

References

1. American Association of State Highway and Transportation Officials. (1997). *Standard specifications for highway bridges* (16th ed.). AASHTO.
2. Amarasinghe, A. G., (2018), ට ලංකාවේ ඛනිජ හා පාෂාණ අත්පොත හා ආදර්ශක මණ්ඩපාව (*Handbook and Sample box of Minerals and rocks of Sri Lanka*), South Asian Research and Training Center
3. Barla, G., Forlati, F., & Zaninetti, A. (1985). Shear behaviour of filled discontinuities. In *Proceedings of the International Symposium on Fundamentals of Rock Joints* (pp. 163-172). Bjorkliden, Sweden.
4. Barton, N., & Choubey, V. (1977). The shear strength of rockfill. *Rock Mechanics*, 10(1-2), 1-54. <https://doi.org/10.1007/BF01237819>
5. Baycan, S., 1996. Field Performance of Expansive Anchors and Piles in Rock. [Doctoral dissertation, Monash University].
6. Berisavljević, D., Berisavljević, Z., & Melentijević, S. (2022). The shear strength evaluation of rough and infilled joints and its indications for stability of rock cutting in schist rock mass. *Bulletin of Engineering Geology and the Environment*, 81(3), 113.
7. Bieniawski, Z.T. (1978). Determining Rock Mass Deformability: Experience from Case Histories, *Int. J. Rock Mech. Min. Sci. and Amp; Geomechanics Abstracts*, 15(5), 237-247.
8. Bieniawski, Z. T. (1989). *Engineering Rock Mass Classification*. John Wiley, New York, 251.
9. Birkholz. M (2005). *Thin Film Analysis by X-Ray Scattering*, WILEY-VCH Verlag GmbH & Co. KGaA.
10. Bowles, J. E. (1996). *Foundation analysis and design* (5 ed.). McGraw-Hill Book Co - Singapore.
11. Britannica, T. Editors of Encyclopaedia (2018, March 9). *stalactite and stalagmite*. *Encyclopedia Britannica*.
<https://www.britannica.com/science/stalactite>
12. British Standards Institute. (1986). *British standard code of practice for foundations* (BS 8004:1986)

13. Bulathsinhala, A. U. V. B., & Puswewala, U. G. A. (2022). The Effect of Quartz and Feldspar Minerals on Formation of Bentonite Filter Cake over Gneissic Bedrocks in Sri Lanka. *ENGINEER*, 55(04), 01-08.
14. Bulathsinhala, A. U. V. B., & Puswewala, U. G. A. (2024). Formation of bentonite filter cake over crystalline metamorphic rocks by means of a pressure chamber: A laboratory study. *Journal of Testing and Evaluation*, 52(1), 364–377. <https://doi.org/10.1520/JTE20220322>
15. Bunaciu, A. A., Udriștioiu, E. G., & Aboul-Enein, H. Y. (2015). X-ray diffraction: Instrumentation and applications. *Critical Reviews in Analytical Chemistry*, 45(4), 289-299. <https://doi.org/10.1080/10408347.2014.949616>
16. Callister, W.D., & Rethwisch, D.G. (2018). *Materials Science and Engineering: An Introduction* (10th ed.). Wiley.
17. Carter, J. P., & Kulhawy, F. H. (1988). *Analysis and design of drilled shaft foundations socketed into rock* (No. EPRI-EL-5918). Electric Power Research Inst., Palo Alto, CA (USA); Cornell Univ., Ithaca, NY (USA). Geotechnical Engineering Group.
18. Carrubba, P. (1997). Skin friction on large-diameter piles socketed into rock. *Canadian Geotechnical Journal*, 34(2), 230-240.
19. Cernak, B., Dvorak, A., Hlavacek, J., Klein, K., & Petrasek, J. (1973). New approaches to problems of bearing capacity and settlement of piles. In *Proceedings of the Eighth International Conference on Soil Mechanics and Foundation Engineering* (p. 67). USSR Society for Soil Mechanics, Moscow.
20. Chapman, G.A., 1980. *West Gate Freeway. Pressure measurements in Bentonite stabilized rock socketed piles*. Rpt. No. 084040, Country Roads Board.
21. Cheng, F., Haberfield, C., & Seidel, J. (1996). Laboratory study of bonding and wall smear in rock socketed piles. In *Proceedings of the 7th Australia New Zealand Conference on Geomechanics: Geomechanics in a Changing World* (pp. 69-74). Adelaide.
22. Cheng, F.K.K., 1997. *A laboratory study of wall smear in rock socketed piles*. [Doctoral dissertation, Monash University].
23. Chin, F. K. (1978). Introduction to rock mechanics (Vol. 9). *The Fifth Southeast Asian Conference on Soil Engineering*.

24. Collingwood, B. (2000). *The effects of construction practices on the performance of rock socketed bored piles*. [Doctoral dissertation, Monash University].
25. Construction Industry Development Authority, Sri Lanka. (2016). *Specification for bored and cast in-situ reinforced concrete piles*. CIDA /SP/101.
26. Coon, R. F., and Merritt, A. H., *Predicting In situ Modulus of Deformation using Rock Quality Indexes, in Determination of the In-situ Modulus of Deformation of Rock*, ASTM Special Publication 477, Philadelphia, 1970, pp. 154-173.
27. Cooray PG (1984), *An introduction to the geology of Sri Lanka*, (2 ed, pp. 340). Dept of National Museums, Govt Press, Colombo
28. Cullity, B.D. (1978). *Elements of X-Ray Diffraction*. (2nd edn), Addison-Wesley Publishing Company.Inc., Phillippines.
29. Day, P. W., Wates, J. A., & Knight, K. (1981). Skin friction on under-slurry piles. In *Proceedings of the International Conference on Soil Mechanics and Foundation Engineering* (pp. 689-692). AA Balkema.
30. De Toledo, P., De Freitas, M., & CGcol. (1993). Laboratory testing and parameters controlling the shear strength of filled rock joints. *Geotechnique*, 43(1), 1-19.
31. Dearman. W.R., (1974), *Weathering Classification in The Characterization of Rock for Engineering Purposes in British Practice*, The international Association of Engineering Geology, KREFELD, 9, 33 – 42.
32. Deutsches Institut für Normung e.V. (1980). DIN 4014: Foundation piles (DIN Standard No. 4014).
33. Dissanayake, C. (1981). The origin of graphite of Sri Lanka. *Organic Geochemistry*, 3(1-2), 1-7.
34. Farmer, I.W. & Goldberger, M. (1969). *Effect of Bentonite on the skin friction of bored piles*, Cementation Research Limited, London, UK.
35. Federation of Piling Specialists (2006), *Bentonite Support Fluids in Civil Engineering*, www.fps.org.uk.
36. Fleming, W.G.K. & Sliwinski, Z.J. (1977). *The use and influence of Bentonite on bored pile construction - CIRIA Rep PG3*, Construction Industry Research and Research Association, London, UK.

37. Follows, S., & Hickson, C. J. (2015). *Groundwater and aquifers*. In *Physical geology* (1st ed.). BCcampus Open Textbook. <https://opentextbc.ca/geology/chapter/14-1-groundwater-and-aquifers/>
38. Fordham, E.J. & Ladva, H.K.J., (1989). Cross flow filtration of Bentonite suspensions. *Physicochem. Hydrodynam.*, 11. 411.
39. Freeze, R.A. and Cherry, J.A. (1979). *Groundwater* (604). Prentice-Hall, Englewood Cliffs, NJ.
40. Gardner, W. S. (1987). Design of drilled piers in the Atlantic Piedmont. In R. E. Smith (Ed.), *Foundations and excavations in decomposed rock of the Piedmont Province* (GSP 9, pp. 62–86). American Society of Civil Engineers. <http://cedb.asce.org/CEDBsearch/record.jsp?dockkey=0051472>
41. Gentier, S., Riss, J., Archambault, G., Flamand, R., & Hopkins, D. (2000). Influence of fracture geometry on shear behavior. *International Journal of Rock Mechanics and Mining Sciences*, 37(1-2), 161-174.
42. Geotechnical Engineering Office. (2006). *Foundation Design and Construction, Civil Engineering and Development*, The Government of the Hong Kong Special Administrative Region (Vol. Geo Publication No.01).
43. Geotechnical Instrumentation and Analysis, (2017), X-Ray Florescence, Integrating Research and Education. <https://serc.carleton.edu/researcheducation/geochemsheets/techniques/XRF.html>
44. Global Synthetics, (2016), *Technical Note- Bentonite Fluid Loss*; <https://globalsynthetics.com.au/wp-content/uploads/2016/05/TECHNICAL-NOTE-FLUID-LOSS.pdf>
45. Goodman, R. E. (1970). Deformability of joints. In *Proceedings of the Symposium on Determination of the In Situ Modulus of Deformation of Rock* (ASTM STP 477, pp. 174-196). ASTM International, Philadelphia, PA, USA.
46. Goodman, R. E. (1976). *Methods of geological engineering in discontinuous rock*, West Group, 509-513.
47. Goodman, R. E. (1980). *Introduction to rock mechanics*. John Wiley and Sons, Canada.
48. Gray, G.R., Darley, H.C.H. & Rogers, W.F., 1980. Composition and properties of oil well drilling fluids. Gulf Publishing Company, Houston, Texas.

49. Gu, X. F., Seidel, J. P., & Haberfield, C. M. (2003). Direct shear test of sandstone-concrete joints. *International journal of geomechanics*, 3(1), 21-33.
50. Haberfield, C. M., & Johnston, I. W. (1994). A mechanistically-based model for rough rock joints. *International Journal of Rock Mechanics and Mining Sciences*, 31(4), 279-292. [https://doi.org/10.1016/0148-9062\(94\)90898-2](https://doi.org/10.1016/0148-9062(94)90898-2)
51. Haberfield, C. M., (2013) Performance of footings in rock based on serviceability, *Australian Geomechanics Journal*, 48(1),1-49
52. Haberfield, C. M., & Lochadon, A. L. E., (2019), Analysis and design of axially loaded piles in rock, *Journal of Rock Mechanics and Geotechnical Engineering*, 535-548.
53. Hassan, K. M., O'Neill, M.W., Sheikh, S.A., & Ealy, C. D. (1997). Design Method for Drilled Shafts in Soft Argillaceous Rock. *Journal of Geotechnical and Geoenvironmental Engineering*, 123(3), 272–92.
54. Hassan, K.M. & O'Neill, M.W., (1997). Side load transfer mechanisms for drilled shafts in soft argillaceous rock. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*, 123(2), 145-152.
55. Hoek, E., & Brown, E. (1980). *Underground Excavations in Rock*, Institution of Mining and Metallurgy, London.
56. Holden, J.C., 1984. *Construction of bored piles in weathered rocks. Research Report No. 34*, Road Construction Authority of Victoria, Melbourne.
57. Hooley, P., & Lefroy Brooks, S. R. (1993). The ultimate shaft frictional resistance mobilised by bored piles in over-consolidated clays and socketed into weak and weathered rock. *Engineering geology special publication*, (8), 447-455
58. Horvath, R.G. and Kenney, T.C. (1979). Shaft Resistance of rock socketed drilled piers. *ASCE Annual Convention*, Atlanta, Georgia, USA.
59. Horvath, R.G., Kenny, T.C. and Kozicki, P. (1983). Methods for improving the performance of drilled piers in weak rock. *Canadian Geotechnical Journal*, 20: 758-772.
60. Hutchinson, M.T. 1972. *Efficiency of displacement of Bentonite slurry by concrete from vertical surfaces and reinforcing bars*. Cementation Research Ltd, Internal Report.
61. Hutchinson, M. T., Daw, G. P., Shotton, P. G., & James, A. N. (1975). The properties of bentonite slurries used in diaphragm walling and their control. In

- Proceedings of the Conference on Diaphragm Walls and Anchorages* (p. 33). Institution of Civil Engineers.
62. Indraratna, B., Haque, A., & Aziz, N. (1999). Shear behaviour of idealized infilled joints under constant normal stiffness. *Geotechnique*, 49(3), 331-355.
 63. Indraratna, B & Haque, A. (2000). *Shear behaviour of rock joints*. Rotterdam: Balkema.
 64. Indraratna, B., Welideniya, H., & Brown, E. (2005). A shear strength model for idealised infilled joints under constant normal stiffness. *Geotechnique*, 55(3), 215-226.
 65. Institute for Construction Training and Development, Sri Lanka. (1997). *Guidelines for Interpretation of Site Investigation Data for Estimating the Carrying Capacity of Single Piles for Design of Bored and Cast In-situ Reinforced Concrete Piles*, (ICTAD /DEV/15).
 66. Jayawardena, U. D. S., & Izawa, E. (1994). Application of present indices of chemical weathering for Precambrian metamorphic rocks in Sri Lanka. *Bulletin of Engineering Geology & the Environment*, 49(1), 55–61. DOI: 10.1007/BF01804636
 67. Jayawardena, U. D. S. (2009). *Engineering properties of Sri Lankan rocks* (1st ed.). U.D.S. Jayawardena.
 68. Jayawardena, U. de S. (2017). Laboratory studies of Miocene limestone in Sri Lanka. *Quarterly Journal of Engineering Geology and Hydrogeology*, 50(4), 422-425. <https://doi.org/https://doi.org/10.1144/qjegh2016-106>
 69. Jayewardene U de S (2018), *A Study on the Soundness of Parent Rocks in Sri Lanka*. Tr Civil Eng & Arch 1(5)- 2018. TCEIA.MS.ID.000125. DOI: 10.32474/TCEIA.2018.01.000125.
 70. Johnston, I. W. (1977). *The assessment of fracture toughness of rock*, [Doctoral dissertation, Luleå University of Technology].
 71. Johnston, I. W., Lam, T., & Williams, A. (1987). Constant normal stiffness direct shear testing for socketed pile design in weak rock. *Geotechnique*, 37(1), 83-89.
 72. Johnston, I. W., & Lam, T. S. (1989). Shear behavior of regular triangular concrete/rock joints—analysis. *Journal of geotechnical engineering*, 115(5), 711-727.

73. Johnston, I. W., Carter, J. P., Novello, E. A., & Ooi, L. H. (1998). Constant normal stiffness direct shear testing of calcarenite. In *Proceedings of the Engineering for Calcareous Sediments Conference* (pp. 541-553). A. A. Balkema.
74. Kanji, M. (1974). Unconventional laboratory tests for the determination of the shear strength of soil-rock contacts. In *Proceedings of the 3rd Congress of the International Society for Rock Mechanics* (Vol. 2, pp. 241-247). Denver.
75. Katz, M. B. (1987). Graphite deposits of Sri Lanka: a consequence of granulite facies metamorphism. *Mineralium Deposita*, 22, 18-25.
76. Knit, J. L. (1970), The logging of rock cores for engineering purposes. *Q. Journal of Engineering Geology*, 3,1-24.
77. Kulhawy, F. H., & Goodman, R. E. (1980). *Design of foundations on discontinuous rock*. In International Conference on Structural Foundations on Rock (Vol. 1). Sydney, Australia.
78. Kulhawy, F. H., & Phoon, K. K. (1993, October). Drilled shaft side resistance in clay soil to rock. In *Design and performance of deep foundations: Piles and piers in soil and soft rock* (pp. 172–183). American Society of Civil Engineers (ASCE).
79. Kulhawy, F. H., & Goodman, R. E. (1987). Foundations in rock. In F. G. Bell (Ed.), *Ground engineering reference book* (Chapter 15). Butterworths.
80. Kulhawy, F. H., Akbas, S. O., & Prakoso, W. A. (2005, June). Evaluation of capacity of rock foundation sockets. In *ARMA US Rock Mechanics/Geomechanics Symposium* (pp. ARMA-05). ARMA.
81. Kulhawy, F. H., & Prakoso, W. A. (2007). Issues in evaluating capacity of rock socket foundations. *Geotechnical Engineering*, 38(3), 169.
82. Klug, H. P., & Alexander, L. E. (1974). *X-ray diffraction procedures for polycrystalline and amorphous materials* (2nd ed.). Wiley.
83. Ladanyi, B., & Archambault, G. (1977). Shear strength and deformability of filled indented joints. *Geotechnical Structural Complex Formations*, Capri, 317-326.
84. Lam, C., Jefferis, S. A. and Martin, C. M. (2014), Effects of polymer and Bentonite support fluids on concrete–sand interface shear strength, *Geo technique* 64(1), 28–39.

85. Little, A. L. (1967). Laterites. In *Proceedings of the 3rd Asian Conference on Soil Mechanics and Foundation Engineering* (Vol. 2, pp. 61–71). Haifa.
86. Liu, H., Kou, S., & Lindqvist, P. (2005). *Microscope rock texture characterization and simulation of rock aggregate properties* (SGU project 60-1362/2004). Geological Survey of Sweden. <http://www.diva-portal.org/smash/get/diva2:998150/FULLTEXT01.pdf>
87. Majano, R. E., & O'Neill, M. W. (1993). Effect of dosage and exposure time of slurries on perimeter load transfer in bored piles. In *Proceedings of the Second International Geotechnical Seminar on Deep Foundations on Bored and Auger Piles* (pp. 207–212). Balkema.
88. Marques, E. A. G., Barroso, E. V., Menezes Filho, A. P., & Vargas Jr, E. D. A. (2010). Weathering zones on metamorphic rocks from Rio de Janeiro—Physical, mineralogical and geomechanical characterization. *Engineering Geology*, 111(1-4), 1-18.
89. Martin, S. K., Poeppel, A. R., Syngros, K., & Nichlany, T. (2016). Bored pile construction challenges in highly variable limestone for a supertall building. In *International Conference on Deep Foundations, Seepage Control and Remediation* (pp. 1-12). Deep Foundations Institute.
90. McVay, M. C., Townsend, F. C., & Williams, R. C. (1992). Design of socketed drilled shafts in limestone. *Journal of geotechnical engineering*, 118(10), 1626-1637.
91. Meigh, A. C., & Wolski, W. (1979, September). Design parameters for weak rocks. In *Proceedings of the 7th European Conference on Soil Mechanics and Foundation Engineering* (pp. 59–79).
92. Meeten, G.H. & Sherwood, J.D., (1994), The hydraulic permeability of Bentonite suspensions with granular inclusions. *Chemical Engineering Science*, 49(19), 3249 - 3256.
93. Miz, M., Akichoh, H., Berraaouan, D., Salhi, S., & Tahani, A. (2017). Chemical and physical characterization of Moroccan bentonite taken from Nador (North of Morocco). *American Journal of Chemistry*, 7(4), 105–112.
94. Moye, D. G. (1955). Engineering geology for the Snowy Mountains scheme. *Journal of the Institute of Engineers, Australia*, 27, 281–299.

95. Murthy, V. N. S. (2002). *Geotechnical engineering: Principles and practices of soil mechanics and foundation engineering*. CRC Press.
96. Nash, K. L. (1974). Stability of trenches filled with fluids. *Journal of the Construction Division*, ASCE, 100(4), 533–542.
97. National Research Council Canada. (1985). *Canadian geotechnical manual (3rd ed.)*. National Research Council of Canada.
98. Nelson, S. A. (2015). *Lecture note on groundwater, Module EENS 1110*. Tulane University. Retrieved February 12, 2021, from [https://www.tulane.edu/~sanelson/eens1110/ground water.htm](https://www.tulane.edu/~sanelson/eens1110/ground%20water.htm)
99. Ohnishi, Y., & Dharmaratne, P. G. R. (1990). Shear behaviour of physical models of rock joints under constant normal stiffness conditions. In N. Barton & O. Stephansson (Eds.), *Proceedings of the International Symposium on Rock Joints* (pp. 267–273). A.A. Balkema.
100. O'Neill, M. W., & Hassan, K. M. (1994). Effects of construction on performance and design criteria. In *Proceedings of the International Conference on Design and Construction of Deep Foundations* (Vol. 1, pp. 137–187).
101. O'Neill, M. W., Townsend, F. C., Hassan, K. M., Buller, A., & Chan, P. S. (1995). *Load transfer for drilled shafts in intermediate geomaterials: Draft report* (FHWA-RD-95-172). U.S. Department of Transportation, Federal Highway Administration.
102. O'Neill, M. W. (1999). Some effects of construction on the performance of deep foundations. In *Analysis, Design, Construction, and Testing of Deep Foundations: Proceedings of the OTRC '99 Conference* (pp. 197–215). Austin, TX.
103. Palmström, A., & Singh, R. (2001). The deformation modulus of rock masses: Comparisons between in-situ tests and indirect estimates. *Tunneling and Underground Space Technology*, 16(2), 115–131. [https://doi.org/10.1016/S0886-7798\(01\)00038-4](https://doi.org/10.1016/S0886-7798(01)00038-4)
104. Patton, F. D. (1966, September). *Multiple modes of shear failure in rock*. In ISRM Congress (pp. ISRM-1CONGRESS). International Society for Rock Mechanics.
105. Peck, R. B., Hanson, W. E., & Thornburn, T. H. (1974). *Foundation engineering* (2nd ed.). John Wiley & Sons.

106. Pells, P. J. N., Rowe, R. K., & Turner, R. M. (1980). An experimental investigation into side shear for socketed piles in sandstone. In P. J. N. Pells (Ed.), *Proceedings of the International Conference on Structural Foundations on Rock* (Vol. 1, pp. 291-302). Sydney, Australia.
107. Phillip, J. R., & Knight, J. H. (1974). On solving the unsaturated flow equations: 3. New quasi-analytic technique. *Soil Science*, 117(1), 1-13.
108. Phillip, J.R. and Smiles, D.E. (1982). Macroscopic analysis of the behaviour of colloidal suspensions. *Advances in Colloid Interface Science*, 17(1), 83-103.
109. Poulos, H. G., Davis, E. H. (1980). *Pile Foundation Analysis and Design*. John Wiley & Sons.
110. Randolph, M. F., (2003). Science and empiricism in pile foundation design. *Geotechnique* 53(10), 847-875, <http://dx.doi.org/10.1680/geot.2003.53.10.847>.
111. Ravi, K.M., Beirute, R.M. & Covington, R.L. (1992). *Erodibility of Partially Dehydrated Gelled Drilling Fluid and Filter Cake - Special publication SPE 24571*. Society of Petroleum Engineers, Washington DC.
112. Rezazadeh, S., & Eslami, A. (2017). Empirical methods for determining shaft bearing capacity of semi-deep foundations socketed in rocks. *Journal of Rock Mechanics and Geotechnical Engineering*, 9(6), 1140-1151.F
113. Rosenberg, P., & Journeaux, N. L. (1976). Friction and end bearing tests on bedrock for high capacity socket design. *Canadian Geotechnical Journal*, 13(3), 324-333.
114. Rowe, R. K., & Armitage, H. H. (1987). A design method for drilled piers in soft rock. *Canadian geotechnical journal*, 24(1), 126-142.
115. Ruwanpathirana, R.S., (2023), *Predicting the end bearing capacity of rock-socketed bored and cast in-situ piles in Sri Lankan metamorphic rock using rock mass properties*, [Master of Science thesis, University of Moratuwa].
116. Samarawickrama, M. N. C., Puswewala, U. G. A., Thilakasiri, H. S., & Udamulla, K. M. L. A. (2023a). Review on the estimation of static deformability modulus of rocks and their adoptability in different rock masses. *Engineer: Journal of the Institution of Engineers, Sri Lanka*, 56(3), 99-120.
117. Samarawickrama, M. N. C., Puswewala, U. G. A., Thilakasiri, H. S., & Udamulla, K. M. L. A. (2023b). Estimation Criteria for Static Rock Mass

- Deformability Modulus for Rock-Socket Design in Metamorphic Rock Masses. *Engineer: Journal of the Institution of Engineers, Sri Lanka*, 56(03), 15-31.
118. Schreiner, H.D., 1978. *An investigation into some factors affecting the strength of under slurry piles*. [M.Sc. Eng Dissertation, University of Natal, Durban, South Africa].
 119. Scott, H., 1978. *The shear strength of a Bentonite layer in a pile foundation*. M.Sc. Dissertation, University of Natal].
 120. Seavey D. A., Ashford S.A., (2004), *Report under Structural System Research Project on effects of Construction Methods on the axial Capacity of Drilled Shafts*. University of California, San Diego, USA.
 121. Seidel, J.P., 1993. The analysis and design of piles socketed into weak rock. [Doctoral dissertation, Monash University, Melbourne, Australia].
 122. Seidel, J. P., & Haberfield, C. M. (1995). Towards an understanding of joint roughness. *Rock Mechanics and Rock Engineering*, 28, 69-92.
 123. Seidel, J. P., Gu, X. F., & Haberfield, C. M. (1996). A new factor for improved prediction of the resistance of pile shafts in rock. In *Proceedings of the 7th ANZ Conference on Geomechanics* (pp. 693-697). IEAust.
 124. Seidel, J., & Collingwood, B. (2001). A new socket roughness factor for prediction of rock socket shaft resistance. *Canadian Geotechnical Journal*, 38(1), 138-153.
 125. Seidel, J. P., & Haberfield, C. M. (2002). A theoretical model for rock joints subjected to constant normal stiffness direct shear. *International Journal of Rock Mechanics and Mining Sciences*, 39(5), 539-553.
 126. Serrano, A., & Olalla, C. (2004). Shaft resistance of a pile embedded in rock. *International Journal of Rock Mechanics and Mining Sciences*, 41(1), 21-35.
 127. Shackley, M. S. (2011). *X-ray fluorescence spectrometry (XRF) in geoarchaeology*. Springer.
 128. Sherwood, J. D., Meeten, G. H., Farrow, C. A., & Alderman, N. J. (1991). Concentration profile within non-uniform mudcake. *Journal of the Chemical Society, Faraday Transactions*, 87(4), 611-618.
<https://doi.org/10.1039/FT9918700611>
 129. Sherwood, J.D., (1993). Formation of a cement filter cake above a compactible mud cake. *Chemical Engineering Science*, 48, 2727-2775.

130. Skinas, C. A., Bandis, S. C., & Demiris, C. A. (1990). Experimental investigations and modelling of rock joint behaviour under constant stiffness. In N. Barton & O. Stephansson (Eds.), *Proceedings of the International Conference on Rock Joints* (pp. 301-307). Balkema.
131. Smiles, D.E. and Harvey, E.G., 1973. Measurement of moisture diffusivity of wet swelling systems. *Soil Science*, 116, 391-199.
132. Soomro, M. H. A. A. (2021). Investigation of shear behaviour of rock joints under cyclic loading [Doctoral dissertation, School of Civil, Mining, and Environmental Engineering. University of Wollongong].
133. Thilakasiri, H. S. (2009). *Construction & Testing of Piles* (01 ed.). Sarasavi Publishers, Sri Lanka.
134. Thilakasiri, H. S. (2009). Use of Osterburg Cell Load Testing as a Post Construction Quality Control Test for Bored and Cast In-situ Concrete Piles in Sri Lanka, *Geotechnical Journal, J. of the Sri Lankan Geotechnical Society*, 04.
135. Thilakasiri, H. S., Abeyasinghe, R. M., & Peiris, T. A. (2015). Optimization of the designing of bored and cast in-situ piles in Sri Lanka. In *Proceedings of the International Conference on Geotechnical Engineering* (pp. 253-256). Sri Lanka Geotechnical Society.
136. Thorne, C. (1977). The allowable loadings of foundations on shale and sandstone in the Sydney region: Field test results. *Sydney Group of Australian Geomechanics Society, Institute of Engineers of Australia*. Barton, ACT, Australia.
137. Timoshenko, S. P., & Goodier, J. N. (1970). *Theory of elasticity* (3rd ed.). McGraw-Hill.
138. Tomlinson, M. J. (1971). Some effects of pile driving on skin friction. In *Behaviour of piles* (pp. 107-114). Thomas Telford Publishing, 107-114.
139. Tomlinson, M. J. (1994). *Pile Design and Construction Practice* (4 ed.). E & FN Spoon.
140. Tomlinson, M., & Woodward, J. (2002). *Pile design and construction practice* (5th ed.). Taylor & Francis.
141. Tucker, K. L., & Reese, L. C. (1984). *The effect of bentonitic slurry on drilled shafts* (Research Report 351-1F). Centre for Transportation Research, The University of Texas.

142. Udagedara, D. T., Oguchi, C. T., & Gunatilake, J. K. (2017). Evaluation of geomechanical and geochemical properties in weathered metamorphic rocks in a tropical environment: A case study from Samanalawewa hydropower project, Sri Lanka. *Geoscience Journal*, 21(3), 441–452. <https://doi.org/10.1007/s12303-016-0060-7>
143. Ulsay, R., & Hudson, J. (2007). *The complete ISRM suggested methods for rock characterization, testing and monitoring: 1974-2006*. ISRM.
144. United States Department of Agriculture, Natural Resources Conservation Service. (2012). *Engineering classification of rock materials* (Part 631, Geology National Engineering Handbook, Chapter 4). <https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?Content=31848.wba>
145. Van Weele, A. (1957). A method of separating the bearing capacity of a test pile into skin friction and point resistance. In *Proceedings of the Fourth International Conference on Soil Mechanics and Foundation Engineering* (pp. 76-80).
146. Vesic, A. S. (1977). *Design of pile foundations* (NCHRP Synthesis 42). Transportation Research Board.
147. Vishwakarma, S. (2015). *Effect of bentonite drilling fluid on skin resistance of the pile* [Master's thesis, Delhi Technological University].
148. Wates, J. A. (1974). *The effect of bentonite on the skin friction of cast-in-place piles and diaphragm walls* [Doctoral dissertation, University of Natal].
149. Wates, J. A., & Knight, K. (1975). The effect of bentonite on the skin friction in cast-in-place piles and diaphragm walls. In *Proceedings of the Sixth Regional Conference for Africa on Soil Mechanics and Foundation Engineering* (pp. 183-188).
150. Wijayasinghe, W. P. S. S., & Samarawickrama, M. N. C. (2013). An investigation on actual soil skin friction capacity of CIB piles: Case study of a proposed forty-two storied building project, Colombo 03. *Journal of Engineering and Technology of the Open University of Sri Lanka (JET-OUSL)*, 1(2).
151. Williams, A. F. (1980). *The design and performance of piles socketed into weak rock* [Doctoral dissertation, Monash University].

152. Williams, A. F., & Pells, P. J. N. (1981). Side resistance of rock sockets in sandstone, mudstone, and shale. *Canadian Geotechnical Journal*, 18(4), 502-513. <https://doi.org/10.1139/t81-064>
153. Withers, J. H. (1964). *Sliding resistance along discontinuities in rock mass* [Doctoral dissertation, University of Illinois].
154. Wyllie, D. C. (1991). *Foundations on Rock* (1 ed.). E & FN Spon.
155. Yoo, C., & Han, Y. S. (2019). Effect of drilling fluid on concrete-soil/rock interface shear strength in seawater drilling environment. *Marine Georesources and Geotechnology*, 37(8), 936-944. <https://doi.org/10.1080/1064119X.2018.1508259>
156. Zhang, L., & Einstein, H. H. (1998). End bearing capacity of drilled shafts in rock. *Journal of Geotechnical and Geoenvironmental Engineering*, 124(7), 574-584. [https://doi.org/10.1061/\(ASCE\)1090-0241\(1998\)124:7\(574\)](https://doi.org/10.1061/(ASCE)1090-0241(1998)124:7(574))