

BIO-DATA

NAME **VISHWANATH SINHA**

PRESENT DESIGNATION Distinguished Professor and Advisor
The LNM Institute of Information Technology Jaipur

PRESENT MAILING ADDRESS The LNM Institute of Information Technology Jaipur
Rupa-ki-Nangal, P.O. Sumel,
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DATE OF BIRTH January 7, 1943

ACADEMIC QUALIFICATIONS

D.Sc. (Electrical Engineering), 1971
Faculty of Electrotechniques
University of Ljubljana,
Slovenia (erstwhile Yugoslavia)

M.S. (Electronics), 1969
Faculty of Electrotechniques
University of Ljubljana,
Slovenia (erstwhile Yugoslavia)

B.Sc. Engineering (Telecommunications), 1963
Bihar Institute of Technology, Sindri
Ranchi University, Bihar

TENURED EMPLOYMENT DETAILS

Distinguished Professor and Advisor, 2008 – Continuing
The LNM Institute of Information Technology Jaipur

Founding Director, 2003 – 2008
The LNM Institute of Information Technology Jaipur

Professor, 1982 – 2005
Department of Electrical Engineering
Indian Institute of Technology, Kanpur

Assistant Professor, 1971-1982
Indian Institute of Technology, Kanpur

Assistant Professor, 1964-1971
Bhagalpur College of Engineering, Bihar

Lecturer, 1963 – 1964
Bhagalpur College of Engineering, Bihar

*VISITING EMPLOYMENT
DETAILS*

2002 May – July 2002
Guest Professor
Communication Networks (COMNETS),
RWTH-Aachen University of Technology, Aachen
Germany

2000 Summer
Visiting Professor (Academic Guest)
Swiss Federal Institute of Technology (EPFL)
Lausanne, Switzerland

1999 Summer
Communication Networks (COMNETS),
RWTH-Aachen University of Technology, Aachen
Germany

1999 Winter & Summer
Mobile Communications Laboratory
Swiss Federal Institute of Technology, Lausanne
Switzerland

1998 Summer
Communication Networks (COMNETS),
Aachen University of Technology, Aachen, Germany

1987 Summer
Dept. of Electrical & Computer Engg.
University of Puerto Rico, Mayaguez Campus
Puerto Rico 00708, U.S.A.

1984 – 1985
Dept. of Electrical & Computer Engg.
University of Puerto Rico, Mayaguez Campus
Puerto Rico 00708, U.S.A.

1983 – 1984
INPE – Brazilian Space Research Institute
Sao Jose dos Campos - SP, Brazil

1977 Summer
Indian Space Research Organization (ISRO)
Space Applications Centre, Ahmedabad, India

1968/69 – 1971
Institute (Nuclear) Jozef Stefan,
Ljubljana, Slovenia (erstwhile Yugoslavia)

*PRESENT AREAS OF
INTEREST*

Engineering Education
Mobile Communication
Error Control Coding
Satellite Communications

*MEMBERSHIP OF
PROFESSIONAL
SOCIETIES*

Fellow, Institute of Electrical and
Electronics Engineers, U.S.A.(FIEEE)

Fellow, Institution of Electronics &
Telecommunication Engineers (India) (FIETE)

Fellow, Institution of Engineers, India (FIE)

Life Member, Indian Society for Technical Education

Member, Telematics Forum

AWARDS

Excellence in IT Education Award, 2006 conferred by the
Indian Economic Development & Research Association,
New Delhi.

Distinguished Alumnus Award of Bihar Institute of
Technology Sindri

Best Paper Award 1985 (for a two-part paper), Students
Journal of IETE (April, July 1985).

J.C. Bose memorial Award 1979 of IETE for the best
Paper published in April, 1979

S.K. Mitra Memorial Award 1976 of IETE for the
paper published in July 1976

RESEARCH ACTIVITIES

**At the LNM Institute of Information Technology
Jaipur**

AREAS OF ACTIVITIES

- Design and Establish the Institute (including its Academics)

- * Mobile Communication

SOME NATOBLE CONTRIBUTIONS

- * Established the Public-Private-Partnership University (Government of Rajasthan & the Foundation of Mr. L N Mittal)
- * Got accreditation as a Deemed University.
- * Organized the 10th International Symposium on Wireless Personal Multimedia Communications (WPMC'07) at Jaipur as the General Chair.

At Indian Institute of Technology, Kanpur

• AREAS OF ACTIVITIES

- * Mobile Communication Studies
- * Error Control Coding
- * Teleteaching

• SOME NOTABLE CONTRIBUTIONS

- * Developed 'Remote Tutor'; a product which establishes a Virtual University and provides on-line interactive teaching tool.
- * National Coordinator, National Project on Telematics being run at the five IITs and IISc, 1992-2003.
- * Project Coordinator for the Project on TELEMATICS 1987 - 1998; (sponsored by Ministry of Human Resource Development; Government of India /AICTE)
- * Project Coordinator for the GIST (Graphics and Indian Script Terminal) Project, 1985-1987; (sponsored by Dept. of Electronics, Government of India);
- * Worked as a member of the Advanced Centre for Electronic Systems (ACES), 1971-1983.
Had been involved in projects on:
 - Military Communication Satellite Systems
 - Digital Communication via tropo
 - Digital Modems for tropo links

- Phased Array Radiating Systems

At Brazilian Space Research Institute

Worked as a member of the Division for Systems for Space Telecommunication. Was involved in projects on:

- System studies for R/TM/TC transponders and payload for space segment for the first Brazilian satellite MECB.
- Modulation techniques for various alternative payloads for data collecting platforms.
- Communication system analysis for R/TM/TR transponder.

GUIDANCE OF THESES

Supervised 43 students.

TEACHING EXPERIENCE:

At the LNM Institute of Information Technology Jaipur

Mobile Communication****

Coding Theory****

At Indian Institute of Technology, Kanpur

Graduate Courses:

EE 621 Algebraic Coding Theory ****

EE 622 Communication Theory

EE 623 Detection & Estimation I

EE 624 Information Theory & Coding

EE 625 Satellite Communication****

EE 626 Data Communication ****

EE 629 Digital Switching

EE 676 Digital Mobile Radio Systems****

(****: Developed these courses)

Undergraduate Courses:

ESc 102N Introduction to Electronics (Tutorial)

ESc 202 Introduction to Electronic Circuits and Instrumentation (Tutorial)

ESc 341 Electrical Science I

ESc 342 Electrical Science II (Tutorial)
TA 306 Principles of Computation (Tutorial)
EE 421 Principles of Communication
EE 422 Communication System Engineering
EE 512 Pulse Techniques (Tutorial)

At Brazilian Space Research Institute

Graduate Courses only:

ECO 302 Theory of Communications
ECO 318 Systems for Space Telecommunication

At University of Puerto Rico, Mayaguez

Graduate Course:

INEL 6010 Statistical Theory of Communication

Undergraduate Courses:

INEL 3105 Electrical Systems Analysis I
INEL 4075 Fundamentals of Electrical Engineering
INEL 4085 Fundamentals of Transformers and Electrical
Machines
INEL 4102 Electrical Systems Analysis II
INEL 4301 Theory of Communication
INEL 5309 Digital Signal Processing

*INTENSIVE COURSES
AND CONFERENCES
ORGANIZED*

Participants in these courses were Faculty Members from Engineering Colleges, working Engineers and Scientists from Industries and Defence Laboratories.

More than thirty different courses; some organized at the Users' premises.

Also organized many large size conferences like (examples):

- IEEE Region-10 '91 TENCON;
- 22nd Midterm Symposium and Exhibition of IETE 1992 ;
- National Conference on Communications, 1996;
- National Symposium on Automotive Electronics, 1997;
- International Symposium on Automotive Electronics

- & Alternate Energy Vehicles, IIT Kanpur, 1999;
- National Conference on Communications, 2001
- International Symposium on Automotive Electronics & Alternate Energy Vehicles, 2001.
- International Symposium on Wireless Personal Multimedia Communications, 2007 (WPMC'07).

PUBLICATIONS

More than 80 papers published/presented in national/International journals/conferences/seminars.

ADMINISTRATIVE RESPONSIBILITIES

Have been actively involved in numerous assignments in several capacities. ONLY A FEW MAJOR ONES ARE LISTED BELOW

At the LNM IIT Jaipur

The CEO of the Institute responsible for academic and administrative functioning of the Institute, from conceptualization to execution.

At Indian Institute of Technology, Kanpur

ACADEMIC/ADMINISTRATIVE ASSIGNMENTS

- Deputy Director
(August 1992 – October 1998; a Deputy Director for the longest duration in the history of the Institute)
- Head
Department of Electrical Engineering & Advanced Centre for Electronic Systems
(September 1988-September 1991).
- Chairman, Joint Entrance Examination (JEE) and Undergraduate Admission, 1986-1987 (JEE 1987)
- Principal Coordinator, Quality Improvement Programme, July 1980 – May 1983
- Chairman, Senate Undergraduate Committee (SUGC), 1980
- NSS Programme Coordinator (1978-1980)

- Chairman, Electrical Engineering Association, 1974

ADMINISTRATIVE ASSIGNMENTS

- Chief Vigilance Officer, May 1988 – November, 1991
- Advisor (Administration), May 1982 – May 1983
- Dean of Students' Affairs, May 1980 – December 1981
- Warden/Warden-in-charge 1975-1978
- Institute Standing Committee Member 1974-1976

COMMUNITY ACTIVITY

Convener, Teachers' Forum, 1975-1976

At Brazilian Space Research Institute

Academic Coordinator for the Graduate Programme of the Department, 1983-1984.

OUTSIDE INSTITUTE ACTIVITIES

- Member, National Board of Accreditation, AICTE, 2003 - 2007
- Chairman, Publications (1999-2001)
Institution of Electronics & Telecommunication Engineers, India. It publishes three Journals :
(i) IETE Journal of Research
(ii) IETE Technical Review
(iii) IETE Journal of Education
- Director, Board of Directors, UPTRON India Ltd. Lucknow (1991-1999).
- Chairman, Board of Directors, UPTEC Computer Consultancy Ltd., Lucknow (1997-continuing); also previously its Director (1993-1997).
- Member, Council of Electronics Research & Development Centre (ER & DC), Lucknow
- Member, Finance Committee, University of Roorkee
- Director, Board of Directors BELTRON Mining Systems Limited, Dhanbad
- Member, R&D Advisory Council Hindustan

Teleprinters Limited, Madras

- Member, Council of the Thapar Institute of Engineering & Technology, Patiala.

PROFESSIONAL SOCIETIES ACTIVITIES

- Council Member, Institution of Electronics & Telecommunication Engineers (IETE) (1992-1995), (1991-1992), (1999-2002)
- Chairman, Institution of Engineers (India), Kanpur Local Centre (1992-1994);
- Member of the UP State Centre of IE(I) (1994-1996)
- Chairman, Institution of Electronics & Telecommunication Engineers (IETE) Kanpur Centre, (1987-1991).
- Member, Executive Committee, IEEE, UP Section, Region 10, 1986- 1992.
- Chairman, IEEE UP Sub-section, 1983
- Secretary-cum-Treasurer, IEEE UP Sub-section, 1982.

GUEST EDITOR

- Special Issue on Satellite Communication, JIETE, Vol. 36, No. 1, Jan.-Feb. 1990.
- Special Issue on Wireless Personal Multimedia Communications, Vol. 54, No. 1, July (1) 2010 (along with U.B. Desai, N.R. Prasad, A. Rodrigues), Springer

EDITOR

- National Conference on Communications, 1995
- National Symposium on Automotive Electronics, 1997
- International Symposium on Automotive Electronics & Alternate Energy Vehicles, 1999;
- National Conference on Communications, 2001
- International Symposium on Automotive Electronics & Alternate Energy Vehicles, 2001.

PUBLICATIONS

(ONLY RECENT ONES)

1. Vishwanath Sinha, "Issues concerning Spectrum Allocation", First Symposium on DSP; FEEC, University of Campinas (UNICAMP), Campinas, Brazil, October 18-20, 2010.
2. Vishwanath Sinha, Plenary Talk on "Educating Engineers for Wireless World", 13th International Symposium on Wireless Personal Multimedia Communications (WPMC'13), Recife, Brazil, October 11-14, 2010.
3. U.B. Desai, N.R. Prasad, A. Rodrigues and V. Sinha, Guest Editors: Special Issue on Wireless Personal Multimedia Communications, Vol. 54, No. 1, July (1) 2010, Springer.
4. Santosh Shah and V. Sinha, "GMSK Demodulator using Costas Loop for Software-Defined Radio", 2009 International Conference on Advanced Computer Control (organized by IACSIT, published by IEEE Computer Society), Singapore, pp. 757-761, January 22-24, 2009.
5. Santosh Shah & V. Sinha, "Iterative decoding vs. Viterbi decoding: a comparison", National Conference on Communications, IIT Bombay, p. 494-497, February 2008.
6. Akshay Garg, Deepen Gupta & Vishwanath Sinha, "A hybrid packet loss recovery scheme for internet telephony", 10th International Symposium on Wireless Personal Multimedia Communications (WPMC'07), Jaipur, December 03-06, 2007.
7. V. Sinha, "The mobile rides on radio waves", International Conference on Microwaves, Antenna, Propagation & Remote Sensing, December 2006, Jodhpur.
8. Santosh Shah, S.L.Maskara & V. Sinha, Software radio in mobile communication systems: Issues and challenges", National Conference on Recent Advances in Microwave Technique and Applications, October 6-8, 2006, Jaipur.
9. V. Sinha, "The quest for Bandwidth – 'Broadband', as we call it today", National Conference on Recent Advancements in Microwave Technique and Applications, October 6-8, 2006, Jaipur
10. Santosh Shah, S.L.Maskara & V. Sinha, "Reconfigurable radio using software technology", 22nd National Convention of Electronics and Telecommunication Engineers, August 4-5, 2006, Jaipur
11. C. Michalke, H. Venkataraman, V. Sinha, W. Rave and Gerhard Fettweis, "Application of SQRD Algorithm for efficient MIMO - OFDM Systems", in Proceedings of European Wireless' 05, April 2005.
12. H. Venkataraman, C. Michalke, V. Sinha, W. Rave and G. Fettweis, "An Improved Detection Technique for Receiver Oriented MIMO - OFDM Systems" in Proceedings of 9th OFDM Workshop, Organized by TU-Hamburg Hamburg, Germany, 15-16 September, 2004.
13. Rajesh Gandhi and Vishwanath Sinha, 'Empirical Path Loss Model for 802.11 b Wi-Fi Links', 6th International Symposium on Wireless Personal Multimedia

- Communications (WPMC03), Yokosuka, Kanagawa, Japan; pp vi, 157-161, September 2003.
14. Bhuwanendra Kumar and Vishwanath Sinha 'Improvements in Turbo Decoding', IETE Journal of Research, Vol. 48, No. 6, November – December 2002, pp 491 – 494.
 15. B. Venkateswara Rao and Vishwanath Sinha, 'Study of Channel Assignment Strategies for Handoff and Initial Access in Mobile Communication Networks; IETE Journal of Research, Vol. 48, No. 1, January- February, 2002; pp 69 – 76.
 16. Rahul Garg, Ajit Jain and V. Sinha, 'Sensors in a Mobile Environment (SIME)', National Conference on Communications; I.I.T. Bombay; January 25-27, 2002; pp 423-427.
 17. Deepak Kumar Sood and Vishwanath Sinha, 'Enhanced FS-ALOHA (E-FS-ALOHA) Algorithm for Contention Resolution in wireless ATM Systems', National Conference on Communications; I.I.T. Bombay; January 25-27, 2002; pp 335-339.
 18. Vishwanath Sinha and D.Raveendra Babu, 'Class-based Packet Scheduling Policies for Bluetooth', National Conference on Communications; I.I.T. Bombay; January 25-27, 2002; pp 330-334.
 19. Editor, Proceedings of the International Symposium on Automotive Electronics & Alternate Energy Vehicles, November 23 - 25, 2001; IIT Kanpur; Allied Publishers Limited; Vishwanath Sinha and B. K. Karmakar
 20. V. Sinha, 'Interdisciplinary curriculum for development of a global engineer', a book-chapter under Part VII on "Successful Practice in Engineering Education – educational Concepts" in the book "Educating the Engineer for the 21st Century", Kluwer Academics Publishers, Dordrecht, Netherlands, 2001; also available on <http://www.gee3.de> as presented at the 3rd Workshop on Global Engineering Education (GEE'3); Aachen, Germany; October 18 - October 20, 2000.
 21. V. Sinha and B.H.Walke, 'An international collaborative networked venture for mobile communication studies', a book-chapter under Part VII on "Successful Practice in Engineering Education – educational Concepts" in the book "Educating the Engineer for the 21st Century", Kluwer Academics Publishers, Dordrecht, Netherlands, 2001; also available on <http://www.gee3.de> as presented at the 3rd Workshop on Global Engineering Education (GEE'3); Aachen, Germany; October 18 - October 20, 2000.
 22. V. Sinha, 'A virtual classroom and more', a book-chapter under Part VII on "Successful Practice in Engineering Education – educational Concepts" in the book "Educating the Engineer for the 21st Century", Kluwer Academics Publishers, Dordrecht, Netherlands, 2001; also available on <http://www.gee3.de> as presented at the 3rd Workshop on Global Engineering Education (GEE'3); Aachen, Germany; October 18 - October 20, 2000.
 23. Gaurav Sharma and Vishwanath Sinha, 'Resource Allocation in Wideband CDMA Networks for Integrated Voice and Internet Traffic', IETE Journal of Research, Vol. 47, No. 5, September – October 2001.
 24. Bellam Sasi Kumar and Vishwanath Sinha, 'Processing Power Requirements for Software Realization of WCDMA (FDD) Downlink in Base Station Systems', 4th

- International Symposium on Wireless Personal Multimedia Communications (WPMC'01), Aalborg, Denmark; pp 213-218; September 09-12, 2001.
25. G. Sreelakshmi and Vishwanath Sinha, 'Modified Algorithms for 3G Security', 4th International Symposium on Wireless Personal Multimedia Communications (WPMC'01), Aalborg, Denmark; pp 1141-1146; September 09-12, 2001.
 26. Mirza Shahrukh Baig, Vishwanath Sinha and Peter Stuckmann, 'Differentiated Services for Mobile Core Networks', 4th International Symposium on Wireless Personal Multimedia Communications (WPMC'01), Aalborg, Denmark; pp 675-680; September 09-12, 2001.
 27. Vishwanath Sinha and D. Raveendra Babu, 'Supporting Classes of Service in Bluetooth', 4th International Symposium on Wireless Personal Multimedia Communications (WPMC'01), Aalborg, Denmark; pp 1375-1380; September 09-12, 2001.
 28. Vishwanath Sinha, 'Human Resource Development through Networked Universities: Mobile Communication Studies Centre'; International Conference on Learning and Teaching On-Line: Practices, Challenges and Prospects; Guangzhou, China, January 10 - 12, 2001; <http://LTOL.scnu.edu.cn>.
 29. Vishwanath Sinha, 'Internet and Information Technology Adaptation for Quality Education'; International Conference on Learning and Teaching On-Line: Practices, Challenges and Prospects; Guangzhou, China, January 10 - 12, 2001; <http://LTOL.scnu.edu.cn>.
 30. Vivek Mudgil and Vishwanath Sinha, 'A Scheme for Download Services for Burst Requests'; National Conference on Communications; I.I.T. Kanpur; January 27-28, 2001; pp 37-41.
 31. Nitin Kumar Gupta and Vishwanath Sinha, 'Exploitation of Overlapping Coverage Area in Microcellular Communication Systems'; National Conference on Communications; I.I.T. Kanpur; January 27-28, 2001; pp 59-62.
 32. B. Venkateswara Rao and Vishwanath Sinha, 'Throughput Improvement in Cellular Communication Networks'; National Conference on Communications; I.I.T. Kanpur; January 27-28, 2001; pp 63-67.
 33. H.S. Vandra and Vishwanath Sinha, 'Specification and Performance Evaluation of Extended HIPERLAN/2 MAC Protocol for use as a Forwarder'; National Conference on Communications; I.I.T. Kanpur; January 27- 28, 2001; pp 158-162.
 34. Editor; Proceedings of the Seventh National Conference on Communications, NCC-2001; IIT Kanpur; January 27-28, 2001; Allied Publishers Limited, 2001; Vishwanath Sinha, Sanjay K. Bose and Ajit K. Chaturvedi.
 35. Gaurav Sharma and Vishwanath Sinha, 'Strategies for Resource Allocation in Wideband CDMA Networks for High Data Rate Applications'; 2000 IEEE International Conference on Personal Wireless Communications (ICPWC'2000), Hyderabad, December 17-20, 2000; pp 273-276.
 36. Bhuwanendra Kumar and Vishwanath Sinha, 'Some Extension to Turbo Decoding for Performance Improvement'; International Conference on Communications, Computers & Devices (ICCCD 2000), I.I.T. Kharagpur, December 14-16, 2000; pp 713-716
 37. Bhuwanendra Kumar and Vishwanath Sinha, 'Modified Turbo Codes for Performance Improvements'; Third International Symposium on Wireless Personal

- Multimedia Communications (WPMC'00); Bangkok, Thailand; November 12-15, 2000; pp 543-547.
38. Vishwanath Sinha, 'Developing Nations' Urgent Need for Communication Connectivity'; Commsphere 2000 International Millennium Conference on Affordable Telecom and IT Solutions for Developing Countries; I.I.T. Madras, Chennai; February 28-March 02, 2000; Published on CD ROM; s 8.2.pdf.
 39. Vishwanath Sinha, 'Software Radio for Personal Communications Services'; Sixth National Conference on Communications (NCC-2000); New Delhi; January 29-30, 2000; Published by Viva Books Pvt. Ltd.; pp 8-12 ;(*Invited Paper*).
 40. Editor; International Symposium on Automotive Electronics & Alternate Energy Vehicles, November 19-21, 1999; IIT Kanpur; Allied Publishers Limited; Vishwanath Sinha and B. K. Karmakar
 41. Vishwanath Sinha, 'South ASEAN Region Communications Scenario and Paradigms for Development'; Second International Symposium on Wireless Personal Multimedia Communications (WPMC'99); Amsterdam; September 21-23, 1999; pp 531-534.
 42. Vishwanath Sinha, 'Innovative Solutions for Communication Connectivity for not so privileged Societies'; IEEE 50th Vehicular Technology Conference; Amsterdam; September 19-22, 1999; Published by IEEE; pp 549-553.
 43. Editor, Proceedings of the National Symposium on Automotive Electronics, October 25- 26, 1997; Allied Publishers Ltd; 1997 (along with B.K. Karmakar).
 44. Vishwanath Sinha, 'On Writing a Technical Paper'; IETE Journal of Education, Vol. 38, No. 2, April- June, 1997.