

Curriculum Vitae



Dr Cheng Zhuoyuan

Head, Building & Project Management, Graduate Diploma in Project Management and Master of Built Environment Programme
School of Science and Technology

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Education Qualifications

2015 Doctor of Philosophy, Nanyang Technological University
2011 B.Eng (Civil), Nanyang Technological University

Academic and Professional Experience

2023 - Present Senior Lecturer, School of Science and Technology, Singapore University of Social Sciences, Singapore
2020 - 2022 Lecturer, School of Science and Technology, Singapore University of Social Sciences, Singapore

Memberships and Professional Activities

- Member, GeoSS
- Member, IES
- Technical Committee on Civil and Geotechnical Works
- SAC Assessor
- Reviewer, Internal Journal of Geotechnical Engineering
- Reviewer, Canadian Geotechnical Journal
- Reviewer, Géotechnique Letters

Consultancy and Executive Experience

2015 – 2020 C&S Engineer, Surbana Jurong Consultants Private Limited

Research Interests

- Soil Dynamics
- Advanced Laboratory and Field Tests

- Numerical Modelling
- Foundation Engineering

Selected Publications

- Ng, W.X.; Cheng, Z.Y.; Peh, L.C. Application of Virtual Reality (VR) in Facility Management Competency-based Training (CBT) in the Era of Industrie 5.0. *IgMin Res.* April 09, 2024; 2(4): 189-198.
- Nyunt T.T., Cheng Z., Zulkati, A. & Chin KK. (2023) "Assessment of Pavement Structural Condition Using Falling Weigh Deflectometer: Singapore's Case Study", Proceedings of the XXVIIth World Road Congress, Paper ID IP0032, Prague, Czech Republic
- Cheng, Z., & Leong, E. C. (2023). Measurement of Dynamic and Static Properties of Residual Soil Using a Modified Cyclic Triaxial Apparatus. *Geotechnical Testing Journal*, 46(6).
- Cheng, Z. (2023). Design of Shallow and Deep Foundations, 1st Edition: Roger Frank, Fahd Caira, Sébastien Burlon, 1 August 20, 2021 by CRC Press, 232 pp., ISBN 9781032016887. *International Journal of Geotechnical Engineering*, 17(4), 448. <https://doi.org/10.1080/19386362.2023.2238471>
- Cheng, Z.Y. & Leong, E.C. (2023) "Comparing the trend of Vs at similar range of saturated and unsaturated stress state variables", Proceedings of the 8th International Conference on Unsaturated Soils, Milos, Greece
- Nyunt T.T., Cheng, Z., Anggraini, Z., Koh, P.P. & Chin, K.K., (2022) "Analysis and visualization for pavement condition assessment using network-level survey data", The 9th Symposium on Pavement Surface Characteristics, paper ID 176, Milan, Italy.
- Leong, E. C., & Cheng, Z. (2022). A geometry-modelling method to estimate landslide volume from source area. *Landslides*, 1-15.
- Cheng, Z. and Leong, E.C. (2022). Discussion of "Poisson's Ratio Characteristic Curve of Unsaturated Soils" by Sannith Kumar Thota, Toan Duc Cao, and Farshid Vahedifard (2022), *Journal of Geotechnical and Geoenvironmental Engineering*, 148(6).
- Leong, E. C., & Cheng, Z.Y. (2019). Timoshenko beam effect in flexural resonant column tests. *Soils and Foundations*, 59(1), 234-239.
- Cheng, Z. and Leong, E.C. (2018). Determination of damping ratios for soils using blender element tests. *Soil Dynamics and Earthquake Engineering*, Vol 111: 8-13
- Leong, E. and Cheng, Z. (2016). Effects of Confining Pressure and Degree of Saturation on Wave Velocities of Soils. *International Journal of Geomechanics*, Vol. 16(6)
- Cheng, Z. and Leong E.C. (2016). Finite element simulations of wave propagation in soils using a Viscoelastic model. *Soil Dynamics and Earthquake Engineering*, Vol. 88: 207-214
- Cheng, Z.Y. & Leong, E.C. (2015). Damping characteristics of sand-rubber chip mixtures as a seismic barrier, Proceedings of the 5th International Conference on Design and Analysis of Protective

Structures, Singapore

- Cheng, Z.Y. & Leong, E.C. (2015). Relationship between water retention, stiffness and damping ratio in soils, Proceedings of the 12th Australia New Zealand Conference on Geomechanics, Wellington, New Zealand, pp. 1-8
- Cheng, Z.Y. and Leong, E.C. (2014). A hybrid bender element–ultrasonic system for measurement of wave velocity in Soils. ASTM Geotechnical Testing Journal, Vol 37(3): 1-13
- Cheng, Z.Y. & Leong, E.C. (2014). Effect of confining pressure and degree of saturation on damping ratios of sand, International Conference on Unsaturated Soils: Research & Applications 1, Sydney, Australia, pp. 227-232
- Cheng, Z.Y. & Leong, E.C. (2013). Ultrasonic testing of unsaturated soils, Proceedings of ISSMGE TC-101 Workshop - Multiphysical Testing of Soils and Shales, Lausanne, Switzerland, pp. 105-110
- Cheng, Z.Y. & Leong, E.C. (2011). Estimation of P-wave velocities for unsaturated geo-materials, Proceedings of the 5th Asia Pacific Conference on Unsaturated Soils, Pattaya, Thailand, pp. 623-628

Awards

- IES/ISTRUCTE Gold Medal cum Book Prize (2010 – 2011)
- TUCSS Geotechnical Engineering Award (2010 – 2011)
- Lee Kuan Yew Gold Medal Award (2010 - 2011)

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