

Qualifications & Experience

ACADEMIC QUALIFICATIONS:

- July 2005** **Executive Development Program ; Kellogg Business School, USA.**
- Dec. 1987** **Ph.D. (Civil Engg.) : University of California, Berkeley, USA.**
Emphasis : Earthquake engineering and structural dynamics
Minor Fields : Geotechnical engineering/soil dynamics; Applied mathematics
- Dec. 1982** **M.S. (Civil Engg.) : University of California, Berkeley, USA.**
Emphasis : Structural engineering and structural mechanics
- June 1981** **B. Tech. (Civil Engg.) : Indian Institute of Technology, Delhi, INDIA.**
Emphasis : Structural and geotechnical engineering

PROFESSIONAL EXPERIENCE:

- Nov. 2000 – Dec. 2000** **Visiting Research Professor : ISD, University of Stuttgart, GERMANY.**
Invited university lectures on wave propagation & scattering in plates, and use of ANN in damage detection. Guided researchers in an SFB project on damage detection in laminated FRP composites towards development of an FRP composite sensor for automobile application
- May 1999 – July 1999** **Visiting Research Professor : University of Manitoba, Winnipeg, CANADA**
Guided researchers on galloping vibration control of transmission lines using tuned liquid dampers. Participated in guiding research on an experimental investigation of wind-induced instabilities for transmission poles.
- Nov. 1998 – present** **Professor of Civil Engg. : Indian Institute of Technology, Bombay, INDIA.**
Offer graduate and undergraduate courses in structural mechanics, dynamics, and earthquake engineering. Conduct research through graduate student guidance and sponsored projects in structural dynamics, structural control, earthquake engineering, structural reliability, and non-destructive evaluation of structures. Offer advice on consultation basis to industry on problems in structural analysis, design and earthquake engineering/lifeline infrastructure.

- July 1994 – Oct. 1998** **Assoc Prof. (Civil Engg.)** : *Indian Institute of Technology, Bombay, INDIA.*
Same as for the above position. In addition, as member of the IIT Curriculum Review Committee (Narayanan Committee) and as chairman of the sub-committee on Mechanics revamped the Mechanics curriculum and assisted in a revamp of the curriculum. For the first time a Department level Introductory Course was introduced at the first year level.
- April 1988 – June 1994** **Asst. Prof. (Civil Engg.)** : *Indian Institute of Technology, Bombay, INDIA.*
Same as for the above positions. In addition, introduced post-graduates courses on Earthquake Engineering, Probability and Statistics in Civil Engineering and updated courses in Structural Dynamics and Advanced Structural Mechanics. As member of departmental undergraduate curriculum review committee revamped the undergraduate structures core courses and electives. Revamped the Engineering Mechanics Laboratory by introducing new experiments.
- June 1983 – Nov. 1987** **Research Asst. (Civil Engg.)** : *University of California, Berkeley, USA.*
NSF funded project to develop simplified earthquake response analysis method for torsionally-coupled building systems.
- Sep. 1981 – May 1983** **Teaching Assoc. (Civil Engg.)** : *University of California, Berkeley, USA.*
Associated with graduate and undergraduate structural engineering and mechanics courses, and a graduate experimental dynamics and stress analysis course.
- June 1981 – Aug. 1981** **Management Trainee (Engg.)** : *Engineers India Ltd., New Delhi, INDIA.*
Analysis and design of off-shore oil-production jacket platforms to be located in the Bombay High region; Preliminary feasibility study for a proposed container terminal at Madras port.
- May 1980 – July 1980** **Trainee Engineer** : *Development Consultants Pvt. Ltd., New Delhi, INDIA.*
Design and analysis of various structural components of two super thermal power plants located in India.

MAJOR PROFESSIONAL & ADMINISTRATIVE ACTIVITIES:

- 2007 – present** Member, Apex Committee on New Campus Establishment & Development, *National Institute for Science Education Research, Bhubaneswar.*
Provide expert advice on academic and residential areas planning for NISER campus; selection of architects; overview of campus plan; monitoring of execution.
- 2007 – present** Member, Technical Advisory Committee, *Maharashtra State Road Development Corporation Limited, Mumbai.*
Provide expert advice on all infrastructure projects – including Western Sealink Project and Trans-Harbour Project in Mumbai.
- 2006 – present** Member, Instrumentation Committee, *Indian Roads Congress, New Delhi*
Prepare new guidelines for instrumentation and health monitoring of bridge infrastructure and review guidelines for road infrastructure.

- 2005 – present** Member, Committee for Capacity Building, *World Federation of Engineering Organisations*, under the aegis of UNESCO, Geneva.
Participate in preparation of review document of capacity building, with special emphasis on technical education, in developing and under-developed countries. Prepared a white paper on possibilities for improvements, especially using distance education.
- 2005 – present** Member, African Science Committee, Nelson Mandela Foundation
Participate in development of science and engineering curriculum at undergraduate and masters level for Sub-Saharan Africa; identify human and financial resources for capacity building.
- 2005 – 2007** Member, Central Board of Railway Research, *Indian Railways*, New Delhi
Review and monitoring of research projects relevant to railways.
- 2004 – present** Vice President & Member of Executive Council, *International Society for Health Monitoring of Intelligent Infrastructure*.
Participate in the professional activities of the society, and provide guidance on direction of health monitoring of infrastructure. Help organise conferences, workshops and other outreach programmes. Provide outreach in South Asia.
- 2004 – present** Member, Governing Academic and Administrative Board, *Africa University of Science & Technology*, under the aegis of World Bank Institute, USA.
Prepared the basic concept plan for the setting up of four AUSTs on the lines of the IITs as requested by World Bank Institute; presented the plan to the African Heads of State meeting at Abuja in January 2005. As a panel member for choice of the architect for the first campus, selected the Architect for the Abuja campus. Then participated in a discussion meeting in Abuja for deciding the subject areas and curriculum in the inaugural academic programme. Helping in identify prospective faculty members.
- 2003 – 2009** Dean (Alumni & International Relations), IIT Bombay
As the first incumbent to the post, set the institute policies governing international collaboration and exchanges. Started two successful joint doctoral programmes with National University of Singapore and Monash University, Melbourne. Participated in the founding of the Asia-Oceania Top University League in Engineering (AOTULE), a conglomerate of 12 research universities from 12 countries in the region. Initiated the idea of a Faculty Alumni Network (FAN), an initiative by which alumni in faculty positions in universities around the world help IITB leverage and further its research agenda. Developed strategic relationships with top research universities, such as Cambridge, Harvard, Monash, Washington University St. Louis, Purdue, NUS and NTU, where the funding essentially is obtained by the partners to further a common research agenda. On the alumni front, made the alumni the major stakeholders in the development of the alumni movement by helping them bring more alumni in the fold through the monthly alumni e-newsletter, by suggesting formation of new chapters. Helped new chapters interact with IITB in several ways that are of mutual benefit. Made the silver jubilee legacy project, where all the alumni of that

batch provide funds for one concept related to IITB, become an integral part of all silver jubilee reunions.

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| 2002-2005 | Member of Expert Advisory Committee for Dean (Planning), IIT Bombay |
| 2002-2003 | Professor-in-Charge (Alumni Affairs) & Professor-in-Charge (International Relations), IIT Bombay |
| 2001-2004 | Member of Advisory Committee for Institute Research & Consultancy Centre, IIT Bombay |
| 1998-2002 | Chairman (Sports Activities), Students Gymkhana, IIT Bombay |
| 1996-1998 | Warden/Associate Warden of Students Hostel 8, IIT Bombay |
| 1992-2001 | DUGC, UGPC and DPGC – Academic Committees Member, IIT Bombay |