CIRRICULUM VITAE

Dr. K. B. Ladhane **kiranladhane.iitr@gmail.com**

NAME : Dr. KIRAN BABURAO LADHANE

QUALIFICATIONS : Ph.D. IIT, Roorkee, India

M.E. (Structures), University of Pune, India

B.E. (Civil Engg.), North Maharashtra University, India

TEACHING EXPERIENCE:

Sr.No	University/Institute	Designation	Period
1.	Pravara Rural Engineering College, Loni, Tal-Rahata Dist Ahmednagar 413736	Lecturer	January 2000 – July 2007
		Assistant Professor	July 2007 – July 2009
2.	Indian Institute of Technology, Roorkee	Research Scholar	July 2009 – May 2012
3.	Pravara Rural Engineering College, Loni, Tal-Rahata Dist Ahmednagar 413736	Associate Professor	May 2012 – August 2016
4.	Government Polytechnic, Jintur	HOD	August 2012 – Sept 2020
5.	Government Polytechnic, Jintur	Incharge Principal	Sept 2020 – August 2021
6.	Government Polytechnic, Nashik	HOD	August 2021 – Till date

SUBJECTS TAUGHT:

Sr.No.	Subject	Level
1.	Public Health Engineering	Diploma
2.	Management	Diploma
3.	Estimating and Costing	Diploma
4.	Programming and Problem Solving	Diploma
5.	Engineering Mechanics	Undergraduate
6.	Strength of Materials	Undergraduate
7.	Theory of Structures I and II	Undergraduate
8.	Advanced Surveying	Undergraduate
9.	Finite Element Methods	Postgraduate
10.	Advanced Structural Mechanics	Postgraduate
11.	Bridge Engineering	Postgraduate
12.	Structural Dynamics	Postgraduate

RESEARCH INTEREST:

- Soil structure interaction
- Structural dynamics
- Finite element method
- Pile foundation

PUBLICATIONS:

JOURNALS (Published/ Accepted)

1. Dhamak, P. S., Rathi, V.R. and Ladhane, K. B. (2014), Dynamic Response of an Elevated Water Tank, *International Journal of Engineering Research & Technology*, 3(8), 1198-1204, ISSN: 2278-0181.
2. Tormal, V.M., Ladhane, K. B. and Rathi, V.R. (2014), Effect of Soil Structure Interaction on Response of Multistorey Building, *International Journal of Engineering Research & Technology*, 3(8), 412-418.
3. Suryawanshi, S.R., **Ladhane, K.B.** and Rathi, V.R. (2013), Finite Element Analysis of Fiber Reinforced Polymer (FRP) Bridge Deck Structures, *International Journal of Engineering Science Invention*, 2(8), PP.94-102. ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726
4. Mhaske, B.A., **Ladhane, K.B.** and Rathi, V.R. (2013), Bending Response of Isotropic Plates Subjected To Sinosidal Thermal Load Using Two Variable Plate Theory, *World Journal Of Engineering Science*, 1(5), 166-175, ISSN: 2320-7213
5. Suhirid, M., **Ladhane, K. B.**, Singh, Mahendra, Sawant, V. A. (2011), Lateral Load Capacity of Rock Socketed Piers Using Finite Difference Approach, *Journal of Civil Engineering Research*, 2011, 1(1), 1-8. ISSN: 2163-2316, doi: 10.5923/j.jce.20110101.01 (USA)
6. **Ladhane, K. B.** and Sawant, V. A. (2012), Dynamic Response of Pile Groups in Series and Parallel Configuration, *Structural Engineering and Mechanics, Techno Press*, 41(3), 395-406. ISSN: 1225-4568, SCI Indexed; Impact Factor(2010) 0.429
7. **Ladhane, K. B.**, Pradeep Kumar, Sawant, V. A., (2012), Field Investigations on GAP System Subjected to Tensile Force, *Entire Research*, 4(2), 1-4. ISSN 0975-5020
8. **Ladhane, K. B.** and Sawant, V. A. (2012), Dynamic Response of 2 Piles in Series and Parallel Arrangement, *Engineering Journal.* 16(4), 63-72. ISSN: 0125-8281, Indexed in Scopus
9. **Ladhane, K. B.**, Hazare, S. P. and Sawant, V. A. (2013), Analysis of Infinite Beams on Elastic Foundation Using Meshfree Method', *International Journal of Civil Engineering Science,*2(1), 22-29. ISSN: 2227-4634
10. Sawant, V. A., Pawar, G. S. and **Ladhane, K. B.** (2012), Parametric Study of Piled Raft for Three Load-Patterns, *Coupled System Mechanics,* 1(2), 115-132, ISSN: 2234-2184, SCI Indexed

INTERNATIONAL CONFERENCE

1. Rathi, V.R. and **Ladhane, K. B.**, Experimental Study on Strengthening of RC Beams Using Externally Bonded GFRP Sheets, *Proc. International Conference on Recent Advances in Concrete & Construction Technology, SRM Engineering College, Kattankulathur, Chennai. India*, pp 719 - 730
2. **Ladhane, K. B.**, Sawant, V. A. and Patil, V. A., Three Dimensional Nonlinear Analysis of Pile Group Subjected To Lateral Load, *Proc. of International Conference on*

Innovative World of Structural Engineering, Govt. College of Engineering, Aurangabad 17 – 19 Sept. 2010, pp 913 - 920

3. Patil, V. A., Sawant, V. A., Kousik Deb and **Ladhane, K. B.**, Dynamic response of rigid pavement subjected to moving load – A parametric study, *Proc. of International Conference on Innovative World of Structural Engineering, Govt. College of Engineering, Aurangabad 17 – 19 Sept. 2010,* pp 271 - 279
4. Meena, J.K., Sawant, V.A. and **Ladhane, K.B.**, Analysis of Laterally Loaded Pile Using Probalistic Methods, *Proc. 5th International Conference on Theoretical, Applied and Experimental Mechanics, Dept. of Aerospace Engineering, Indian Institute of Technology, Kharagpur, 27 – 29 Dec. 2010,* pp 601 – 602
5. **Ladhane, K. B.** and Sawant, V. A., 3D FEA of Pile Group Subjected to Dynamic Load, *International Conference on Recent Advances in Engineering, Technology And Management, SPICON2012, Mumbai.*
6. **Ladhane, K. B.** and Sawant, V. A., Dynamic response of Group of 3 Pile in Series and Parallel arrangement, 5th *Engineering Conference Engineering Towards Change-Empowering Green Solutions, ENCON 2012, Kuching, Malaysia*
7. Vishnu S. Kumar, **Ladhane, K. B.** , Sawant, V. A. and Samadhiya, N. K., Dynamic Response of Single Pile Using Finite Difference Method, *5th Engineering Conference Engineering Towards Change-Empowering Green Solutions, ENCON 2012, Kuching, Malaysia*
8. **Ladhane, K. B.**, Sawant, V. A. and Shukla, S. K. (2013), Effect of damping on response of pile group, *Research, Development and Practice in Structural Engineering and Construction,* Editors: V. Vimonsatit, A. Singh and S. Yazdani, Research Publishing, Singapore, *Proceedings of the First Australasia and South East Asia Conference in Structural Engineering and Construction, 28 November– 2 December 2012, Perth, Australia*, pp. 577 – 582. ISBN: 978-981-07-3678-1, doi: 10.3850/978-981-08-7920-4_GFE-15-0380

NATIONAL CONFERENCE

1. **Ladhane, K. B.** and Rathi, V.R., GGBS Concrete: A Durable Solution For Marine Structures, *National Conference On Structural Engineering, Birla Institute of Technology, Pilani, 24 – 25 September 2004*, pp 160 – 166.
2. Rathi, V.R. and **Ladhane, K. B.**, Experimental Studies on Corrosion of Rebars in Concrete Structure, *National Conference on Structural Engineering, Birla Institute of Technology, Pilani, 24 – 25 September 2004*, pp 98 – 104
3. **Ladhane, K. B.** and Rathi, V.R., Pozzolanic Material: A Durable Solution for Marine Structures, *National Conference on Recent Trends in Infrastructure Development, PSG College of Technology, Coimbatore, 24 – 25 January 2007,* pp 151 – 161

4. Rathi, V.R., Naik, U. P. and **Ladhane, K. B.**, Comparative Experimental Study on Mineral Admixtures: Silica Fume & Metacaoline, *National Conference on Recent Trends in Infrastructure Development, PSG College of Technology, Coimbatore, 24 – 25 January 2007*, pp 162 – 169

5. **Ladhane, K. B.**, Sawant, V. A. and Patil, V. A., Nonlinear Analysis of Pile Group Subjected to Lateral Load, *Proc. of National Conference on Innovative Techniques in Civil Engineering (ITCE2010), Alagappa Chettiar College of Engineering and Technology, Karaikudi 9/04/2010*

6. Patil, V. A., Sawant, V. A., Kousik Deb and **Ladhane, K. B.**, Effect of Shear Modulus on The Dynamic Response of Rigid Pavement Subjected to Moving Load, *Proc. of National Conference on Innovative Techniques in Civil Engineering (ITCE2010), Alagappa Chettiar College of Engineering and Technology, Karaikudi 9/04/2010*

7. **Ladhane, K. B.**, Sawant, V. A. and Patil, V. A., Three Dimensional Nonlinear Analysis of Pile Group Subjected to Lateral Load, *Proc. of National Conference on Innovations in Civil Engineering (ICE2010), Kumaraguru College of Engineering and Technology, Coimbatore, 20/4/2010*

8. Patil, V. A., Sawant, V. A., Kousik Deb and **Ladhane, K. B.**, Parametric Study of The Dynamic Response of Rigid Pavement Subjected to Moving Load, *Proc. of National Conference on Innovations in Civil Engineering (ICE2010), Kumaraguru College of Engineering and Technology, Coimbatore, 20/4/2010*

9. **Ladhane, K. B.** and Sawant, V. A., Nonlinear 3D Finite Element Analysis of Pile Group Subjected To Lateral Load, *Indian Geotechnical Conference – 2010 (GEOTrendz), Indian Institute of Technology, Bombay* 16 – 18 Dec 2010, pp 861 - 864

10. Pradeep Kumar, Sawant, V. A., Patil, V. A. and **Ladhane, K. B.**, Robust Foundation System for Resistance of Uplift forces in Weak Soil, *National Conference on Recent Advances in Ground Improvement Techniques, Central Building Research Institute, Roorkee, 24 - 25 Feb. 2011*, pp 137-145

11. Pradeep Kumar, Ranjan, *G.*, Sawant, V. A., Patil, V. A. and **Ladhane, K. B.**, Field Study on GAP System for resistance of Tensile forces, *National Conference on Recent Advances in Ground Improvement Techniques, Central Building Research Institute, Roorkee, 24 - 25 Feb. 2011*, pp 275-278

12. **Ladhane, K. B.**, Sawant, V. A. and Patil, V. A., Elasto-Plastic 3D FEA of Laterally Loaded Pile Group, *Proc. National Conference Advance in Civil Engineering (AICE 2011), Pravara Rural Engineering College, Loni*, 3 – 5 April 2011

13. Sunita Kumari, Nema, A. K., **Ladhane, K. B.**, The influence of geo-environmental properties on municipal solid waste, *Proceeding of the National Conference on Recent Advances in Civil Engineering (ISBN: 978-81-921121-0-7), October 14-16, 2011, Varanasi,* pp. 311-316

14. **Ladhane, K. B.** and Sawant, V. A., Dynamic Analysis of Pile Group with 3-Piles in Series Arrangement, *Indian Geotechnical Conference 2011, Kochi, pp* 955-958.

BOOKS PUBLISHED

- A Book Titled **"Concrete Technology"** for Nirali Publication, Pune

MEMBERSHIP OF PROFESSIONAL BODIES

Professional Body	**Member No./ID**	**Remarks**
Indian Society for Technical Education	LM 39461	Life Member
Indian Society for Rock Mechanics And Tunneling Technology	LM 1656	Life Member
Indian Geotechnical Society	LM 2848	Life Member

EDUCATIONAL QUALIFICATIONS

Sr.No	**Qualification**	**School/College/University**	**Year of passing**	**% Marks obtained**	**Class**
01	Ph.D.	I.I.T., Roorkee	2012	--	--
02.	M.E.CIVIL (Structures)	Pune University	2006	65.35	First
03.	B.E.CIVIL	North Maharashtra University	1998	66.93	Distinction
04.	H.S.C.	C.B.S.E.	1994	64.80	First
05.	S.S.C	C.B.S.E.	1992	68.20	First

Abstract of Ph.D. Thesis:

It has been proposed to develop a program in FORTRAN to analyse a laterally loaded single pile and pile groups (1×2, 1×3, 2×2, 3×3) using three-dimensional finite element technique. To account for the material non linearity the soil will be modelled using different material models (von-Mises, Drucker Prager, Mohr Coulomb and advanced plasticity based models). To study the stress transfer at the interface of the soil pile, 16 noded isoparametric surface element with zero thickness will be used. The same will be helpful to simulate the gapping and/or slippage at the soil pile interface. The pile will be modelled as linear elastic material. The soil, pile and pile cap will be descritised using the 20 noded isoparametic solid element. To avoid the radiation effect due to the dynamic loading it is proposed to use the appropriate boundary conditions. The displacements at each time step will be evaluated using the Newmark Beta Integration method.

The proposed research work will be divided in the three parts:

1. Static nonlinear analysis of laterally loaded pile group
2. Dynamic linear analysis of laterally loaded pile group
3. Dynamic nonlinear analysis of laterally loaded pile group

To overcome the problem of reflection of the waves from the finite boundaries during dynamic analysis, it is proposed to use the transmitting boundary. Kelvin elements will be

used as transmitting boundary beyond which infinite elements will be used to model infinite domain.

COMPUTATIONAL SKILLS

- **Software:** ANSYS, STAADPro, Surfer, AutoCAD, ABAQUS, SAP.
- **Operating System:** DOS, WINDOWS, LINUX
- **Programming Language:** ForTran, MS Visual Basic, VBA, Python
- **Documentation Package:** MS-Office (2003, 2007)**,** Adobe packages
- **Mathematical Tool:** MatLab, Maplej

PERSONAL DETAILS:

Date of Birth : 01.06.1977

Marital State : Married

Nationality : Indian

Permanent Address : At. Post Pimpri Nirmal, Tal Rahata,
Dist-Ahmednagar, Pin 423107, Maharashtra, India

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REFEREES:

1. Dr. V. A. Sawant (PhD Supervisor)
   Assistant Professor,
   Department of Civil Engineering,
   Indian Institute of Technology, Roorkee, Uttarakhand, 247667, INDIA
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2. U. P. Naik (M. E. Thesis Supervisor)
   Professor,
   Department of Civil Engineering,
   Pravara Rural Engineering College, Loni,
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3. Dr. Pradeep Kumar (Ph. D. External Examiner)
   Scientist E-II,
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