

## 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 world-renowned expert in Civil (Geotechnical) Engineering. He is the Founding Editor-in-Chief of the *International Journal of Geosynthetics and Ground Engineering* (Springer Nature, Switzerland), and the Founding Research Group Leader of Geotechnical and Geoenvironmental Engineering Research Group at the School of Engineering, Edith Cowan University, Joondalup, Perth, Australia. He is the Distinguished Professor of Civil Engineering at Indian Institute of Technology Madras, Chennai, Delhi Technological University, Delhi, Birsa Institute of Technology (BIT), Sindri, Amity University, Noida, VIT University, Vellore, Manipal Institute of Technology, Manipal, Chitkara University, Solan, VR Siddhartha Engineering College, Vijayawada, and Amrita University, Coimbatore, India. He is also the Mentor of Rajkiya Engineering College, Ambedkar Nagar, UP, India, and the Advisor of Floodkon Consultants LLP, Delhi, India.

Dr Shukla is a registered Chartered Professional Engineer in Civil and Geotechnical Engineering, Engineers Australia, an APEC (Asia Pacific Economic Cooperation) Engineer in Civil Engineering, and an International Professional Engineer in Civil Engineering, International Engineering Association (IEA).

He graduated in 1988 with a first-class degree with distinction in Civil Engineering from BIT Sindri (Ranchi University, Ranchi), India. He earned his MTech in Civil Engineering (Engineering Geology) in 1992 and PhD in Civil Engineering (Geotechnical Engineering) in 1995 from the Indian Institute of Technology Kanpur, India.

Dr Shukla has held a visiting appointment at the James Cook University, Australia from April 2008 to October 2008, where he taught Geosynthetic Engineering and Rock Mechanics, and he has been an Adjunct Associate Professor there during 2008 to 2011. He has also held visiting appointments at the Department of Civil and Structural Engineering, the Hong Kong Polytechnic University, Hong Kong during 2002 to 2005. Prior to joining the Edith Cowan University in April 2009, he has been 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 has been the Foreign Faculty at the Indian Institute of Technology, Bhubaneswar, India and Delhi Technological University, Delhi, India in 2016 under Global Initiative of Academic Networks (GIAN) programme of Government of India, New Delhi. He has been an Adjunct Professor at the School of Building and Civil Engineering, Fiji National University, Suva, Fiji during April 2018 to April 2020. He collaborates with several international universities, research institutions, industries and individuals on academic and field projects. As a Consulting Geotechnical Engineer, he has successfully provided solutions to the challenging field problems faced by many engineering organizations.

He has over 25 years of experience in teaching, research, consultancy, administration/management, and professional engagement. His 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. He has a strong research profile (**Google Scholar h-index: 35, i10-index: 113, ResearchGate Reads: 195, 000+**). **He is among the top 2% researchers in his field for single-year 2020 impact at the global level, as Elsevier published the list on 20 October 2021.** His research contributions include development of many new fundamental engineering concepts for applications in field projects covering civil engineering as well as multidisciplinary areas, such as mining and geological engineering, and they have been cited widely. He has authored over 295 research papers and technical articles, including 190 refereed journal publications. He is also author/editor of 24 books, including 7 textbooks, and 23 book chapters. His books titled 'Core Principles of Soil Mechanics' and 'Core Concepts of Geotechnical Engineering' published by ICE Publishing, London are very popular textbooks in the core geotechnical engineering courses worldwide and have been the Amazon **Best Sellers 2020, 2021 and 2022**. Shukla's generalized expression/theory for active thrust (2015) and Shukla's generalized expression/theory for passive resistance (2013) are being used by practicing engineers worldwide for designing the retaining structures. Shukla's wraparound geosynthetic reinforcement technique developed during 2007-2008 for strengthening the foundation soil is in routine field practice.

Being the WA (Western Australia)'s Brightest Mind, he received **2021 ECU (Edith Cowan University) Aspire Award** from the Business Events Perth, Australia. He has been honoured with the **IGS Award (2018)** by the International Geosynthetics Society, USA, in recognition of outstanding contribution to development and use of geosynthetics during 2014-2017 award period, Executive Dean's Award (2011) by Edith Cowan University, Australia for establishing teaching and research infrastructure in Civil Engineering, Outstanding Researcher Award (2010) by Edith Cowan University, Australia, Vishwakarma Award (2007) by Akhil Bharatiya Vidhwat Parishad, India for the best technical contribution in the form of a book at the global level, and Best Paper Awards (1995, 2015, 2016) by Indian Geotechnical Society, New Delhi, India.

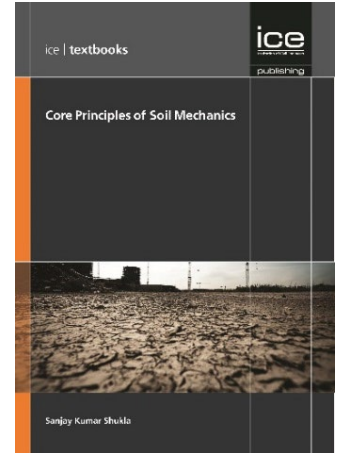
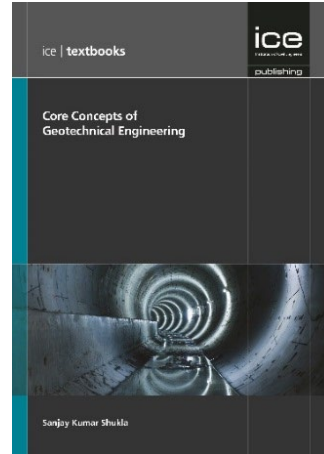
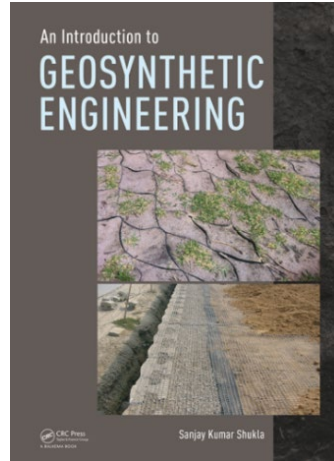
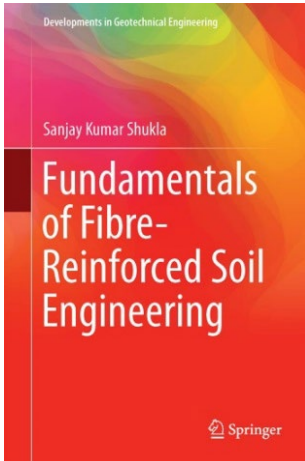
Presently, Dr Shukla is a Book Series Editor, Geotechnical Characteristics of Soils and Rocks around the World, Taylor & Francis, USA, a Book Series Editor of Lecture Notes in Civil Engineering (Springer, Switzerland), a Senior Editor (Civil and Environmental Engineering) of Cogent Engineering (Taylor and Francis, UK), and a Regional Editor (Australia) of the Soil Mechanics and Foundation Engineering (Moscow, Russia). He serves on the editorial boards of several international journals, including Ground Improvement (ICE Publishing, UK), Geotechnical Research (ICE Publishing, UK), and Journal of Mountain Science (Springer, Switzerland). 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. He is a reviewer of more than 30 international journals in the areas of Civil (Geotechnical) Engineering.

He is a Fellow of American Society of Civil Engineers (ASCE), Fellow of Engineers Australia, Life Fellow of Institution of Engineers (India) and Indian Geotechnical Society, 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 has been the Founding Honorary Secretary of Indian Geotechnical Society, Varanasi Chapter during 2005-2007, and its Chairman during 2007-2009.

# Book Publications

## Textbooks

1. **Shukla, S.K.** (2017). *Fundamentals of Fibre-Reinforced Soil Engineering*. Springer Nature, Singapore.
2. **Shukla, S.K.** (2016). *An Introduction to Geosynthetic Engineering*. CRC Press, Taylor and Francis, London, UK.
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.

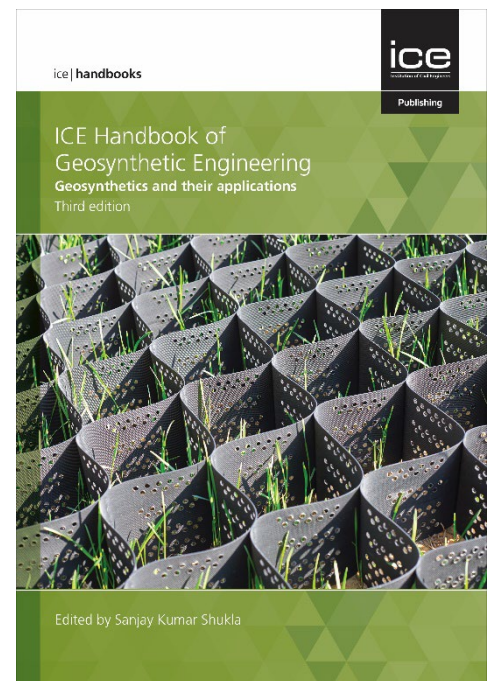


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8. **Shukla, S.K.** (2022). *Engineering Characteristics of Soils and Rocks of India*. CRC Press, Taylor and Francis, London.
9. **Shukla, S.K.** (2022). *ICE Handbook of Geosynthetic Engineering*. 3<sup>rd</sup> edition, ICE Publishing, London, UK.
10. 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
11. **Shukla, S.K.** (2012). *Handbook of Geosynthetic Engineering*. 2<sup>nd</sup> edition, ICE Publishing, London, UK.
12. **Shukla, S.K.** (2002). *Geosynthetics and Their Applications*. Thomas Telford Publishing, London, UK.

## Conference Proceedings Books

13. Gupta, A.K., **Shukla, S.K.** and Azamathulla, H. (Eds.) (2022). *Advances in Construction Materials and Sustainable Environment*, Springer International Publishing, Switzerland
14. **Shukla, S.K.**, Raman, S.N., Bhattacharjee, B. and Bhattacharjee, J. (Eds.) (2021). *Advances in Geotechnics and Structural Engineering*. Springer International Publishing, Switzerland.
15. **Shukla, S.K.**, Chandrasekaran, S., Das, B.B. and Kolathayar, S. (Eds.) (2021). *Smart Technologies for Sustainable Development*. Springer International Publishing, Switzerland.
16. 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.
17. 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.
18. 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.
19. 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.
20. 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.



21. Kanwar, V.S. and **Shukla, S.K.** (2020). *Sustainable Civil Engineering Practices*, Springer International Publishing, Switzerland.
22. **Shukla, S.K.**, Barai S.V. and Mehta, A. (Eds.) (2020). *Advances in Sustainable Construction Materials and Geotechnical Engineering*, Springer International Publishing, Switzerland.
23. 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.
24. **Shukla, S.K.** and Guler, E. (Eds.) (2018). *Advances in Reinforced Soil Structures*, Springer International Publishing, Switzerland.

## Research Publications (Selected only from over 295 technical articles)

- 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.
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- 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.
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- 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.
- Muthukumar, M. and **Shukla, S.K.** (2019). Influence of fibres on volume change attributes of expansive soil blended with lime. *Ground Improvement*, UK, Vol. 172, No. 1, pp. 37-43.
- 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.
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- Shrivastava, N., Zen, K. and **Shukla, S.K.** (2017). Modelling of compaction grouting technique with development of cylindrical cavity expansion problem in a finite medium. *International Journal of Geosynthetics and Ground Engineering*, Switzerland, Vol. 3, No. 4: 40, pp. 1-12.
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- 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.
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- **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.
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- **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.
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- **Shukla, S.K.** (2012). An analytical expression for the seismic passive earth pressure from the  $c-\phi$  soil backfills on rigid retaining walls with wall friction and adhesion. *International Journal of Geotechnical Engineering*, USA, Vol. 6, No. 3, pp. 365-370.
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- **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.
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