

BIO-DATA

DR. KARUNESH KUMAR SHUKLA

Professor

Applied Mechanics Department

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Date of Birth: July 01, 1965

Marital Status: Married

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Applied Mechanics Department
Motilal Nehru National Institute of Technology Allahabad
Allahabad-211004, U.P., India

Educational Qualifications:

B.Eng. (Civil Engineering)	1986	M.M.M.E.C. Gorakhpur (Gorakhpur University)
M.Eng. (Structures)	1988	M.N.R.E.C. Allahabad (University of Allahabad)
Ph.D.	2001	I. I. T. Delhi

Employment Details:

Designation	Employer	Period
Professor (Applied Mechanics Deptt.)	M.N.N.I.T. Allahabad	13-8-2010- continuing
Professor (Civil Engg. Deptt.)	M.N.N.I.T. Allahabad	19-02-09 to 12-8-2010
Professor (Applied Mechanics Deptt.)	M.N.N.I.T. Allahabad	15-6-05 to 18-02-09
Assistant Professor (Applied Mechanics Deptt.)	M.N.R. E.C. Allahabad	20-02-2000 to 14-06-05
Lecturer(Selection Grade) (Applied Mechanics Deptt.)	M.N.R. E.C. Allahabad	8-10-99 to 19-02-2000
Senior Lecturer (Applied Mechanics Deptt.)	M.N.R. E.C. Allahabad	8-10-94 to 7-10-99
Lecturer (Applied Mechanics Deptt.)	M.N.R. E.C. Allahabad	7-10-88 to 7-10-94

Areas of Interest:

Composite Plates and Shells, Smart Structures, Retrofitting & Strengthening of RCC Structures, Computational Mechanics, Stability & Dynamics of Structures, Multi-scale Composites

Courses Lectured:

- (a) **U.G. Level:** Engineering Mechanics, Strength of Materials, Advance Strength of Materials, Structural Analysis, Composite Materials, Optimization Techniques, Mechanical Vibration, Finite Element & Finite Difference Methods
- (b) **P.G. Level:** Theory of Stability, Theory of Plates & Shells, Applied Computational Methods, Theory of Elasticity, Advanced Structural Analysis, Dynamics of Structures, Finite Element Method, Mechanics of Composite Materials, Experimental Stress Analysis

Research and Consultancy

1. Research Scholar, Applied Mechanics Department, I.I.T. Delhi, India, July 1997 – Sept. 2000 (on QIP scholarship from Govt. of India)
2. Visiting Research Fellow, Mechanical and Computer Aided Engineering Department, Feng Chia University, Taichung, Taiwan, Nov. 2002- March 2003, June 2004.
3. **M. Tech. Theses Supervised:** 42+6(in progress)

4. Ph. D. Theses Supervised:

(a). Completed:

- (i) B.P.Patel (2005), “Thermal Buckling and Postbuckling Characteristics of Composite Laminated Shells (Co-Supervisor: Prof. Y .Nath)
- (ii) Ramesh Pandey (2008), “Some Studies on Nonlinear Analysis of Laminated Composite Rectangular Plates” (Co-Supervisor: Prof. Anuj Jain)
- (iii) Dinesh Bhatia (2011), “Some Studies on Biomechanical Aspects of Human Leg” (Co-Supervisor: Dr. R.P.Tewari)
- (iv) R.K.Srivastava (2012), “Study of Rigid Pavements for Village Roads in Alluvial Regions” (Co-Supervisor: Prof. S.K.Duggal).
- (v) Jeeoot Singh (2012), “Some Studies on Linear and Nonlinear Analysis of Rectangular Plates using RBF based Meshfree Method” (Co-supervisor: Prof. T.Nath).
- (vi) Ashutosh Upadhyay, “Nonlinear Static and Dynamic Analysis of Skew Plates”, (submitted)
- (vii) T. Ramesh, “ Life Cycle Analysis for Green Building Design” (Co-Supervisor: Dr. Ravi Prakash) (submitted)
- (viii) Ashok Jain, “Analysis and Design of Precast Ferrocement Units for Ware-houses”. (submitted)

(b). Under Progress: 2

- (i). Kishore Guru, “ Study of CNT reinforced multi-scale composites”. (Co-supervisor: Dr.S.B.Mishra)
- (ii) Syed Tabin Rushad, “Strengthening of the R.C.C. Flexural Structures”, (Co-supervisor: Prof. S.K.Duggal)

5. Publications

Refereed International Journals:

- “Non-linear Flexural and Dynamic Response of CNT Reinforced Laminated Composite Plates”, Bhardwaj, G., Upadhyay, A.K., Pandey, R., and **Shukla, K.K.**, *Composites Part B*, 45, 89-100 (2013).
- “Nonlinear flexural analysis of functionally graded plates under different loadings using RBF based meshless method”, Singh, Jeeoot and **Shukla, K.K.**, *Engineering Analysis with Boundary Elements*, Vol. 36, 1819-1827 (2012).
- “Large Deformation Flexural Behavior of Laminated Composite Skew Plates: An Analytical Approach” Upadhyay, A.K. and **Shukla, K.K.**, *Composite Structures*, Vol. 94, 3722-3735 (2012)

- “Life cycle approach in evaluating energy performance of residential buildings in Indian Context”, T Ramesh, T., Prakash, R., and **Shukla, K.K.**, *Energy and Buildings*, 54, 259-265 (2012).
- “Flexural response of Doubly Curved Laminated Composite Shells” by Sharma, A., Upadhyaya, A.K., **Shukla, K.K.**, *J. SCIENCE CHINA Physics, Mechanics & Astronomy*, (Accepted)
- “Geometrically Nonlinear Static and Dynamic Analysis of Functionally Graded Skew Plates” Upadhyay, A.K. and **Shukla, K.K.**, *Communications in Nonlinear Sciences and Numerical Simulation*, (Accepted).
- “Nonlinear Dynamic Response of Elastically Supported Laminated Composite Plates” Pandey, R., Upadhyay, A.K., **Shukla, K.K.**, and Jain A., *Int. J. Mechanics of Advanced Materials and Structures* , Vol. 19 (6), 397-420, 2012.
- “Nonlinear flexural analysis of laminated composite plates using RBF based meshless method”, Singh, Jeeoot and **Shukla, K.K.**, *Composite Structures*, Vol. 94, 1714-1720 (2012).
- “Life Cycle Energy Analysis of Residential Buildings with Different Envelopes and Climates in Indian Context” by Ramesh, T., Prakash, R., and **Shukla, K.K.**, *J. Applied Energy*, Vol. 89(1), 193-202 (2012).
- “Nonlinear dynamic response of laminated composite plates subjected to pulse loading” by A.K.Upadhyay, R. Pandey, and **K.K.Shukla**, *Communications in Nonlinear Sc. Numerical Simulation*, Vol. 16, 4530-4544 (2011).
- State of Art: Functional Electrical Stimulation (FES) by Bhatia D., Bansal G., Tewari R.P. and **Shukla K.K.**, *Int. J. Biomedical Engineering & Technology* , Vol. 5, No.1, 77-79. (2011).
- Life cycle energy analysis of buildings: An overview by T.Ramesh, Ravi Prakash, **K.K.Shukla**, *Energy and Buildings*, 42(10), 1592-1600, (2010).
- Nonlinear Flexural Response of Laminated Composite Plates under Hygro-Thermo-Mechanical Loading by Upadhyay, A.K, Pandey, R., and **Shukla, K.K.**, *Communications in Nonlinear Sc. Numerical Simulation*, 15(9), 2634-2650, (2010).
- Hygrothermoelastic postbuckling response of laminated composite plates by Pandey R., Upadhyay A.K. and **Shukla K.K.**, *J. Aerospace Engg., ASCE* , 23(1), 1-13, (2010).
- Nonlinear free vibration analysis of composite plates with material uncertainties: A Monte Carlo simulation approach by Singh B.N., Bist A.K., Pandit M.K., **Shukla K.K.**, *J. Sound & Vibration*, 324(1-2) 2009 (2009).
- Thermoelastic stability analysis of laminated composite plates: An analytical approach by Pandey R., **Shukla K.K.** and Jain A., *Communications in Nonlinear Sc. Numerical Simulation*, 14, 1679-1699 (2009).
- Nonlinear flexural analysis of laminated composite plates by Pandey R., **Shukla K.K.** and Jain A., *Int. J. Applied Mechanics & Engineering*, 13(3), 707-733 (2008).
- Second order statistics of natural frequencies of smart laminated composite plates with random material properties by Singh B.N., Umrao A. and **Shukla K.K.**, *Smart Structures and Systems: An Int. Journal*, 4(1) (2008).
- Postbuckling response of functionally graded rectangular plates subjected to thermo-mechanical loading by **Shukla K.K.**, Ravi Kumar K.V., Pandey R. and Nath Y., *Int. J. Structural Stability and Dynamics*, 7(3), 519-541 (2007).

- Nonlinear stability and dynamics of laminated composite plates and shells by Singh S., Sharma A., Patel B.P., **Shukla K.K.** and Nath Y., *Vibration Problems: Springer*, 415-427 (2007).
- Free vibrations of laminated composite conical panels with random material properties by Tripathi V., Singh B.N. and **Shukla K.K.**, *Composite Structures*, 81(1), 96-104 (2007).
- Postbuckling analysis of functionally graded rectangular plates by Wu T.L., **Shukla K.K.** and Huang J.H., *Composite Structures*, 81(1), 1-10 (2007).
- Nonlinear static and dynamic analysis of functionally graded plates by Wu T.L., **Shukla K.K.** and Huang J.H., *Int. J. Applied Mechanics & Engineering*, 11(3), 679-698 (2006).
- Nonlinear thermo-elastic buckling characteristics of cross-ply laminated joined conical-cylindrical shells by Patel B.P., Nath Y. and **Shukla K.K.**, *Int. J. Solids and Structures*, 43, 4810-4829 (2006).
- Nonlinear thermoelastic stability characteristics of cross-ply laminated oval cylindrical/conical shells by Patel B.P., **Shukla K.K.** and Nath Y., *Finite Elements in Analysis and Design*, 42, 1061-1070 (2006).
- Thermal postbuckling analysis of laminated cross-ply truncated circular conical shells by Patel B.P., **Shukla K.K.** and Nath Y., *Composite Structures*, 71(1), 101-114 (2005).
- Buckling and transient behaviour of layered composite plates under thermomechanical loading by **Shukla K.K.**, Nath Y. and Kreuzer E., *ZAMM*, 85(3), 163-175 (2005).
- Thermal postbuckling characteristics of laminated conical shells with temperature dependent properties, by Patel B.P., **Shukla K.K.** and Nath Y., *AIAA Journal*, 43(6), 1380-1388 (2005).
- Thermo-elastic stability behaviour of laminated cross-ply elliptical shells by Patel B.P., **Shukla K.K.** and Nath Y., *Structural Engineering and Mechanics*, 19(6), 749-755 (2005).
- Postbuckling of cross-ply laminated rectangular plates containing short random fibres by Huang J.H. and **Shukla K.K.**, *Composite Structures*, 68(3), 255-265 (2005).
- Buckling of laminated composite rectangular plates by **Shukla K.K.**, Nath Y., Kreuzer E. and Sateesh K.V., *J. Aerospace Engg., ASCE*, 18(4), 215-223 (2005).
- Thermal postbuckling of laminated composite plates with temperature dependent properties by **Shukla K.K.**, Huang J.H., Nath Y., *J. Engineering Mechanics, ASCE*, 130(7), 818-825 (2004).
- Thermal buckling of laminated cross-ply oval cylindrical shells by Patel B.P., **Shukla K.K.**, Nath Y., *Composite Structures*, 65(2), 217-229 (2004).
- Nonlinear dynamic analysis of composite laminated plates containing spatially oriented short fibres by **Shukla K.K.**, Chen J.M. and Huang J.H., *Int. Journal of Solids and Structures*, 41(2), 365-384 (2004).
- Buckling of laminated composite rectangular plates under transient thermal loading by **Shukla K.K.** and Nath Y., *Journal of Applied Mechanics, ASME*, 69(5), 684-692 (2002).
- Thermomechanical postbuckling of cross-ply laminated rectangular plates by **Shukla K.K.** and Nath Y., *J. Engineering Mechanics, ASCE*, 128(1), 93-101 (2002).
- Analytical solution for buckling and postbuckling of angle-ply laminated composite plates under thermomechanical loading by **Shukla K.K.** and Nath Y., *International Journal of Nonlinear Mechanics*, 36(7), 1097-1108 (2001).
- Nonlinear transient analysis of moderately thick laminated composite plates by Nath Y. and **Shukla K.K.**, *Journal of Sound and Vibration*, 247(3), 509-526 (2001).

- Postbuckling of angle-ply laminated plates under thermal loading by Nath Y. and **Shukla K.K.**, *Communications in Nonlinear Sciences and Numerical Simulation*, 6(1), 1-16 (2001).
- Postbuckling of cross-ply laminated rectangular plates under in-plane thermal loading by Nath Y. and **Shukla K.K.**, *Int. J. Nonlinear Science and Engrg.*, 1, 1-16 (2001).
- Nonlinear analysis of moderately thick laminated rectangular plates by **Shukla K.K.** and Nath Y., *J. Engineering Mechanics, ASCE*, 126(8), 831-838 (2000).

National Journals

- Study on the role of muscles under different loading conditions using EMG analysis of lower extremities”, D.Bhatia, R.P.Tewari, S. Ayub, **K.K.Shukla**, and M.A.Ansari, *Advances in Applied Sciences Research*, 1(3),118-128 (2010).
- Reinforced Cement Concrete Pavement for Village Roads in Alluvial Region: A Sustainable Option”, R.K. Srivastava, S.K. Duggal, and **K.K. Shukla**, *Highway Research Journal, Indian Road Congress*, (Accepted).
- Warehousing Structures-An optimal approach, A.K.Jain and **K.K.Shukla**, *Indian Concrete Journal* (2012).
- Flexural Analysis of laminated composite plates using thin plate spline radial basis function by Jeet Singh, Sandeep Singh, and **K.K.Shukla**, *J. Modeling and Simulation in Design and Engineering*, Vol. 2, No. 1, 79-84 (2011).
- Determination of activity of significant muscle groups for lower limb exercise by Bhatia, D., Bansal, G., Tewari, R.P., and **Shukla, K.K.**, *Indian Journal of Biomechanics: Special Issue, NCBM, IIT Roorkee* (2009).
- Parametric study on the vibration of cylindrical shell on an elastic foundation by Paliwal D.N., Pandey R.K. and **Shukla K.K.**, *J. of Structural Engineering*, 26(2), 149-153 (1999).

International Conferences

- A.K.Upadhyay and K.K.Shukla, “Static and Dynamic Analysis of Functionally Graded Skew Plates” Fourth International Congress on Computational Mechanics and Simulation (ICCMS 2012), IIT Hyderabad, Dec 9-12, 2012.
- J.Singh and K.K.Shukla, “Nonlinear Free Vibration of Functionally Graded Plates using Multiquadric collocations” The Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), IIT Delhi, Dec 5-8, 2012.
- R.B.Patil and K.K.Shukla, “Static and Vibration analysis of Laminated Composite and Sandwich Plates” The Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), IIT Delhi, Dec 5-8, 2012.
- A.K.Upadhyay and K.K.Shukla, “Buckling of Laminated Composite and Sandwich Skew Plates” The Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), IIT Delhi, Dec 5-8, 2012.
- P.K.Tungala and K.K.Shukla, “Supersonic Flutter of Rectangular Plates with Variable Fiber Spacing” The Third Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2012), IIT Delhi, Dec 5-8, 2012.
- J. Singh and **K.K.Shukla**, “ Buckling Analysis of Laminated Composite and Sandwich Plates subjected to Different In-plane Loadings”, 8th South African Conference on Applied Mechanics, SACAM-2012, University of Johannesburg, South Africa, Sept 3-5, 2012.

- A.K.Upadhyay and **K.K.Shukla**, “ Nonlinear Dynamic Analysis of Laminated Composite Skew Plates”, Fourth Int. Conf. on Structural Stability and Dynamics (ICSSD-2012), Jaipur, India, 4-6 Jan. 2012.
- G. Bhardwaj, A.K.Upadhyay, R. Pandey, and **K.K.Shukla**, “ Buckling and Postbuckling Response of CNT Reinforced Multi-Scale Composite Laminated Plates” , Fourth Int. Conf. on Structural Stability and Dynamics (ICSSD-2012), Jaipur, India, 4-6 Jan. 2012.
- Sandeep Singh, J. Singh, and **K.K.Shukla**, “Buckling of Laminated Composite Plates using Meshless Method Based on Radial Basis Function”, Fourth Int. Conf. on Structural Stability and Dynamics (ICSSD-2012), Jaipur, India, 4-6 Jan. 2012.
- Viswanath, S.M., A.K.Upadhyay, and **K.K. Shukla**, “ Low Velocity Impact Analysis of Sandwich Plates using General Linearized Contact Law”, Fourth Int. Conf. on Structural Stability and Dynamics (ICSSD-2012), Jaipur, India, 4-6 Jan. 2012.
- J. Singh, Sandeep Singh, and **K.K.Shukla**, “ RBF based Meshless Method for Free Vibration Analysis of Laminated Composite Plates”, Int. Conf. on Aeronautical and Astronautical Engineering, ICAAE 2011, Paris, France, July 27-29, 2011.
- Viswanath, S.M., A.K.Upadhyay, and **K.K. Shukla**, “ Low Velocity Impact Analysis of Composite Laminates using Linearized Contact Law”, 5th International on Advances in Mechanical Engineering (ACAME), SVNIT Surat India, June06-08, 2011.
- P.P.Singh, G. Bhardwaj, S.B.Mishra, and **K.K.Shukla**, “ Influence of Aspect Ratio and CNT-Matrix Interphase in Carbon Nanotube Reinforced Composites”, 5th International on Advances in Mechanical Engineering (ACAME), SVNIT Surat India, June06-08, 2011.
- M.K.Dikshit, S.B.Mishra, and **K.K.Shukla**, “ Investigation of Elastic Modulus of Epoxy DGEBA Cured with DEDTA by Molecular Dynamics”, 5th International on Advances in Mechanical Engineering (ACAME), SVNIT Surat India, June06-08, 2011.
- K.V.Kulkarni, A.K.Upadhyay, and **K.K.Shukla**, “ An Analytical Solution for Dynamic Response of Laminated Composite Skew Plates”, 5th International on Advances in Mechanical Engineering (ACAME), SVNIT Surat India, June06-08, 2011.
- Ambuj Sharma, A.K.Upadhyay, and **K.K.Shukla**, “Response of Doubly Curved Laminated Composite Shells”, The Second Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS 2010) at Nanjing University of Aeronautics and Astronautics Nanjing China, Oct. 22-25, 2010.
- Sandeep Singh, Ramesh Pandey, and **K.K.Shukla**, “Buckling Analysis of Laminated Composite Plates with Eccentric Circular Cutouts using FEM”, ICTACEM 2010.
- Jeet Singh, **K.K.Shukla**, and T.Nath, “A mesh free method for analysis of sandwich and composite plates using multiquadrics discretizations”, ICTACEM 2010.
- Dinesh Bhatia, R.P. Tewari, **K.K. Shukla** “Mathematical Modeling and Simulation of knee ankle muscles for different locomotion activities” 6th World Congress on Biomechanics (WCB 2010) in conjunction with 14th International Conference on Biomedical Engineering, National University of Singapore and International Federation of Medical and Biomedical Engineering and Biomedical Engineering Society, 1st-6th August 2010, Singapore, IFMBE Proceedings 31, pp. 640–643, 2010.
- A.K.Upadhyay, Praveen Kumar, and **K.K.Shukla**, “ Linear Static Analysis of Skew Composite Plates”, ICCMS, IIT Mumbai, Dec. 2009
- Sumit Sharma, Ramesh Pandey, A.K.Upadhyay, and **K.K.Shukla**, “Postbuckling Response of Hybrid Composite plates” ICCMS, IIT Mumbai, Dec. 2009.

- K.M.Gupta, A.K.Gupta, and **K.K.Shukla** (2008), “Nonlinear Analysis of Sandwich Composite Plate under Impact Loading”, 5th MSAT, Bangkok, Sept. 2008, 97-99.
- R.Pandey, A.K.Upadhyay, **K.K.Shukla**, and A.Jain (2007), “Non-linear response of laminated composite plates under hygro-mechanical loading”, ICTACEM – 07, December 2007.
- R. Pandey, **K.K.Shukla**, and A. Jain (2006), “Postbuckling response of laminated composite rectangular plates”, ICCMS06, IIT Guwahati.
- V. Anjani Kumar, Ramesh Pandey, **K.K.Shukla**, and Jin H. Huang (2006), “Linear vibration analysis of composite rectangular plates: A state space approach”, ICCMS06, IIT Guwahati.
- **K.K.Shukla**, Ravi Kumar, KV., and Y.Nath (2006), “ Stability Analysis of Functionally Graded Rectangular Plates”, 15th USNCTAM, University of Colorado, Colorado, USA, June 25-30, 2006.
- B.P.Patel, A.Sharma, **K.K.Shukla**, and Y.Nath, (2005) “ Nonlinear dynamics and stability of laminated composite plates and shells”, ICOVP, 2005.
- B. N. Singh, Arun K. Mishra and **K. K. Shukla** (2005) “Stability of Piezoelectric Laminated Composite Plates with Uncertain Material Properties” International conference on Smart Materials, Structures and Systems, July 28-30, 2005, IISC Bangalore.
- Vivek Tripathi, B N Singh and **K.K. Shukla** (2005), “Free vibration study of laminated composite conical panels with random material properties” International Conference on Smart Materials, Structures and Systems ,July 28-30, 2005 at IISC Bangalore.
- Jhao-Ming Chen, **K.K.Shukla**, Jin H.Huang (2005), “ Analysis and design of double piezoelectric beam driven torsional microactuator”, ICCES05, IIT Madras.
- Ramesh Pandey, **K.K.Shukla**, and Anuj Jain (2004), “ Nonlinear static analysis of laminated composite plates”, ICTACEM 2004, IIT Kharagpur, pp. 140-142, 2004.
- Atul Umrao, B.N.Singh, and **K.K.Shukla** (2004), “Free vibration response of piezoelectric laminated composite plates with random material properties”, ICTACEM 2004, IIT Kharagpur, pp. 80-83, 2004.
- **K.K.Shukla**, Manoj S. Patil, Ramesh pandey and Anuj Jain (2004) “ Thermal Buckling of Functionally graded Rectangular Plates”, 17th Engineering Mechanics Conf., ASCE , USA, 2004.
- **K.K.Shukla**, Y.Nath and J.H.Huang (2003), “Buckling of laminated composite rectangular plates under thermomechanical loading: An analytical approach”, Proceedings of the 5th International Conference on Thermal Stresses and Related Topics, TS-2003, Blacksburg, VA, USA, TM-5-1-(1-4).
- **K.K.Shukla** ,Y.Nath, and B.Rahul Deo (2003), “Thermomechanical Postbuckling Of Laminated Composite Rectangular Plates with Temperature Dependent Properties”, ICCE-10 July 20-26, 2003, New Orleans, USA.
- **Shukla, K. K.** and Nath, Y (2000)," Nonlinear Analysis of Rectangular Plates: An Analytical Approach", SEC-2000, IIT Bombay, pp.359-366, 2000.
- Nath, Y, **Shukla, K. K.**, A.K.Sharma and G.Raghvender (1998)," Thermal Buckling of Symmetrically Laminated Cross-Ply Rectangular Plates", ICTACEM 98, IIT Kharagpur.

National Conference

- G. Bhardwaj, R.Pandey, **K.K.Shukla**, “ Flexural Response of CNT Reinforced Multi-scale Composite Laminated Plates”, ISAMPE National Conference on Composites- INCCOM10, Nov. 2011, Pune
- Dinesh Bhatia, Ashish Mishra, R.P.Tewari, **K.K. Shukla** (2010), “Modeling and Simulation of Hip knee muscles using EMG from different locomotion activities” National Conference on Emerging Medical Instrumentation (CEMI-2010) organized by CSIO, Chandigarh on 11th and 12th May 2010.
- Dinesh Bhatia, Gagan Bansal, R.P Tewari, **K K Shukla** (2009), “Determination of activity of significant muscle groups for lower limb exercise” National Conference on Biomechanics organized by Department of Mathematics, IIT Roorkee and Indian Society of Biomechanics at IIT Roorkee on 7 & 8th March 2009.
- Y.Nath, **K.K.Shukla** and M.P.Janardhana (2001), “Laminated Composite Cylindrical Panels: An Analytical Approach”, 12th ISME Conf., pp.161-168.
- **K.K. Shukla**, Y. Nath, and R.K.Pandey (1999), " Reliability Analysis of a Tall Vertical Pressure Vessels", Proc. 11th ISME Conf. IIT Delhi, pp. 149-154.
- K. Ramakrishna, **K.K.Shukla** and Arvind Kumar (1997), “ Knowledge based system for assessment of distress in reinforced concrete due to corrosion”, Proc. National Seminar on Role of building chemicals in construction industry”, I.E. Allahabad, III103-108.
- **K.K.Shukla** and Jai Prakash (1995), “Light Weight Precast Slab”, Proc. National Seminar on High Rise Structures”, Institution of Engineers, Allahabad, V62-66.

Text Book

- “An Introduction to Strength of Materials” Co-authored with Prof. Anuj Jain & Dr. Ramesh Pandey (Under Publication, Narosa Publications)
- “ Structural Analysis” (Under preparation)

6. Industrial Projects/ Consultancy

- Structural design of India gate at Sonauli, Gorakhpur (India- Nepal Border), UPPWD Gorakhpur, 1994, 0.40 lacs.
- Structural Design Evaluation of the Agricultural Engineering College, Etawah, UP, UPRNN, 1994-95, 1.60 lacs
- Structural Design of Curved Beams of Girls Polytechnic Amethi & Sultanpur, UPPWD, 1996, 0.40 lacs.
- Structural Design Evaluation of Overhead Water tank and Buildings at MNREC, Allahabad, 1995. 2.0 lacs
- Structural Design of Foundation of Wind Tunnel at MNREC Allahabad.
- Design of Minor Bridge at Pratapgarh, UPRNN, 2003, 0.60 lacs.
- Design evaluation of Hospital Building at MLN Medical Allahabd, 2003. 0.50 lacs
- Stability Checking of retaining walls, Oriental structures Ltd. 2007, 0.25 lacs
- Design of Culverts, 2007, 0.25 lacs.
- Design of lifting bolts, 2007, 0.10 lacs
- Survey work of ADA Allahabad, 2007, 4.5 lacs
- Design of Extension of bridge culvert, Oriental structures, 2008, 0.25 lacs
- Design of sump well, Up Jal Nigam, 2008, 0.26 lacs.
- Design checking of number water tanks, 2008, 0.25 lacs

- Design of 4 storied building, ADA Allahabad, 2008. 0.50 lacs
- Design of 4 storied building, ADA Allahabad, 2010. 0.50 lacs
- A number of testing consultancies related to steel testing and others.(2004-8) 2.5 lacs.
- Design Checking of different shops of Indian Railway sponsored by L&T Ltd (2012)-2.5 lacs
- Evaluation of Flood Protection Scheme in Uttarakhand (2011-12)- 2.0 lacs
- Proof Checking of Design and Drawings of ROB at Rly Km 1409/8-9 on Kanpur(2012)- Rs. 0.68 lacs
- Supervision of Civil construction works at the MNNIT Allahabad for the period 1994-95, 2003-2009

7. Sponsored Research Projects

- (i) **Title:** Design Simulation, Modeling and Mechanical Properties Characterization of Carbon Nano Tube (CNT) Composites (completed)

Funding Agency: Advanced Systems Laboratory (ASL) a Defense Research and Development Organization (DRDO), Ministry of Defence, Govt. of India.

Fund allotment: Rs. 127 lacs (Co-PI: Dr. S.B.Mishra, MED)

- (ii) **Title:** “Characterization, Modelling and Analysis of Nano flake and Nano-sheet Graphite Nanocomposites”

Funding Agency: Joint Research funding under Indo-Taiwan S&T Programme

Fund allotment: funding of 2 visits from each side.

Period: March 2009-2012

- (iii) DST-FIST project for Applied Mechanics Department, MNNIT Allahabad, Rs. 130 lacs (Prepared & presented before the committee on behalf of the deptt.)

Awards and Recognitions

- National scholarship 1979-1986.
 - GATE Fellowship 1986-1988.
 - QIP Fellowship 1997-2000.
 - Cited in Marcus World’s Who’s and Who in Science & Engineering 2003, 2005, 2006, 2007.
 - Included in the reference book by the International Biographical Centre, Cambridge, England as leading Scientists of the World 2005.
 - **Visiting Research Fellow** Nov.02 – March 03 and June 2004, Feng Chia University, Taichung, Taiwan.
 - Developed BE/B.Tech (Civil Engg.) Curriculum, sponsored by AICTE New Delhi in 1998.
- (iv) **Served as Reviewer** to the following Int. Journals (i) J. Engineering Mechanics, ASCE, (ii) J. Sound & Vibration, (iii) Finite Element Analysis & Design, (iv) Int. J. Structural stability & Dynamics, (v) Int. J. Geotechnical & Geological Engg.,(v) Communication in Nonlinear Science & Numerical Simulations, (vi) Composite Structures, (vii) Mechanics of Advanced Materials & Structures (viii) Int J. of Mechanical Sciences (ix) Acta Mechanica Solida Sinica (x) AIAA (x) Shock and Vibration (xi) Composites: Part-B (xii) Int. J. Mechanical Sciences (xiii) Structural Engineering & Mechanics

- Member International Editorial Board of Int. Journal “The Open Aerospace Engg. Journal” published by Bentham Science & Engg. Publication, USA.
- Member, Editorial Board of Journal of Modeling and Simulation in Design and Manufacturing (ISSN: 0976-7827)
- Served as member selection committee for recruitment of the faculty at NIT Nagpur, NIT Hamirpur, NIT Raipur, NIT Jiapur and NIT Jamshedpur.
- Reviewed Text Book on “ Structural Analysis”
- Secretary & President of QIP Research Scholar Forum, IIT Delhi, 1998-1999.
- President, Teacher’s Association, MNNIT Allahabad, 2007-9
- Chaired Technical Sessions in International Conference, ICTACEM2010, ICSSD-2102
- Member, International Advisory Board, 4th International Conference on Structural Stability and Dynamics held at NIT Jaipur, Jan. 2012.
- Member, National Advisory Board 3rd Asian Conference on Functional Materials and Structures, ACFMS-2012 to be held at IIT Delhi, Dec. 2012.

Administrative Experience:

(a) Institute Level:

- Head, Applied Mechanics Department: August 2011- Continuing
- Head, Mathematics Department: March 2011- August 2011
- Dy. Dean (Administration): 2001-2004
- Faculty in-charge Construction: July1994- Aug. 95, Sept.2003- Feb. 2010
- Assistant Warden- Tandon Hostel & P.G. Hostel
- Warden in-Charge: Delegacy & Malviya Hostel
- Officer-in-Charge: Various Games
- Chief Proctor
- Chairman, Institute Health Care Committee
- Chairman, Institute Security Advisory Committee

(b) Department Level

- Officer-in-charge: Computational lab, Engineering Mechanics lab, Structural Analysis lab, Strength of Materials lab, Time table
- Convener-Departmental Postgraduate Committee
- Convener-Departmental Under Graduate Committee

(c) Others

- Dy. Coordinator-UPMCAT: 2001, 2002, 2003
- Dy. Chairman Central Counseling Board- AIEEE-2003, 2004
- Convener-Technical Committee: CCB-AIEEE-2003
- Member-CCB Head Quarter, AIEEE-2008
- Member-Technical Committee, AIEEE-2009

Short Term/Refresher Courses Organized / Attended:

Organized:

- Convener, Self Sponsored Short Term course on “Finite Element Analysis (Theory and Practice)” MNNIT Allahabad, January 29 – February 03, 2007, Number of participants – 45.

- Chairman, National Workshop on Advanced Functional Materials and Structures (AFMS-12) in collaboration with University of Missouri, Columbia, USA at MNNIT Allahabad, July 12-14, 2012.

Attended:

- Short Term course on “Computer Methods in Optimization”, Oct. 12-23, 1992, IISc Bangalore.
- Short Term Course on “Pump and Valve Selection for Optimum Performance”, Dec. 27-Jan. 8, 1994, MNREC Allahabad.
- Short Term Course on “Recent Trends in Engineering Materials” Dec. 26- Jan 6, 1995, MNREC Allahabad.
- Specialist Course on “Detailing of Reinforced Concrete Structures” Oct. 12-17, 1995, University of Roorkee.
- Summer School on “Reliability Based Innovative Product Design” June 1-12, 1998, IIT Delhi.
- Summer School on “Instrumentation & Data Analysis” July 6-17, 1998, IIT Delhi.
- National workshop on “Institute Works- Construction and Management” Sept. 23-24, 2002, IIT Kanpur.
- Short Term Programme on “Curriculum Processes” Feb. 15-17, 2005 organized jointly by MNNIT Allahabad & NITTTR, Chandigarh.
- Short Term Course on “Virtual Instrumentation” Jan. 17-21, 2005 organized jointly by MNNIT Allahabad & NITTTR, Chandigarh.

Conferences/Seminars Participated:

- National Seminar on High Rise Structures, Institution of Engineers Allahabad, 1995.
- Int. Conf. on Theoretical, Applied, Computational & Experimental Mechanics, ICTACEM-98, IIT Kharagur, 1998.
- 11th ISME Conf. IIT Delhi, 1999.
- Geo-Environment-2005, MNNIT Allahabad
- Int. Conf. Computational & Experimental Sciences, ICCES-5, IIT Chennai, 2005.
- Int. Conf. Computational Mechanics, ICCMS06, IIT Guwahati, 2006.
- Int. Conf. 15th USNCTAM, Univeristy of Colorado, Colorado, USA, June 25-30,2006.
- Int. Conf. on Theoretical, Applied, Computational & Experimental Mechanics, ICTACEM-07, IIT Kharagur, 2007
- 2nd Asian Conference on Functional Materials & Structures ACFMS 2010 , Nanjing University of Aeronautics and Astronautics, Nanjing, China, Oct.22-25, 2010.
- Int. Conf. on Theoretical, Applied, Computational & Experimental Mechanics, ICTACEM-10, IIT Kharagur, 2010
- Int. Conf. on Aeronautical and Astronautical Engineering, ICAAE 2011, Paris, France, July 27-29, 2011.
- 8th South African Conference on Applied Mechanics, SACAM-12, University of Johannesburg, South Africa, Sept. 3-5, 2012.

Invited Talks:

- “Nonlinear Analysis of Composite Laminated Plates Under Thermomechanical Loading: An Analytical Approach” at Civil Engg. Deptt., Feng Chia University, Taichung Taiwan, 10-3-2003.
- “Dynamic Response of Composite Laminated Plates” at Mechanical Engg. Deptt., Feng Chia University, Taichung Taiwan, 17-3-2003.
- “Basics of Finite Element Method” Short term course at MNNIT Allahabad, 2007.
- “Variation Formulations” Short term course at MNNIT Allahabad, 2007.
- Inaugural talk on “ Finite Element Method” a refresher course at HBTI Kanpur, 2007.
- “Basics of Elasticity” Short term course at MNNIT Allahabad, 2007.
- “Computational Mechanics” Short term course at MNNIT Allahabad, 2007.
- “Basics of Finite Element Analysis & its Application”, Short term course at Oriental Institute of science & Technology, Bhopal, 2007.
- “Research Scenario at MNNIT Allahabad”, TOKO University, Taiwan, 2007.
- “About MNNIT & Research Scenario at MNNIT” CUHK & HKU, Hongkong, 2007.
- “Smart Materials & Systems” at Advanced Material Processing and Research Institute Bhopal, 2008.
- “Civil Engineering Profession” at a Seminar organized by U.P. Professional Civil Engineering association at Lucknow, 2007.
- “Laboratory Teaching” Orientation Programme for New Faculty Members at MNNT Allahabad-2004.
- “Multiscale Composites” at National Workshop on Advanced Functional Materials and Structures, MNNIT Allahabad, July 12-14, 2012.

Visits Abroad (Foreign Universities):

- University of Johannesburg, South Africa
- Nanjing University of Aeronautics & Astronautics, Nanjing, China
- Feng Chia University, Taichung, Taiwan
- TOKO University, Chai, Taiwan
- Hongkong University, Hongkong
- Chinese University Hongkong, Hongkong
- University of Collorado, Boulder, USA
- Columbia University, New York, USA
- City College of Engineering, City Univeristy, New York, USA
- Florida International University, Miami, USA
- The Parks College of Engineering and Aviation, St. Louis, USA
- University of Missouri, Columbia, USA