

Dr JUNLONG SHANG

50 Nanyang Ave, Singapore 639798 | Mobile: +65 86499772 | Email: shangjunlongcsu@gmail.com and jshang@ntu.edu.sg

Curriculum Vitae (shortened)

Correct to July 2018

Nationality Chinese

Academic Qualifications

- 2016 PhD in Earth Science (Rock Mechanics), the University of Leeds, Leeds, United Kingdom
Thesis: Persistence and tensile strength of incipient rock discontinuities
Supervisors: Steve Hencher (University of Leeds, University of Hong Kong & Hencher Associate Ltd) & Jared West (University of Leeds)
- 2012 MEng in Mining Engineering (Rock Mechanics) first class, Central South University, China
- 2010 BEng in Mining Engineering (Rock Mechanics) first class, Central South University, China

Professional Employment and Status

- 2017-present: Postdoctoral Research Fellow, Nanyang Centre for Underground Space, Nanyang Technological University, Singapore
Project: Microbiological, Chemical and Physical Interactions in Rock Cavern Water Storage. (Funded by Singapore Government)
- Reviewer for journals: Eng. Geol., Int. J. Rock Mech. Min. Sci., Rock Mech. Rock Eng., Eng. Fract. Mech., J. Rock Mech. Geotech. Eng.
- Organising Committee Member of the 10th Asian Rock Mechanics Symposium – the ISRM International Symposium for 2018, 29 Oct – 03 Nov 2018, Singapore.

Selected Awards (14 in total)

- Distinguished Master Thesis Award, granted by Hunan Province, China (2015)
- Top 10 BSc Student Award, granted by Central South University, China (2012)

Selected Journal Publications (25 in total)

(# 5 papers have been published out from the PhD thesis; * 4 papers are related to the PhD topic – the nominee's further investigation)

[1] **J Shang**, L J West, S R Hencher, Z Zhao (2018) Geological discontinuity persistence: Implications and quantification. *Engineering Geology*, 241: 41-54. DOI: org/10.1016/j.enggeo.2018.05.010.

[2] **J Shang**, L J West, S R Hencher, Z Zhao (2018) Tensile strength of large-scale incipient rock joints: A laboratory investigation. *Acta Geotechnica*, 13(4): 869-886. DOI: 10.1007/s11440-017-0620-7.

[3] **J Shang**, Z Zhao, M M Aliyu (2018) Stresses induced by a demolition agent in non-explosive rock fracturing. *International Journal of Rock Mechanics and Mining Sciences*, 107: 172-180. DOI: org/10.1016/j.ijrmms.2018.04.049

[4] **J Shang**, S R Hencher, L J West, K. Handley (2017) Forensic excavation of rock masses: A technique to quantify discontinuity persistence. *Rock Mechanics and Rock Engineering*, 50(11): 2911-2928. DOI: 10.1007/s00603-017-1290-3.

[5] **J Shang**, S R Hencher, L J West (2016) Tensile strength of geological discontinuities including incipient bedding, rock joints and mineral veins. *Rock Mechanics and Rock Engineering*, 49(11): 4213-4225. DOI: 10.1007/s00603-016-1041-x

* [6] **J Shang**, Z Zhao, J Hu, M M Aliyu (2018) 3D particle-based DEM investigation into the shear behaviour of incipient rock joints with various geometries of rock bridges. *Rock Mechanics and Rock Engineering*, DOI: <https://doi.org/10.1007/s00603-018-1531-0>

* [7] **J Shang**, Z Zhao, S Ma (2018) On the shear failure of incipient rock discontinuities under CNL and CNS boundary conditions: Insights from DEM modelling. *Engineering Geology*, 234: 153-166. DOI: org/10.1016/j.enggeo.2018.01.012

* [8] **J Shang**, K Duan, K Handley, Z Zhao (2018) Numerical investigation of the direct tensile behaviour of laminated and transversely isotropic rocks containing incipient bedding planes with different strengths. *Computers and Geotechnics*, DOI: 10.1016/j.compgeo.2017.11.007.

* [9] **J Shang**, Y Gui, Z Zhao (2018) Broad-spectrum fracture toughness of an anisotropic sandstone under mixed-mode loading. *Theoretical and Applied Fracture Mechanics*, 96: 556-575. DOI: <https://doi.org/10.1016/j.tafmec.2018.07.005>

[10] **J Shang**, Jianhua Hu, Keping Zhou, Xianwei Luo, Mohammed M. Aliyu (2015) Porosity increment and strength degradation of low-porosity sedimentary rocks under different loading conditions. *International Journal of Rock Mechanics and Mining Sciences*, 75: 216-223. DOI: <https://doi.org/10.1016/j.ijrmms.2015.02.002>