

## BIO-DATA



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### V. Venkata Rao

Retired Professor

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### I. Career Interests:

Teaching, research, and consulting in

- Operations Research
- Production and Operations Management
- Computer-based Information Systems

### II. Personal details:

- Date of birth: 19 March 1949
- Widower ; has one daughter.

### III. Education:

- **1977-1981: Ph. D; M.S.(Operations Research);** both from the School of Industrial and Systems Engineering, Georgia Tech (Georgia Institute of Technology) , Atlanta, Georgia, USA.  
Ph.D. dissertation: 'Optimal Lot Sizing for Acyclic Multi-Stage Production Systems'
- **1972-1974: M.Tech.(Industrial Engineering and Operations Research),** Dept. of Mechanical Engineering, Indian Institute of Technology (I.I.T.), Kanpur, India.  
M.Tech. thesis: 'Batch Size Selection and Batch Sequencing in a Computer Centre'
- **1966-1971: B.E. (Mechanical),** Govt. College of Engineering, Kakinada, Andhra University, India.  
**(now, JNTU, Kakinada)**  
Passed with First Class Distinction  
Rank: Third in the university

### IV. Employment History:

- July 1981 to March 2014: **Member of the faculty, Indian Institute of Management, Ahmedabad.**  
1981-84: Assistant Professor  
1984-87: Associate Professor  
1987 – March 2014: Professor

**Primary membership:** Computers and Information Systems Group (Now called Information Systems area)

**Secondary membership:** Production and Quantitative Methods Area

**Superannuated on 31 March 2014**

- Aug 1974 - Dec 1976: **Systems Analyst; Computer Centre, Indian Institute of Management, Ahmedabad.**

- 01 August 2015-01 March 2017: **Editor in Chief, “Technomic Review”, ( an online magazine) Published jointly by IIM Ahmedabad and Paris Tech**
- August 2014-December 2023: **Adjunct Professor, IIM, Udaipur**
- August 2017 to Jan 2018: **Adjunct Professor, Adani Institute of Infrastructure Management, Ahmedabad**
- **Visiting Professor.** Already taught, or scheduled to teach in the near future, courses on a visiting basis at IIM Nagpur, IIM Sambalpur, and IIM Amritsar at MBA level and in Executive Education Programmes.

#### **Editorships of Professional Journals.**

- Member of the Editorial Board, Vikalpa, IIM Ahmedabad ( for one term of three years)
- Associate Editor, Journal of Contemporary Business Studies, IIM Indore, August 2023 onwards.

#### **Fellowships**

- July 1986 - Sep 1986: **UNDP Fellow, School of Industrial and Systems Engineering, Georgia Institute of Technology, USA.**
- May-June 1997: Spent seven weeks at **Infosys Technologies Ltd, Bangalore** on a research study on Y2K Projects, funded by the Infosys Fellowship.

#### **V. Awards:**

- 1966-1971: **State Government's Special Merit Scholarship for the top ranking students** in Higher Secondary examination, awarded by Govt. of Andhra Pradesh.
- 1977-1981: **National Merit Scholarship for studies abroad**, awarded by the ministry of education, Government of India.
- 1981: **Wunch Award for outstanding Ph.D. dissertation** awarded by the School of Industrial and Systems Engineering, Georgia Institute of Technology, USA.
- 1983, 1984: **Best teacher award**, awarded by the first year post graduate and fellow students of the Indian Institute of Management, Ahmedabad.

#### **VI. Teaching:**

1. The topics taught to post graduate, fellow and management development programme participants: mathematical modelling, decision support systems, expert systems, data base management systems, computer networks, data structures and algorithms, computer file design, end user computing, management information systems, computer based gaming, production planning and control, project management, systems analysis and simulation, introduction to programming, enterprise resource planning systems (ERP), decision making under certainty, decision making under uncertainty, Information Technology for competitive advantage, system design of computer applications, supply chain management.
2. Played a lead role in designing the following courses:
  - Decision Support Systems (a management development program)

- Expert Systems (a management development program)
- Enterprise Resource Planning Systems: Technology Planning and Implementation (a management development program)
- e-Governance Programme for Chief Information officers of Andhra Pradesh (APCIO) (a long-term program exclusively meant for IAS, IPS, IFS, and First Class officers of Andhra Pradesh Government).
- Algorithms and Data Structures (a doctoral level course at IIM Ahmedabad)

## **VII. Consulting Projects :**

Participated as a member of IIMA consulting teams in the following consulting projects:

1. Computer selection for a petroleum refining and marketing company
2. Design of MIS for a port trust
3. Computer selection for a dairy development board
4. Computer selection for a fertilizer company
5. Development of a decision support system for project appraisal in a fertilizer company
5. Setting up training programs at an Institute for Information and Communication Management in a public sector bank
6. Development of a decision support system for job shop scheduling for an automobile fasteners manufacturer
7. Designing algorithms for job shop scheduling in an electronic connector manufacturing company
8. Evaluation of a Command Area Development Project
9. Operations planning in a zonal railway
10. Training of trainers in railways
11. Extensions to a Railway Line Capacity Planning Software Package
12. Evaluation of technical proposals for a software project to be developed for a central government department
13. Post-Implementation evaluation of ERP for a coal mining company
14. Improvements in an e-governance web-site related to the world bank
15. Improvement of existing computer applications for a tea manufacturing and marketing company
16. Business Process Analysis Study for a textile machinery accessory manufacturer

**VIII. Administrative Positions Held:**

1. 1990-92: Chairman, Computer Services Committee, IIM, Ahmedabad.
2. 1992-94: Chairman, Computer and Information Systems Group, IIM, Ahmedabad.
3. 1997-99: Chairman, Library Committee, IIM, Ahmedabad.
4. 1999-2001: Chairman, Faculty Development Program, IIM Ahmedabad.
5. 2001-2003: Chairman, Management Development Programs committee, IIM Ahmedabad.
6. 2008-2010: Chairman, Fellow Program in Management, IIM Ahmedabad.
7. 2021-2023. One of the Program Directors, Mahatma Gandhi National Fellowship (MGNF), Phase-II (an activity under the SANKALP scheme of the Ministry of Skill Development and Entrepreneurship, GOI), IIM Udaipur.
8. 2014 – 2020. IIM Udaipur. Coordinator, Management Capacity Enhancement Programmes, for senior management and senior faculty of Engineering Institutions, organized under the TEQIP scheme of the MHRD, Government of India.

**IX. Association with Professional Bodies:**

1. 1990-1992: Chairman, Ahmedabad Chapter, Computer Society of India.
2. Life Member, Operations Research Society of India.

**X. Publications and Presentations:**

- Venkata Rao, V., "Policy Alternatives for the Fellow Programme in Management", in Vijay Sherry Chand and T.V. Rao (ed.), *Nurturing Institutional Excellence: Indian Institute of Management Ahmedabad, New Delhi, Macmillan Publishers India Private Limited, 2011, 265-276.*
- Venkata Rao, V. "Issues in the Design of Training Programs on e-Governance," *Vikalpa*, 33, 4 (October-December 2008), 88-91.
- Vhora, Neharika; and Venkata Rao, V. "Dr. APJ Abdul Kalam in Conversation with Neharika Vohra and V. Venkata Rao", *Vikalpa*, 34,1 (January-March 2009), 61-68.
- Venkata Rao, V., "Process Re-Design and Computerization", Invited address, Fourth IEEE All India Student Congress (AISC-2007), Sep 28-Sep 30, 2007, DA IICT, Gandhinagar.

- Venkata Rao, V., "Knowledge Management in Indian Software Export Industry", conference on Knowledge Management, IIPS, Devi Ahalya University, Indore, October, 2002 (Key note address)
- "Evaluation of Gyandoot Project", report of a research study sponsored by World Bank, Co-authors Prof. T.P. RamaRao, and research staff of the Centre for Electronic Governance, IIMA.
- "Evaluation of Check Post Computerization Project", report of a research study sponsored by the World Bank, Co-authors: Prof. T.P. Rama Rao, and the research staff of the centre for Electronic Governance, IIMA.
- Chavan, Vinaysingh; and Venkata Rao, V., "Revenue Management for Online Stores: Dual Channel Selling and Dynamic Pricing", Third National Conference on Management Science and Practice (MSP 2008), Ahmedabad, March 22-March 24, 2008
- Kumar, S., V. V. Rao, and D. Tirupati (2006), "*Multiple products, multiple constraints, single period inventory problem: A Hierarchical solution procedure*", International Journal of Operations and Quantitative Management , Volume 12, Number 1, March 2006, pp. 1-12.
- Kumar, S., and V. V. Rao (2005), "*Evaluating lateral transshipment policy in a two-echelon inventory system*", Journal of Comparative International Management, (accepted for publication).
- Was invited to participate in "Brainstorming Workshop for Building Institutional Partnerships for CIO Training" conducted by National Institute for Smart Governance (NISG ), Hyderabad, during 27-28 December 2005. Prof. Venkata Rao made a presentation on "Experience in designing and conducting APCIO programme". He also worked as a member of the working group on curriculum development committee.
- (Paper accepted for presentation) Kumar, Satyendra; Rao, V. Venkata; Tirupati, Devanath, "Vehicle Allocation and Bin Packing", 47<sup>th</sup> National Meeting of Canadian Operational Research Society (CORS), 16-18 May 2005, Halifax, Canada.
- Ray Subhajyoti, Rao V. Venkata, "Assessing the impact of e-government project on citizen service quality: An analytic hierarchy approach" , Published in the proceedings of the conference, "ECEG 2004: 4<sup>th</sup> European Conference on e-Government", held at Dublin, Ireland, 17-18 June 2004, published by the Department of Taoiseach, Ireland in collaboration with The European Commission and Academic Conferences Limited.
- (Research report)Rao, T.P. Rama, Rao, V. Venkata, Bhatnagar, S.C., and Satyanarayana, J., e-Governance assessment frameworks, report of a study sponsored by the Ministry of Information Technology, Government of India, New Delhi, published on the Internet at <http://egov.mit.gov.in>
- (Research report)Rao, V Venkata, Ray Subhajyoti, "Civic Centers of Ahmedabad Municipal Corporation, Gujarat", chapter in the research report Rao, T.P. Rama (Editor), Evaluation of e-Governance Projects, report of research sponsored by the Asia Foundation, USA, May 2004
- Venkata Rao, V; and Sridharan, R. " Minimum Rooted Not-Necessarily- Spanning Arborescence Problem," Networks, 39,2,2002,77-87.
- Rao, Venkata V., "Desired : A Phased Implementation of ERP", Case Diagnosis of the case "Erhardt+Leimer India Limited: Strategic Transformation through ERP", **Vikalpa**, Vol. 26, No. 1, Jan-Mar. 2001, pp. 110-114.

- Panelist at "Open House on Y2K" organised by Gujarat Chamber of Commerce and Industry, 11 August, 99 from 10.00 AM- 1.30 PM at their Hall on Ashram Road.
- *Y2K Conversion Projects: What a Manager should be Aware of*, Vikalpa, Vol. 23, No. 2, April-June 1998, pp 3-13.
- *ERP: Lessons from Experience*, Invited Paper, Southern Regional Conference of the Computer Society of India, Vijayawada, February 6-7, 1998.
- *Integrating Decision Support and Knowledge-based Systems : Some Examples*, Key-note address, National Seminar and Knowledge-based systems, Division II of the Computer Society of India, Vallabh Vidhya Nagar, June 3-4, 1998.
- *Primal and Lagrangian Heuristics for the Minimum Weight Rooted Arborescence Problem*, (1) presented at the annual conference of the Operational Research Society of India, IIT Bombay, December 1996, (2) Working Paper No. 1353, Feb 1997, Indian Institute of Management, Ahmedabad (Co-author), (3) Submitted to 'Networks' for publication (Co-authored with Prof R. Sreedharan).
- *Management Gaming through Computer Networks*, invited presentation at the Seminar on Technologies for Educational Networking, Indira Gandhi National Open University (IGNOU), New Delhi, November 1-2, 1995.
- *Developing a Training Programme on Shipping Management*, presented at the 31st National Maritime day seminar, April 4, 1994, Bombay. (Co-authors: Profs G. Raghuram, Deepti Bhatnagar, Siddharth Sinha)
- Manikutty, S., Raghuram, G., Venkata Rao, V., and Roy, T.A., *A Computer Based Crew Management System for Freight Trains in South Central Railway*, Paper in Srinivasan, S. (ed), *Information Technology and Management*, Allied Publishers, New Delhi, 1992.
- Raghuram, G., Venkata Rao, V., *A Computer Based Crew Scheduling System for Freight Trains in Indian Railways*, published in (i) *Rail Transport*, Vol 1, No 4, Oct-Dec 1992, pp 22-27, (ii) *COMPRAIL-92*, Proceedings of the third international conference on computer-aided design, manufacture, and operation in the railway and other advanced mass transit systems, Washington DC, Aug 92. (Co-author)
- Maslekar, N.V., Rama Rao, T.P., Venkata Rao, V., *The Role of IT in the Corporate Sector: the Case of HMT*, presented in the workshop on Information Technology for National Development, Indian Institute of Management, Ahmedabad, March 28-29, 1993.
- Manikutty, S., Raghuram, G., and Venkata Rao, V., *Simulation Models to Evaluate Railway Operating Policies*, (1) published in "Operational Research for Development" edited by Jonathan Rosenhead and Arabinda Tripathy, New Sage Publishers, New Delhi, 1996; (2) presented in, the International Conference Operational Research for Development (ICORD-92), Indian Institute of Management 14-16, Dec, 1992; (3) presented at the 6th World Conference on Transport Research, June 29-July 2, 1992.
- Venkata Rao, V., Sreedharan, R. *The Minimum Weight Rooted Arborescence Problem: Weights on Arcs Case*, Working paper No. 1030, May 1992, IIM Ahmedabad; presented at the Silver Jubilee Convention of the Operations Research Society of India, IIM Ahmedabad, Dec 17-19, 1992.
- Venkata Rao, V., and Raghuram, G. *A Decision Support System for Improving Railway Line Capacity*, (i) paper published in *Public Enterprise*, Vol 11, No.1, March 1991, pp 64-73; (ii) published in Murthy TKS et al (ed), *Computer Applications in Railway Planning and Management*, Proceedings of the 2nd International Conference on Computer Aided Design, Manufacture, and other Advanced Mass Transit Systems held at

Rome, Italy, March 1990, Computational Mechanics Publications, Southampton, 1990, pp 101-112; also presented at the above conference.

- Venkata Rao, V., Syam Prasad, C. *Gantt Chart Colouring*, in Goyal, M.L. et al (ed), Information Technology in Everyday Life, Tata McGraw-Hill Publishing Co., 1991, Proceedings of the Annual Convention of the Computer Society of India held at New Delhi Sep 29-Oct 1, 1991; presented at the above conference.
- Venkata Rao, V., Syam Prasad, C. *Interactive Gantt Charting*, in Kaujalgi, V.B., et al, Computers and Information Science, Proceedings of the Annual Conference of the Computer Society of India held at Bangalore Sep 20-23, 1989, published by Tata McGraw-Hill Publishing Company Limited, New Delhi, 1989.
- Venkata Rao, V. *Can We Justify Research on Optimization Methods?: The Case of Optimization in Multi-Stage Production Systems*, in Thrimurthy, P (Ed), Trends in Computer Applications, Proceedings of National Seminar organized by the Computer Society of India at Vallabh Vidyanagar, January 1990 (Invited Paper).
- Venkata Rao, V. *Computers in Management Education*, Invited paper, Western Regional Conference-89, Computer Society of India, Vallabh Vidya Nagar, January 20-21, 1989.
- McGinnis, L.F., Venkata Rao, V., *Cost Parametric Families of Multi-Stage Lot Sizing Problems : Some Structural Results*, presented at the Conference on Multi-echelon Inventory Systems, Wharton School, University of Pennsylvania, June 1987.
- Venkata Rao, V., *Flexible Access to Models and Data Through Decision Support Systems*, Vikalpa, Vol 12, No. 1, Jan-Mar 1987.
- Venkata Rao, V., McGinnis, L.F., *Optimal Lot Sizing in Multiperiod Production Systems*, Institute of Industrial Engineers Transactions (USA), Vol 15, No 1, March 1983, pp 54-62.
- McGinnis, L.F., Venkata Rao, V. *A Decomposition Method for Optimal Lot Sizing in Acyclic Production Systems*, PRDC Report Series, 83-05, School of Industrial and Systems Engineering, Georgia Institute of Technology, 1983.(Co-author)
- Venkata Rao, V., McGinnis, L.F. *The Minimum Weight Rooted Arborescence Problem: A Branch and Bound Solution*, IIMA Working Paper Series, No. 514, June 1984.
- *Quantity Discount Pricing Model: An Exact Formulation and Analysis*, IIMA Working Paper, 1987.(Co-author)
- Venkata Rao, V., McGinnis, L.F., *Modelling and Analysis of an Acyclic Multi-stage Production Planning Problem*, presented at the ORSA/TIMS joint national meeting, Toronto, Canada, May 1981. (Co-author)
- McGinnis, L.F., Venkata Rao, V., *On Goal Programming in Networks*, in Herbert, J (ed), Proceedings, The Thirteenth Annual Meeting, Southeast Chapter, The Institute of Management Sciences, 1977.
- Patel, N.R., Venkata Rao, V., *A Modified S-s Policy for Inventory Control*, Presented at the Annual Conference of the Computer Society of India, Poona, January, 1977.
- Rama Rao, T.P., Venkata Rao, V. *A Mini Computer Based Operating System for Computer Aided Instruction*, presented at the Symposium on Computer Aided Instruction, Indian Institute of Management, Ahmedabad, 1976.
- Kaul, M., Venkata Rao, V., *Design of Display-based Simulation Models*, Proceedings of the National Systems Conference, Electrical Engineering Department, University of Roorkee, Roorkee, India, March, 1976. (Co-authored)

- Bhatnagar, S.C., Venkata Rao, V. *A Computer-based Production Planning System for Textiles*, Presented at the annual conference of the CSI, January 1975 (Co-authored)
- Venkata Rao, V., Batra, J.L., *Batch Size Selection and Batch Sequencing in a University Computer Centre*, presented at the annual conference of the CSI, Ahmedabad, January 1975. (Co-author)
- Venkata Rao, V., *An Analysis of Cost structure in Iron and Steel Industry*, Industrial Engineering and Management, October 1974.

#### **XI. Articles in Newspapers**

- Venkata Rao, V. “Analyzing data gets quicker and easier” India Inc, **The Financial Express** (January 6, 2007)
- Venkata Rao, V. “When, why, what of ERP upgrades” India Inc, **The Financial Express** (December 23, 2006)
- Venkata Rao, V. “Better customer interaction a must” India Inc, **The Financial Express** (December 2, 2006)
- Venkata Rao, V. “Improper content management may lead to legal troubles” India Inc, **The Financial Express** (October 7, 2006)
- Venkata Rao, V. “An analytics system can help identify problems” India Inc, **The Financial Express** (September 23, 2006)
- Venkata Rao, V. “Management of data must for enhancing performance” India Inc, **The Financial Express** (July 29, 2006)
- Venkata Rao, V. “Need to learn from partners in outsourcing projects” India Inc, **The Financial Express** (July 22, 2006)
- Venkata Rao, V. “Improving communication of an organization by IT” India Inc, **The Financial Express** (June 17, 2006)
- Venkata Rao, V. “Going online helps legal services remain on course” India Inc, **The Financial Express** (June 10, 2006)
- Venkata Rao, V. “Critical mass of users crucial”, India Inc, **The Financial Express** (Feb 17, 2007)
- Venkata Rao, V. “Solution ensures data security”, India Inc, **The Financial Express** (March 3, 2007)
- Venkata Rao, V. “Assigning responsibility is not enough”, India Inc, **The Financial Express**, (March 31, 2007)
- Venkata Rao, V. “Time to strengthen other systems” India Inc, **The Financial Express**, Page 3 ( April 29, 2007)--commentary on the casestudy ‘Change and continuity’
- Venkata Rao, V.” Centralized data pool brings in gains”, India Inc, **The Financial Express**, Page 3 (May 19, 2007)--Commentary on the case study “Remote access puts growth on auto pilot”
- Venkata Rao, V., “Web-enabled ERP isn’t secure enough”, India Inc, **The Financial Express**, June 14, 2007, Commentary on the case study “ Making for a smooth integration



- Published about 165 answers in the **Open Space** column of the **Sunday Times, Times of India**, during 2005-2011.

#### **XII. Cases Written( both registered with IIMA and unregistered):**

- IOT Infrastructure and Energy Services Ltd., A Saga of Growth (Co-authors: Profs Asha Kaul, G.Raghuram , Sanjay Verma)
- Migration of Oracle Applications 11.0.3 to 11i at JDS Universal (Co-authors: Prof A.K. Jain, M. Padalkar)
- Software Project Management : the MEM Project (Co-authors: Prof T.P. Rama Rao, Dr. S. Yegneshwar)  
(A case on software project management issues in a software export project involving reverse engineering)
- IT at Grameen Bank (A case describing the use of computers at the Grammen Bank, Bangladesh, a bank concerned with poverty alleviation) (Co-authors: Profs S.C. Bhatnagar, T.P. Rama Rao)
- IT at Bangladesh Tobacco Company Ltd ( A case that describes a variety of computer applications in different functional areas including production, marketing of cigarettes and purchase of tobacco in a cigarette manufacturing company) (Co-authors: Profs S.C. Bhatnagar, T.P. Rama Rao)
- MRP at Hydraulics International Limited (A case that describes the way a material requirement planning package was implemented in an engineering company)
- MRP at Blue Moon ( A case that describes the implementation of a small MRP system on PCs by an electronics firm) (Co-author: Prof. N. Ravichandran)
- Southern Auto Ltd (A case on job shop scheduling) (Coauthors) Profs Samir Baurua, T. Madhavan)
- PRS at KSRTC (Describes in detail all the phases of the computer based passenger reservation system project of the Karnataka Road Transport Corporation) (Co-author: Prof N. Ravichandran)
- Crew Scheduling in Indian Railways (Describes a context in which an on line transaction processing system for signing on and off of crew for freight trains can be implemented) (Co-author: Prof G. Raghuram)
- Way Bill Auditing at ATC (Describes the design of a PC based system for the auditing of waybills in a bus transport corporation for both urban transport and mofussil services)
- Opening of a New Division at GSRTC ( Describes all the activities that constitute the project of opening a new division by Gujarat State Road Transport Corporation) (Coauthors: Mr. Derasri and Gopalakrishnan)
- Computer Selection for NDDDB (Coauthor: Prof T.P. Rama Rao)
- Computer Selection for Swadeshi Fuel Co (Coauthor: Prof T.P. Rama Rao)
- GMMF Case ( A case that deals with perishable inventory management) (Coauthor: Prof Rekha Jain)
- Computerised Maintenance Scheduling System for Amal Synthetics Ltd.
- Computerisation at Ahmedabad Electricity Co. Ltd. (Coauthor: Prof T.P. Rama Rao)
- MIS for Quality International Shipping Ltd.
- EDI at New Customs House, Indira Gandhi International Airport, New Delhi.
- TWINS Project, Andhra Pradesh (Coauthors: Prof K.V. Ramani, Mr. Rajul Asthana)
- Torrent Group (BP 256) (co-authors: Profs M. R. Dixit, Pankaj Chandra, I.M. Pandey, Sekhar Chowdhury, S. Sreenivasa Rao)
- Surat Electricity Co. (BP 258) (Coauthors: Profs M.R. Dixit, S. Sreenivasa Rao)
- Torrent Cables (A), (B) & (C) (BP 259, 260 & 261) (Coauthors: Prof. M. R. Dixit)
- Torrent Pharmaceuticals Ltd. (BP 262) (co-authors: Profs M. R. Dixit, Pankaj Chandra, I.M. Pandey, Sekhar Chowdhury, S. Sreenivasa Rao)
- Torrent Gujarat Biotech Ltd. (A), (B) & (C) (BP 263, 264 & 265)(Coauthors: Profs M.R.Dixit, Pankaj Chandra, Shekhar Chaudhury, S. Sreenivasa Rao).

#### **XIV. Hobbies and extra curricular activities**

Painting and sketching

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