



Prof. (Dr.) Prabhir Kumar Basudhar

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****** Faculty Profile ******

Dr. Prabir Kr. Basudhar

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Experience

- More than 40 years' experience in Teaching, Research and Constancy in the field of Civil Engineering.
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- **Posts Held**
- **Professor, Civil Engineering Department, GLA University, Mathura, July,2012 – Continuing.**
- **Adjunct Professor, Civil Engineering Department, Indian School of Mine, Dhanbad Jharkhand, 2014 onward.**
- **Professor, Civil Engineering Department, Indian Institute of Technology, Kanpur, August 1991-2012.** Served as Head of the department from January, 1997 to December 2000. Successfully led the department having seven disciplines with about thirty Faculty members, more than fifty technical and administrative staff members, about two hundred undergraduate, ninety postgraduate and forty research students. The activities of the department were coordinated without any problems and managed the differences of opinion if there be any in a persuasive manner as far as possible without any acrimony. From 1995 to 1997, I was the Professor-in-Charge of Geotechnical engineering for

the second term and successfully completed the assignment increasing the revenue earned manifold through consultancy services. I also served as the convener of the Institute Affairs Committee that oversees the activities of the different department of the Institute. I served as the Chairman of the House allotment committee and was instrumental to develop a transparent system creating a webpage for the same.

- **Professor and Head, Civil Engineering Department, Papua New Guinea University of Technology, August 2007-July 2008.** This was the only technical Institute in the Asia-Pacific region excluding Australia and New Zealand. I was selected there through an International selection process for a term of three years. Here I led the department at a difficult period having about ten faculty members, fifteen staff members, one hundred and fifty undergraduate students drawn from different countries but mainly from Papua New Guinea. Maintained a very harmonious and cordial relation in the department. I also headed the Institute Work Shop which was under the management of Civil Engineering Department. For the second term under my leadership the Workshop made profit for the first time and generated revenue for the University by taking up Jobs from the city. I took a leading role in organizing centralized examination system all over the country that was introduced for the first time.
- **Visiting Professor, School of Civil Engineering, Asian Institute of Technology, Bangkok, Thailand, January 2003-April 2003.** I was deputed for a semester by Govt. of India to the place mainly for teaching.
- **Assistant Professor, Civil Engineering Department, Indian Institute of Technology, Kanpur, 15th December, 1982 to 8th March, 1991.** During this period, I served various committees of the department like Convener of Undergraduate and Post Graduate program over-viewing and managing the academic activities of the department. Departmental Library and Senate library committee, Departmental Workshop, Computational laboratory. I also served the Institute as Warden and then as Warden in charge managing students hostel having about 250 students and about 50 mess employees, 20 menial staff members looking after the maintenance, mess and overall health and discipline in the hostel. During this period I acquired managerial skill and flourished in the same.
- **Lecturer, Civil Engineering Department, Institute of Technology, Banaras Hindu University, Varanasi, August 1976-December, 1982.** Even though I was very junior member in the hierarchy, I earned peer-appreciation due to my team work, diligent nature and discipline and for never ever shirking from a responsibility. Here also I served as the Professor in charge of the departmental workshop. I was very active especially in the Silver jubilee Celebrations of the department in organizing the conference along with Late Prof.T.V.N.Rao.
- **Senior Research Assistant, Civil Engineering Department, Indian Institute of Technology, Kanpur, December 1972-July, 1976.** Helped the faculty members in conducting tutorial classes.
- **Graduate Trainee Engineer, Damodar Irrigation Circle, Irrigation and Waterways Directorate, Govt. of West Bengal, Govt. of India Training Scheme, July 1968-July 1969.** Mainly engaged in surveying and preparing a project proposal for increasing the discharge capacity of a small natural stream and concreting in irrigation projects.
- *Administrative Experience*
- **Vice Chairman, I.I.T. Kanpur Zone, All India JEE, 2005 – 2006.** Successfully conducted the JEE (Joint Entrance Examination) in about 100 centers spreading over a wide region in collaboration with Late Prof.V.N.Kulkarni.
- **Chairman, Institute House Allotment Committee, I.I.T. Kanpur, 2002-2004.** As the chairman I had to lead a team to look after the house allotment of the Faculty and staff members of the Institute. I was instrumental in making the system very transparent computerizing the information system. I received a commendation certificate from the director of the Institute for the same.
- **Member (Several times) & Convener (Once), Departmental Post-Graduate Committee, Civil Engineering, As the convener, I led a team of faculty members to overview the Post graduate program of the Department.**

- **Head of the Department of Civil Engineering and Environmental Engineering Program, 1997-2000.** Led the department at a time when the Institute was facing financial crisis. Maintained a harmonious relation amongst all in the department.
- **Member and Convener, Institute Affaire Committee, 1998-1999.** Had to convene and co-ordinate the meetings of the Heads of Departments of the Institute for smmot running of the Institute affairs.
- **Member (Several Times) & Convener (Once), Departmental under-graduate Committee.**
- **Professor-in-charge, Departmental workshop, Civil Engineering I.I.T. Kanpur, 1995-1998**
- **Professor-in-charge, Geotechnical Laboratory, Several times, I.I.T. Kanpur**
- **Chairman, GATE, I.I.T. Kanpur Zone, 1997-1998,** this examination is conducted all over India for admission to post graduate program in engineering, science and technology.
- **Vice-Chairman, GATE, I.I.T. Kanpur Zone, 1995-1997**
- Member-Senate- Postgraduate Committee, I.I.T. Kanpur
- Member-Senate Undergraduate Committee, I.I.T. Kanpur
- Member-Senate Library Committee, I.I.T. Kanpur
- Professor-in-charge- Departmental Computational Lab, Civil Engineering, I.I.T. Kanpur
- **Warden and Warden-in-charge, IIT Kanpur Student Hostel-1984-1987**

- ***Research Experience***

I have wide research experience in the following areas and contributed significantly in national and international journals and conferences.:

- Soil-structure interaction,
- Automated Stability Analysis of slopes and earth and rock fill dams, Analysis of embankments constructed on soft clays, Analysis of response of earth and rock fill dams during earthquakes, Analysis of nailed slopes and embankments on reinforced soft clays; Stability of Ocean beds,
- Optimum design of foundation system, Optimal lower bound solution of plane problems in geotechnical engineering,
- Stress-strain behavior of sands,
- Parametric estimation through inverse formulation,
- Estimation of in-situ soil properties,
- Soil liquefaction, Buckling and flexural response of piles in liquefying soils,
- Reinforced earth walls and beds: Lumped parameter and finite element modeling , flexural behavior of beams on reinforced foundation beds,
- Development of Monocell Pressuremeter and its use in in-situ soil characterization,
- Application of GA and ANN in geotechnical engineering,
- Steady state strength of sands
- Engineering behavior of compacted fly ash with chemical and geosynthetics fiber admixtures.
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Qualifications

- **Doctor of Philosophy, Ph.D. (Civil), 1977, I.I.T. Kanpur, Soil Mech. and Foundation Engineering. C.P.I. 8.8/10**
Thesis Topic: Basudhar, P. K. (1976), "Some Applications of Mathematical Programming Techniques to Stability Problems in Geotechnical Engineering," Ph.D. thesis, I.I.T. Kanpur.
- **Master of Technology, M.Tech. (Civil), 1971, I.I.T. Kanpur, Soil Mech. and Foundation Engineering. C.P.I. 8.0/10.**

Thesis topic: Basudhar, P. K. (1971), "Flexural Behavior of Axially and Laterally Loaded Piles," M.Tech. Thesis, I.I.T. Kanpur.

- **Bachelor of Engg., B.E. (Civil)**, 1968, Univ. of Burdwan, West Bengal, Regional Engg. College, Durgapur (Presently National Institute of Technology), Civil Engg. 71.17%, Ist Class. Elective subjects: Mathematics, Port, Dock and harbor engineering. B.tech Project: Indirect Tensile Strength of Concrete.
- **Higher Secondary**, 1963, Board of Secondary Education, West Bengal, Ramakrishna Mission High School, Asansol. Ist Division. Science stream (Physics, Chemistry, Mathematics, Biology, English and Bengali)

Publication

Book Sections: Published

- Arindam Dey and Prabir K. Basudhar (2011) *Inverse Formulation for Burger Model Parameter Estimation in Advances in Ground Technology and Geo-Information*, Ed. K. K. Phoon, S. H. Goh, R. F. Shen and H. Zhu, Research Publishing, Singapore, pp. 483-491: ISBN No. 978-981-07-0188-8.

Journal Publications: Published

- Anubhav, and Basudhar, P.K., (2013). "Interface Behaviour of Woven Geotextile with Rounded and Angular Particle Sand" *Journal of Materials in Civil Engineering*, ASCE, Available Online 09 Jan. 2013, doi: 10.1061/(ASCE)MT.1943-5533.0000774.
- Nainegali, L. S., Basudhar, P. K. and Ghosh, P. (2013). "Interference of two asymmetric closely spaced strip footings resting on non-homogeneous and linearly elastic soil bed." *Int. J. Geomech.*, Accepted, doi: 10.1061/(ASCE)GM.1943-5622.0000290
- Anubhav, and Basudhar, P.K., (2012). "Footing on double-faced wrap-around reinforced soil walls." *Ground Improvement*, Available Online 28 November 2012. doi:10.1680/grim.12.00006.
- Anubhav, and Basudhar, P.K., (2012). Experimental Studies of Strip Footing on Model Wrap-Around Reinforced Soil Walls. *Electronic Journal of Geotechnical Engineering*, 17 (A), 1 –12
- Dey and P. K. Basudhar (2012) "Estimation of burger model parameters using inverse analysis" *International Journal of Geotechnical Engineering, J Ross*, Vol. 6, Iss. 3, pp. 261-274.
- Anubhav, S. and Basudhar, P.K., (2011). "Numerical modelling of surface strip footings resting on double-faced wrap-around vertical reinforced soil walls." *Geosynthetics International*, 18 (1), 21-34.
- A. Dey and P. K. Basudhar "Parameter estimation of four-parameter viscoelastic Burger model: Inverse Analysis" *Interaction and Multiscale Mechanics: An International Journal*, Techno Press, Vol.5, No.3, pp.211-228.
- Dey, A. and Basudhar, P.K. "Estimation of burger model parameters by inverse analysis of oedometer data" *Recent Trends in Civil Engineering and Technology*, STM Journals (Accepted for publication).
- Anubhav, and Basudhar P.K., (2012). "Footing on Double Faced Wrap-around Reinforced Soil Walls." *Ground Improvement*, Available Online 28 November 2012. doi:10.1680/grim.12.00006.
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- Anubhav, and Basudhar P.K., (2012). "Experimental Studies of Strip Footing on Model Wrap-Around Reinforced Soil Walls." *Electronic Journal of Geotechnical Engineering*, Vol. 17 (A), 1-12.
- Dey, A. and Basudhar, P. K. (2011) "Flexural Response of Surface Strip Footing resting on Reinforced Viscoelastic Foundation Beds" *International Journal of Geotechnical Engineering*, J. Ross Publications, Vol. 5, Iss. 2, pp. 165-179.
- Dey, A, Basudhar, P.K. and Chandra, S. (2011), Distribution of subgrade modulus beneath beams on reinforced elastic foundations, *Indian Geotechnical Journal*, Vol.11, No.2, April, 54-63.

- Anubhav, and Basudhar, P.K., (2010). "Modeling of Soil-Woven Geotextile Interface Behavior from Direct Shear Test Results." *Geotextiles and Geomembranes*, 28 (4), 403-408.
- Shelke, A., Basha, P. S., Basudhar, P. K., Patra, N. R. and Misra, S. (2010) "Uplift capacity of single bent pile and pile group considering arching effects in sand" *Geotechnical and Geological Engineering*, Vol. 28, No. 4, pp. 337-347.
- Das, S. K. and Basudhar, P. K. (2009) "Comparison of intact rock failure criteria using various statistical methods" *ActaGeotechnica*, 4(3), pp. 223-231, 764-771.
- Das, S. K. and Basudhar, P. K. (2009) "Utilization of self-organizing map and Fuzzy Clustering for Site Characterization Using Piezocone data" *Computer and Geotechnics*, 36(1-2), pp.241-248.
- Dey, A. and Basudhar, P. K. (2008) "Flexural Response of Footing on Reinforced Granular Beds of Variable Subgrade Modulus" *International Journal of Geotechnical Engineering*, J. Ross Publications, Vol. 2, Iss. 3, pp. 199 – 214.
- Das, S. K. and Basudhar, P. K. (2008) "Prediction of Residual Friction Angle of Clays Using Artificial Neural Network" *Engineering Geology*, Volume 100, Issues 3-4, 1 September 2008, Pages 142-145.
- Deb, K. Chandra, S. and Basudhar, P. K. (2008) "Response of Multi layer Geosynthetic-Reinforced Bed Resting on Soft Soil with Stone Columns", *Computers and Geotechnics*, Elsevier, U. K., Vol. 35, No. 3, pp: 323-330.
- Basudhar, P. K. Vashistha, A., Deb, K. and Dey, A. (2008) "Cost Optimization of Reinforced Earth Walls", *Geotechnical and Geological Engineering: an International Journal*, Springer, Netherlands, Vol. 26, No. 1, pp: 1-12.
- Basudhar, P. K. Dixit, P. M, Gharpure, A. and Deb, K.(2008) "Finite Element Analysis of Geotextile-Reinforced Sand-Bed Subjected to Strip Loading", *Geotextiles and Geomembranes*, Elsevier, U. K, Vol. 26, No. 1, pp: 91-99.
- Das, S. K. and Basudhar, P. K. (2007) "Prediction of Hydraulic Conductivity of Clay Liners Using Artificial Neural Network" *Low land Technology International Journal*, Japan, June.
- Deb, K., Sivakugan, N., Chandra, S. and Basudhar, P. K. (2007) "Numerical Analysis of Multi Layer Geosynthetic-Reinforced Granular Bed over Soft Fill", *Geotechnical and Geological Engineering: an International Journal*, Springer, Netherlands, Vol. 25, No. 6, pp: 639-646.
- Meera, R. S. and Basudhar, P. K. (2007) "Flexural response of piles under liquefied soil conditions" *Geotechnical and Geological Engineering*, Vol. 25, No. 4, pp. 409 – 422.
- Shanker, K., Basudhar, P. K. and Patra, N. R. (2007) "Buckling of Piles under Liquefied Soil Conditions", *Geotechnical and Geological Engineering*, Vol. 25, No. 3.
- Shanker, K., Basudhar, P. K. and Patra, N. R. (2007) "Uplift Capacity of Piles Groups Embedded in Sands: Predictions & Performance" *Soils and Foundations*, Vol. 46, No. 5.
- Shanker, K., Basudhar, P. K. and Patra, N. R. (2007) "Efficiency of Pile Groups under Uplift Loads", *Geotechnical and Geological Engineering*, vol. 25, No. 2.
- Deb, K., Chandra, S. and Basudhar, P. K. (2007) "Effect of Rheological Behavior of Geosynthetics on Settlement Response", *International Journal of Geotechnical Engineering*, J. Ross Publication, U.S.A., Volume 1, Issue 1.
- Basudhar, K., Saha, S. and Deb, K.(2007) "Circular Footings Resting on Geotextile-Reinforced Sand Bed" *Geotextiles and Geomembranes*, Elsevier, U. K, Vol. 25, issue 6.
- Deb, K., Basudhar, P. K. and Chandra, S. (2007) "A Generalized Model for Geosynthetic-Reinforced Granular Fill-Soft Soil with Stone Columns", *International Journal of Geomechanics*, ASCE, U.S.A., Vol. 7, No 4, pp: 266-276.
- Deb, K., Chandra, S. and Basudhar, P. K. (2007) "Nonlinear Analysis of Multi Layer Extensible Geosynthetic-Reinforced Granular Bed on Soft Soil", *Geotechnical and Geological Engineering: an International Journal*, Springer, Netherlands, Vol. 25, No 1, pp: 11-23
- Das, S. K. and Basudhar, P. K. (2006) "Undrained lateral load capacity of piles in clay using artificial neural network" *Computer and Geotechnics*, Vol 33(8), 454-459
- Das, S. K. and Basudhar, P. K. (2006) "Comparison study of parameter estimation techniques for rock failure criterion models" *Canadian Geotechnical Journal*, 43(7), pp. 764-771.

- Deb, K., Chandra, S. and Basudhar, P. K. (2005) "Settlement Response of a Multi Layer Geosynthetic-Reinforced Granular Fill-Soft Soil System" *Geosynthetics International*, Thomas Telford, U.K, Vol. 12, No 6, pp: 288-298.
- Maheshwari, P., Basudhar, P. K. and Chandra, S. (2005) "Modeling of Beams on Reinforced Granular Beds." *Geotechnical and Geological Engineering*, Vol 24, No. 2, pp. 313-324.
- Maheshwari, P., Chandra, S. and Basudhar, P. K. (2005) "Steady State Response of Beams on a Tensionless Geosynthetic-Reinforced Granular Fill-Soft Soil System Subjected to Moving Loads". *Soils and Foundations*, Vol. 45, No. 5, pp. 11 – 18.
- Basha, B. M. and Basudhar, P. K. (2005) "Pseudo Static Seismic Stability Analysis of Geosynthetic-Reinforced Soil Retaining Walls" *Indian Geotechnical Journal*
- Das, S. K. and Basudhar, P. K. (2005) "Parameter Estimation of Hoek-Brown Rock Failure Criterion" *Indian Geotechnical Journal*, Vol. 35, No. 2, pp. 144 – 153.
- Maheshwari, P., Basudhar P. K. and Chandra, S. (2005) "The Effect of Prestressing Force and Interfacial Friction on the Settlement Characteristics of Beams on Reinforced Granular Beds" *Indian Geotechnical Journal.*, Vol. 35, No. 3, pp. 283 – 298.
- Patra, C. R. and Basudhar, P. K. (2005) "Optimum Design of Nailed Soil Slopes" *Geotechnical and Geological Engineering: An International Journal*, Vol.23, No.3, pp. 273-296
- Das, S. K. and Basudhar, P. K. (2005) "Prediction of Coefficient of Lateral Earth Pressure Using Artificial Neural Networks" *The Electronic Journal of Geotechnical Engineering (EJGE)*, Vol. 10. Bundle-A.
- Maheshwari, P., Chandra, S. and Basudhar, P. K. (2004) "Response of Beams on a Tensionless Extensible Geosynthetic-Reinforced Granular Fill-Soft Soil system Subjected to Moving Loads" *Computers and Geotechnics*, Vol. 31, No. 7, pp. 537-548.
- Maheshwari P., Chandra S. & Basudhar P. K. (2004) "Modeling of Beams on Geosynthetic-Reinforced Granular Fill-Soft Soil System Subjected to Moving Loads" *Geosynthetics International*, Vol. 11, No. 5, pp 369-376.
- Maheshwari P., Basudhar P. K. and Chandra S. (2004) "Analysis of Beams on Reinforced Granular Beds" *Geosynthetics International*, Vol.11, No. 6 pp 460-470.
- Patra, C. R. and Basudhar, P. K. (2003) "Generalized Solution Procedure for Automated Slope Stability Analysis Using Inclined Slice" *Geotechnical and Geological Engineering: An International Journal*, Vol.21, Issue.3.
- Patra, C. R. and Basudhar, P. K. (2003) "Stability Computations in Nailed Slopes" *Highway Research Bulletin*, No.68, pp.43-54.
- Patra, C. R. and Basudhar, P. K.(2001) "Nailed Soil Structure : An Overview" *Indian Geotechnical Journal*, Vol.31, No.4, pp.1-367.
- Sabahit, N., Madhav, M. R. and Basudhar, P. K.(2001) "Stability of Embankments on Nonhomogeneous Clay of Finite Depth" *Indian Geotechnical Journal*, Vol.31, No.3, pp.221-239.
- Bhattacharyya, G. Basudhar, P. K. (2001) "Generalized Procedure of Slices for Analysis of Zoned Dams Under Steady Seepage" *Indian Geotechnical Journal*, Vol. 31, No. 2, pp.173-197.
- Bhattacharya, G. and Basudhar, P. K. (2001) "A New Procedure for Finding Critical Slip Surfaces in Slope Stability Analysis" *Indian Geotechnical Journal*, Vol.31, No.1, 2001, pp. 149-172.
- Bhattacharya, G. and Basudhar, P. K. (2000) "Slope Stability Computations in Non-homogeneous and Anisotropic Soils" *Indian Geotechnical Journal*, Vol.30, No.4, pp.385-399.
- Madhav, M. R., Basudhar, P. K. and Miura, N. (1999) "Analysis of Culvert Approaches with Piles of Varying Length" *Low land Technology, International*, June, pp.77 to 84.
- Bhattacharya, G. and Basudhar, P. K. (1997) "Convergence of Slope Stability Computations Using GPS" *Indian Geotechnical Journal*, Vol.27(4), pp. 337-352.
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- Sabahit, N, Basudhar, P. K., Madhav, M. R. (1996) "A Generalized Procedure for the Optimum Design of Nailed Soil Slopes" International Journal for Numerical and Analytical Methods in Geomechanics, Vol.19, pp. 437-452.
- Bhattacharya, G. and Basudhar, P. K. (1996) "A Note on the Back Analysis of Slope Failures" Indian Geotechnical Journals, Vol.26, No.4, pp. 430-441.
- Singh, D. N. and Basudhar, P. K. (1995) "Optimal Lower-bound Solutions of Plane-strain Metal Indentation and Extrusion Problems" Journal of Material Processing Technology, 49, pp. 75-84, Elsevier.
- Singh, D. N., Basudhar, P. K. and Srivastava, S. K. (1995) "Limit Analysis of Stability Problems in Geotechnical Engineering: State-of-the-Art" Indian Geotechnical Journal, Vol.25(b), pp. 314-341.
- Singh, D. N. and Basudhar, P. K. (1995) "Unconstrained Minimization Techniques for Passive Earth Pressure – A Comparative Study" Indian Geotechnical Journal, Vol.25(2), pp. 182-195.
- Singh, D. N. and Basudhar, P. K. (1995) "The Stability of A Trapdoor, Soils & Foundation" Japanese Soc. of Soil Mech. & Foundation Engg., Vol.35, No.3, Sept., pp. 111-115.
- Basudhar, P. K. and Singh, D. N. (1994) "A Generalized Procedure for Predicting Optimal Lowerbound Breakout Factors of Strip Anchors" Geotechnique, 44, No.2, pp. 307-318.
- Sabbahit, N., Basudhar, P. K., Madhav, M. R. and Miura, N. (1994) "Generalized Stability Analysis of Reinforced Embankments on Soft Clay" Geotextiles and Geomembranes, Vol.13, pp. 765-780.
- Singh, D. N. and Basudhar, P. K. (1993) "Optimal Lowerbound Bearing Capacity of Strip Footing" Soils and Foundations, 30(4), pp. 18-25.
- Singh, D. N. and Basudhar, P. K. (1993) "Optimal Lowerbound Bearing Capacity of Reinforced Soil Retaining Walls Using Finite Elements and Nonlinear Programming" Geotextiles and Geomembranes, Vol.12, No.7, pp. 665-686.
- Singh, D. N. and Basudhar, P. K. (1993) "A Note on the Effect of Mesh Pattern on the Lower bound Bearing Capacity of Embedded Strip Footings" Int. J. for Num. and Analytical Methods in Geomechanics, Vol.17, pp. 735-743.
- Singh, D. N. and Basudhar, P. K. (1992) "A Note on Vertical Cut in Homogeneous Soils" Canadian Geotechnical Engineering Journal, June, pp. 859-862.
- Singh, D. N. and Basudhar, P. K. (1992) "A Note on the Optimal Lowerbound Pull-out Capacity of Inclined Strip Anchor in Sand" Canadian Geotechnical Engineering Journal, Vol.29(5), pp. 870-873.
- Bhowmik, S. K. and Basudhar, P. K. (1989) "Sequential Unconstrained Minimization Technique in Slope Stability Analysis" Indian Geotechnical Journal, Vol.19, No.2, pp. 124-146.
- Basudhar, P. K., Valsangkar, A. J., Madhav, M. R. (1986) "Stability of Slopes in Dessicated Clays" Indian Geotechnical Journal, Vol.16, Oct., No.4, pp. 346-363.
- Basudhar, P. K., Valsangkar, A. J., Madhav, M. R. (1981) "Sequential Unconstrained Minimization in the Optimal Lower Bound Bearing Capacity Analysis" Indian Geotechnical Journal, Vol.11, Jan., No.1, pp. 42-55.
- Basudhar, P. K., Madhav, M. R. (1980) "Simplified Passive Earth Pressure Analysis" Journal of Geotechnical Engineering Division, American Society of Civil Engineers, April, GT4, pp. 470-474.
- Basudhar, P. K., Valsangkar, A. J., Madhav, M. R. (1979) "Optimal Lower Bound of Passive Earth Pressure Using Finite Elements and Nonlinear Programming" International Journal of Numerical and Analytical Methods in Geomechanics, John Wiley and Sons Ltd., Vol.3, pp. 367-379.
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- Basudhar, P. K., Madhav, M. R., Valsangkar, A. J. (1978) "Optimization Techniques in Bearing Capacity Analysis" Indian Geotechnical Journal, Vol.8, April No.2, pp. 105-110.
- Valangkar, A. J., Kameswara Rao, N .S. V., Basudhar, P. K. (1973) "Generalized Solution of Axially and Laterally Loaded Piles in Elasto-Plastic Soil" Soils and Foundations, Vol.13, No.4, Dec., pp. 1-14, Japanese Society of Soil Mechanics and Foundation Engineering.

- Basudhar, P. K., Valsangkar, A. J., Kameswara Rao, N. S. V. (1973) “Flexural Response of Axially and Laterally Loaded Piles in Layered Soils” *The Bridge and Structural Engineer*, Vol.3, No.1, June, pp. 27-43, Journal of the Indian National group of International Association for Bridge and Structural Engg.
- Valsangkar, A. J., Basudhar, P. K. (1973) “Tapered Beam on Elastic Plastic Foundation” *Journal of Aeronautical Society of India*, Vol.24, No.4, pp. 422-424.

Conference Publications: Published

- Nainegali, L. S., Basudhar, P. K. and Ghosh, P. (2013). “Interference of two closely spaced strip footings resting on linearly elastic Gibson soil.” 18th Southeast Asian Geotechnical Conference cum Inaugural AGSSEA Conference, Singapore, ISBN: 978-981-07-4949-1, pp. 1019-1025.
- Nainegali, L. S., Ghosh, P., and Basudhar, P. K. (2013). “Interaction of nearby strip footings under inclined loading.” ISSMGE, Proceedings of the 18th International Conference on Soil Mechanics and Geotechnical Engineering, Paris, France. Accepted.
- Nainegali, L. S., Basudhar, P. K. and Ghosh, P. (2012). “Analysis of nearby rigid strip footings on elastic soil bed subjected to inclined load.” Proceedings of Indian Geotechnical Conference, New-Delhi, V2, pp 660-663.
- Dey, A. and Basudhar, P.K. (2011) “Inverse formulation for Burger model parameter estimation” *International Symposium on Advances in Ground Technology and Geo-Information (IS-AGTG)*, Singapore, pp. 483-491.
- Dey, A. and Basudhar, P.K. (2011) “Inverse analysis: A tool for model parameter optimization” *GeoChallenges: Indian Geotechnical Conference (IGC-2011)*, Kochi, India, pp. 843-846.
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- Dey, A. and Basudhar, P.K. (2011) “Parameter-estimation of four-parameter viscoelastic Burger model by Inverse Analysis” *3rd International Symposium on Computational Mechanics-2nd Symposium on Computational Structural Engineering (ISCM III-CSE II)*, Taiwan, Extended Abstract CD-ROM.
- Dey, A. and Basudhar, P.K. (2011) “Load-Settlement behavior of elastic-perfectly plastic GRFB” *14th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering 23 - 27 May 2011*, Hong Kong, China, pp. 1-6.
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- Basudhar, P. K., Madhav, M. R., Valsangkar, A. J. (1977) “Optimal Lower Bound solution of some plane problems in soil mechanics” Presented at the Int. Conf. on Innovative Numerical Methods of Analysis, France.

Discussion Papers

- Singh, D. N. and Basudhar, P. K. (1997) “The Stability of a Trapdoor, Soils & Foundations” p. 140.
- Bhattacharya, G., and Basudhar, P. K. (1991) “Stability Analysis of Embankments on Soft Ground” Journal of Geotechnical Division, ASCE, pp.1096-1098.

Ph.D Thesis Supervised

Awarded/ Completed : 12

Working : Nil

Postgraduate Thesis Supervised

Completed/ Awarded : 67

Working : Nil

Membership of professional bodies

- Fellow of Indian Geotechnical Society.
- Life Member of Indian Society of Earthquake Technology.
- Member International Society of Soil Mechanics and Foundation Engineering.
- Life Member of India Society for Rock Mechanics and Tunneling Technology.
- Fellow of Institution of Engineers, India.
- Life Member Indian Society of Technical Education
- Ex. Member of Technical Committee on Landslides, DST, Govt. of India.
- Ex. Member of Planning Cell of U.P., P.W.D., Govt. of Uttar Pradesh
- Associate Member of American Society of Civil Engineers (A.M. 441212)

Achievements

- **Excellent contribution award, 2008** for dedicated and excellent service to teaching, research and advancement of geotechnical engineering, awarded by International Association for computer methods and advances in geomechanics.
- **Excellent Paper Award: 2008** Junior for the paper on "Generalized model for geosynthetic-reinforced granular fill-soft soil with stone columns", International Journal of Geomechanics, Vol.7, No.4, 2007, ASCE Awarded by International Association for computer methods and advances in geomechanics.
- **IGS-Shri R.N. Prasad biennial for the best paper** on “Slope Stability and Landslides” (2003)
- **Gold medal** awarded by Institution of Engineers for best paper on Optimal Design of Nails, Institution of Engineers, Orissa Chapter, 2002.
- **Gold medal** awarded by Institution of Engineers for best paper on Design of Nailed slopes using nonlinear programming, 2001, Institution of Engineers, Orissa Chapter.
- **AMIL Best paper award** for the best paper published in IGS Journal entitled “Sequential Unconstrained minimization in slope stability analysis.
- Senate **Appreciation letter for excellent teaching in Engineering Graphics**, a core course.
- Senate **Appreciation letter for excellent teaching in Computation Methods in Engineering**, a core course.
- Senate **appreciation letter for Excellent Teaching in Soil Mechanics** to UG Students.

- Senate **Appreciation letter for excellent teaching in Geotechnical Investigation for Civil Engineering Projects** to PG students.
- **Appreciation letter** from the Director for commendation service and leadership rendered in HAC-I (Faculty House Allotment Committee)
- **Reviewer:** Geotechnical and Geological Engineering: An International Journal, ActaGeotechnica; International Journal of geomechanics, ASCE; Soil Dynamics and Earthquake Engineering; ISET Journal, Roorkee; Institute of Engineers India; Indian Geotechnical Journal, Soils and foundations.
- Ex. Co-Editor, Indian Geotechnical Journal

SCHOLARSHIP

Awarded by Government of India from 1963 to 1968 for continuing Bachelor of Engineering Program at Regional Engineering College, Durgapur, West Bengal.

- Research scholarship awarded by the Government of India from 1969 to 1971 for continuing Master's Program in Civil Engineering, I.I.T. Kanpur.
- Research Scholarship awarded by the Government of India from 1971 to 1972 for continuing Ph.D. Program in Civil Engineering, I.I.T. Kanpur.

PATENT

CAVITEX: Cavity Expansometer: A low cost monocell strain controlled pressure-meter for in-situ soil testing, Patent offered and sealed.

Conferences/ Seminars/Workshops Attended

- National and International conferences attended :14

• **SHORT COURSE**

Engineering of Ground (May 1997): Dr. M. R. Madhav and Dr. P. K. Basudhar

• **GUEST LECTURES**

- Basudhar, P.K., (2012), "Optimal Lowerbound Solution of Some Plane Problems in Geotechnical Engineering", Civil Engineering Department, UMKC, Kansas, U.S.A
- Basudhar, P.K. (2006), " Sequential Unconstrained Minimization in Slope Stability Analysis using Generalized Procedure of Slices", University of Arizona, Arizona, U.S.A.
- Basudhar, P. K. (1997) "Engineering Behaviour of Soft Clays" Lecture Notes on Ground Improvement Techniques, Dept. of Civil Engg., NERIST, Nirjuli, Itanagar, pp. 21-28.
- Basudhar, P. K. (1997) "Ground Improvement using Vibrotechniques and Dynamic Compaction" Lecture Notes on Ground Improvement Techniques, Dept. of Civil Engg., NERIST, Nirjuli, Itanagar, pp. 57-59.
- Basudhar, P. K. (1997) "Ground Modification by Soil Nailing" Lecture Notes on Ground Improvement Techniques, Dept. of Civil Engg., NERIST, Nirjuli, Itanagar, pp. 109-115.
- Basudhar, P. K. (1999) "Ground and Rock Anchors Earth Slope Stability and Land Slides" Lecture Notes, Ed. Sanjay Kumar, Shukla, Dept. of Civil Engg., HBTI, Kanpur, pp. 167-183.

SYMPOSIUM CONDUCTED

1. Convener, Symposium on Advances in Geotechnical Engineering, SAGE-2003, An International Conference, Kanpur, India.