

## Personal Details

## Professor Steve Hencher

**Nationality** British; Resident UK.

**Date of Birth** 23<sup>rd</sup> October 1948

**Profession** Engineering Geologist/ Geotechnical Engineer



Chartered Engineer UK (since 1982);  
Chartered Geologist UK (since 1991)  
Registered Professional Geotechnical  
Engineer, Hong Kong (1997 to 2007)

Managing Director, Hencher Associates Limited  
Emeritus Professor of Engineering Geology,  
The University of Leeds, UK  
Honorary Professor, the Department of Earth Sciences, the  
University of Hong Kong

## Summary CV

2005 to present	Director Hencher Associates Limited
2006 to present	Professor of Engineering Geology, University of Leeds. Emeritus Professor since April 2017.
2006 to present	Honorary Professor, Department Earth Sciences, Hong Kong University
1997 to 2014	Director Halcrow China Ltd and Halcrow Asia Partnership Ltd (later CH2MHILL) (p/t since 2005) Head of Geotechnics Hong Kong (1998 - 2007) Director of Halcrow Korea (1998-2005)
1996 to 1997	Senior Engineering Specialist Bechtel Corporation, USA; Design Supervision, Korean High Speed Rail (Seoul to Busan).
1984 to 1996	Senior Lecturer in Engineering Geology, University of Leeds
1980 to 1984	Senior Geotechnical Engineer, Geotechnical Control Office, Hong Kong Govt.
1976 to 1980	Engineering Geologist, W. S. Atkins; 2 years seconded to Central Electricity Generating Board to supervise major driven piling contract for Drax Power Station
1973 to 1976	Research (rock mechanics), Imperial College of Science & Technology, London University.

<b>Education and Professional Status</b>	<p>BSc Geology (Honours), London University, 1973 PhD, Diploma of Imperial College (DIC) Engineering Geology, Imperial College of Science and Technology, London University, 1977</p> <p>Fellow of the Institution of Civil Engineers, UK (FICE) Chartered Engineer (CEng) since 1982 Fellow of the Geological Society of London (FGS) Chartered Geologist (CGeol) since 1991 Member of the Academy of Experts (MAE)</p> <p>Member of Working Parties on Weathered Rock (Geological Society of London, UK) and Landslides (international) Member of Hong Kong Institution of Engineers Working Group on Foundations (2001 to 2004) Invited member to ISRM Commission to revise guidance on rock mass characterisation. Associate Editor for Journal: <i>Rock Mechanics and Rock Engineering</i> (Springer)</p>
<b>Awards</b>	<p>The Geological Society of London: Engineering Group Award, 1991 The British Geotechnical Society (now BGA) Prize, 1996 Hong Kong Institution of Engineers, Geotechnical Paper of the Year Award, 2000 The Canadian Geotechnical Journal, Quigley Award, 2018</p>
<b>Publications</b>	<p>Steve has published two text books, one on Practical Engineering Geology and the other titled Practical Rock Mechanics together with chapters in other books. He has also published many papers on many different aspects of geotechnical engineering including fundamental scientific studies and numerous case histories.</p>

## Experience in Chronological Order

2005 - current

### Hencher Associates Limited: Director

**Expert Advice re Unexpected Ground Conditions. (2019 ongoing) Client: Gammon Construction, Hong Kong.**

Review of materials and contaminants from excavation at Festival Walk, Hong Kong with respect to a claim.

**Expert Review re Unexpected Ground Conditions. (2018 ongoing) Client: HKA/ISGEC Heavy Industries, UK/India**

Review of site works in Philippines (Lobo-lobo sugar power station) with respect to claim regarding 'latent' ground conditions for contractor. Singapore arbitration set for 2019.

**Expert Review re Unexpected Ground Conditions. (2018 ongoing) Client: Bachy Soletanche, UK.**

Review of on-going bored piling contract in Glasgow to explain pile behaviour, with the aim of developing a claim.

**Expert Advice re Unforeseen Ground Conditions Claim for Chennai Metro, India. Preparation of Expert Witness Reports. (2017 to 2018) Client: Chennai Metro Rail Limited.**

Review of documents and preparation of expert reports for arbitration. Presentation of evidence, Chennai.

**Expert Advice re Diaphragm Wall Construction for Mass Transit Rail Contracts 823A and 823B, Hong Kong (2013 to 2018). Client: Bauer Hong Kong.**

Expert review for Bauer (HK) on ground conditions with reference to diaphragm wall construction issues. Preparation of expert reports for arbitration proceedings, Hong Kong.

**Expert Advice. Unexpected Ground Conditions during Site Excavation works at Hong Kong International Airport. (November 2015 to 2017). Client: Gammon Construction Ltd., Hong Kong.**

Analysis and reporting on ground conditions encountered vs those that were to be anticipated. Presentation at Mediation, Hong Kong.

**Technical Review regarding Unforeseen Ground Conditions during Excavation Works; Great Man-Made River Project, Libya. (2016). Client: TTJV, Turkey. Instructed by Chadbourne & Parke LLP, New York.**

Review of documents and reports and advising on claim.

**Expert Advice. Technical Review of Factors concerning Rock Fall at Sai Ying Pun Station Cavern Construction, Hong Kong. (2015 to 2016). Client: Gammon Construction Ltd. and Nishimatsu JV, Hong Kong**

Review and analysis of rock fall during construction. Preparation of expert report with reference to court case.

**Technical Review of Aspects of Design for Major Rock Cut Slopes, Hinkley Point Nuclear Power Station, Somerset, UK. (2015) Client: BAM Ritchie, in support of Leeds University**

Technical review, site visit and reporting regarding design parameter issues for major cut slopes in Blue Lias rock.

**Rock Slope Instability at Ulsan Renovation City, South Korea (2014 to 2016). Client: Korean Geological Society.**

Independent review of failure of anchored cut slopes at major site development near

Ulsan, South Korea.

**Technical Review for Major Infrastructure Project: Simandou Iron Ore Mine, Guinea (2015 to 2016). Client: Rio Tinto.**

Independent Expert Geotechnical Reviewer for major infrastructure project involving proposed open pit mine workings, >600 km of rail with three tunnels, numerous bridges and embankments and a new port in Guinea, West Africa. Advice on testing programmes.

**Assessing Stabilisation Options for Bangudae Petroglyphs, Ulsan, Korea (2013). Support to Professor Su Gon Lee, Seoul City University.**

Technical support and field studies regarding stabilisation of pre-historic rock carvings in vertical rock cliff, periodically flooded by reservoir.

**Slope Instability at Sebuku Mine, Indonesia (2013) Client: PT Bahari Cakrawala Sebuku.**

Independent technical review of Golder Associates design including field studies in association with Golder Associates. Investigation into large-scale earth movements and potentially catastrophic failure in 100-metre high wall of open-pit coal mine. Advice on remedial measures.

**Investigation and Analysis of Slopes, Aegean Petrochemical Plant, Turkey (2013) Client: Mott Macdonald.**

Technical support to Mott Macdonald Ltd, UK regarding major landslides in deeply weathered, complex volcanic sequence. Field mapping and advice on ground investigation and stabilisation.

**Expert Advice and Witness. Malaysian Bored Piles Dispute (instructed through Raja, Darryl & Loh, Kuala Lumpur) (2013).**

Review of bored piling design following failure and downgrading of pile capacity. Preparation of expert witness report for court case.

**Expert Advice and Witness. Jembayan Mine, East Kalimantan, Indonesia (instructed through DLA Piper, Singapore) (2011 to 2013)**

In-depth investigation and preparation of expert witness reports regarding large, soft ground landslide and associated major damage to coal handling facilities. Evidence at arbitration in Singapore. Advice on future stability of infrastructure.

**Advice regarding Slope Stability of Weak Rocks in Open Pit Mining (2011 to 2013) Client: CSIRO, Australia**

CSIRO are managing research for the Large Open Pit Mines (LOP) group of companies regarding slope stability issues. I was contracted to advise the LOP group regarding weak rock mass characterisation, testing and stability and to present at meetings in Vancouver, Hong Kong and Johannesburg.

**Foundation Problems for Caissons, Pasir Panjang Terminal, Singapore. Client: Penta Ocean Ltd.**

Investigation and reporting on possible causes for softening of foundations during construction of large offshore caissons in support of GCG Asia (Hong Kong).

**Settlement of Oil Tanks, Johor Bahru, Malaysia. Client: Crawford & Company Adjusters (instructed by DLA Piper, Singapore)**

Review, analysis and reporting on possible causes of excessive settlement of oil tanks founded on stone columns.

**Expert Advice and Witness. Common Cooling Water System, Qatar. Client: Grandi Lavori, Italy (instructed by Incutti Lawyers, Rome).**

Analysis and preparation of expert report concerning dispute over ground investigation and dredging of weak rock; presentation of evidence at arbitration in Geneva, Switzerland.

**Slope Instability at Centennial Highway, Brisbane, Australia. Client: Main Roads Board, Queensland, Australia**

Independent technical review of Golder Associates design. Close working with Golder Associates on investigation, analysis and remediation measures for major landslide in extremely complex and difficult geological conditions threatening recently constructed highway.

**Expert Advice and Witness. Piled Foundations for 43-storey building in Central Financial District, Church Street, Singapore. Clients: Liberty Insurance and Samsung Corporation (instructed by DLA Piper, Singapore)**

Advice on cause of severe settlement for multi-storey building in Central Business District, Singapore.

Preparation of Expert Report on piling design in preparation for arbitration. Presentation of evidence at arbitration, Singapore.

**Slope Safety System, Korea. Client: Professor Su Gon Lee, Seoul City University (for Korean Government)**

Technical support including fieldwork to major 3-year research effort by Korean universities to devise a slope safety system for Korea.

**Expert Advice and Witness. Dispute over Bored Pile Foundations, KCRC East Rail Extension – TCC200/TCC300, Hong Kong. Client: Necso (now Acciona)**

Expert advice and preparation of report on ground conditions with respect to major claim regarding bored piling operations in weathered rock. Presentation to mediation.

**TBM Delays, CIRCLE LINE STAGE 4 & 5 – CONTRACT 855, Singapore. Client: WH – STEC – AM JV**

Expert advice on unexpected ground conditions causing delays to TBM slurry machine drives.

**Expert Advice and Witness. Tunnel Collapse, Deep Tunnel Sewerage Scheme, Singapore. Client: Public Utilities Board Singapore**

Expert advice on Tunnel Boring Machine launch chamber collapse. Specification of ground investigation in Bukit Timah granite and design of unique laboratory testing programme, simulating collapse in weathered rock. Preparation of expert report for arbitration.

**Rock Slopes Seoul and Cheju Island, Korea. Client: Professor Su Gon Lee, Seoul City University**

Expert support in fieldwork and analysis to mitigate risk from major natural rock slopes threatening roads and other infrastructure.

**Investigation and Analysis of Po Selim Landslide, Cameron Highlands, Malaysia. Client: Malaysian Government (through Professor Andrew Malone, Hong Kong University)**

Expert advice on very large complex rock slope failure. Field mapping, analysis and advice on remedial measures. Specialist rock testing.

**Macau temporary works failure in sheet pile walls, Macau, China. Client: Gammon, Hong Kong.**

Employed by Gammon to conduct independent critical review of procedures and actions leading to collapse of temporary works – for internal audit purposes and lessons to be learned.

August 1997 to  
July 2014 (part-  
time from 2005)

**Halcrow China Ltd., Hong Kong (now CH2M): Director**

Responsible for direction and technical standards for geotechnical group of about 150 engineers in Hong Kong office (1997-2007). Technical direction of numerous foundation, road, landslide, tunnel and research projects. Regional Director for Korea (1998 to 2005). Part-time from 2005.

**Kishanganga Dam, India (2012 to 2014)**

Expert review of design for major rock slopes above spillway. Design of testing programme, parameter selection. Input to redesign of slopes.  
Site visit to power caverns and tunnels and advice on stabilisation measures to deal with unexpected rock joint systems.

**Bukit Antarabangsa Landslide Malaysia (2009 to 2013)**

Independent expert review of Government report on fatal landslide and advice regarding court proceedings. Preparation of two expert reports for High Court, Kuala Lumpur

**Abu Dhabi Sewerage System (2013)**

Independent expert review of ground investigation, ground model and design for deep shaft through weak rock and soil.

**Little Bay Port Development, Montserrat (2012)**

Technical review and advice on options for stabilising large natural rock slopes

**Izmit Bay Suspension Bridge, Turkey (2012)**

Technical expert advice (including field mapping and testing) on foundation conditions and design of anchorages for what will be one of the longest span bridges in the world.

**Wynn-Cotai Hotel, Macau (2011-2012)**

Expert advice on options for ground improvement, foundation design and site formation through reclaimed area underlain by soft clay.

**Kori Nuclear Power Station, Ulsan, Korea (2010)**

Independent expert report for insurers on wash-out failure of large raft and pad foundations during construction.

**Macau piling dispute (2009-2010)**

Independent expert report and expert evidence for arbitration in HK regarding pile design in site comprising recent fill and soft alluvial clay.

**IFC Building, Seoul, Korea**

Preparation of independent expert report for insurers concerning major failure of deep, strutted excavation.

**Genting Highlands Resorts, Malaysia**

Investigation and reporting on risk from landslides in slopes adjacent to access roads (20km+).

**Landslide Investigation Consultancy (2007-2008)**

Technical direction and review of landslide investigations. Author of report on landslides triggered by Maximum Credible Earthquake to impact Hong Kong.

**Ras Laffan Cooling Water Project, Qatar**

Preparation of expert report regarding excavation feasibility in limestone. Evidence at arbitration, Paris.

**Dibba Road, Dubai**

Project Director for investigation and advice on major rock slope failure.

**Incheon Second Bridge, South Korea**

Design check leader for piled foundations for major cable stay bridge linking Incheon Island (airport) to mainland (JV with Arup)

**Busan-Keoje Link, South Korea**

Geotechnical advice on design and construction of major project (2 cable-stay bridges and immersed tube tunnel)

**Lands Department, Hong Kong**

Project Director for major study involving the Engineering Inspections and design/upgrade of over 700 slopes.

**Landslide Prevention Measures, Hong Kong**

Technical Reviewer (and presenter) of numerical study into the potential hydrogeological damming of slopes by the installation of grouted soil nails.

**Pile Design, Karachi, Pakistan**

Advice on the potential for damage to piles due to seismic liquefaction for high-rise buildings.

**Chongming Tunnel, Shanghai, China**

Led geotechnical team for successful basic design competition for 9 km, 15.2m diameter, slurry shield TBM tunnel under the Yangtze River – a world record once constructed

**Tung Chung Road Widening, Hong Kong**

Project Director for design of natural terrain landslide mitigation structures for new road across mountainous terrain.

**Sual Power Station, Philippines**

Detailed study of foundation failure during construction. Preparation of expert reports and presentation of evidence at High Court, London, UK.

**Tin Shui Wai, Hong Kong**

Expert advice to Independent Commission Against Corruption (Hong Kong Government) regarding fraud associated with driven piles. Presentation of evidence in criminal court.

**Shatin Housing Estate, Hong Kong**

Expert advice to Independent Commission Against Corruption (Hong Kong Government) regarding fraud associated with bored piles. Presentation of evidence in criminal court.

**Nant Helen Opencast Coal Mine, UK**

Expert advice for major claim re unexpected ground conditions (AMEC).

**Po Lam Road Technical Audit**

Project Director for first Hong Kong Technical Audit on slope construction to a forensic level (GEO).

Expert advice for subsequent litigation (ICAC). Presentation of Expert Evidence in criminal court.

**Strategic Sewers Disposal Scheme (TBM Tunnels)**

Factual witness on geological conditions for major arbitration (Camponon Bernard/Maeda).

**Landslide Investigation Consultancies  
(1997-1999; 2000-2001; 2002-2003)**

Technical direction, investigation leader and review. Forensic investigation for Ching Cheung Road landslide.

**Black Hills Tunnels, Hong Kong**

Geotechnical advice throughout Mass Transit Railway Corporation subway tunnel detailed design.

**Landslide Preventive Measures**

Project Director for LPML. Technical guidance and formal review of design options for numerous slope upgrading works on various LPM projects.

**Slope Inspections**

Technical guidance and quality control for Engineering Inspections for numerous slopes (Highways Department; Lands Department).

**Quantitative Risk Assessment for Natural Terrain**

Lead investigator for 2 pioneering studies of risk from landslides from natural terrain.

**Rockfall Barriers**

Project Director for Special Project Study into safe practice for rock slope formation.

**Young Dong Railway Relocation Tunnel, South Korea**

Technical Director for bid assistance for the design of 17 km, mountain loop tunnel.  
Client: Daewoo Engineering.

**Seoul-Chuncheon Railway, South Korea**

Technical Director for bid assistance for design of 2 km bridges and viaducts.

**Wolmoon Tunnel, South Korea**

Technical Director advising on blasting restrictions for the construction of a new tunnel adjacent to a running railway (also in tunnel).

**Philippines: Bakun Hydro Electric Scheme**

Investigation of fatal landslide and recommendations for risk mitigation. Assessing geotechnics of high-pressure tunnel and need for liner.

**China: ChongQing Expressway**

Expert review of slopes and tunnels for major expressway under construction.

1996-1997

**Bechtel International  
Korea: Senior Engineering Specialist**

**Korea High Speed Rail Project**

Geotechnical Design Management / Advisor for investigation design and construction for two major tunnelled and cut and cover underground stations. Numerical analysis of 50 m deep, vertical slopes extending 3 km in weathered rock and large span (>25 m) and multiple underground openings (FLAC, PHASES, SLOPE-W) Client: Korean High Speed Rail Corporation (KHRC).

Design check and field examination for several other sections including piling and drill and blast tunnelling.

**Chile: Alto Cachapoal Hydro-electric Scheme**

Geotechnical appraisal of tunnels and power caverns. Definition of Reference Ground Conditions and advice on contract negotiations.

**China: Nuclear Plant**

Advising on the likely magnitude and significance of high in-situ lateral stresses in shallow excavations for Power Station.

2006-current

**The University of Leeds, UK: Professor of Engineering Geology from 2006 (part-time)**

2006-current

**Research Professor (Visiting Professor since May 2016)**

Teaching MSc Engineering Geology students (Ground Investigation and practical case study courses on landslides, foundations, tunnels). PhD research supervision (landslides and rock mass characterisation).

1984-1996

**Lecturer/Senior Lecturer in Engineering Geology**

Predominantly teaching and research in graduate school (Masters and PhD level). Major research themes include shear strength of rock discontinuities, weathered rock and colluvium, origin of rock joints and rock mass characterisation, landslides, physical and numerical modelling of underground excavations and fluid flow through rock masses. (10 PhD students - all completed successfully)

1984-1996

**Independent Geotechnical Consultant**

**Hencher Associates Limited**





**UK: Dan Y Darrent Highway Bridge**

Expert advice on remedial measures and formulation of major claim concerning the construction of rock socketed piles in karstic limestone. Client: Trafalgar House.

**Hong Kong: SSDS**

Engineering geologist for detailed study and formal risk analysis of 5 subsea TBM tunnels experiencing unexpectedly high water inflows. Client: Golder Associates (for Campenon Bernard, now Vinci).

**UK: Giggleswick Scar**

Advice on stability of natural slope under the impact of quarry blasting. Client: Giggleswick School

**UK: Sellafield Public Inquiry**

Expert Witness on fracture flow of fluids for Public Inquiry concerning construction of Underground Rock Laboratory for Nuclear Waste Repository at Sellafield. Client: Friends of the Earth.

**UK: Vale of York Groundwater Extraction Scheme**

Formulation of case for Public Inquiry against Yorkshire Water's plan to extract groundwater using deep boreholes. Client: SOS.

**UK: Halifax Tunnel**

Inspection and advice on ground failure in TBM tunnel and help with claim preparation. Client: Golder Associates.

**UK: Middlesbrough Sewer Tunnel**

Investigation and advice to contractor on claim concerning face instability in tunnel. Client: B & B Tunnelling.

**UK: Backwell Quarry**

Investigation and advice on stability of very high (>100 m) slopes showing signs of progressive failure in limestone quarry. Client: RMC Ltd.

**UK: Opencast Slope Stability**

Advice, testing and analysis for defining slope geometries and optimising working practice at several major open-cast coal sites in South Wales. Client: British Coal Opencast Executive.

**Brazil: Landfill Design**

Advice on the design and siting of landfill sites for Sao Paulo City. Client: Etep Consulting Engineers.

**UK: Pyke Quarry**

Advice on stability of limestone quarry and thick overlying superficial deposits. Client: Wardell Armstrong.

**UK: Sellafield Nuclear Repository Investigation**

Advice on rock mass quality assessment for proposed underground nuclear waste repository. Client: Wardell Armstrong.

**Jersey: Queens Valley Reservoir**

Construction supervision and detailed mapping for Queens Valley Reservoir. Supervision of drill and blast tunnels and determining support requirements. Client: Montgomery Watson.

**UK: Furness Vale**

Investigation and analysis of high risk, previously failed slope threatening new high-pressure water pipeline. Client: North West Water.

1980-1984

**Geotechnical Control Office, Hong Kong Government**  
**Senior Geotechnical Engineer**

Led team carrying out detailed and forensic investigations of major landslide events in 1981-1984.

Innovative contributions particularly relating to weathering description and classification, case studies of landslides and rock joint characterisation and direct shear testing.

Numerous reports, papers and contributions to Hong Kong standards and guidance documents.

Preparation of Geotechnical Area Study (GAS) study reports for various areas of HK.

Engineering geologist for a major study of stability of more than 200 HK cut slopes (CHASE).

1976-1980 **W S Atkins & Partners (Seconded to Central Electricity Generating Board)**

**UK: Piling Engineer**

Site supervision of main piling contract for Drax Power Station, Yorkshire, UK including specification and supervision of ground investigations including CPTs and subsurface drilling and the production and driving of 20,000 concrete piles.

1976-1978 **W S Atkins & Partners**

**UK: Morocco, Algeria: Engineering Geologist, Various Projects**

Design and supervision of site investigations, foundation and slope analysis and design on many projects including Redcar and Scunthorpe steel works, Portsmouth dry dock and commercial developments in Leicester.

Field mapping and ground modelling for new hospital and university at Tlemcen, Algeria

Seismic risk studies and preparation of response spectra for structural design of two new steel works (Annaba, Algeria; Nador, Morocco) and one nuclear power station (Kori-2, South Korea).

Investigation and design of remedial works for leachate leakage at landfill site, Gloucester.

1973-1976 **Imperial College of Science and Technology, London University  
PhD Research**

Research into the effect of earthquake and blasting vibrations on the shear strength of rock discontinuities.

1975 **UK/USA: Earthquake Studies**

Consultant for feasibility study for the use of a borehole stress meter for earthquake prediction. Client: Robertson Research Ltd.

1975 **UK: Keswick By-pass**

Consultant for site investigation of bridge abutment using borehole periscope to characterise rock mass joint network. Client: Scott Wilson Kirkpatrick & Partners.

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**Publications – technical reports mostly omitted**

2019

Hencher, S.R. 2019. The Glendoe tunnel collapse in Scotland. *Rock Mechanics and Rock Engineering* (in press).

2018

Shang, J., West, L.J., Hencher, S.R., & Z. Zhao 2018. Geological discontinuity persistence: Implications and quantification. *Engineering Geology* <https://doi.org/10.1016/j.enggeo.2018.05.010>. 14p.

2017

Shang, J., Hencher, S.R., West, L.J. & Handley, K. 2017. Forensic Excavation of Rock Masses: A technique to investigate discontinuity persistence. *Rock Mechanics and Rock Engineering* 50: 2911 - 2928.

Pells, P., Bieniawski, Z.T., Hencher, S.R. & Pells, S. 2017. RQD: time to rest in peace. *Canadian Geotechnical Journal*, 54(6): 825-834.

2016

Shang, J., Hencher, S.R. & West, L.J. 2016. Tensile strength of geological discontinuities including incipient bedding, rock joints and mineral veins. *Rock Mechanics and Rock Engineering*, 49: 4213-4225.

2015

Hencher, S. R. 2015. *Practical Rock Mechanics*. Taylor & Francis, 356p.

Hencher, S. R. & Richards, L. R. 2015. Assessing the shear strength of rock discontinuities at laboratory and field scales. *Rock Mechanics and Rock Engineering*, **48**, 883-905.

Lee, S. G., Hencher, S.R., Kim, J. W., Cho, S. B., Lee, H. D., Park, S. H., Kim, G. S. & Lee, Y. S. 2015. Damage to the Bangudae petroglyph in South Korea and a scheme for its conservation. *Proceedings 9th Asian IAEG Conference*, Beijing, China, 329- 333.

Shang, J., Hencher, S.R., West, L.J., 2015. Tensile strength of incipient rock discontinuities. In: Schubert, W., Kluckner, A. (Eds.), *Future Developments of Rock Mechanics: Proceedings of the ISRM Regional Symposium EUROCK 2015 & 64th Geomechanics Colloquium*, 7–10 October, Salzburg, Austria.

2014

Hencher, S. R. 2014. Characterizing discontinuities in naturally fractured outcrop analogues and rock core: the need to consider fracture development over geological time. Geological Society of London Special Publication, *Advances in the Study of Fractured Reservoirs*, v.374, 113-123.

Lee, S.G. & Hencher, S.R. 2014. Recent extreme rainfall-induced landslides and government countermeasures in Korea. K. Sassa et al. (eds.) *Landslide Science for a Safer Geoenvironment*, Vol. 1, Springer International, 357-361.

2013

Lee, S. G. & Hencher, S. R. 2013. Assessing the stability of a geologically complex slope where strong dykes locally act as reinforcement. *Rock Mechanics and Rock Engineering*, **46**, 1339-1351.

Wentzinger, B., Starr, D., Fidler, S., Nguyen, Q. & Hencher, S. R. 2013. Stability analyses for a large landslide with complex geology and failure mechanism using numerical modelling. *Proceedings International Symposium on Slope Stability in Open Pit Mining and Civil Engineering*, Brisbane, Australia, 733-746.

2012

Hencher, S. R. 2012. *Practical Engineering Geology*. Taylor & Francis, 438p.

Hencher, S. R. 2012. Discussion of comparison of different techniques of tilt testing and basic friction angle variability assessment by Alejano, Gonzalez & Muralha. *Rock Mechanics and Rock Engineering*, **45**, 1137-1139.

Hencher, S. R. & Malone, A.W. 2012. Hong Kong Landslides. Chapter 30 in *Landslides: Types, Mechanisms and Modeling*, ed. J. Clague and D. Stead, Cambridge University Press, 373-382.

2011

Hencher, S. R., Lee, S.G., Carter, T.G. & Richards, L.R. 2011. Sheeting joints – Characterisation, Shear Strength and Engineering. *Rock Mechanics and Rock Engineering*, **44**, 1-22.

2010

Hencher, S. R. 2010. Preferential flow paths through soil and rock and their association with landslides. *Hydrological Processes*, **24**, 1610-1630.

Hencher, S. R. & Lee, S.G. 2010. Landslide mechanisms in Hong Kong. Geological Society, London, *Engineering Geology Special Publications*, V 23, 77-103.

2009

Devonald, D. M., Thompson, J. A., Hencher, S. R. & Sun, H. W. 2009. Geomorphological landslide models for hazard assessment – a case study at Cloudy Hill. *Quarterly Journal Engineering Geology*, **42**, 473-486.

Hencher, S. R. 2009. Technical trends for long span bridge foundations. Invited Paper. *Proceedings of International Commemorative Symposium for the Incheon Bridge*, ROTREX 2009, 456-465.

Lee, S. G. & Hencher, S. R. 2009. The repeated collapse of a slope despite continuous reassessment and remedial works. *Engineering Geology*, **107 (1-2)**, 16-41.

2008

Hencher, S. R. 2008. Slide rule technology. *Ground Engineering*, **41**, 4, 19-21.

Hencher, S. R. 2008. The “new” British and European standard guidance on rock description. A critique by Steve Hencher. *Ground Engineering*, 41, 7, 17-21.

Hencher, S. R., Lee, S. G. & Malone, A. W. 2008. Back analysis of landslides to allow the design of cost-effective mitigation measures. *Proceedings 1st World Landslide Forum*, Tokyo, 251-54.

Hencher, S. R., Sun, H.W. & Ho, K.K.S. 2008. The investigation of underground streams in a weathered granite terrain in Hong Kong. In: Huang & Mayne (eds), *Geotechnical and Geophysical Site Characterization*, Taylor & Francis Group, London, 601-607.

Lee, S. G. & Hencher, S. R. 2008. Landslide mitigation and risk reduction practice in Korea. *Proceedings 1st World Landslide Forum*, Tokyo, 341-43.

Lee, S. G., Lee, C.S., Park, D.C. & Hencher, S.R. 2008. Characteristics of landslides related to various rock types in Korea. *Proceedings 10<sup>th</sup> International Symposium on Landslides and Engineered Slopes* (Chen et al., eds.), Xian, China, 427-33.

Malone, A. W., Hansen, A., Hencher, S. R. & Fletcher, C. J. N. 2008. Post-failure movements of a large slow rock slide in schist near Pos Selim, Malaysia. The 10th International Symposium on Landslides and Engineered Slopes, Xian, 457-61.

Shaquour, F. M., Jarrar, G., Hencher, S. R. & Kuisi, M. 2008. Geotechnical and mineralogical characteristics of marl deposits in Jordan. *Environmental Geology*, 55, 1777-83.

#### 2007

Hencher, S. R. 2007. Hazardous ground conditions – reducing the risks. **Keynote Paper.** *Engineering Geology in Geotechnical Risk Management*. Hong Kong Regional Group of the Geological Society of London, 32-40.

Hencher, S.R. 2007. Slope failures in Hong Kong. *Geophysical Research Abstracts*, Vol. 9, 04821.

Lee, S. G. & Hencher, S.R. 2007. Slope safety and landslide risk management in Korea. *Proceedings of the 2007 International Forum on Landslide Disaster Management*, Hong Kong, vol. 1, 125-68.

Lee, S. G. & Hencher, S. R. 2007. Repeated collapse of cut slopes despite remedial works. *Proceedings of the 2007 International Forum on Landslide Disaster Management*, Hong Kong, vol. 1, 451-64.

#### 2006

Hencher, S. R. 2006. Weathering and erosion processes in rock – implications for geotechnical engineering. **Invited Paper.** *Proceedings Symposium on Hong Kong Soils and Rocks*, March 2004, Institution of Mining, Metallurgy and Materials and Geological Society of London, 29-79.

Hencher, S. R., Anderson, M. G. & Martin R. P. 2006. Hydrogeology of landslides. *Proceedings of International Conference on Slopes*, Malaysia, 463-474.

#### 2005

Hencher, S. R., Tyson, J. T. & Hutchinson, P. 2005. Investigating substandard piles in Hong Kong. *Proceedings 3<sup>rd</sup> International Conference on Forensic Engineering*, Institution of Civil Engineers, London, 107-18.

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