BIO DATA

1. NAME : MANOHAR NARAYAN VILADKAR

2. ABBREVIATED NAME : M. N. VILADKAR

3. ADDRESS :

Dr. M.N. VILADKAR
Professor of Geotechnical Engg.,
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4. DATE OF BIRTH : December 9, 1949

5. NATIONALITY : INDIAN

6. PASSPORT DETAILS : No. B 3041248, issued by - The Govt. of India at Regional Passport Office, Bareilly (UP) on 12.09.2001 and valid up to 11.09.2011

6. EDUCATIONAL QUALIFICATIONS:

Degree/ Examination	University/Institute	Year	Division
H.S.S.C.	Nagpur Div. Board, Nagpur	1966	First
B.E. (Civil Engg.)	Nagpur University, Nagpur	1972	First
M.Tech.(Geotech.Engg.)	Indian Institute of Technology, Bombay	1974	First
Ph.D. (Civil Engg.)	University of Roorkee, Roorkee	1984	

7. RESEARCH/TEACHING EXPERIENCE:

Designation	University	Duration
Sr. Research Fellow	University of Roorkee, Roorkee	Nov. 1974 – Dec. 1978
Lecturer in Geotech. Engg.	University of Roorkee, Roorkee	Dec. 1978 – Oct. 1985
Reader in Geotech. Engg.	University of Roorkee, Roorkee	Oct. 1985 – April 1996
Professor of Geotech. Engg.	University of Roorkee, now **Indian Institute of Technology Roorkee (IITR)**	April 1996 – Till date

8. MEMBERSHIP OF PROFESSIONAL BODIES:

Member	Institution of Engineer's (India)
Life Member	Indian Geotechnical Society
Member	Indian National Soc. for Rock Mech. & Tunneling Technology
Member	International Society for Rock Mechancis
Life Fellow	Indian Society of Earthquake Technology
Life Member	Indian Society for Desert Technology
Life Member	Indian Society for Wind Engineering
Life Member	Indian Society for Construction Materials and Structures
Member	Indian Society of Hydraulics

9. AWARDS RECEIVED

1979 **HEICO** (Hydraulic and Engineering Instruments Corporation of India Ltd.) ***GOLD MEDAL*** and ***CASH PRIZE*** and ***COMMENDATION CERTIFICATE*** of Indian Geotechnical Society for ***BEST PAPER in ROCK MECHANICS*** (Title – Instrumentation and Design of New Supports for Multiple Openings in Failing Rock Mass)

1985 Indian Society of Earthquake Technology ***BEST PAPER AWARD*** *(CASH PRIZE AND COMMENDATION CERTIFICATE)* in the area of Earthquake Engineering for the paper – "Prediction of Displacements of Retaining Walls under Dynamic Conditions", Jnl. Ind. Soc. of Earthquake Tech., Vol. 22, No. 3.

1991 *Dr. B.B. Rai – S.N. Gupta Biennial* ***BEST PAPER AWARD*** instituted by the Indian Geotechnical Society for the Best Paper published in Ind. Geotech. Soc. Journal – "Displacement Dependent Earth Pressures in Retaining Walls", Vol. 20, No. 4, pp. 260-287, 1990 for the period 1989 and 1990.

1999 ***BEST PAPER AWARD*** of the Indian Society for Rock Mechanics and Tunneling Technology (ISRMTT) for the paper entitled: "Three **Dimensional Analysis of Arch cum Gravity Dam–Foundation Interaction"** published in a Seminar on Nathpa Jhakri Project under the category–"Case History of Foundations on Rock".

10. CITATION

- The research work published in the area of the *THEORY OF INFINITE ELEMENTS* has been cited in Text Book – *INFINITE ELEMENTS* written by **Dr. Peter Bettess,** Professor of Offshore Engineering and Head, Department of Marine Technology Development, University of New Castle Upon Tyne, U.K.

- The research contribution – "A Semi-Empirical Method for the Design of Support Systems in Underground Openings", Int. Jnl. of Tunneling & Underground Space Technology, Vol. 10, No. 3, pp. 375-383, 1995 has been used in the *Design of a Large Storage Cavern by Sunkyong Engineering & Construction Ltd., Seoul, Korea.*

11. FELLOWSHIPS AWARDED

- **UNESCO FELLOWSHIP** (July 1987) for Participation in Lectures on **Recent Advances in Computational Mechanics** at the International Centre for Mechanical Sciences, Udine, ITALY.

- TECHNICAL COOPERATION TRAINING PROGRAMME (**TCTP**) **Award of British Govt.** (1987-1988) for collaborative research in **Computer Aided Analysis & Design in Civil Engineering** at University of Wales, Swansea, U.K.

12. VISITING FACULTY

- **Visiting Professor**, Technical University, Budapest, Hungary (1989-1990) under Indo-Hungarian Cultural Exchange Programme.

- **Visiting Scholar** (Oct. 1997 – June 1999) – Department. of Mechanical Engineering, The Hong Kong University of Science & Technology, Hong Kong for conducting research in the area of **Thermodynamically Controlled Fracture Propagation in Micro-Electronic Packages.**

13. APPOINTED

- Member of BDC-73:3 Committee of the Bureau of Indian Standards for Drafting IS Code of Practice on *: UNDERGROUND OPENINGS AND FIELD MONITORING.*

- Member, BDC-73: 3 Committee of the Bureau of Indian Standards for Drafting IS-Code of Practice on *SELECTION AND DEVELOPMENT OF SITES FOR BUILDINGS IN HILLY AREAS.*

- Chairman, *HILL AREA DEVELOPMENT ENGINEERING* Sectional Committee - CED 56 of the Civil Engineering Division Council of the Bureau of Indian Standards, New Delhi.

- Member, *Special Task Force appointed by Office of the Hon. Prime Minister of India'*, for Investigating the Varunavrat Parvat Landslide in Uttarkashi (UA), India.

- Member, *Special Task Force appointed by The Ministry of Home Affairs, New Delhi,* for Natural Disaster Mitigation due to Landslides**.**

- Member, *Research Council, Central Building Research Institute, Roorkee*
- *Member, Expert Committee of DST, New Delhi for Establishment of a National Geotechnical Facility*

14. ADMINISTRATIVE POSITIONS HELD / HOLDING IN IIT ROORKEE:

Currently Holding

- Member, Sponsored Research and Industrial consultancy (SRIC) Board
- Member, Buildings and Works committee of IIT Roorkee
- Member, Professorial Committee of Deptt. of Civil Engg.
- Member, Professorial Committee of Deptt. of Earthquake Engg.
- Member, Professorial Committee of Disaster Mitigation and Management Centre
- Member, Special Purchase Committee, SRIC
- Member, Special Purchase Committee, Information Superhighway Centre

Earlier Held

- Coordinator, AICTE Centre for Appropriate Technology for Development of Hilly Regions
- Convener, Technical Committee, Indian Geotechnical Conference, Dec. 2003
- Joint Organising Secretary, Ninth International Conference on Wind Engineering, New Delhi, 1995.
- Co-ordinator, Specialist Course on FINITE ELEMENTS IN NON-LINEAR MECHANICS, held under the auspices of the Institution of Engineer's (India), Jan. 1993.
- Co-ordinator, Advanced Course on FINITE ELEMENTS IN NONLINEAR MECHANICS, held under Roorkee-Delhi-Swansea Collaboration (RDSC) Link Program with British Govt., Oct. 1989.
- Joint Organising Secretary, Seminar on – GEOTECHNICAL CENTRIFUGE, New Delhi, 1989.
- Joint Organising Secretary, International Conference on Computer Aided Analysis & Design in Civil Engineering, Jan. 1985.
- Coordinator, Computer Aided Design Laboratory, Deptt. of Civil Engg.

15. TEACHING ACTIVITIES: Conducted Lectures in -

i) Under Graduate Studies (B.E. / B. Tech. Courses):

- Engineering Graphics
- Computer Programming
- Computer Programming & Application in Civil Engg.
- Computer Graphics (**University Pool Elective**)
- Soil Mechanics
- Foundation Engineering
- Rock Engineering (**Departmental Elective for B. Tech. Final year**)

ii) Post-Graduate Studies (M.E. / M. Tech. Courses):

- Advanced Soil Mechanics
- Analytical & Numerical Treatment of Problems in Geo-mechanics
- Advanced Foundation Engg.
- CAD of Foundations
- Engineering Behaviour of Rocks
- Applied Rock Mechanics
- Plasticity & Fracture Mechanics in Rock Structure
- Tunnel Engineering (Underground Excavations)
- Foundations on Weak Rocks

16. FIELDS OF RESEARCH INTEREST:

- Computational Nonlinear Mechanics & Fracture Mechanics
- Static and Dynamic Soil – Structure Interaction (Earthquake & Blast Loading)
- Rock Mechanics & Underground Space Technology
- Numerical Methods in Geo-mechanics
- Ground Subsidence due to Shallow Underground Tunneling

17. GUIDANCE TO DOCTORAL (Ph.D.) THESES:

Completed – 12

- Interaction of Frame Structures on Visco-elastic Foundations
- Non-Linear Soil-Structure Interaction in Framed Structures
- Rock Mass – Tunnel Support Interaction Analysis (**Prof. Leonard's Prize**)
- Finite Element Analysis of Hyperbolic Cooling Towers Under Wind Loads
- Seismic Earth Pressures and Displacement Analysis of Rigid Retaining Walls having Reinforced Sand Backfill (1998)
- Non-linear Transient Dynamic Soil-Structure Interaction with Special Reference to Blast Loading (1998)
- Influence of Anisotropy and Shear Zones on Stability of Caverns (1998) (**Prof. Leonard's Prize**)
- Ground Subsidence due to Shallow Tunneling in Soft Ground (2003)
- Finite Element Analysis of Shallow Foundations for Eccentric Inclined Loads
- Modeling of Nonlinear Dynamic Soil-Structure Interaction Problems
- Stability of Caverns in Anisotropic Rock Masses
- Modeling of Fibre Reinforced Flexible Pavements

In Progress – 03

- Behaviour of Infilled Jointed Rocks
- Analysis of Eccentrically Obliquely Loaded Footings on Slopes
- Assessment of Geotechnical Parameters through Geo-electrical Measurements

18 GUIDANCE to MASTER'S (M.E./M.TECH.) THESES (Completed – 44):

2008
* Numerical Modelling of Piled Embankments on Soft Soils
* Stress Analysis of a Powerhouse Cavern in Jointed Rock Mass
* Comparative Study of Statistical Strength Criteria for Rocks

2007
* Alternative approach for Predicting Modulus of Deformation Using FEM

2006
* Finite Element Analysis of Shallow Foundations for Eccentric Inclined Loads

2005
* Prediction of Ground Subsidence due to Shallow Tunneling in Soft Ground
* Analysis of Tunnels in Squeezing Ground Condition

2003
*Analysis of Impact Type Machine Foundations Considering Damping
* Diagnostic Study of Failed Canal Slopes
* Geotechnical Studies for Stability of Khanera Landslide Near Yamunotri

2002
* A Study on Damped Vibration Isolation Problem

2001
* Stress Analysis around Tunnels in Jointed Rock Masses
* Soil-Structure Interaction in Frame Structures
* Nonlinear Soil-Structure Interaction

1997
* Design of Support System in Tunneling in NJPC Project
* Development of Expert System for Tunnels in Weak Rock
* Shear Characteristics of Randomly Distributed Fiber Reinforced Soil under Cyclic Loading

1996
* Effect of Weak Rock in Dam-Foundation Interaction of Kishau Dam
* Effect of Shear Zone on Dam-Foundation Interaction
* Stress Distribution in Shotcrete Lining in Caverns
* Development of Expert System for Tunnel Construction in Rock Masses
* Use of Finite Element Method in Determining Stability of Large Underground Cavities

1995
* Analysis of Hyperbolic Cooling Towers for Geometric Imperfections
* Semi-Empirical Method for Design of Supports in Underground Excavations
* Expert System for Tunnel Construction
* Use of Finite Element Method in Determining Stability of Large Underground Cavities

1994
* Expert System for Design of Tunnels in Rock

1993
* Performance Study of Instrumented Underground Power House Cavity at Lakhwar

1992
* Finite Element Analysis of Rock Slopes with In-situ Stresses
* 3-D Finite Element Analysis of Proposed Arch cum Gravity Dam at Lakhwar

1991
* Rock Slope-Structure Interaction of Buildings in Hilly Areas

1990
* Elasto-Plastic Analysis of Deep Tunnels
* Analysis of Tunnels in Elasto-Plastic and Visco-Elastic Media

1989
* Assessment of Rheological Constants for Time Dependent Behaviour
* Interactive Graphical Package for Rock Slopes
* Software Package for Rigid Retaining Walls with Graphics
* Computer Aided Design of Retaining Walls

1988
* Computer Aided Analysis for Stability of Rock Slopes
* Displacement Analysis of Retaining Walls Under Static Condition

1987
* Settlement of Foundations on Cohesionless Soils

1986
* Visco-elastic Soil-Structure Interaction of Buried Pipes
* Ultimate Bearing Capacity of Rigid Ring Footings on Clay
* Three Dimensional Non-Linear Soil-Structure Interaction in Frames

1985
* Prediction of Displacement of Retaining Walls under Static and Dynamic Conditions

1982
* Analysis of Circular Rafts on Non-Linear Subgrades

19. SPONSORED RESEARCH PROJECTS:

Title	Agency	Amount (Rs.)	Duration
Soil-Structure Interaction in Frame Structures	Deptt. of Science & Technology, Govt. of India, New Delhi	5,05,000.00	April 1, 1989 To Sept.30, 1992
Software Development for 3-D Finite Element Analysis of Structures in Water Charged Rock Masses for River Valley Projects	Indian National Comm. on Rock Mechanics and Tunneling Technology, New Delhi	12,000,00.00	April 1993 To June30, 2002
Non-Linear Soil-Structure Interaction in Framed Structures	Deptt. of Science & Technology, Govt. of India, New Delhi	3,45,230.00	April 1993 -2001
Development of Aids for Forecasting of Large Earthquakes	University Grants Commission, New Delhi	3,00,400.00	April 1993 -1999
Nonlinear Transient Dynamic Soil-Structure Interaction with Special Reference to Blast Loading	All India Council for Technical Education (AICTE), New Delhi	5,00,000.00	May 1999 to March 2002

20. RESEARCH PUBLICATIONS : Total = 91

RESEARCH PUBLICATIONS: (International Journals) - 33

2008

- Samadhiya, N. K., Viladkar, M. N. and Moataz A. Al-Obaydi, "3-D Joint / Interface Element for Rough Undulating Major Discontinuities in Rock Masses", Accepted for Publication in ASCE Int. Jnl. of Geomechanics.

- Samadhiya, N. K., Viladkar, M. N. and Moataz A. Al-Obaydi, "Numerical Implementation of Anisotropic Continuum Model for Rock Masses", ASCE Int. Jnl of Geomechanics, Vol. 8, No. 2, pp 157-161.

2007

- Maheshwari Priti, and Viladkar, M. N., "Strip Footings on a Three Layer Soil System: Theory of Elasticity Approach", International Journal of Geotechnical Engineering, Vol. 1, No. 1, pp. 47-60.

- Satish Chandra, M. N. Viladkar, Nagrale, Prashant P., "Mechanistic Approach for Fibre Reinforced Flexible Pavements", ASCE Jnl of Transportation Engg., Vol. 134, No. 1, pp 15-23.

2006

- Viladkar, M. N., Karisiddappa, Bhargava, P. and Godbole, P.N., "Static Soil–Structure Interaction Response of Hyperbolic Cooling Towers to Symmetrical Wind Loads", Int. Jnl. of Engineering Structures, Vol. 28, No. 9, pp 1236-1251.

- Nagrale, P.P., Chandra, S. and Viladkar, M.N., "Finite Element Analysis of Flexible Pavements with Fibre Reinforced Subgrade", International Journal of Pavements, Vol. 5, pp 50-61.

2004

- Samadhiya, N.K., Viladkar, M.N. and Singh, B., "Three Dimensional Analysis of a Power House Cavern in Anisotropic Rock Mass, International Journal of Rock Mechanics & Mining Sciences, Vol. 41, No. 3, pp 487-488.

- Samadhiya, N.K., Viladkar, M.N. and Singh, B., "Three Dimensional Analysis of a Power House Cavern in Anisotropic Rock Mass, International Journal of Rock Mechanics & Mining Sciences, Vol. 41, Supplement 1, pp 664-669.

1998

- Viladkar, M.N., Karisiddappa, Godbole, P.N. and Prem Krishna, "Finite Element Analysis of Column Supported Hyperbolic Cooling Towers Using Semi-Loof Shell and Beam Elements", Int. Jnl. of Engineering Structures, Vol. 20, Nos. 1-2, pp. 75-85.

- Godbole, P.N., Viladkar, M.N. and Tankha, A., "Analysis of Hyperbolic Cooling Towers with Bulge Imperfections under Wind Loads", ASCE, Engineering Mechanics Division, Vol. 124, No. 11, pp. 1269-79.

1997

- Singh, B., Viladkar, M.N., Mehrotra, V.K. and Samadhiya,N.K. "Rock Mass Strength Parameters Mobilised in Tunnels", Int. Jnl. of Tunneling & Underground Space Technology, USA, Vol. 12, No. 1, pp. 47-54.

- Verman, M., Viladkar, M.N., Singh, B. and Jethwa, J.L., "Effect of Tunnel Depth of Modulus of Deformation of Rock Mass", Int. Jnl. of Rock Mechanics & Rock Engineering, UK, 30(3), pp. 121-127.

- Verman, M., Singh, B., Jethwa, J.L. and Viladkar, M.N. "Estimation of Cohesion around Underground Openings", International Journal of Rock Mechanics & Mining Sciences, Vol. 34, No. 5, pp 851-858.

1995

- Viladkar, M.N., Godbole, P.N. and Noorzaei, J., "Convenient Forms of Yield Criteria for Elasto-Plastic Analysis of Geological Materials", Int. Jnl. of Computers & Structures, Pergamon Press U.K., Vol. 54, No. 2, pp. 327-337.

- Verman, M., Viladkar, M.N., Singh, B. and Jethwa, J.L., "Determination of Support Reaction Curves for Steel Supported Tunnels", Int. Jnl. for Tunneling and Underground Space Technology, USA, Vol. 10, No. 2, pp. 217-224.

- Verman, M., Viladkar, M.N., Singh, B. and Jethwa, J.L., "A Semi-Empirical Method for Design of Support Systems in Underground Openings", Int. Jnl. for Tunneling and Underground Space Technology, USA, Vol. 10, No. 3, pp. 375-383.

1994

- Viladkar, M.N., Noorzaei, J. and Godbole, P.N. "Elasto-Plastic Analysis for Soil-Structure Interaction in Framed Structures", Int. Jnl. of Computers & Structures, Pergamon Press, U.K., Vol. 56, No. 5, pp. 797-807.

- Viladkar, M.N., Noorzaei, J. and Godbole, P.N., "Influence of Strain Hardening on Soil-Structure Interaction Framed Structures", Int. Jnl. of Computers & Structures, Pergamon Press, U.K., Vol. 56, No. 5, pp. 789-785.

- Viladkar, M.N., J. Noorzaei and Godbole,P.N., "Behaviour of Infinite Elements in Elasto-Plastic Domain", Int. Jnl. of Computers & Structures, Pergamon Press, U.K., Vol. 51, No. 4, pp. 337-342.

- Viladkar, M.N., J. Noorzaei and Godbole,P.N., "Interactive Analysis of Space Frame-Raft-Soil System Considering Soil Non-linearity", Int. Jnl. of Computers & Structures, Pergamon Press, U.K., Vol. 51, No. 4, pp. 343-356.

- Viladkar, M.N., J. Noorzaei and Godbole,P.N., "Modelling of Interface for Soil-Structure Interaction Studies", Int. Jnl. of Computers & Structures, Pergamon Press, U.K., Vol. 52, No. 4, pp. 765-779.

- Noorzaei, J., Viladkar, M.N. and Godbole, P.N., "Nonlinear Soil-Structure Interaction of Plane Frames", Int. Jnl. of Computer Aided Engg. & Software (Engg. Computations), Pineridge Press, U.K., Vol. 11, pp. 303-316.

1993

- Viladkar, M.N., J. Noorzaei and Godbole, P.N., "Non-Linear Soil-Structure Interaction in Plane Frames – A Parametric Study", Int. Jnl. of Computes & Structures, Vol. 49, No. 3, pp. 561-566.

- Viladkar, M.N., Ranjan, G. and Sharma R.P., "Soil-Structure Interaction in Time Domain", Int. Jnal. of Computers and Structures, Vol. 46, No. 3, pp. 429-442.

1992

- Karisiddappa, Prem Krishna, Godbole, P.N. and Viladkar, M.N., "Analysis of Hyperbolic Cooling Towers for Wind Loads", Int. Jnl. of Wind Engg., No. 52, Aug. & Proc. Int. Conf. On Computational Wind Engg., CWE – 92, Tokyo, Japan.

1991

- Viladkar, M.N., Sharma, R.P. and Ranjan, G., "Visco-Elastic Finite Element Formulation for Isolated Foundations on Clays", Int. Jnl. of Computers and Structures, Vol. 43, No. 2, pp. 313-324.

- Godbole, P.N., Viladkar, M.N. and Noorzaei, J., "Space Frame-Raft-Soil Interaction Including Effect of Slab Stiffness", Int Jnl. Of Computers and Structures, Pergamon Press, U.K., Vol. 43, No. 1, pp. 93-106.

- J. Noorzaei, Viladkar, M.N. and Godbole, P.N., "Soil-Structure Interaction of Space Frame-Raft-Soil System – A Parametric Study", Special Issue of Int. Jnl. of Computers & Structures (Proc. Int. Conf. On Computational Structures Technology, Heriot-Watt University, Edinburgh, U.K., Vol.40,No.5, pp. 1235-47.

- Viladkar, M.N., Godbole, P.N. and Noorzaei, J., "Soil-Structure Interaction in Plane FRAMES Using Coupled Finite-Infinite Elements", Int. Jnl. of Computers & Structures, Vol. 39, No. 5, pp. 535-546.

- Godbole, P.N., Viladkar, M.N. and Noorzaei, J., "A Modified Frontal Solver with Multi-Element and Variable Degree of Freedom Features", Int. Jnl. of Computers & Structures, Vol. 39, No. 5, pp. 525-534.

1990

- Viladkar, M.N., Godbole, P.N. and Noorzaei, J., "Some New Three Dimensional Infinite Elements", Int. Jnl. of Comp. & Strs., Vol. 34, No. 3, pp. 455-467.

- Godbole, P.N., Viladkar, M.N. and Noorzaei, J., "Non-Linear Soil-Structure Interaction Analysis Using Coupled Finite-Infinite Elements", Int. Jnl. of Comp. & Strs., Vol. 36, No. 6, pp. 1089-96.

RESEARCH PUBLICATIONS: (Indian Journals) – 14

2008

- Moataz A. Al-Obaydi , Samadhiya, N. K.and Viladkar, M. N., "Nonlinear Analysis of Naptha Jhakri Power House Cavern – A Case Study", Jnl of Rock Mechanics & Tunneling Technology, 14 (1), pp. 23 – 45.

- Viladkar, M.N., Verman, Manoj, Singh, Bhawani and Jethwa, J.L., "Rock Mass – Tunnel Support Interaction Analysis – Part – I : Ground Response Curves", Journal of Rock Mechanics & Tunneling Technology, (Accepted for pub., July 2008 issue).

- Viladkar, M.N., Verman, Manoj, Singh, Bhawani and Jethwa, J.L., "Rock Mass Tunnel Support Interaction Analysis – Part – II : Support Reaction Curves", Journal of Rock Mechanics & Tunneling Technology, (Accepted for pub., July 2008 issue).

2007

- Nagrale Prashant P., Chandra Satish and Viladkar M. N., " Modeling of Flexible Pavements Resting on Fiber Reinforced Subgrade Soils", Highway Research Bulletin, 77, IRC, Oct. 2007, 47 – 57.

2006

- Nagrale Prashant P., Chandra Satish and Viladkar M. N., "Benefits of Fibre Reinforced Subgrade Soils in Flexible Pavements", Journal of Institution of Engineers (India), Vol. 87, pp.53-57.

- Nagrale Prashant P., Chandra Satish and Viladkar M. N., " Strength Characteristics of Fiber Reinforced Subgrade Soil", Highway Research Bulletin, 74, IRC, Sept. 2006, 49 – 57.

2004

- N.K. Samadhiya, M.N. Viladkar and P. Bhargava, "Software Package for 3-Dimensional Non-Linear Elastic Analysis of Caverns", Jnl. of Rock Mech. & Tunnelling Technology, Vol. 10, No. 1, Jan., pp.49-76.

- R.G.S. Sastry and Viladkar, M.N., " Role of Integrated Geophysical Studies in Defining Profile Below Steep Hill Slope at the Base of an Endangered Multi-Storeyed Building in Himachal Pradesh", Journal of Geological Society of India, Vol. 63, March, pp. 282-290.

1996

- Kumar, Krishen, Ranjan , G. and Viladkar, M.N., "Dynamic Stiffness and Damping Cofficients of Pile Foundations for Compressor Foundation Design", Journal, Indian Geotechnical Society, Vol. 26, No. 3, pp. 313-343.

1990

- Saran Swami, Viladkar, M.N. and Tripathi, O.P., "Displacement Dependent Earth Pressures in Retaining Walls", Jnl. Indian Geot. Soc., Vol. 20, No. 4, pp. 260-287.

- Ranjan, G. and Viladkar, M.N., "Dynamic Soil-Structure Interaction in Frame Structures"" A State of Art Report, Jnl. Indian Soc. Earthquake Technology, Vol. 27, No. 2, pp. 46-64.

1985

- Saran, S., Viladkar, M.N. and Reddy, R.K., "Displacement Dependent Earth Pressures", Jnl. Indian Geot. Soc., Vol. 17, No. 2, pp. 121-141.

- Reddy, R.K., Saran, S. and Viladkar, M.N., "Prediction of Displacements of Retaining Walls Under Dynamic Conditions", Jnl. Indian Soc. of Earthquake Tech., Vol. 22, No. 3, pp. 101-115.

1983

- Viladkar, M.N., Ranjan, G., Singh, B. and Ramasamy, G., "Development of Sites in Hilly Regions – A Rational Approach", Jnl. Inst. of Engr. (India), Vol. 63, Pt. C14, pp. 188-193.

RESEARCH PUBLICATIONS: (International Conferences/Symposia) – 26

2009

- Viladkar, M.N., Verman, Manoj and Singh Bhawani, "Rock Mass – Tunnel Support Interaction Analysis", Proc. Int. Conf. on Rock Joints and Jointed Rock Masses, Tucson, Arizona, USA, Jan.4-10, 2009.

2008

- Maheshwari, Priti and Viladkar, M.N. (2008), "Theory of Elasticity Approach for Strip Footings on Multilayered Soil Media", The 12th International Conference of International Association for Computer Methods and Advances in Geomechanics (IACMAG), Oct. 1 -6, 2008, Goa, India, pp. 3464 – 3472.

2006

- Viladkar, M. N., Bhandari, N. M., Godbole, P. N. and Trikha, D. N., "Three Dimensional Finite Element Analysis of Taj Mahal Structure", Proc. of Int. Conf. on Structural Analysis of Historical Constructions V, New Delhi, India, November 6 - 8, 2006.

- Chandra, Satish, Viladkar, M. N. and Nagrale Prashant P., "Elasto-Plastic Analysis of Fibre Reinforced Flexible Pavements", Proc. of 22nd ARRB Conference, Canberra, Australia, October 29, 2006.

2004

- Samadhiya, N.K., Viladkar, M.N., Singh, Bhawani, " Three Dimensional Analysis of a Power House Cavern in Anisotropic Rock Mass, Proc. SINOROCK 2004, Int. Conf. P.R. of China (to be published in the Int. Jnl. of Rock Mech. & Mining Sc.)

2001

- S.K. Saran, M.N. Viladkar, K.G. Garg, "Displacement Analysis of Rigid Retaining Walls Having Reinforced Sand Backfill Under Static Condition", Proc. Int. Symp. On Geotechnical & Environmental Challenges in Mountainous Terrain, Kathmandu Nepal, Nov 6-7, pp.

1997

- Viladkar, M.N., Godbole, M.N. and Garg, S.K., "Boundary Simulation for Dynamic Soil-Structure Interaction Problems", Invited Paper by TC4 Committee of Int. Society for Soil Mech. & Foundn. Engg. For Publication at the 14th Int. Conf. On Soil Mech. & Fondation Engineering, Hamburg, Germany, Sept., pp. 371-379.

- Manoj Verman, J.L., Jethwa, Bhawani Singh, M.N. Viladkar, "Mobilised Cohesion Around Undergrund Openings", Proc. Conf. Tunnelling Asia, New Delhi, India, pp. 95-104.

1996

- Viladkar, M.N., Godbole, P.N., Tankha, A., "Analysis of Cooling Towers with Bulge Imperfections", Proc. Fourth Int. Conf. on Natural Draught Cooling Towers, Kaiserslautern, Germany, pp. 233-240.

1995

- Karisiddappa, Krishna, P., Godbole, P.N., Viladkar, M.N., Noorzaei, J., "Analysis of Column Supported Cooling Towers for Unsummetrical Wind Loads", Ninth Int. Conf. On Wind Engg., New Delhi, India, Vol. III, pp. 1523-1536.

- Godbole, P.N., Viladkar, M.N., Karisiddappa, Prem Krishna, "Analysis of Hyperbolic Cooling Towers with Geometric Imperfections Under Wind Loads", Ninth Int. Conf. On Wind Engg., Vol. III, pp. 1537-1550.

1994

- Viladkar, M.N., Saran, S., "Shuttle Technique for Analysis of Soil-Structure Interaction in Framed Structures", Proc. XIII Int. Conf. Soil Mech. & Foundn. Engg., New Delhi, India, Vol. 2, pp. 595-598.

1993

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- Soil Investigations and Recommendations for the Foundations of Horton Spheres, Allahabad & Kanpur, U.P. **(GEP-235-1985)**

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- Soil Investigations and Recommendations for Foundations of Maharishi Triveni Rigved Temple, Allahabad, U.P. **(GEP-283-1988)**

- Stability Analysis of Slope and Design of Cantilever Retaining Wall for Lal Bahadur Shastri National Academy of Administration, Mussorie, U.P. **(GEP-206-1989)**

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- Advice on foundations for 120 MW Power Plant at TISCO, Jamshedpur**,** Jamshedpur, TATA Power Co., Mumbai (**CED-1065/2006-07)**

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