Ramamritham (2008). "A study on adoptability of new Mobile based Applications and Services in Emerging Economies in Indian context", *International Conference on Emerging Economies*, IIM Indore on 11-13 Aug, 2008.

29. Honnutagi A. A., Sonar R. M. and Bhargava S (2008). "Strategic and Analytical tools for implementing Knowledge Management in Indian Construction Industry", *Proceedings of International Conference on Globalisation and Emerging Economies*, Academy of International Business-India and Indian Institute of Management, Indore, 11-13 August 2008.

30. Manish Godse, Rajendra Sonar and T. I. Eldho, E. P. Rao (2008). "Using Rule Based Expert System to Wrap Procedural Code of Integrated Watershed Model", *First International Conference on Emerging Trends in Engineering and Technology (ICETET 2008)*, IEEE Proceedings, pp.332-336, July 16-18, 2008.

31. Anil Jadhav and Rajendra Sonar (2008). "A Hybrid System for Selection of the Software Packages," ICETET, 2008 *First International Conference on Emerging Trends in Engineering and Technology*, July 16-18, 2008, IEEE Proceedings, pp.337-342