



**Dr. ANUPAMA SHARMA**  
**Professor, Energy & Astro -Maha Vaastu consultant**  
**Deptt. of Architecture & Planning**  
**Maulana Azad National Institute of Technology, Bhopal**

1. **ACADEMIC QUALIFICATIONS** : B.Arch (1991), M.Arch (1994), PhD(2002) **Energy , Maha Vaastu Certified Acharya**

2. **TEACHING EXPERIENCE**: 27Years (2 years at IIT Roorkee)      **RESEARCH EXPERIENCE**: 1 Year at IIT Roorkee

**CONSULTANCY EXPERIENCE**: 14Years (Various Vaastu projects, Interior projects according to maha vaastu)

**RESEARCH AREA**: *Energy & Sustainable built Environment*

3. **RESEARCH PUBLICATIONS**

(a) No. of Research Papers Published in International journal :20 (Twenty)

(b) National Journal: 12 (Twelve)

(c) No. of Research Papers Presented/Published in CONFERENCES

(i) International Conferences: 07 ( Seven)

(ii) National Conferences: 21 ( Twenty)

4. **CONSULTANCY**

Consultancy projects worth **1.89 crore** in around 8 projects of Vetting of hydraulic design and drawing of various components of various water schemes in villages and Source appointment and carrying capacity and emission inventory studies.

5. **SPONSORED RESEARCH PROJECTS**

- ❖ Research project on "Emission Inventory & Source Apportionment Study of Dewas "Sponsored by Nagar Palika Nigam, Dewas of Rs.69,38,750/-
- ❖ Research project on "Emission Inventory & Source Apportionment Study of Dewas "Sponsored by Nagar Palika Nigam, Sagar of Rs.83,13,750/-
- ❖ Research project under Smart City, "Survey for Computation of Liveability Index at Jabalpur" by smart city cell, Jabalpur of Rs. 5.5lakhs.
- ❖ "Modernization of facilities of Environmental Science laboratory" Sponsored by MHRD, Govt. of India, New Delhi – Total Cost Rs 3.00 lakhs
- ❖ "Monitoring of Urban Development on Fringe areas using Remote sensing techniques" under the centre of Excellence scheme Jan'99 of Rs.1.00 lakh.
- ❖ "Adaptation of Traditional Techniques from Energy conscious Heritage buildings to low cost shelters" under the scheme of thrust area approved by MHRD Govt. of India by the letter No. F-27/1/1999 TS –1 dated 30<sup>th</sup> Mar.'2000 of Rs. 5.50 lakhs
- ❖ "Development of Remote sensing Technology" under the scheme of Modernization & Removal of Obsolescence approved by MHRD Govt. of India by the letter No. F-28/1/1999 TS –1 dated 31<sup>st</sup> Mar.'2000 of Rs. 5.00 lakhs .
- ❖ "Strategies for managing Earth Quake hazards in M.P" under the scheme of R&D by Institution of Engineers India by the letter No. T-R&D / Prj. No. 1(2002-2003) dated 31/03/2003 of Rs. 50,000/-.

5. **Ph.D. THESIS GUIDED/IN PROGRESS** (Awarded: 07) ( 03 undergoing)

6. **M.Tech. THESIS GUIDED/ IN PROGRESS**

❖ 30 M.Tech Theses Guided

7. **UG PROJECTS GUIDED:** 60 U.G projects Guided

#### **8. ACADEMIC ACHIEVEMENT/AWARD**

- ❖ Awarded Shakti Chetna Samman by Vishwamanglik Sabha for my remarkable achievements in the field of Vastu and Energy on 17<sup>th</sup> March'24
- ❖ AICTE Young Teachers Career Award on "Thermal Comfort Guidelines" of Rs. 10.5 lakhs for the financial year 2003-2004.
- ❖ Official Evaluator for GRIHA projects for the session 2012-2016.
- ❖ Mahavastu Acharya certified by Mahavastu Centre ,New Delhi.
- ❖ Naari Shaki ko Saamaan a Women Achiever Award for the contribution in the field of Vaastu by Brij Bhoomi Foundation on 12 Oct'19.

#### **9. EXPERT LECTURES DELIVERED (Other Institutions):**

- ❖ 30 (On the Topics related with Energy, Climate, vastu, Planning Techniques).

#### **10. DEVELOPMENT OF NEW LABORATORY:**

- ❖ Environmental Science Lab.

#### **11. CONFERENCES/SEMINAR ORGANISED:**

- ❖ Organised 36<sup>th</sup> National Convention of Architectural Engineers and National Conference on Green Buildings, Innovations and Sustainability(NCGBIS) from 19-20<sup>th</sup> November'22 under the Aegis of Architectural Engineering Division Board, The Institution of Engineers(INDIA), M.P.State Centre, Bhopal.
- ❖ Organised a one day student workshop on "Smart City Interventions" a part of Design Yatra of IIID , Bhopal Chapter on 6<sup>th</sup> Feb'17.
- ❖ Organised a one day student workshop on "Tribal Art" by nationally acclaimed Artist Yashwant Singh on 26<sup>th</sup> Oct'16.
- ❖ Workshop on 'Autodesk Revit' for Architects, faculty and professionals on 23<sup>rd</sup> Sept'16.
- ❖ Organised a one day workshop on "International Etiquettes & Personality Grooming" on 5<sup>th</sup> August'16 at MANIT Bhopal.
- ❖ Organised a working studio on "Building Smart Human Cities" from 8-10<sup>th</sup> March'13 in collaboration with Indian Institute of Architects, Bhopal Chapter.
- ❖ Organized an International Conference on "Reimagining Inclusive Urbanization : People building better cities " from 7<sup>th</sup> -9<sup>th</sup> Jan'12 at MANIT, Bhopal in collaboration with University of Sydney, Australia
- ❖ Organized a two week "Global Studio - 2012" from 10<sup>th</sup> -24<sup>th</sup> Jan'12 at MANIT, Bhopal in collaboration with University of Sydney, Australia.
- ❖ Organized a Two week short term Staff development programme sponsored by AICTE/MHRD on 'Sustainable Strategies for Green Architecture' from 1<sup>st</sup> Sept'08-12<sup>th</sup> Sept'08 at MANIT, Bhopal.
- ❖ Organized 19<sup>th</sup> National Convention of Architectural Engineers and National Seminar on 'Sustainable built Environment' on the platform of Institution of Engineers (India) at MANIT, Bhopal on 1<sup>st</sup>-2<sup>nd</sup> November'2003.
- ❖ Organised a Two Days National Workshop on "Energy thrift in Low cost Smart Buildings" at Energy Centre, MACT, Bhopal on 19<sup>th</sup> – 20<sup>th</sup> Dec. 2001.
- ❖ Organised a one day National workshop on "Urbanization stresses & conservation of lakes" at MACT Bhopal, on 23<sup>rd</sup> March 2002 sponsored by Bhoj Wetland project, EPCO Bhopal.
- ❖ Organised a one day National workshop on "Environmental Education & Sustainable development" at MACT, Bhopal, on 23<sup>rd</sup> March 2002 sponsored by EPCO, Bhopal.
- ❖ Member of the organizing committee of Seventeenth National Convention of Computer Engineers and National Seminar on "Computer Education in 21<sup>st</sup> Century" at The Institution of Engineers (India) M.P.State Centre, Bhopal, on 18<sup>th</sup> & 19<sup>th</sup> Jan 2003.
- ❖ Member of the organizing committee of the 18<sup>th</sup> National Convention of Environmental Engineers & National Seminar on "Solid Waste Management" at The Institution of Engineers (India) M.P. State Centre, Bhopal, on 19 - 20<sup>th</sup> Oct. 2002.

#### **12. REPORTS**

- ❖ Edited the proceedings of National Workshop on "Energy thrift in Low cost Smart Buildings" at Energy Centre, MACT, Bhopal on 19<sup>th</sup> – 20<sup>th</sup> Dec. 2001.
- ❖ Edited the proceedings of the 19<sup>th</sup> National Convention of Architectural Engineers & National Seminar on "Sustainable built environment" by The Institution of Engineers (India) M.P. State Centre, Bhopal, at MANIT, Bhopal on 1<sup>st</sup> –2<sup>nd</sup> November 2003.

- ❖ Report of the Research project “Strategies for managing Earthquake hazards in M.P” submitted in March 2005 to the Institution of Engineers (India)

**13. ADMINISTRATIVE EXPERIENCE AT INSTITUTE LEVEL**

- ❖ Head of the Department from March'16- June'18
- ❖ Student Advisor from August'12 -August'14
- ❖ Exam Controller at department level
- ❖ Controller of Examination from Sept '08 to July'09
- ❖ NASA In charge for the year 2006-07(Organized Golden Jubilee NASA at MANIT, Bhopal)
- ❖ Professor in charge Value Education cell for two years
- ❖ Assistant Proctor March 2006 to Sept'08
- ❖ Deputy controller of examination from March 2006 to Sept'08
- ❖ Member AIEEE Counseling 2008, 2007, 2006, 2005.
- ❖ Member P.G and PhD admission committee.
- ❖ Assistant Superintendent Examination (U.G) with effect from 12<sup>th</sup> Sept. 2002 for two years.
- ❖ Executive elected member from the Architectural Engineering division, Institution of Engineers (India), M.P.State Centre.
- ❖ Member of administrative team for the improvement and maintenance of Residential quarters, Girls hostel, etc
- ❖ Member U.G Admission Committee till Sept.'2005
- ❖ Member Board of Studies Dept of Arch & Planning, MANIT.
- ❖ Member DPRC, Dept. of Architecture & Planning, MANIT
- ❖ NASA In charge for the year 2004 & 2005

**14. MEMBER INTERVIEW BOARD/ EXPERT OF INSPECTION COMMITTEE/OTHER OUTSIDE NATIONAL SOCIETIES**

- ❖ **Active Member of Vigyan Bharti , Bhopal Chapter**
- ❖ **Jury Member for the Swatchta Mission for RWA, Hawkers Market, Markets of M.P Govt**
- ❖ **Member of National level Inspection Reforms committee of Council of Architecture, New Delhi**
- ❖ **Official DTS trainer, trained by DoPT , Govt of India**
- ❖ **BOS member of IES, College from 16<sup>th</sup> march'20**
- ❖ **Member of Inspection team for M.P.Ayog for private universities.**
- ❖ **Expert for evaluation Design competition for BSIP, Lucknowl (Dec'19)**
- ❖ **Expert for evaluation Design competition for AMPRI, CSIR, Bhopal (Oct'19)**
- ❖ **Advisor for GRIHA projects to “INERTIA” a firm for delivering sustainable design from 10/08/16 onwards.**
- ❖ **Member of the committee to evaluate “Master Plan” of CSVTU, Bilai campus, Chattisgarh University.**
- ❖ **Member of BOS of Shri Vashnav Vidyapeeth Vishwavidyalaya, Indore**
- ❖ **Member of selection committee of Director & Faculty of Shri Vashnav Vidyapeeth Vishwavidyalaya, Indore**
- ❖ **Executive Member of Indian Vastu Society of India.**
- ❖ **Member of Mahavastu experts, india.**
- ❖ Member of NATA evaluation team from COA for the years 2010, 2011, 2012.
- ❖ Chairman Interview committee for recruitment of faculty in Architectural School, Indore for RGPV, Bhopal
- ❖ Member of Interview panel for Government of M.P for 2006 & 2007.
- ❖ Chairman inspection committee on behalf of Council of Architecture for Architectural Schools.
- ❖ Member of Inspection committee on behalf of RGPV, Bhopal for Architectural Schools.

**15. MEMBERSHIP OF PROFESSIONAL BODIES**

- ❖ Member of Seven Professional bodies like **ISES, COA, IEI (India), IIA , IVVRF, IVS & SESI**

**16. SHORT-TERM COURSE ATTENDED:      **22 WEEKS (DoPT training program of Govt of India, from 24<sup>th</sup> Feb'20-28<sup>th</sup> feb'20****

**LIST OF PAPERS PUBLISHED**

1. **“Classification, Mitigations and Methods to Detect UHI: A review”** published in International Journal of Scientific research in engineering and Management (IJSREM) Issue 2, volume 7 , February 2023, ISSN No 2582-3930, Impact factor 7.185
2. **“Sustaining transformation in Built Environment- The Case of Trashiyangtse , Bhutan”** published and presented in National Conference on Green Buildings, Innovation and Sustainability held in Bhopal on 19-20<sup>th</sup> November’22 organised by IEI(India)
3. **“Sustaining Indigenous knowledge system in Building Ventilation: A Review of Hindu Temples”** published and presented in National Conference on Green Buildings, Innovation and Sustainability held in Bhopal on 19-20<sup>th</sup> November’22 organised by IEI(India)
4. **“Indian Knowledge Systems and Practices Case Application: Vaastu-Vidya and its Practices in Contemporary Architecture & Planning”** published and presented in National Conference on Green Buildings, Innovation and Sustainability held in Bhopal on 19-20<sup>th</sup> November’22 organised by IEI(India).
5. Chapter in a Book entitled “Engineering Research and Technology” title of the chapter **“Analyzing Energy Saving Measures and Key Metrics for Enhancing Cooling Performance in Atrium Buildings”** chapter number 10, pages 133-145, Volume 8, Issue July 2021,ISBN No 978-93-91473-60-0.
6. **“Assessing the Impact of Skylight Design on Daylight Availability and Visual Comfort in Top-Lit Atriums for Commercial Buildings: A Case of Bhopal”**. Published in International Journal of Scientific & Technology Research, Volume-8 Issue-11, ISSN: 2277-8616 (Nov, 2019). (SCOPUS)
7. **“Assessing Physical Development in the Local Areas of Bhopal by Evaluating Identified Physical Amenities”** International Journal of Engineering and Advanced Technology (IJEAT)’, ISSN: 2249-8958 (Online), Volume-8 Issue-5, June 2019, pp.2031-2038 (SCOPUS)
8. **“People’s Perception of Physical Development in the Local Areas of Bhopal”** International Journal of Innovative Technology and Exploring Engineering (IJITEE)’, ISSN: 2278-3075 (Online), Volume-8 Issue-12, October 2019, pp.3670–74. (SCOPUS)
9. **“Comparative Analysis of International and Local Ranking Organisation Themes : An Approach to Identify the Need of Physical Development”** published in ‘International Journal of Innovative Science Modern Engineering (IJISME), Volume-5 Issue-12, pp83-87, June’19.
10. **“Identifying Local Area Development Indicators for an Indian City”** Published in International Journal of Management and Humanities (IJMH), Volume-3 Issue-10, pp 29-32, June19.
11. **"Sustainable development of existing communities: The Role of Municipal Corporation"** submitted to be published in International journal of Engineering studies and technical approach.

12. **"Interrelation of attributes of occupant's comfort, ventilation system and indoor air quality in residential buildings"** published in International journal of Recent Advances in Multidisciplinary Research , Volume 05,May 2018.
13. **"Assessing Energy Preservative Measures and Substantial Parameters for Optimizing Cooling Performance in Atrium Buildings"** published in International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Volume-7 Issue-1, March 2018.(SCOPUS)
14. **" Identity, Aesthetic and Ionic Values of Atrium: Reflecting Role in Architecture"** published in International journal of Engineering studies and technical approach, Volume 03, No. 11, Nov 2017.
15. **"Cities of the future: An Approach to water conservation in urban landscape- With a New Perspective"** published in Planners Newsletter Vol. no.69, October-December 2016 issue, page 3-4.
16. **"Bio climatic Design strategies for healthier Habitat & Habitants"** National seminar on Emerging trends in green technology, ASAP, Gwalior, April'16.
17. **"SBS- An Architects Perspective"** published in the international journal of Academic Research for multidisciplinary, Impact factor 2.417, ISSN: 2320-5083, Volume 4, issue 2, March'16.
18. **"Sustainability is Simplicity"** in the International Conference at EUEC-2016 at San Diego, USA from 3-5th Feb'16.
19. **"Conceptual Framework for Slum Free City Planning: An Urban Environment Management Approach"** published in International Journal of Housing and Human Settlement Planning Vol. 1: Issue 1 ,JHSP (2015) 1-17.
20. **"A fuzzy based methodology for user's perception evaluation of low floor buses for Bhopal City."**International Journal of Applied Engineering Research (IJAER).Volume 10, Number 22, 2015.
21. **"Performance Evaluation of Public Transport of Bhopal City from User's Perspective."**International Conference on Futuristic Trends in Computational Analysis and Knowledge Management, Amity University, Greater Noida, 2015
22. **"Slum Redevelopment Strategy: A Way forward to Urban Environment Management through Inclusive Approach"** published in Research Journal of Engineering Sciences ISSN 2278 – 9472, Vol. 3(7), 28-37, July (2014).
23. **"Strategies for the improvement of Service Quality for Commuters in Public Transit Service-A Case Study of Bhopal."***AKGEC International Journal of Technology, Vol. 5, No. 2.* (Dec 2014)
24. **Review of Public Transit Services in the State Capital Bhopal."** International Journal of Engineering and Technical Research (IJETR) ISSN: 2321-0869, Volume-2, Issue-12, September 2014.

25. **“Analysis of Customer’s Satisfaction in public transport using fuzzy logic for Bhopal City”** *International Journal of Engineering and Technical Research (IJETR)* ISSN: 2321-0869, Volume-2, Issue-12, December 2014
26. **“Electromagnetic radiation :a cause of sick building syndrome”** published in the journal of Council of Architecture , Time ,space and people in Vol-14 issue 2, feb 2014.
27. **“Quantifying Embodied energy using green building technologies under affordable housing construction”** in *Journal of Energy Efficiency*,2013,2,171-175 published in the Dec’13 issue.
28. **“Adoption of Green building Practices in Mass housing construction projects LEED-India Rating system revision in Indian Scenario”** published in the international journal of Advanced Engineering Technology, IJAET/Vol.III/Issue IV/Oct-Dec’2012.
29. **“ A Review on Urban Public Transport System of Bhopal City”** published in the international journal of Advanced Engineering Technology, IJAET/Vol.III/Issue II/April-June’2012.
30. **“Perspectives and Initiatives of Inner City Areas”** published in National journal of Architecture + Design, Volume XXVIII, No. 1, January 2011, pages 94-98.
31. **“Road Safety improvement: A Challenging issue on Indian Roads”** published in **International** Journal of Advanced Engineering Technology, Vol II/ April-June, 2011/ 363-369.
32. **“An Overview on Bus Rapid Transit System”** published in International ‘Journal of Engineering Research and Studies’ in volume II/ issue II/ Oct.- Dec., 2010/ 195-205.
33. **“An Approach to Human Adaptability towards its Built Environment: A Review”** published in the **International** journal of Energy & Power Engineering, Issue May2010.
34. **‘Design and Development of Land Information System using Remote Sensing and GIS Techniques’** published in the National Conference on ‘Recent Advances in Satellite Based Remote Sensing Technology’ held at MANIT, Bhopal.
35. **“Bamboo and Built Environment: Sustainability issues”** published in the journal of The Institution of Engineers (India), Architecture Division, issue October 2009.(SCOPUS)
36. **“Restructuring of unauthorized colonies: Implications and consequences”** published in the journal of IIA, page 16-18, April’2007.
37. **“Evaluation of data for developing an adaptive model of thermal comfort and preference”** published in the **international** journal ‘**The Environmentalist**’ page 73-81, volume 27, issue 1 , March 2007. .(SCOPUS)
38. **“Madhya Pradesh & its potential”** in the journal of IIA, page 23-25, August’2005.
39. **“Evaluation of data for developing an adaptive model of thermal comfort and preference”** presented in the 9<sup>th</sup> Environmental Research Conference’ 2005 at Hobart, Tasmania, Australia from 29<sup>th</sup> Nov. to 2<sup>nd</sup> Dec’2005.
40. **“Thermal performance of historical buildings: A case study of Lucknow”** published and presented in the international conference EUROSUN’2004, the 5<sup>th</sup> ISES Europe solar Conference at Freiburg , Germany from 20-23<sup>rd</sup> June 2004.

41. **“Unauthorized Colonization in Indore: Zoning Regulations and Building byelaws Violations”** in the National Town and Country Planners Congress at Indore from 27<sup>th</sup> – 29<sup>th</sup> Dec’2004
42. **“Saving Energy with passive systems”** published and presented in the National Seminar on ‘Integrated Approach for Equilibrium in built Environment’ at IPS Academy, Indore from 26<sup>th</sup> – 28<sup>th</sup> Feb’2004.
43. **“Thermal Comfort and Heritage Building”** has been accepted for publication in the journal of The Institution of Engineers (India), Architecture Division, April, 2003 issue. **.(SCOPUS)**
44. **“Climatic responsive Energy efficient Passive design techniques in Buildings”** has been accepted for publication in the journal of The Institution of Engineers (India), Architecture Division, Aug’2003 issue. **.(SCOPUS)**
45. **“Use of computers for building simulation by the Architects and Planners”** presented in the 17<sup>th</sup> National convention of Computer Engineers and National Seminar on Computer Education in 21<sup>st</sup> century on 18-19<sup>th</sup> Jan. 2003, organized by The Institution of Engineers (India), M.P. State Centre.
46. **“An Appraisal of a Heritage building in a composite climate ”** published at the International convention of SESI at Coimbatore on 17<sup>th</sup> -19<sup>th</sup> Jan. 2003
47. **“Climatic Responsive Energy Efficient Passive Techniques in Buildings”** presented at 18<sup>th</sup> National Convention of Architectural Engineers & National Seminar on Climatically Responsive Energy Efficient Architecture at Jaipur on 17<sup>th</sup>& 18<sup>th</sup> Oct.’02 Organised by The Institution of Engineers (India), Rajasthan State Centre.
48. **“Energy Efficient low cost Architecture”** presented at International conference on Recent advances in Solar Energy Conversion Systems, ICSECS, 28-29, Sept. 2002, at Maulana Azad National Institute of Technology, Bhopal.
49. **“Quality Control in Buildings: Case study of Anjar Earthquake ,Distt. Bhuj (Gujarat)”** presented at National Conference on Advances in Construction Materials (AICM-2002), April 8-9, 2002 at REC, Hamirpur.
50. **“Management information system in Biomedical waste management”** accepted for presentation at All India Seminar on Bio- Medical Waste –Its Handling and Management held by Institution of Engineers (India), Bhopal State centre on 10th Feb. 2002.
51. **“Thermal Performance in Heritage Buildings of Composite Climate”** published in the Journal of the Indian Institute of Architects, Vol. 66 issue 11, Dec’01. page 31-36.
52. **“Gender dimension of Environmental and technical education”** presented at National workshop on Role of technical women in technological education at Energy centre on 24<sup>th</sup> Dec. 2001.
53. **“Energy Conservation Techniques in Historical Buildings: A lesson from Gohar Mahal, Bhopal”** in the National Seminar on Energy & Environment, 21-22 Dec’01 at AnandEngg. College, Agra

54. **“Evaluation Techniques Of Parameters Affecting Thermal Performance Of Buildings”** presented at National Renewable Energy Convention – 99 at school of Energy and Environmental studies Devi Ahillya Vishvidhyalaya Indore , pp. 302 – 307 , Dec’20-22 , 1999.
55. **“Solar passive applications in traditional buildings’** presented at National conference on “Solar Energy And Systems” at Energy centre MACT, Bhopal, pp.193, Aug. 6-7 1998.
56. **“Measurement Techniques of Parameters affecting thermal Performance of buildings”** presented at International conference on “Planning for 21<sup>st</sup> century” at University of Roorkee. Roorkee , pp. 535-544 ,Oct.2-4 , 1997 .
57. **“ Thermal Comfort and Historical Buildings”** has been published in the Space Journal of School of Planning and Architecture, New Delhi, Vol.11, No.2 pp. 45-50 April 1996.
58. **“Energy Conservation Techniques in Historical buildings”** presented at International conference on “Civil Engineering Practices in 21<sup>st</sup> century” at University of Roorkee, Roorkee , pp. 1407-1416, Feb. 26-28<sup>th</sup> 1996.
59. **“ Some aspect of Thermal Energy In Historical Buildings”** presented for the Workshop and Seminar on “Energy efficient Building and Passive Solar Architecture” M.A.C.T, Bhopal , Aug.7-12 , 1995.
60. **“Thermal Comfort and Historical buildings”** Institute of Engineers (India) Bhopal.
61. **“Dynamics in space economics through transformation”** at 8<sup>th</sup> national convention of architecture Engineers held at Delhi 8-10 Nov. 1994.
62. **“Eco Development”** All India Seminar on Effect of development on environment, 15-16 Dec. 1991 at Institute of Engineers (India) Bhopal.
63. **“Effect of environment on economic activities and occupational structure”** All India Seminar on Effect of development on environment, 15-16 Dec. 1991 at Institute of Engineers (India) Bhopal.
64. **“The role of women in the behavioural and institutional change in Environmental Education”** All India Seminar on Effect of development on environment , 15-16 Dec. 1991 at Institute of Engineers (India) Bhopal.
65. **“Environmental Considerations in the planning of Road systems in urban areas”** at the national conference on Environment held in Gramodaya Vishwavidyalaya Chitrakoot on 15<sup>th</sup> August 1992.
66. **“Water Conservation – an Environment necessity”** presented at the seminar in Water and Environment 28<sup>th</sup> April 1992 organised by the Institute of Engineers (India) Bhopal.
67. **“Utilisation of infrastructure facilities in settlement – a Case study of Bhopal”** presented at workshop organised by the Institute of Town Planners, India, Roorkee regional centre on 13<sup>th</sup> Jan. 1995.

68. **“Low cost Planning Technology as thrust area of S& t input for solving the problems of urban slums – a case study of Bhopal”** presented at National Seminar on thrust area of science and Technology input for solving problems of M.P. region held at Bhopal on 25<sup>th</sup> March 1995.