

## Biographical Profile

**Dr Sanjay Kumar Shukla, PhD, MTech, BSc Eng, F.ASCE, FIEAust, FIEIndia, FIGS, CPEng NER, APEC Engineer, IntPE(Aus)**



**Dr Sanjay Kumar Shukla** is a globally recognized expert in Civil and Geotechnical Engineering. He serves as the Founding Editor-in-Chief of International Journal of Geosynthetics and Ground Engineering by Springer Nature, Switzerland, and is the Founding Geotechnical and Geoenvironmental Engineering Research Group Leader at Edith Cowan University, Perth, Australia. His eminence extends to his Distinguished Professorship of Civil Engineering at several renowned universities across India and the USA, including, Delhi Technological University, Delhi, Amity University, Noida, VIT University, Vellore, Manipal Institute of Technology, Manipal, Amrita Vishwa Vidyapeetham, Coimbatore, VR Siddhartha Engineering College, Vijayawada, Manipal University, Jaipur, India and Southern Illinois University, Carbondale, USA. He is also a Mentor for Rajkiya Engineering College, Ambedkar Nagar, UP, India, and a Technical Advisor for ZTech India Limited, Delhi, India.

He graduated with a first-class degree with distinction in Civil Engineering from BIT Sindri (Ranchi University, Ranchi), India, in 1988. Subsequently, he earned his MTech in Civil Engineering with a specialization in Engineering Geology in 1992, followed by a PhD in Civil Engineering with a focus on Geotechnical Engineering in 1995, both from the prestigious Indian Institute of Technology Kanpur, India, recognized globally for its excellence in technical education and research.

Dr Shukla is a registered Chartered Professional Engineer in Civil and Geotechnical Engineering with Engineers Australia, holds the designation of Asia Pacific Economic Cooperation (APEC) Engineer in Civil Engineering, and is recognized as an International Professional Engineer in Civil Engineering by the International Engineering Association.

He is a distinguished Fellow of American Society of Civil Engineers and Engineers Australia, a Life Fellow of Institution of Engineers (India) and Indian Geotechnical Society, a Member of International Geosynthetics Society, and a Life Member of Indian Roads Congress, Indian Society for Rock Mechanics and Tunnelling Technology, Indian Society for Technical Education and Coal Ash Institute of India. He served as the Founding Honorary Secretary of the Varanasi Chapter of the Indian Geotechnical Society from 2005 to 2007 and subsequently as its chairman from 2007 to 2009.

He currently holds key editorial positions, including Book Series Editor for 'Geotechnical Characteristics of Soils and Rocks around the World' at Taylor & Francis, USA, and Lecture Notes in Civil Engineering (LNCE) and Springer Tracts in Civil Engineering (STCE) at Springer, Switzerland. He serves as the Regional Editor (Australia) for Soil Mechanics and Foundation Engineering, Moscow, Russia. Additionally, he contributes to the editorial boards of prestigious international journals such as Ground Improvement and Geotechnical Research (ICE Publishing, UK). He has been the Guest Editor for the Special Issues of Indian Geotechnical Journal (Vol. 43, No. 4, 2013) on Geosynthetic Engineering, and International Journal of Geotechnical Engineering (Vol. 8, No. 3, 2014) on Geosynthetics. With a background in Civil (Geotechnical) Engineering, he actively reviews submissions for over 30 esteemed international journals.

Dr. Shukla held a visiting appointment at James Cook University, Australia, from April 2008 to October 2008, where he taught Geosynthetic Engineering and Rock Mechanics, subsequently serving as an Adjunct Associate Professor from 2008 to 2011. He also held visiting appointments at the Department of Civil and Structural Engineering, the Hong Kong Polytechnic University, Hong Kong, from 2002 to 2005. Prior to joining Edith Cowan University in April 2009, he served as an Associate Professor at the Department of Civil Engineering, Indian Institute of Technology BHU, Varanasi, India, and taught at Harcourt Butler Technical University, Kanpur, India, North Eastern Regional Institute of Technology, Nirjuli, India, and BIT Sindri, India. He also served as Foreign Faculty under the Government of India's Global Initiative of Academic Networks (GIAN) program and held an Adjunct Professorship at the School of Building and Civil Engineering, Fiji National University, Suva, Fiji, from April 2018 to April 2020.

With over 28 years of experience, he has excelled in teaching, research, consultancy, administration, and professional engagement. Dr Shukla's primary areas of research expertise include geosynthetics and fibres for sustainable developments, ground improvement techniques, earth pressure and slope stability, soil-structure interaction, and environmental, mining and pavement geotechnics. His research profile is robust and well-established (Google Scholar h-index: 46, i10-index: 149, ResearchGate reads: 266,000+ with Research Interest Score higher than 99% of ResearchGate members). As per the 2024 announcement by Elsevier, he is recognized among the world's top 2% of scientists every year since 2020, over the past four years, and ranked among the top 0.5% of scientists globally by ScholarGPS.

He has made significant research contributions by introducing novel engineering concepts applicable to diverse field projects, spanning civil engineering, mining, and geological engineering. These contributions have garnered widespread citations, reflecting their impact. He has an extensive portfolio of over 330 technical articles, with more than 220 published in reputable, peer-reviewed journals. Additionally, he has authored/edited 28 books, comprising 7 textbooks and 25 book chapters. His well-known textbooks, *Core Principles of Soil Mechanics* and *Core Concepts of Geotechnical Engineering* by ICE Publishing, London are widely used in geotechnical courses and ranked #1 on Amazon from 2020-2023. Shukla's generalised analytical expressions for seismic active thrust (2013) and passive resistance (2015) are integral to global engineering practices for retaining structures. Additionally, his wraparound reinforcement technique, developed during 2007-2008, stands as a recognized sustainable ground improvement method. Further solidifying his influence, Shukla's seven research mantras, introduced in 2022, have played a key role in promoting sustainable research practices worldwide.

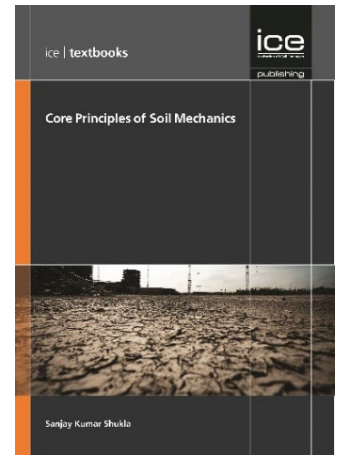
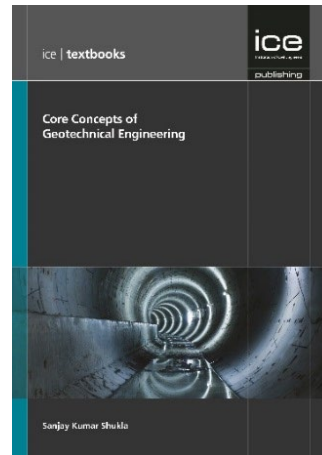
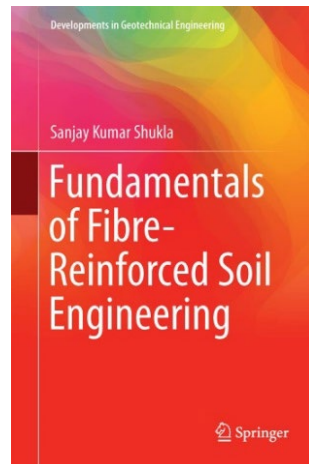
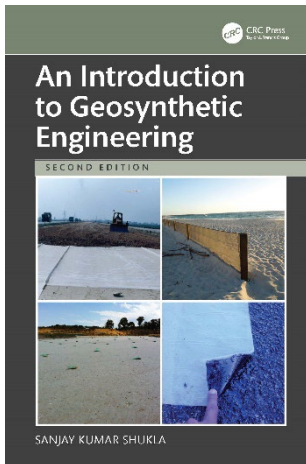
He was awarded the Distinguished Honour (2024) by the Consulate General of India, Perth in recognition of his academic contributions to Geotechnical Engineering. Recognized as WA's Brightest Mind, he was honoured with the 2021 ECU Aspire Award by Business Events Perth, Australia. Additionally, he received the most prestigious IGS Award (2018) from the International Geosynthetics Society, USA, in recognition of his outstanding contribution to development and use of geosynthetics. His accolades also include the Executive Dean's Award (2011) from Edith Cowan University, Australia, for establishing robust teaching and research infrastructure in Civil Engineering. Furthermore, he was awarded the Outstanding Researcher Award (2010) by Edith Cowan University, Australia, the Vishwakarma Award (2007) by Akhil Bharatiya Vidhwat Parishad, India, for his outstanding technical book, and Best Paper Awards (1995, 2015, 2016) by the Indian Geotechnical Society, New Delhi, India.

With his extensive academic and professional network spanning over 70 countries, Dr Shukla collaborates with top universities, institutions, industries, and individuals on academic and field projects. As a consulting geotechnical engineer, he solves complex problems for engineering organizations. His expertise has greatly enriched Civil Engineering worldwide. A renowned speaker, Dr. Shukla delivers keynote talks and short courses globally and is widely consulted for practical engineering solutions.

# Book Publications

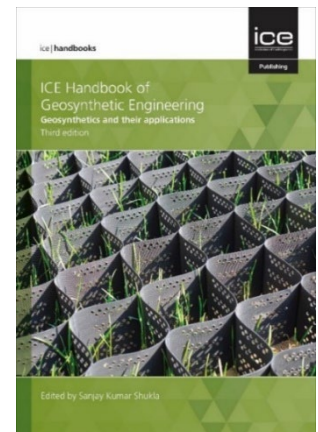
## Textbooks

1. **Shukla, S.K.** (2026). *An Introduction to Geosynthetic Engineering*. 2<sup>nd</sup> edn. CRC Press, T & F, London, UK (in press).
2. **Shukla, S.K.** (2017). *Fundamentals of Fibre-Reinforced Soil Engineering*. Springer Nature, Singapore.
3. **Shukla, S.K.** (2015). *Core Concepts of Geotechnical Engineering*. ICE Publishing, London, UK.
4. **Shukla, S.K.** (2014). *Core Principles of Soil Mechanics*. ICE Publishing, London, UK.
5. Das, B.M. and **Shukla, S.K.** (2013). *Earth Anchors*. 2<sup>nd</sup> edition, J. Ross Publishing, Florida, USA.
6. Sivakugan, N., **Shukla, S.K.** and Das, B.M. (2013). *Rock Mechanics – An Introduction*. CRC Press, Taylor and Francis, Florida, USA.
7. **Shukla, S.K.** and Yin, J.-H. (2006). *Fundamentals of Geosynthetic Engineering*. Taylor and Francis, London, UK.



## Reference books

8. Kanwar, V.S., **Shukla, S.K.**, John, S. and Kandra, H.S. (2023). *Sustainable Civil Engineering Principles and Applications*. CRC Press, Taylor and Francis, London
9. **Shukla, S.K.** (2022). *Engineering Characteristics of Soils and Rocks of India*. CRC Press, Taylor and Francis, London.
10. **Shukla, S.K.** (2022). *ICE Handbook of Geosynthetic Engineering*. 3<sup>rd</sup> edition, ICE Publishing, London, UK.
11. Kanoungo, A., Kanwar, V.S. and **Shukla, S.K.** (2020). *Characteristics of Asphalt Modified with Industrial Waste Sludge Containing Calcium Carbonate*. LAP Lambert Academic Publishing, Mauritius
12. **Shukla, S.K.** (2012). *Handbook of Geosynthetic Engineering*. 2<sup>nd</sup> edition, ICE Publishing, London, UK.
13. **Shukla, S.K.** (2002). *Geosynthetics and Their Applications*. Thomas Telford Publishing, London, UK.



## Conference Proceedings Books

14. Jose, B.T., Sahoo, D.K., **Shukla, S.K.**, Krishna, A.M., Thomas, J. and Veena, V. (Eds.) (2024). *Proceedings of the Indian Geotechnical Conference 2022*, Vol. 8, Springer, Singapore.
15. Jose, B.T., Sahoo, D.K., **Shukla, S.K.**, Krishna, A.M., Thomas, J. and Veena, V. (Eds.) (2024). *Proceedings of the Indian Geotechnical Conference 2022*, Vol. 7, Springer, Singapore
16. **Shukla, S.K.**, Raman, S.N., Bhattacharjee, B. and Singh, P. (Eds.) (2023). *Recent Developments in Geotechnics and Structural Engineering*. Springer, Singapore.
17. Gupta, A.K., **Shukla, S.K.** and Azamathulla, H. (Eds.) (2022). *Advances in Construction Materials and Sustainable Environment*, Springer International Publishing, Switzerland
18. **Shukla, S.K.**, Raman, S.N., Bhattacharjee, B. and Bhattacharjee, J. (Eds.) (2021). *Advances in Geotechnics and Structural Engineering*. Springer International Publishing, Switzerland.
19. **Shukla, S.K.**, Chandrasekaran, S., Das, B.B. and Kolathayar, S. (Eds.) (2021). *Smart Technologies for Sustainable Development*. Springer International Publishing, Switzerland.
20. Patel, S., Solanki, C.H., Reddy, K.R. and **Shukla, S.K.** (Eds.) (2021). *Proceedings of the Indian Geotechnical Conference 2019*, Vol. I, Springer International Publishing, Switzerland.
21. Patel, S., Solanki, C.H., Reddy, K.R. and **Shukla, S.K.** (Eds.) (2021). *Proceedings of the Indian Geotechnical Conference 2019*, Vol. II, Springer International Publishing, Switzerland.
22. Patel, S., Solanki, C.H., Reddy, K.R. and **Shukla, S.K.** (Eds.) (2021). *Proceedings of the Indian Geotechnical Conference 2019*, Vol. III, Springer International Publishing, Switzerland.

23. Patel, S., Solanki, C.H., Reddy, K.R. and **Shukla, S.K.** (Eds.) (2021). *Proceedings of the Indian Geotechnical Conference 2019*, Vol. IV, Springer International Publishing, Switzerland.
24. Patel, S., Solanki, C.H., Reddy, K.R. and **Shukla, S.K.** (Eds.) (2021). *Proceedings of the Indian Geotechnical Conference 2019*, Vol. V, Springer International Publishing, Switzerland.
25. Kanwar, V.S. and **Shukla, S.K.** (2020). *Sustainable Civil Engineering Practices*, Springer International Publishing, Switzerland.
26. **Shukla, S.K.**, Barai S.V. and Mehta, A. (Eds.) (2020). *Advances in Sustainable Construction Materials and Geotechnical Engineering*, Springer International Publishing, Switzerland.
27. Kallel, A., Erguler, Z.A., Cui, Z.-D., Karrech, A., Karakus, M., Kulatilake, P. and **Shukla, S.K.** (Eds.) (2019). *Recent Advances in Geoenvironmental Engineering, Geomechanics and Geotechnics, and Geohazards*, Springer International Publishing, Switzerland.
28. **Shukla, S.K.** and Guler, E. (Eds.) (2018). *Advances in Reinforced Soil Structures*, Springer International Publishing, Switzerland.

## Research Publications (Selected only from over 320 technical articles, including over 215 refereed, scholarly journal publications)

- Otieno, F. and **Shukla, S.K.** (2024). How does mine tailings slurry solids concentration affect stability of dam embankment slope? *International Journal of Mining, Reclamation and Environment*, UK, DOI: 10.1080/17480930.2024.2305517.
- Rajabian, A. and **Shukla, S.K.** (2023). Stability analysis of anchor-reinforced soil slopes with Taylor's stability chart. *International Journal of Geomechanics*, ASCE, USA, Vol. 23, No.2, pp. 04022278:1 - 04022278:12.
- **Shukla, S.K.** (2022). Seven research mantras: a short guide for researchers. *International Journal of Geosynthetics and Ground Engineering*, Vol. 8, Issue 6, pp. 75:1-75:4.
- Singh, M., Trivedi, A. and **Shukla, S.K.** (2022). Evaluation of geosynthetic reinforcement in unpaved road using moving wheel load test. *Geotextiles and Geomembranes*, UK, DOI: 10.1016/j.geotextmem.2022.02.005.
- Bharathi, M., Dubey, R.N. and **Shukla, S.K.** (2022). Numerical simulation of the dynamic response of batter piles and pile groups. *Bulletin of Earthquake Engineering*, Netherlands, DOI: 10.1007/s10518-022-01362-7.
- Raja, M.N.A. and **Shukla, S.K.** (2021). Multivariate adaptive regression splines model for reinforced soil foundations. *Geosynthetics International*, UK, Vol. 28, No. 4, pp. 368–390.
- Raja, M.N.A. and **Shukla, S.K.** (2021). Predicting the settlement of geosynthetic-reinforced soil foundations using evolutionary artificial intelligence technique. *Geotextiles and Geomembranes*, UK, Vol. 49, No. 5, pp. 1280-1293.
- Raja, M.N.A. and **Shukla, S.K.** (2021). Experimental study on repeatedly loaded foundation soil strengthened by wraparound geosynthetic reinforcement technique. *Journal of Rock Mechanics and Geotechnical Engineering*, China, Vol. 13, No. 4., pp. 899-911.
- Raja, M.N.A. and **Shukla, S.K.** (2020). Ultimate bearing capacity of strip footing resting on soil bed strengthened by wraparound geosynthetic reinforcement technique. *Geotextiles and Geomembranes*, UK, Vol. 48, No. 6, pp. 867-874.
- Pandey, L.M.S. and **Shukla, S.K.** (2020). Detection of leakage of MSW landfill leachates through a liner defect: experimental and analytical methods. *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, USA, Vol. 146, No. 8: 04020060, pp. 1-11.
- Khan, M.U.A. and **Shukla, S.K.** (2020). Load-settlement response and bearing capacity of a surface footing located over a conduit buried within a soil slope. *International Journal of Geomechanics*, ASCE, USA, Vol. 20, No. 10 (04020173), pp. 1-11,
- Sahoo, P.P. and **Shukla, S.K.** (2019). Taylor's slope stability chart for combined effects of horizontal and vertical seismic coefficients. *Géotechnique*, UK, Vol. 69, No. 4, pp. 344-354.
- Pandey, L.M.S. and **Shukla, S.K.** (2019). An insight into waste management in Australia with a focus on landfill technology and liner leak detection. *Journal of Cleaner Production*, Netherlands, Vol. 225, pp. 1147-1154.
- Bharathi, M., Dubey, R.N. and **Shukla, S.K.** (2019). Experimental investigation of vertical and batter pile groups subjected to dynamic loads. *Soil Dynamics and Earthquake Engineering*, UK, Vol. 116, pp. 107-119.
- Pandey, L.M.S. and **Shukla, S.K.** (2018). Effect of state of compaction on the electrical resistivity of sand-bentonite materials. *Journal of Applied Geophysics*, Netherlands, Vol. 155, No.1, pp. 208-216.
- Raj, D., Singh, Y. and **Shukla, S.K.** (2018). Seismic bearing capacity of strip foundation embedded in  $c-\phi$  soil slope. *International Journal of Geomechanics*, ASCE, USA, Vol. 18, No. 7: 04018076, pp. 1-16
- Borana, L., Yin, J.H., Singh, D.N., **Shukla, S.K.** and Hua-Fu, P. (2017). Influences of initial water content and roughness on skin friction of piles using FBG technique. *International Journal of Geomechanics*, ASCE, USA, Vol. 17, No. 4: 04016097, pp. 1-14.
- Kazi, M., **Shukla, S.K.** and Habibi, D. (2016). Behaviour of embedded footing on geotextile-reinforced sand. *Ground Improvement*, UK, Vol. 169, No. G12, pp. 120-133.
- Kuranchie, F.A., **Shukla, S.K.** and Habibi, D. (2016). Utilization of iron ore mine tailings for the production of geopolymer bricks. *International Journal of Mining, Reclamation and Environment*, UK, Vol. 30, No. 2, pp. 92-114.
- Kuranchie, F.A., **Shukla, S.K.**, Habibi, D. and Kazi, M. (2016). Load-settlement behaviour of a strip footing resting on iron ore tailings as a structural fill. *International Journal of Mining Science and Technology*, China, Vol. 26, No. 2, pp. 247-253.

- **Shukla, S.K.** (2015). Generalized analytical expression for dynamic active thrust from  $c-\phi$  soil backfills. *International Journal of Geotechnical Engineering*, UK, Vol. 9, No. 4, pp. 416-421.
- Pandey, L.M.S., **Shukla, S.K.** and Habibi, D. (2015). Electrical resistivity of sandy soil. *Geotechnique Letters*, UK, Vol. 5, No. 3, pp. 178-185.
- Kazi, M., **Shukla, S.K.** and Habibi, D. (2015). An improved method to increase the load-bearing capacity of strip footing resting on geotextile-reinforced sand bed. *Indian Geotechnical Journal*, India, Vol. 45, No. 1, pp. 98-109.
- **Shukla, S.K.**, Shahin, M.A. and Abu-Taleb, H. (2015). A note on void ratio of fibre-reinforced soils. *International Journal of Geosynthetics and Ground Engineering*, Switzerland, Vol. 1, No. 3, pp. 29.1-29.5.
- **Shukla, S.K.** (2014). Seismic passive earth pressure from the sloping  $c-\phi$  soil backfills. *Indian Geotechnical Journal*, India, Vol. 44, No. 1, pp. 107-111.
- **Shukla, S.K.** (2013). Generalized analytical expression for dynamic passive earth pressure from  $c-\phi$  soil backfills. *International Journal of Geotechnical Engineering*, UK, Vol. 7, No. 4, pp. 443-446.
- **Shukla, S.K.** and Sivakugan, N. (2013). Load coefficient for ditch conduits covered with geosynthetic-reinforced granular fill. *International Journal of Geomechanics*, ASCE, USA, Vol. 13, No. 1, pp. 76-82.
- Gill, K.S., Choudhary, A.K., Jha, J.N. and **Shukla, S.K.** (2013). Experimental and numerical studies of loaded strip footing resting on reinforced fly ash slope. *Geosynthetics International*, UK, Vol. 20, No. 1, pp. 13-25.
- Yadav, D.K. and **Shukla, S.K.** (2012). Analytical model for deflection of the runway pavement at touchdown point caused by an aircraft during landing. *International Journal of Geomechanics*, ASCE, USA, Vol. 12, No. 2, pp. 113-118.
- **Shukla, S.K.** (2011). Dynamic active thrust from  $c-\phi$  soil backfills. *Soil Dynamics and Earthquake Engineering*, UK, Vol. 31, No. 3, pp. 526-529.
- **Shukla, S.K.** and Hossain, M.M. (2011). Stability analysis of multi-directional anchored rock slope subjected to surcharge and seismic loads. *Soil Dynamics and Earthquake Engineering*, UK, Vol. 31, Nos. 5-6, pp. 841-844.
- **Shukla, S.K.**, Sivakugan, N. and Singh, A.K. (2010). Analytical model for fiber-reinforced granular soils under high confining stresses. *Journal of Materials in Civil Engineering*, ASCE, USA, Vol. 22, No. 9, pp. 935-942.
- Lovisa, J., **Shukla, S.K.** and Sivakugan, N. (2010). Behaviour of prestressed geotextile-reinforced sand bed supporting a loaded circular footing. *Geotextiles and Geomembranes*, UK, Vol. 28, No. 1, pp. 23-32.
- **Shukla, S.K.**, Sivakugan, N., Gandhi, M. and Ahmed, M.K. (2009). Improved expressions for field values of compaction test parameters. *Géotechnique*, UK, Vol. 59, No. 10, pp. 851-853.
- **Shukla, S.K.**, and Sivakugan, N. (2009). A general expression for geosynthetic strain due to deflection. *Geosynthetics International*, UK, Vol. 16, No. 5, pp. 402-407.
- **Shukla, S.K.**, Gupta, S.K. and Sivakugan, N. (2009). Active earth pressure on retaining wall for  $c-\phi$  soil backfill under seismic loading condition. *Journal of Geotechnical and Geoenvironmental Engineering*, ASCE, USA, Vol. 135, No. 5, pp. 690-696.
- **Shukla, S.K.**, Loughran, J.G. and Sivakugan, N. (2009). Stress within a cohesionless granular fill in a storage vessel with sloping walls during initial static loading. *Powder Technology*, UK, Vol. 192, No. 3, pp. 389-393.
- **Shukla, S.K.**, Sivakugan, N. and Mahto, S. (2009). A simple method for estimating Poisson's ratio of geosynthetics at zero strain. *Geotechnical Testing Journal*, ASTM, USA, Vol. 32, No. 2, pp. 181-185.
- **Shukla, S.K.** and Kumar, R. (2008). Overall slope stability of the prestressed geosynthetic-reinforced embankment on soft ground. *Geosynthetics International*, UK, Vol. 15, No. 2, pp. 165-171.
- **Shukla, S.K.**, Chauhan, H.K. and Sharma, A.K. (2004). Engineering aspects of geotextile-reinforced roadway of the National Highway, NH-2, Varanasi zone. *Civil Engineering and Construction Review, New Delhi, India*, Vol. 17, No. 12, pp. 56-61.
- **Shukla, S.K.** and Yin, J.H. (2003). Time-dependent settlement analysis of a geosynthetic-reinforced soil. *Geosynthetics International*, UK, Vol. 10, No.2, pp. 70-76.
- **Shukla, S.K.** and Chandra, S. (1998). Time-dependent analysis of axi-symmetrically loaded reinforced granular fill on soft subgrade. *Indian Geotechnical Journal*, India, Vol. 28, No. 2, pp. 195-213.
- **Shukla, S.K.** and Chandra, S. (1996). A study on a new mechanical model for foundations and its elastic settlement response. *International Journal for Numerical and Analytical Methods in Geomechanics*, USA, Vol. 20, No. 8, pp. 595-604.
- **Shukla, S.K.** and Chandra, S. (1995). Time-dependent settlement response of granular fill on soft soil. *Soils and Foundations*, Japan, Vol. 35, No.4, 105-108.
- **Shukla, S.K.** and Chandra, S. (1994). A generalized mechanical model for geosynthetic-reinforced foundation soil. *Geotextiles and Geomembranes*, UK, Vol. 13, No. 12, pp. 813-825.
- **Shukla, S.K.** and Chandra, S. (1994). The effect of prestressing on the settlement characteristics of geosynthetic-reinforced soil. *Geotextiles and Geomembranes*, UK, Vol. 13, No. 8, p. 531-543.

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