

Biographical Profile

Dr Sanjay Kumar Shukla, PhD, MTech, BSc Eng, F.ASCE, FIEAust, FIEIndia, FIGS



Dr Sanjay Kumar Shukla is the Founding Editor-in-Chief of the *International Journal of Geosynthetics and Ground Engineering* (Springer International Publishing, 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 Delhi Technological University, Delhi, Amity University, Noida, VIT University, Vellore, 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.

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 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 (**h-index: 31, i10-index: 95, RG Score: 36.17**). 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 280 research papers and technical articles, including over 175 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 and 2021**. 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 has been the **2021 ECU (Edith Cowan University) Aspire Award Winner** announced by the Business Events Perth, Australia. He has been honoured with the **IGS Award (2018)** from 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)** from Edith Cowan University, Australia for establishing teaching and research infrastructure in Civil Engineering, the **Outstanding Researcher Award (2010)** from Edith Cowan University, Australia, the **Vishwakarma Award (2007)** from Akhil Bharatiya Vidhwat Parishad, India for the best technical contribution in the form of a book at the global level, and the **Best Paper Awards (1995, 2015, 2016)** from Indian Geotechnical Society, New Delhi, India.

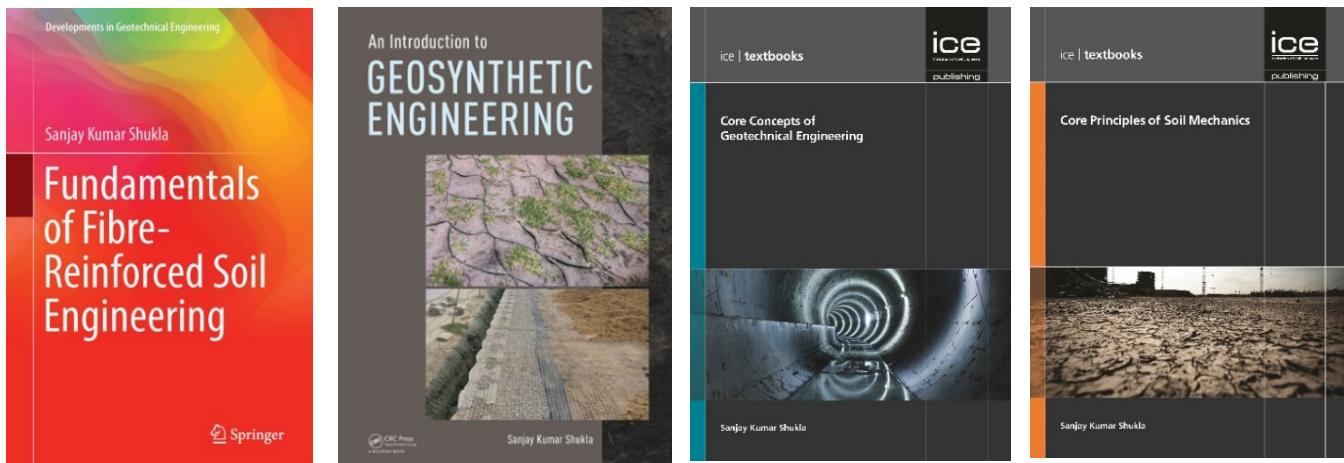
Presently, Dr Shukla is a Book Series Editor of *Lecture Notes in Civil Engineering* (Springer, Switzerland), a Senior Editor (Civil and Environmental Engineering) of *Cogent Engineering* (Taylor and Francis, UK), and a Regional Editor (Australia) of the *Soil Mechanics and Foundation Engineering* (Moscow, 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*. 2nd 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.

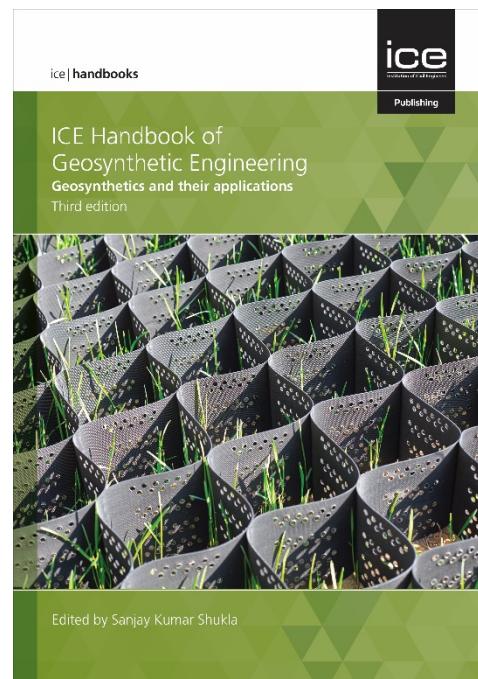


Reference books

8. **Shukla, S.K.** (2022). *Engineering Characteristics of Soils and Rocks of India*. CRC Press, Taylor and Francis, London.
9. **Shukla, S.K.** (2021). *ICE Handbook of Geosynthetic Engineering*. 3rd edition, ICE Publishing, London, UK.
10. Kanouno, 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*. 3rd 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 280 technical articles)

- 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, DOI: 10.1016/j.geotexmem.2021.04.007.
- 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.
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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.
- Raj, D., Singh, Y. and **Shukla, S.K.** (2018). Seismic bearing capacity of strip foundation embedded in $c\text{-}\phi$ 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.
- 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.
- Kazi, M., **Shukla, S.K.** and Habibi, D. (2016). Behaviour of embedded footing on geotextile-reinforced sand. *Ground Improvement*, UK, Vol. 169, No. GI2, pp. 120-133.
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- 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 $c\text{-}\phi$ 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.
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- **Shukla, S.K.** (2014). Seismic passive earth pressure from the sloping $c\text{-}\phi$ 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 $c\text{-}\phi$ soil backfills. *International Journal of Geotechnical Engineering*, UK, Vol. 7, No. 4, pp. 443-446.
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- **Shukla, S.K.** (2011). Dynamic active thrust from $c\text{-}\phi$ 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.
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- **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.
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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.
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- **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.
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- **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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