



	<p>Dr. J. E. M. MACWAN Professor Civil Engineering Department S. V. National Institute of Technology, Surat-395005, Gujarat. Email: jemm@ced.svnit.ac.in Phone :+ 91 0261 2201529 Mobile: +91 9427148108</p>
---	---

Qualifications

Ph.D. (2001) Civil Engg. S.G. University, Surat.

Thesis Title: Fuzzy Simulation Analysis of Residential Location Behavior for a Metropolitan City in Indian Context

M.E. (1987) Civil Engg. (Env. Engg.) S.G. University, Surat.

Project Title: Evaluation of Bio-kinetic Constants of Industrial wastes.

B.E. (1978) Civil Engg. S.G. University, Surat.

RESEARCH INTEREST

- Smart Housing
- Smart Mass Transportation and mobility
- Smart affordable Housing
- Fuzzy applications to Urban planning/Env. Engg
- Water & Wastewater.
- Air pollution

- Env. Planning
- Town & regional planning

EXPERIENCE

- Total Teaching Experience: 33 Years
- Professional : 3.5 Years

Prestigious Award;

- Awarded for the best research in Civil Engg in the field of Green Building technology by Honorable Ex President Dr Pranav Mukherji at Chennai in 2014.

PUBLICATIONS

INTERNATIONAL JOURNAL

1. "Treatability studies of liquid wastes on the laboratory model of aerated lagoon" Asia Environment Vol. 10, No.2 pp 43-47, 1988.
2. Green Building Rating: A fuzzy Comprehensive Evaluation Approach, International Journal of Computer Applications in Engineering Technology and Sciences, INDIA, Vol.1, Issue 2, April-September 2009, pp. 325-329.
3. "Green building rating assessment tools in India: A comparative Study" International Journal Environment and Development. Vol.6, No. 2, (July –December) 2009, pp. 83-91.
4. "Analytic Hierarchy Process Approach For Criteria Ranking of Sustainable Building Assessment: A Case Study", World Applied Sciences Journal 8 (7): 881- 888, 2010.
5. "Fuzzy Rule Based Approach for Modeling Biogas Production Rate in a Real Scale UASB Reactor Treating Distillery Wastewater", International journal titled, Journal of Environmental Research and Development, Vol.6,No.3A,788-801,Jan-March 2011.
6. "Applicability of 10% Consistency Ratio Concept of AHP in Sustainable Building Criteria ranking" Int. Journal of Operations and Quantitative Management vol 17, no. 4, December 2011.
7. "Importance of urban traffic noise pollution in sustainable transportation planning: a review" International Journal of emerging technologies and application in engineering, technology and the sciences, vol. 4, Issue 2, July 2011-December 2011.

8. "Built environment sustainable construction strategies for urban India" International Journal of Advances in Management, Technology & Engineering Sciences Vol. II, Issue 2 (II), November 2012.
9. "Green Building assessment system: A Fuzzy Logic Approach" International Journal of Advances in Management, Technology & Engineering Sciences Vol. II, Issue 2 (II), November 2012.
10. "Global Weights of Parameters for Sustainable Buildings from Consultant Perspectives in Indian Context.", ASCE, Architectural engineering division, September 2012.
11. "Modern Scheduling Techniques and Tools for Residential"; International Journal of Engineering Research and Industrial Applications (IJERIA) Volume 5, No. III, August 2012; pg. 327-338.
12. "Sustainable Building Assessment Tool: Indian Leading Architects' Perceptions and Preferences." Springer, Inst. Eng. India Ser. A (November 2012-January 2013) 93(4):259-270.
13. "Assessment and MLR Modeling of Urban traffic Noise at Major Arterial Roads of Surat, India"; International journal titled, Journal of Environmental Research and Development, Vol.7,No.4A, April-June 2013.
14. "Sustainable Cities: Challenges & Opportunities of Rapid Urbanization:", International Journal of Asia – Pacific Chemical, biological & Environmental Engineering Society (APCBEES), Elsevier, ISSN: 2212-6708, January 2013.
15. "Urbanization and its Impact on Housing", International Journal of Multidisci. Research, Vol. I, Issue8(I), pp.116-121, ISSN: 2277-9302.
16. "Fuzzy and Neurofuzzy Modeling for prediction of Effluent COD for real scale UASB reactor treating Distillery Wastewater", Asian journal of water, Environment and Pollution Vol 11 (2014 pp 45-53).
17. "Development of Residential Carbon Emission Assessment Models" International Journal of Engineering research and Technology, vol 3, issue ISSN: 2278-0181, 08, Aug 2014.
18. "Fuzzy and Neuro-fuzzy Modeling for Prediction of Effluent COD for a Real Scale UASB Reactor Treating Distillery Wastewater" Asian Journal of Water, Environment and Pollution, Vol.11, No.2, pp45-53, 2014

19. "Residential Development Trend Analysis in a fast growing Indian City". International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 4 Issue 07, pp 675-681, 2015.
20. "Preoccupancy Parametric Analysis of Green Residential Building Experts' Opinions"; International Journal of Research and Scientific Innovation" ISSN No.: 2321-2705, page: 1-10 Volume II, Issue IX, August 2015.
21. SMART model of Supply of Urban Land in India. International journal of urban regional research [IJURR], 1st July, 2015.
22. "Innovative Methods to Practice Town planning Scheme for supply of Urban Land in India" International journal of innovation and emerging research in engineering [IJIERE]. Volume 2, issue 6 Page n0 11-16, 3rd July, 2015.
23. "Identifying Urban Zonal Preferences: Planners' perspective", ICE-Urban Design and Planning, Vol. 170, Issue 1, pp 1-22, ISSN:1755-0793,DOI: <http://dx.doi.org/10.1680/jurdp.15.00041>(Scopus indexed, SJR ranking 0.320)

NATIONAL JOURNAL

1. "Modern trends in low cost housing material for Indian conditions." J. Architects digest, Vol. 64, pp 14-17 Nov-Dec.1988.
2. "Water quality improvement through non point pollution control." Journal of Institute of public Health Engineers India, Vol.2, pp 15-19, 1990.
3. "A study on High Rise scenario of an Indian metropolitan city", Journal of Institute of Town Planners, India (ITPI), I:I, pp 52-61 (2004).
4. Bhatt R. and Dr Macwan J E M (2008), Developing indicators for Analytic hierarchy process based green building assessment, accepted for publication in ADIT Journal of Engineering, Vol.5, Issue 1, pp. 87-89, December
5. Bhatt R and Dr Macwan J E M (2009), Green Buildings: Global research progress and avenues in India, submitted in Journal of Institution of Engineers, Architectural division. Volume 90 (October).
6. "Road Traffic Noise in Urban Street Canyons: National Journal of Indian Roads Congress (IRC).May 2014

7. "Urban Housing and Policies in India: Review and Research Challenges", Journal of Indian Institute of Architects, Vol.79, Issue 12, ISSN: 0019-4913, pp 26-31, 2014. (Petkar A. S. and Dr. J.E.M. Macwan)
8. "G.W. Weights and L.W. Weights of parameters for Residential Location Preferences from Planners perspective in Indian context", Technical Journal of The Institute of Engineers (India) Pune Local Centre, Vol.38 Nov.2014, ISBN: 978-81-924990-2-4, pp 41-46, 2014. (Petkar A. S. and Dr. J.E.M. Macwan)

INTERNATIONAL CONFERENCES

1. "Site and services scheme plot allocation process – A network model" proceedings of XVI International Association for Housing Word Congress on Housing, Bangalore, pp 486-489, 1988.
2. "Impact of River Pollution upon Rural Area – A Short Term Study", International Conference on Rural Water Supply and Sanitation for Developing Countries, Nagpur, Jan.1992.
3. "Role of urban ecosystem in environmental planning of metropolitan Areas "3rd International conference on Environmental Planning and Management, V.R.C.E, Nagpur Feb.1996.
4. "Affordability –Floor area relation with reference to location: A case study of waste Surat, India", International Conference on Humane Habitat. Mumbai, January 1999.
5. "Development of Residential location model for fast growing Metropolitan center" International Conference on Urbanization and Housing, Bangalore January, 2000.
6. "Metropolitan Housing Demand: A case study of Surat, India" International conference on Urbanization and Housing, Bangalore January 2000.
7. "Housing growth potential based fuzzy simulation Zonal ranking: A case study of Indian Metropolitan" International conference on Computing and Decision Making in Civil and Building Engineering, Montréal (Canada) June 14-16, 2006.
8. Urban road traffic noise: unwanted sound or an unwanted issue?", International conference on global technology initiatives, Issue 1, March 12.
9. "Sustainability Assessment of Urban Land Management polices of India and new proposal" 2nd International Conference on Emerging Trends in Engineering and Technology (ICETET'2014) 30-31 May 2014, London.

10. "Urban Land Management: Paradigm shift for sustainable infrastructure" ASCE India section presents, International conference on sustainable civil infrastructure (ICSCI 2014) 17-18 Oct. 2014, Hydrabad.
11. "Framework of Analytical Hierarchy Process based on Residential Location Preferences" Proceeding of the Neo International Conference on Habitable Environments held on 31 Oct to 2 Nov, 2014 organized by Lovely Professional University, Phagwara, Punjab, India and Indian Institute of Architects, pp 513-518.
12. Petkar, A. S. and Dr. J.E.M. Macwan (Oct 2013). "Residential Location Preferences: Approaches and Research Avenues", Proceedings of Fourth International Conference on Advances in Civil Engineering, AETACE, Elsevier Publication 2013, 13-14 Dec, 2013, NCR, India, pp. 903-909.

NATIONAL CONFERENCES

1. "Environmental Protection Act (India) 1986 and National Environmental Act (GDR) 1970 A comparative review" National seminar on Environmental Protection Legislation and Strategy required for its Strict Implementation, Surat 1989.
2. "Review of the environmental protection legislation's in India and USA and suggestions for its strict implementations", National Seminar on Environmental Protection Legislation and Strategy required for its Strict Implementation, Surat Dec. 1989.
3. Abatement of ground water pollution due to sanitary landfill leachates", National Conference on Advances Ground Water Hydrology and Management of Irrigated Land, Surat Feb. 1989.
4. "The city and ecological concept and reviews", National seminar on Urbanization and its Impact on Housing and Land Cost, Surat March 1993.
5. "Corporate planning for solid waste management "National seminar for Environmental Problems of Metropolitan Cities and Remedial Measures, Surat Dec.1996.
6. "Environmental impact assessment statements for metropolitan cities", National seminar for the Environmental Problems of Metropolitan Cities and Remedial Measures, Surat Dec.1996.
7. "Laboratory studies for Removal of colour due to Disperse Dye by using Flyash" National seminar on Advanced Technology for water and Waste Treatment December 1999, SVRCET, Surat.
8. "Air Pollution Control: A Case Study of a Large-scale Pulp and Paper Mill", National Conference on Urban Air Pollution : Issues & Management, December 2003, SVNIT, Surat

9. "Environmental Aspects of Alternative Auto Fuels", National Conference on Urban Air Pollution: Issues & Management, December 2003, SVNIT, Surat.
10. "Zonal Attraction Potentials for Urban Housing: A Fuzzy Approach", National Symposium on Urban Housing: Issues & Development Strategies, March 2004, SVNIT, Surat.
11. "High-Rise Scenario of a Fast Growing Indian Metropolitan", National Symposium on Urban Housing: Issues & Development Strategies, March 2004, SVNIT, Surat.
12. "Environmental Quality Index of Urban Housing for the Poor", National Symposium on Urban Housing: Issues & Development Strategies, March 2004, SVNIT, Surat.
13. "A Comparative Study on High-Rise Residents Behaviour of CBD & Fringe Area of a Metropolitan City", National Convention Souvenir, Ahmedabad, 2005.
14. "Case study of A Metropolitan Solid Waste Management", National seminar on Integrated Municipal Solid Waste Management, Thanjavur, Tamilnadu 27-28 April 2006.
15. "Sludge Waste disposal through Bio-Metanation for electricity generation: A case study", National seminar on Integrated Municipal Solid Waste Management, Thanjavur, Tamilnadu 27-28 April 2006.
16. "Neural Network model to predict biogas based electricity generation for a wastewater treatment plant", National Conference on Water and Waste Management, Kakinada, Andhra Pradesh 23-24 April 2007.
17. "Sustainable Development: Challenges for expanded Urban Area", National conference on Water and Waste Management, Kakinada, Andhra Pradesh 23-24 April 2007.
18. "CO Prediction of Idling Two Wheelers: A Comparative Study of an ANN and MLRA Models" National conference on Sustainable Urban Transportation: Issues and Management Strategies, 28-29 December 2007, Surat.
19. "Environmental Planning Proposals for a Growing Industrial City with special reference to Vapi (south Gujarat), National conference on Sustainable Urban Environment: Issues and Management Strategies 27-29 February 2008 , Surat.
20. "Fly Ash: Bane or Boon, waste or wealth" National conference on Sustainable Urban Environment: Issues and Management Strategies, 27-29 February 2008 , Surat.
21. "Metropolitan Domestic Solid Waste Generation Analysis in Indian Context". National conference on Sustainable Urban Environment: Issues and Management Strategies, 27-29 February 2008, Surat.

22. A study of effect of operating parameters on the performance of Upflow anaerobic sludge blanket reactor, National Conference on Environmental Pollution and Control Measures, 12-13 September, 2008 Kota, Rajasthan.
23. "Green Buildings: Features, Benefits and Recommendations for growth improvements in India", National Seminar on Mapping Excellence towards Global Competitiveness, organized by IE, Mumbai, 16-17 October 2008.
24. "Green Building: A case study" National Conference on Green Technology (NCGT-2008), 10-12 November 2008, Government Polytechnic, Nashik.
25. Bhatt R, Dr Macwan J E M and Dr Bhatt D (2009), "Green building to Sustainable Building: As the shift of paradigm needed", All India Seminar on Green Buildings, IE Kota Local Centre, 18-19TH April 2009, pp. 42-45.
26. "Urban Growth Decision Model: A Fuzzy Composite Structure Approach", National Conference on Recent Advances in Civil and Structural Engineering at Vallabh Vidyanagar on 25-26 April 2014.
27. "Vadodara City, Information Technology Node Development: Ecological Proposal", National Conference on Research Advance" National Conference on Recent Advances in Civil and Structural Engineering at Vallabh Vidyanagar on 25-26 April 2014.
28. "Chakarathirth Beach, Diu; Potential Assessment and Beach Resort Proposal", National Conference on Recent Advances in Civil and Structural Engineering at Vallabh Vidyanagar on 25-26 April 2014.
29. "Sustainability Performance Evaluation of Urban Land Management Approaches through AHP", National Conference on Recent Advances in Civil and Structural Engineering at Vallabh Vidyanagar on 25-26 April 2014.
30. "A Parametric Evaluation of National Green Building Experts View with Reference to Western India", National Conference on Recent Advances in Civil and Structural Engineering at Vallabh Vidyanagar on 25-26 April 2014.
31. "Construction Strategies for Urbanization" National Conference on Sustainable Urban & Transportation Planning: Issues & Management Strategies (SUTRIMS 11), 2014, CED, SVNIT, Surat.

32. “G.W. Weights and L.W. Weights of parameters for Residential Location Preferences from Planners perspective in Indian context”, Annual Technical Paper meet – 2014 organized by The Institute of Engineers (India), Pune.

Doctoral Guidance:

Five Ph.D. thesis are guided and degrees are awarded in the following fields.

- # Modelling for Green Building
- # Urban Noise Modelling.
- # Modelling for CO and Gas production in Wastewater.
- # Development of Line of balancing Model
- # Integrated GIS model for Development plan on Urban Residential Preferences behavior.

Doctoral Guidance Ongoing

- # Urban Land Management: Development of new techniques
- # Carbon Emission floor area relationship and evolution of new Architectural Models.
- # Fuzzy- GIS model for Landfill site selection.
- # Green Building rating model for Pre and post occupancy parameters.
- # Development of Smart Region parametric Guidelines.

Post Graduate Guidance:

- More than 70 post graduates are produced in the following field.
- # Urban planning
- # Urban Housing
- # Urban Infrastructure.
- # Environmental Engg/Planning

Consultancy Projects:

1. Leveling of new acquired land for extension of the runway at Airport-Diu.
2. Construction of Auditorium near overhead Water Tank at Malala Village-Diu.
2. Construction of New School Building for Government Higher Secondary Girls, Diu.

3. Construction of Cricket Pavilion.
4. Construction of Jetty opposite D.M.C., Diu.
5. Construction of road from Kirit Oil Mill to near check post via Hindu Crematorium at Ghogala, Diu.
6. Construction of extension of fishing platform by providing C.C.wall with back earthfilling and soiling on to towards creek side at Pavti-Diu.
7. Construction of pile jetty for Landing of Passenger vessels at Diu.
8. Extension of Padmabhushan Sports Complex
9. Providing of Cement Concrete pavement over newly constructed dry dock platform at Jalaram Society at Vanakbara-Diu.
10. Construction of fishing platform from Kajimam to bunder jetty at Ghoghla-Diu.
11. Construction of New Vegetable and Fish market behind recreation Park-Diu.
12. Construction of Swimming pool, Gymnasium and indoor sports complex at Bandodkar Colony, Ghoghla, Diu.
13. Beautification & development of Jogging Track at Bandodkar Colony, Ghoghla, Diu.
14. Development of Sunset point at Chakratirth beach at Diu.
15. Construction of Garage and Hall, Diu.
16. Construction of Dry dock Platform by providing C.C. wall with back earth filling and soiling on top towards creek side from Jalaram Society at Vanakbara to Saudwadi in Diu.
17. Strengthening, repairing, rehabilitation and restoration of city wall for heritage walkway from Diu Zampa towards Chandrikamata temple at Diu. (Ch.457.00 to 737.00 mts)
18. Development of smart village proposals

b) Departmental Duties

- Member Secretary of DBUGS
- Seminar Co-ordinator (U.G./P.G. level)
- Superintendent of Central Examination
- Worked as a Co-ordinator for semester examination Assessment of B.E.-III & PDDC (all branches) for the year 2002-03
- Worked as a Co-ordinator for semester examination Reassessment of B.E.-III & PDDC (all branches) for the year 2002-03

- Member Library Committee, Timetable Committee
- Co-chairman Finance Committee Student's Council
- Worked as a Prof.Incharge for Maintenance and Repairs for Estate section
- Member Literary & Debating Committee
- Co-ordinator for M.Tech and Ph.D. Admission
- Head ,Civil Engineering Department