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Cover image: Heavy Haul Rail, Pilbara, Western Australia
Photography and story: Robin Power

Ballast condition is a significant contributor to rail track performance, as is the condition of the supporting formation. Traditionally, an intrusive and costly process called 'pot holing' is utilised to gather data for planning rail track maintenance and renewal programs, providing rehabilitation works design inputs and decision making. Excavators are used to remove ballast at the sleeper ends of 2-3 sleepers, exposing the ballast profile. The depth and condition of the ballast is photographed, measured and material samples maybe taken for laboratory analysis. Then, a traditional DCP is used to test into the formation, capturing blows per 10 cm, which is often converted to CBR. The ballast is then scraped back into location. The process is typically repeated at x m intervals. A line shut is required with all the costs, planning and other implications associated with this.

An alternative approach used is a coupling of cone resistance vs depth profile with very high quality depth indexed down the hole imagery (video & photos). Rapid image analysis using AI including estimation of the soil grain size distribution (PSD) and water content allows a qualitative characterisation of soil. This is achieved using a Variable Energy Dynamic Penetrometer (VEDP) coupled with very high end camera technology and analysis software. This provides a non-destructive rail track ballast assessment (ballast fouling and ballast recovery rates) and condition monitoring of the formation (rail track substructure layers), all captured, processed and presented in digital environment. The technique is also used to calibrate Ground Penetrating Radar (GPR) data and to provide more information in problem areas.

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VIEW FROM THE CHAIR

JUNE 2026

It is both an honour and a privilege to take on the role of National Chair of the Australian Geomechanics Society (AGS). I would like to acknowledge the significant contribution of my predecessor, Tim Thompson, and the Board, whose leadership has positioned the AGS strongly at a time of both opportunity and change.

The past two years have marked a significant transition for the AGS. The move to a company limited by guarantee has established a modern governance framework and strengthened our organisational foundations. Importantly, this transition is not merely administrative; it enables AGS to operate with greater clarity, accountability, and long-term sustainability.

This strengthened foundation comes at an important time for our profession. The broader environment in which geotechnical engineering operates is evolving rapidly. Across Australia, we are seeing the impacts of climate variability emerge more directly in our work through more intense rainfall events, prolonged dry periods, and increasingly complex ground responses. These are no longer abstract risks. They are influencing how we design for long-term performance.

Recent infrastructure projects continue to remind us that, despite advances in investigation and analysis, subsurface uncertainty remains one of the most significant risks facing our profession. The "unknowns" in the ground are still very real, and they continue to test both our assumptions and our designs. At the same time, expectations surrounding net-zero infrastructure are pushing the profession to think differently about material use, ground improvement, and efficiency, not only in terms of cost and performance, but also carbon outcomes.

Alongside these environmental pressures, recent global disruptions, particularly those relating to energy supply and fuel security, have further highlighted how dependent we are on factors extending well beyond the site boundary. For our profession, the lesson extends beyond energy alone; it is fundamentally about resilience and uncertainty. The conditions we design for, whether in the ground or within broader systems, are not fixed. Perhaps most importantly, recent global events have reinforced that uncertainty is not an occasional challenge, but a constant condition. They have also reminded us of a simple but important lesson: we must become better at recognising early warning signs before they develop into major failures.

In geotechnical engineering, this principle is particularly relevant. Whether dealing with slope instability, foundation performance, excavation movements, or embankment behaviour, failures are often preceded by subtle indicators. The challenge is not only collecting data but developing systems capable of converting data into timely decisions. This requires better baseline information, targeted instrumentation, regular monitoring and data collection, clear trigger levels, and, critically, the discipline to act when early signs emerge.

It is against this backdrop that the Australian Geomechanics Society is progressing development of the **2026–2030 Strategic Plan**, a major milestone for AGS. The strategy is being co-designed with input from the Board, Chapters, and previous national chairs, and will help define our purpose, priorities, and measures of success over the coming years. At its core, the strategy reinforces a simple but powerful objective:

To connect, empower, promote, and represent a thriving Australian geomechanics community.

While this objective may sound straightforward, it is intentionally focused. As a learned society, we cannot do everything. Our responsibility is to concentrate effort where AGS can provide the greatest value, whether through technical leadership, knowledge sharing, advocacy, or supporting the next generation of engineers.

The emerging strategic framework is structured around three key pillars: **LEAD, DELIVER**, and **GROW**. Early priorities include strengthening member value and engagement, advancing technical leadership and knowledge sharing, increasing advocacy and industry influence, and supporting sustainable organisational capability. Importantly, the strategy reinforces that AGS must remain **member-centred**, **focused**, and **purposeful**. Ultimately, however, the success of the strategy will depend on people, our volunteers, Board members, and contributors across all Chapters.

A key enabler of this strategy is the AGS's ongoing digital transformation. Work is currently underway to develop an **AGS App** that will enhance how members engage with events, conferences, and technical content. This initiative is being aligned with broader improvements to our website and digital systems to create a more integrated and accessible member experience.

In parallel, discussions are progressing on a nationalisation of the Queensland Geotechnical Database, an initiative with the potential to improve how geotechnical data is shared and utilised across the industry. While still evolving, the long-term vision is for AGS to play an active role in supporting this national resource in collaboration with government partners.

Together, these initiatives represent an important shift for the AGS from being primarily a knowledge-sharing forum to becoming an enabler of data-driven practice and digital collaboration.

This evolution is particularly important given the rapid integration of artificial intelligence and data-driven methods into geotechnical

practice. Advances in digital monitoring, remote sensing, and machine learning are enabling engineers to move from periodic assessment toward continuous, real-time understanding of ground behaviour. Today, AI and real-time data are revolutionising the way we interpret information, anticipate outcomes, and make decisions. For example, a new AI-powered landslide warning system developed in Hong Kong is expected to deliver real-time predictions of slope failure with accuracy exceeding 90%, using millions of historical data points and continuously learning from new information. Similarly, Auckland Transport has employed AI to map landslide risks across its road network through a GIS-based system analysing more than 30 contributing factors, including data from previous storm events.

These technologies are not replacing engineering judgement; rather, they are enhancing it. They allow us to better quantify uncertainty, detect early warning signs, and make more informed decisions across the lifecycle of infrastructure. Put simply, the greater the uncertainty, the greater the value delivered by data, monitoring, and intelligent analysis.

In many respects, the direction for our profession is clear. As engineering challenges become more complex and less predictable, the value of geotechnical expertise only increases. The role of AGS is not simply to respond to these changes, but to help lead how the profession adapts.

As the challenges facing our profession become increasingly complex and interconnected, collaboration remains central to the role of AGS. Addressing these emerging challenges will require not only technical innovation, but also stronger collaboration across industry, academia, and international partners. A strong example is our ongoing partnership with the New Zealand Geotechnical Society (NZGS) in updating the AGS (2007) Guidelines for Landslide Risk Management. This collaboration includes a formal memorandum of understanding and shared technical contributions across both countries. AGS is proud to support this effort as a project partner, helping to bring the updated guidelines to completion while ensuring its relevance and accessibility for practitioners in Australia. The AGS has also recently confirmed partial financial support for a series of NZGS Slope Stability Design Manuals in development. Importantly, these initiatives reinforce the value of regional and international collaboration. The challenges we face are rarely unique to one country, and there is significant benefit in working together to develop practical, evidence-based guidance. This is precisely where AGS can add meaningful value, not by duplicating effort, but by partnering with others to deliver high-quality outcomes for the profession.

Looking ahead, the AGS has a strong pipeline of initiatives, including continued development of technical guidelines and publications, expansion of education and training programs across regions, ongoing digital transformation initiatives, support for major international conferences and events, and increased focus on outreach, diversity, and inclusion. At the same time, we must remain focused on our core purpose: supporting a thriving geomechanics community. This requires balancing growth with technical excellence, and innovation with the practical needs of our members.

The strength of the Australian Geomechanics Society has always been its members, their expertise, their willingness to contribute, and their commitment to advancing the profession. As we move into this next phase, I encourage all members to engage actively with the AGS, whether through technical contributions, mentoring, or participation in events and initiatives.

I look forward to working with you all as we continue to build on this strong foundation and help shape the future of geomechanics in Australia.

Amir Shahkolahi

National Chair, Australian Geomechanics Society

WOMEN IN AGS (WIAGS)

IWD 2026: AGS Celebrates International Women's Day

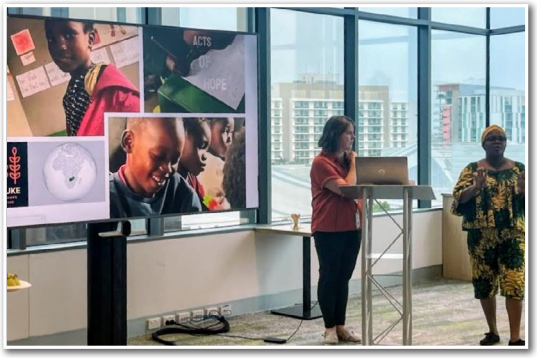
Sunday 8th of March marked International Women's Day, which is celebrated in various ways around the world. A number of countries such as Cambodia, Kyrgystan, Mongolia, and Zambia declare it a public holiday for all. In China and Madagascar is it a holiday for women only. Here at the AGS we found various ways to celebrate the day across the chapters.

Brisbane – Walk and Talk

Kicking off on Monday 9 March, the Queensland Chapter held a Walk + Talk event. The wet weather didn't dampen the spirits of the 30 women and men who enjoyed a leisurely walk by the Brisbane River, stopping by some local landmarks for a photo and heading over the new(ish) Neville Bonner Bridge for a different view of the city. I find the walking events a great and natural opportunity to chat and meet new people, rather than being trapped in a meeting room juggling a plate and a drink at a more traditional networking event.

Walkers at the "Brisbane Sign" by the river on a rainy day

Following the walk, we assembled back at the Jacobs office for breakfast and a chat with Esnart Kazhingu from Mamuke in Zambia. Mamuke was our charity partner for the morning's event with a portion of ticket sales being donated to their work educating vulnerable children.



Natalie Quinlisk interviewing Esnart Kazhingu

Newcastle – Panel and Breakfast

Later that week, our Newcastle Chapter hosted a breakfast and panel event at the local GHD office. During the Q&A panel discussion, Professor D. Jean Hutchinson (Professor Emerita of Geological Engineering - Queen's University, Canada), Dr. Sujatha Manoj (Professional civil/geotechnical engineer with over 33 years' experience) and Lucy Poyser (Undergraduate geotechnical engineer - Douglas Partners, Newcastle) shared their unique experiences of working in geomechanics. We celebrated their achievements and discussed the ongoing challenges faced by women in our field, exploring what can be done to further reduce gender disparity (especially in senior positions) and help #BalanceTheScales.

Newcastle Panel (L-R) Abigail Watman, Dr Sujatha Manoj, Lucy Poyser and Professor D. Jean Hutchinson

Adelaide – Walk and Talk

Later in March, The SA/NT Chapter hosted an IWD Walk and Talk event, providing an informal setting for members to connect outside the traditional technical forum. The event encouraged discussion and reflection on inclusion, professional experiences, and career pathways within the ground engineering community. The relaxed nature of the Walk and Talk allowed for attendees to make many meaningful connections, strengthening the WIAGS community across a range of career stages, and reinforcing the Chapter's commitment to fostering a welcoming and inclusive professional environment.

The group of walkers in Adelaide

Melbourne – Picnic Lunch in the Gardens

The Victorian Chapter hosted a relaxed and engaging (slightly belated) International Women's Day gathering that brought together members of the geotechnical community in an informal, welcoming setting. Held at the Flagstaff Gardens picnic area, the BYO lunch format encouraged a casual atmosphere where attendees could connect, share experiences, and strengthen professional networks across academia and industry.

Conversations ranged from Melbourne weather to career development and mentorship and technical challenges! We hope to have another event soon to continue engaging with our community and promoting women in the profession.

Lunchtime in Melbourne

Supporting the WIAGS Mission

The overarching intent of these events is to increase women's engagement with the AGS community. The panel events give us the opportunity to celebrate specific women's successes, and the networking events help to create an inclusive culture. All of this aligns with our WIAGS mission:

"Increase women's engagement in the AGS community, celebrate their successes and foster an inclusive culture that attracts and retains women."

Thank you to all who attended and to each local WIAGS Committee for making these events happen.

Many chapters will be hosting events in celebration of International Women in Engineering Day this coming June. We appreciate the support of the wider AGS community at these events.

By Natalie Quinlisk, Chair of WIAGS National Committee

CHAPTER NEWS

NEW SOUTH WALES

63rd Rankine Lecture – From Geo-monitor to Geo-adapt
Event Mentors: Asal Bidarmaghz (UNSW)

Professor Kenichi Soga's 63rd Rankine Lecture, "From Geo-monitor to Geo-adapt", was held by the Australian Geomechanics Society on 23 February 2026. The lecture presented a clear shift in geotechnical engineering: from simply monitoring infrastructure to using monitoring data to actively improve design, construction and long-term asset management. His main argument was that geotechnical systems should no longer be treated as static assets designed once and checked occasionally. Instead, tunnels, pipelines, foundations and other ground infrastructure can be managed as adaptive systems, where distributed sensing, fibre-optic monitoring, wireless sensors and data analytics provide continuous feedback on real performance.

The lecture showed how high-resolution monitoring can improve understanding of ground–structure interaction, construction response, strain development and long-term deterioration. For tunnels, this means better tracking of deformation and lining behaviour. For pipelines, it allows early detection of localised ground movement and strain demand. For deep foundations, it provides stronger evidence on load transfer, settlement and construction quality. The key value is not the sensor itself, but the ability to convert data into engineering decisions.

Overall, Soga argued for a future where geotechnical design becomes more performance-based, data-informed and adaptive. This is directly relevant to climate-responsive infrastructure and energy geostructures, where piles, tunnels and retaining walls may need to be monitored and managed over their full life under changing thermal, hydraulic and mechanical conditions.

63rd Rankine Lecturer Professor Kenichi Soga presenting at AGS Sydney.

AGS 2026 Industry Day at Western Sydney University
Event Mentors: Pan Hu (WSU) and Asal Bidarmaghz (UNSW)

The AGS 2026 Industry Day at Western Sydney University was held on 30 March 2026 at the Peter Shergold Building, WSU, Parramatta. Hosted by the Sydney Chapter of the Australian Geomechanics Society, in collaboration with Western Sydney University, the event introduced undergraduate, postgraduate and research students to geotechnical engineering, engineering geology and AGS activities. The programme featured short presentations by practitioners, including Dr Naveen Meena from Beca, Aidan McKenzie from Transport for NSW, Samantha Ross from GHD, Manuel Neves and Bethan Murrant from Fortify Geotech. The speakers shared practical insights into career pathways and day-to-day professional practice across soil–structure interaction, slope stability, geological modelling, site investigation, infrastructure delivery, foundation engineering, retaining structures, ground improvement, and construction-phase geotechnical advice. Overall, the event strengthened links between students, academia and industry, while promoting AGS engagement and professional development for the next generation of geotechnical engineers and engineering geologists.

AGS Industry Day presenters from left to right: Dr Naveen Meena, Aidan McKenzie, Samantha Ross, Manuel Neves and Bethan Murrant.

Honorary Life Member Presentation: "Compaction, can it be Intelligent?"
Event Mentors: Adnan Sahyouni (Menard)

The Honorary Life Member presentation by Professor David Airey from the University of Sydney, titled "Compaction, can it be Intelligent?", was held on 8 April 2026. The event attracted 111 registrations from across industry and academia, bringing together participants from different professional backgrounds, experience levels and age groups.

Professor Airey revisited the fundamentals of soil compaction and challenged the profession to modernise current compaction quality assurance and quality control practices. A central message was that compaction still relies heavily on long-standing empirical methods, while

Professor David Airey presenting to the AGS Sydney Chapter.

testing, interpretation and standards have not evolved at the same pace as other areas of engineering and science. The presentation highlighted the limitations of density-only compliance and reinforced the need to better account for moisture content, degree of saturation, stiffness and long-term performance.

The lecture covered intelligent compaction, stiffness-based measures, field testing and future directions for QA/QC. Professor Airey discussed the value of GPS coverage, pass-count data, layer thickness, machine operation and processed compaction measurement values in improving process assurance. However, he also noted that truly intelligent compaction systems are not yet fully available and will require stronger interpretation frameworks, better field data and potentially AI or machine-learning tools.

A field trial example from the Toowoomba Range Second Crossing was used to compare stiffness measures, layer thickness and pass-count effects across different aggregate and rock materials. The discussion showed that stiffness-based indices can be highly sensitive to material variability, reinforcing the importance of good stockpile management, moisture control and reliable moisture content data.

Full room – showing the attendees.

QUEENSLAND

This report includes the Queensland Chapter news from March to April 2026. Chapter activities included multiple evening technical presentations, a morning social event, and a regional lecture series.

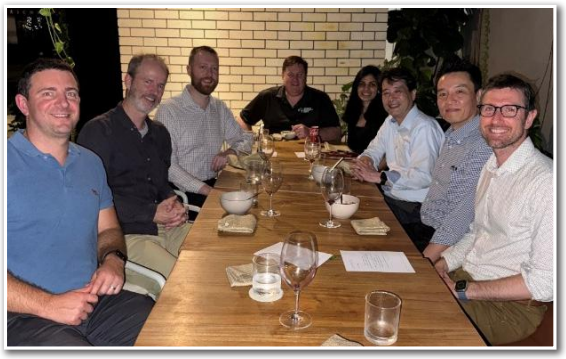
63rd Rankine Lecture – Kenichi Soga
From Geo-monitor to Geo-adapt: leveraging distributed sensing and data analytics for performance-based design, construction, and maintenance

Thursday 5 March 2025

Over 60 members and guests gathered at Rydges Fortitude Valley for an evening lecture featuring Prof. Kenichi Soga, who delivered his Rankine Lecture on distributed sensing and data analytics across a wide range of geotechnical applications.

Kenichi Soga was an engaging and insightful speaker, sharing examples that demonstrated the growing impact of sensing technologies on geotechnical practice. He brings an exceptional academic background, currently serving at the University of California at Berkeley, and formerly at the University of Cambridge.

Kenichi Soga in Brisbane.



Speaker dinner, Left to Right: Matt Stewart, Tim Thompson, Jared Priddle, Jon Gibbs, Arsh Kaur, Kenichi Soga, Jun Sugawara, Vincent Blanchet.

International Women's Day: Walk + Talk

Monday 9 March 2026

It was a wet Monday morning, when we gathered 30 women and men in Brisbane for our annual AGS Walk + Talk event. We dawdled in the drizzle but enjoyed the warmth of conversation amongst friends new and old. The coffee was hot, the food was fresh, and the gift bags – gorgeous!

Our charity partner for the morning's event was Mamuke – acts of hope. We were honoured to welcome the founder, Mrs Esnart Kazhingu from Zambia, who shared about the strength of women and the importance of education. Mamuke run a preschool and nutrition program for vulnerable children in a very poor community. Did you know that in Zambia, International Women's Day is celebrated with a public holiday!?

Thank you to all who attended and the QLD WIAGS Committee for making it happen. Our thanks also go to Jacobs for generously sponsoring the venue.

The walkers braved the rain for a riverside stroll and chat.

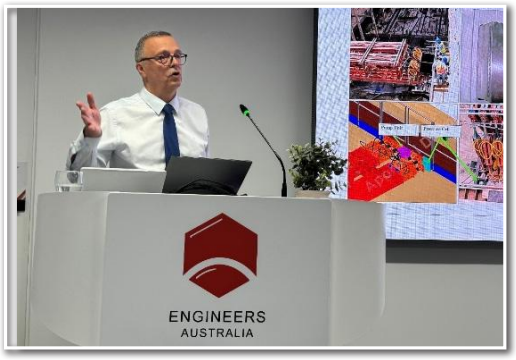
Each attendee took home a small gift bag and memento of the morning.

Unlocking the Challenges of Deep Underground Construction

Wednesday 25 March 2026

Over 50 members and non-members gathered at Engineers Australia to listen to Dino Sarac from Bechtel. He shared lessons from a complex case study on constructing a deep underground station beside an existing 26metredeep basement, highlighting the challenges of supporting a high and narrow sand backfill with a complex retaining system of rock pillars and props.

It was a valuable practical presentation for anyone involved in deep excavations, geotechnical design, or construction monitoring, and a great reminder of the value of sharing realworld lessons from major projects.



Dino Sarac presenting at Engineers Australia.

Speaker dinner, Left to Right: Jaime Wilson, Dino Sarac, Vincent Blanchet.

2025 Peter Hollingsworth Honoured Lecture: Lessons from 44 Years of Change in Geotechnical Engineering

Thursday 23 April 2026

More than 100 members and guests convened at Sofitel Brisbane Central to hear Dr Burt Look OAM present his 2025 Peter Hollingsworth Honoured Lecture.

Burt delivered a reflective and philosophical talk on how geotechnical engineering has evolved through advances in site investigation, laboratory testing, data interpretation, and risk communication, particularly in the context of expansive clays, residual soils, and weathered rock common to Queensland. Case studies demonstrated how data noise and well-known cognitive biases in geotechnical engineering can systematically distort

professional judgement. He emphasised the need to better integrate field observations, laboratory data, and reliability-based thinking, while challenging conservative assumptions and "judgement" driven practices that can obfuscate the real engineering risk. The lecture highlighted ongoing gaps in current practice and reinforced the importance of reliability-based transparency and accountability in modern geotechnical engineering.

Burt is highly regarded both nationally and internationally and is especially well-known in Queensland. His career has been predominantly in consultancy, where he has held senior technical and business leadership roles with Connell Wagner (Aurecon), SKM (Jacobs), and FSG.

The AGS QLD Chapter awards the Peter Hollingsworth Honoured Lecture every two years. Peter was a Queensland-trained civil engineer (1951) and licensed surveyor (1954) who played a formative role in Australian and Southeast Asian geotechnical engineering through innovative project delivery and environmental impact studies across a wide range of sectors.

Dr Burt Look OAM delivering the 2025 Peter Hollingsworth Honoured Lecture in Brisbane.

Over 100 attendees listening to Dr Burt Look OAM.

Toowoomba AGS Tech Talks Evening

Thursday 30 April 2026

The AGS Queensland Chapter held its first event in Toowoomba! The evening lecture series was at the request of Jian James of Engineers Australia's Toowoomba Regional Group committee.

Technical presentations were delivered by eminent industry speakers from various organisations including consultancies, local government, and contractors.

The Queensland Chapter continues to pride itself as a provider for knowledge sharing and promoting technical excellence as well as enabling great networking opportunities.

The event was a huge success with over 70 attendees from all walks of engineering.

Toowoomba Tech Talks evening at the library.

The program started with a brief introduction of the AGS Queensland Chapter by Vincent Blanchet (Immediate Past Chair) and a brief update from Chris Bridges on Engineers Australia activities, which was followed by technical presentations including:

- Cressbrook Dam Safety Improvement Project – Lessons and Learnings to Date presented by Courtney Shadbolt (Toowoomba Regional Council), Janus Basson (SMEC) and Reid Baldry (Seymour Whyte).
- Managing Expansive Soils in Bulk Earthworks: Challenges and Practical Solutions Applied to a Local Project in Toowoomba by Jaxon Taylor (Engeo).
- Slope Engineering and Risks by Dr Chris Bridges (SLR).
- Toowoomba Range Rail Corridor – Slope Risk Hazards and Maintenance Strategies by Andy Law (SMEC) and Bruce Cheesman (SMEC).

These Technical Events are supported by our Annual Sponsors including Wagstaff Piling (Platinum) and Gold sponsors IGS, EDG, and Black Insitu.

Speakers, and Organising Committee at AGS Toowoomba Tech Talks 2026.

Speaker dinner, Left to Right: Jian James, Trudy Wallington, Andy Law, Bruce Cheesman, Courtney Shadbolt, Jared Priddle, Jaxon Taylor, Vincent Blanchet.

SOUTH AUSTRALIA AND NORTHERN TERRITORY

Chapter Events

The 2026 technical program commenced with the 63rd Rankine Lecture delivered by Professor Kenichi Soga, an internationally recognised leader in geotechnical and infrastructure engineering. Professor Soga drew on his extensive experience across major infrastructure projects and research to discuss how advances in geotechnical engineering were influencing the delivery and longterm performance of complex infrastructure. The presentation emphasised the importance of integrating deep technical understanding with innovation, monitoring, and sound engineering judgement to respond to increasingly complex ground conditions. Members benefited from exposure to global perspectives and challenges relevant to both research and professional practice.

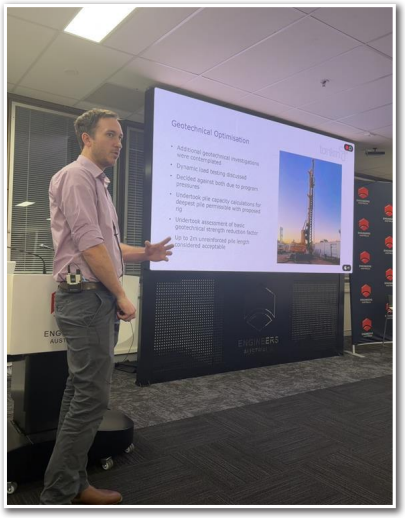
Rankine Lecture – Professor Kenichi Soga

The technical presentation in March focused on brownfield redevelopment, delivered by Scott Williams (Trilogy Consulting) and Helen Boot (Menard Oceania). The speakers examined how historical land use and legacy ground conditions influenced geotechnical risk, investigation strategies, and design outcomes on redevelopment sites. The presentation examined ground improvement techniques and methodologies suited to brownfield conditions, with a focus on selecting appropriate solutions that respond to variable ground conditions and constraints imposed by previous site use. It highlighted the importance of integrating site history, ground improvement strategies, and constructability considerations to manage risk effectively in constrained urban environments. Practical insights were shared on navigating uncertainty and ensuring geotechnical advice remained adaptable as site understanding evolved.

The SA/NT Chapter hosted an International Women's Day Walk and Talk event, providing an informal setting for members to connect outside the traditional technical forum. The event encouraged discussion and reflection on inclusion, professional experiences, and career pathways within the ground engineering community. The relaxed nature of the Walk and Talk allowed for attendees to make many meaningful connections throughout the morning, strengthening the WIAGS community across a range of career stages, and reinforcing the Chapter's commitment to fostering a welcoming and inclusive professional environment.

International Women's Day – Walk and Talk

The April technical presentation was delivered by Jordan NeisBeer of Tonkin Consulting, who examined the importance of flexibility in engineering design through a case study of a commercial development affected by challenging brownfield conditions and historical site use. The presentation described how unresolved geotechnical risks following detailed design prompted a reassessment of foundation solutions, leading to a revised design approach supported by close involvement during construction. Emphasis was placed on calibrating observed ground conditions with design assumptions, managing uncertainty as construction progressed, and maintaining adaptability in decisionmaking. The session highlighted the value of proactive geotechnical engagement in achieving improved outcomes on complex projects.



April 2026 Presentation – Jordan Neis-Beer (Tonkin)

The AGS SA/NT Chapter thanks all presenters and attendees for their contributions and looked forward to continuing a diverse program of technical presentations and networking activities throughout the remainder of the year.

Lauren Amato, SA/NT Chapter Chair

WESTERN AUSTRALIA

There has been some technical seminars and a Rankine Lecture in WA in the first few months of 2026.

Technical seminars

The technical seminars for the year kicked off in March, featuring Dr David Oliveira from Aurecon, who presented on 'Design of High-Performance Rock Bolted Thin Shotcrete Linings: From Basics to Advanced Concepts'. The talk explored how tunnels in poor to fair-quality rock can be stabilised using rock bolts and thin shotcrete linings, which work together to reinforce the rock mass, control localised failures and enable safe stress redistribution during excavation. Advanced design concepts were also covered, including fibre reinforcement, compressive membrane action and non-linear concrete behaviour, with a focus on optimising support performance under dynamic loading conditions.

The seminar was held in collaboration with the Australian Tunnelling Society (ATS) and the WA Ground Control Group (WAGCG), drawing a diverse audience of geotechnical engineers, engineering geologists, structural engineers, technicians, project coordinators and concrete technologists.

Dr David Oliveira sharing a technical seminar on high performance rock bolted thin shotcrete linings

In April, Danny David from Ventia presented on a complex rehabilitation project in a talk titled 'Ranger Uranium Mine Rehabilitation Project: TSF Dewatering for Closure, Pit 3 Wick Drain Installation & Injection Well Drilling'. The talk offered valuable insights into the challenges, innovation and teamwork required to install prefabricated vertical drains (PVDs) over water into underlying tailings, to facilitate drainage and accelerate consolidation to enable remediation. The project navigated a demanding range of challenges, including working in a contaminated marine environment and extreme weather conditions, all within the remote setting of Kakadu National Park in the Northern Territory.

David Danny sharing project challenges and solutions on the Ranger Uranium Mine Rehabilitation Project

63rd Rankine Lecture

On 24 February 2026, Perth hosted the prestigious 63rd Rankine Lecture delivered by Professor Kenichi Soga. Kenichi delivered a thorough and engaging lecture exploring how distributed sensing and data analytics are transforming geotechnical engineering, shifting the field from traditional monitoring approaches toward adaptive, performance-based design and infrastructure management.

Prof. Kenichi Soga (4th from left) in Perth following the Rankine Lecture with AGS WA members

Australian Geomechanics Society Prize, Curtin University

Each year, the AGS supports the AGS Prize at Curtin University, awarded to the recipient of the 'Best Geotechnical Research Project Award'. The prize recognises the most impactful final year project undertaken by final year undergraduate students specialising in geotechnical engineering at Curtin University. It aims to inspire undergraduate students with an interest in geotechnical engineering by recognising their work in research and projects for the betterment of geotechnical engineering knowledge and best practices.

The recipient of the AGS Prize, Curtin University this year was Harikleia Kontorinis. We extend our congratulations to Harikleia for her impressive achievement. The ceremony was held at Tim Winton Lecture Theatre hosted by Curtin University on 10 April 2026.

Donovan Lium (left) on behalf of the AGS presenting the AGS Prize, Curtin University to Harikleia Kontorinis (right).

Eddy Yong, AGS WA Chapter Chair

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The Australian Geomechanics Society was founded in 1970. Its origins lie in the National Committee of Soil Mechanics of the Institution of Engineers, Australia established in 1953 and the call for a corresponding society in rock mechanics. In 1973 the society was expanded to include the third discipline of engineering geology and has remained substantially unchanged since that date.

The society is affiliated with:

- International Association of Engineering Geology and the Environment
- International Society for Soil Mechanics and Geotechnical Engineering
- International Society for Rock Mechanics

The AGS produces *Australian Geomechanics* the newsletter and journal of the Society and specialty conferences, symposia, seminars and workshops, including the four-yearly ANZ Geomechanics conference. *Australian Geomechanics* is published four times a year. The AGS is jointly sponsored by the Institution of Engineers Australia and the Australasian Institute of Mining and Metallurgy.

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7-9	Pile Driving Contractors Association (PDCA) 26th Annual Conference & Expo - Pile Driving Around the World, Lake Buena Vista, Florida, USA *https://www.piledrivers.org/conferences-and-events/pdca-2026-annual-conference/*
10	Second ISRM Commission Conference on Estimation of Rock Mass Strength and Deformability, Colombo, Sri Lanka *https://www.slrmes.org/*
13-17	13th U.S. National Conference on Earthquake Engineering (13NCEE), Portland, Oregon, USA *https://13ncee.eeri.org/*
21-24	Australian Conference on Rock Mechanics (ACRM), Melbourne, Australia *https://australiangeomechanics.org/meetings/acrm2026/* **AGS EVENT**
AUGUST 2026	
4-6	ANCOLD 2026 Dam Operators Forum, Perth, Western Australia, Australia *https://ancold.org.au/*
4-7	12th International Conference on Short and Medium Span Bridges, Vancouver, British Columbia, Canada *https://www.smsb2026.ca/*
6-10	12th International Symposium on Field Monitoring in Geomechanics 2026, Indore, India *https://isfmg2026.com/*
11-13	Caving 2026, Ulaanbaatar, Mongolia *https://www.acgcaving.com/*
14-16	10th International Conference on Geoscience Education (GeoSciEd X), Adelaide, Australia *https://eventstudio.eventsair.com/geoscoed-conference-2026/*
24-25	4th International Conference on Geotechnical Engineering - Resilient Geotechnics for a Sustainable Future, Colombo, Sri Lanka *https://icgecolombo2026.org/*
24-26	International Conference on Advances and Innovations in Soft Soil Engineering, Delft, Netherlands *https://www.issmge.org/events/international-conference-on-advances-and-innovations-in-soft-soil-engineering-2026*
26-28	Fourth Workshop on the Future of Machine Learning in Geotechnics (4FOMLIG), Seoul, Republic of Korea. *https://fomlig2026.com/*
26-28	X Latin American Congress on Rock Mechanics - an ISRM Regional Symposium, Brasilia, Brazil *https://isrm.net/conference/show/6388*
SEPTEMBER 2026	
1-3	ANCOLD 2026 Tailings Dam Operators Forum, Devonport, Tasmania, Australia *https://ancold.org.au/*
7-8	3rd International Conference on Construction Resources for Environmentally Sustainable Technologies (CREST 2026), Cambridge, UK *https://engage-events.ifm.eng.cam.ac.uk/IC-CREST2026#/*
12-16	GeoQuébec 2026 - 79th Canadian Geotechnical Conference, Québec, Canada *https://geoquebec2026.ca/en/*
13-17	13 ICG – 13th International Conference on Geosynthetics - "Legacy, Evolution & Revolution in Geosynthetics", Montreal, Canada *https://www.13icg-montreal.org/*
13-19	AEG's 69th Annual Meeting - Moving Environmental and Engineering Geology Forward, Chattanooga, Tennessee, USA *https://www.aegannualmeeting.org/*
14-15	1st Scientific Colloquium - Large Scale Testing, Karlsruhe, Germany *https://www.ibf.kit.edu/908.php*
15-19	Eurock 2026 - Risk Management in Rock Engineering - an ISRM Regional Symposium, Skopje, North Macedonia *https://isrm.net/conference/show/6376*
16-18	Fourth International Symposium on Geotechnical Engineering for the Preservation of Monuments and Historic Sites, Athens, Greece *https://tc301-athens.com/*
20-23	The 5th International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application, Uppsala, Sweden *https://www.coufrac2026.com/*
20-24	Near Surface Geoscience Conference & Exhibition 2026, Thessaloniki, Greece *Home - EAGE NearSurface*
20-26	Damsweek 20026, Belém, Brazil *https://cbdb.org.br/evento/dams-week-2026*
21-23	2nd International Conference on In Situ Measurement of Soil Properties and Case Histories (INSITU 2026), Bali, Indonesia *https://www.insitu2026.com/*
27-30	6th SEGJ International Symposium - New Frontiers in Geophysics: From Resources to Infrastructure, Sapporo, Japan *https://sites.google.com/segj.org/is-16th/home*

CONFERENCE CALENDAR

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13-16	6th International Conference on Information Technology in Geo-Engineering, Graz, Austria *https://www.icitg2026.com/*
14-16	Hydro 2026 - Adapting to change - Embracing opportunities, Bologna, Italy *https://www.hydropower-dams.com/hydro-2026/*
26-28	2026 ANCOLD Conference - Resilient Dams, Smart Futures, Hobart, Tasmania, Australia *https://ancoldconference.com.au/*
30-6 Nov	XV IAEG World Congress, Delft, The Netherlands *https://iaeg.info/event/xv-iaeg-world-congress/*
NOVEMBER 2026	
4-6	International Conference on Performance-Based Design in Earthquake Geotechnical Engineering (PBD), Puerto Varas, Chile *https://www.pbd-v-chile.com/*
26-27	6th International Conference on Geotechnics for Sustainable Infrastructure Development, Hanoi, Vietnam *https://geotechn.vn/*
MARCH 2027	
17-19	7th International Conference on Grouting and Deep Mixing, Florence, Italy *https://dfi.org/events/upcoming-events/*
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12-14	International Symposium on Ground Improvement (IS-GI Lyon 2027,TC-211 Symposium), Lyon, France *https://www.menard-group.com/isgi-lyon2027/*
23-29	World Tunnel Congress (WTC 2027), Antwerp, Belgium *https://about.ita-aites.org/future-events*
MAY 2027	
11-13	5th International Conference on Shaft Design and Construction (SDC2027), London, UK *https://www.iom3.org/events-awards/5th-international-shaft-design-construction.html*
12-14	International Symposium Cone Penetration Testing CPT '27, Vancouver, British Columbia, Canada *https://www.cpt27.org/*
AUGUST 2027	
31-3 Sep	International Conference on Scour and Erosion (ICSE13), Porto, Portugal *https://icse13.org/*
SEPTEMBER 2027	
21-24	11th European Conference on Numerical Methods in Geotechnical Engineering (NUMGE 2027), Graz, Austria *https://www.tugraz.at/events/numge2027/*
OCTOBER 2027	
17-23	16th ISRM International Congress on Rock Mechanics, Seoul, Korea *http://isrm2027.website.or.kr*
NOVEMBER 2027	
1-4	10th International Congress on Environmental Geotechnics (10ICEG), Kyoto, Japan *https://10iceg.org/*
JANUARY 2028	
9-12	12th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground (IS-Doha 2028), Doha, Qatar *https://www.issmge.org/news/is-doha-2028-early-announcement*
MARCH 2028	
26-29	18th Panamerican Conference on Soil Mechanics and Geotechnical Engineering and Geo-Congress 2028, Chicago, Illinois, USA *https://www.geocongress.org/*
JUNE 2028	
25-30	Eurock2028 - Advances in rock mechanics and rock engineering to cope with increasingly extreme conditions, Aix-en-Provence, France *https://isrm.net/conference/show/6396*
AUGUST 2028	
12-28	38th International Geological Congress - Geosciences for Humanity, Calgary, Canada *https://www.igc2028canada.org/*
SEPTEMBER 2029	
1-5	6th International Conference on Transportation Geotechnics, Southampton, United Kingdom *https://inconference.eventsair.com/cmspreview/ictg-2029*

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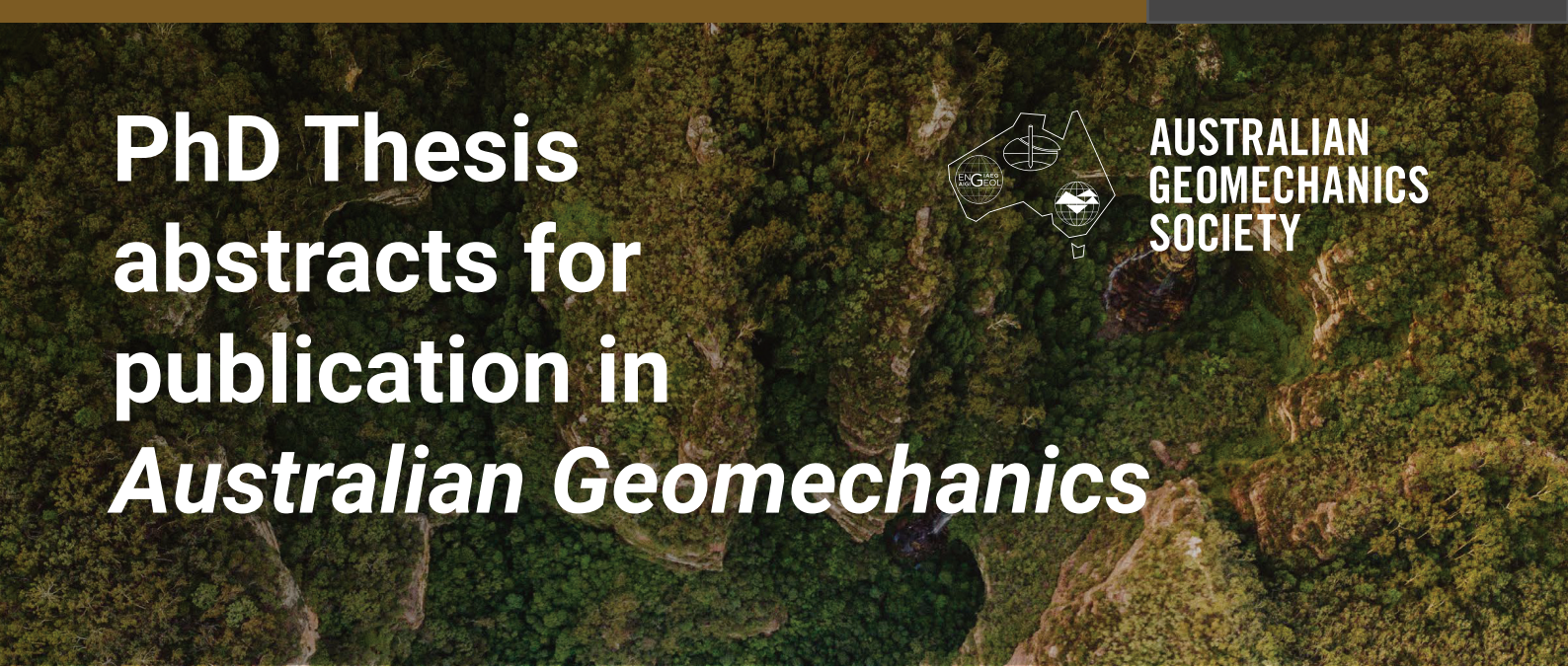

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The Australian Geomechanics Society invites PhD students to submit an abstract of their thesis completed in 2026 to *Australian Geomechanics*.

This invitation is restricted to PhD theses submitted to Australian universities and accepted as partial fulfilment of the requirements for the degree of Doctor of Philosophy and to PhD theses by Australian students submitted at overseas institutions.

The thesis should have been completed and accepted within one year of the abstract being published in *Australian Geomechanics*.

The invitation is open to all theses related to geomechanics topics. AGS requests promotion of this initiative among PhD students and academic networks.

The abstracts will be published in the March 2027 issue of *Australian Geomechanics*.

The following information is required for publication:

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Deadline: Friday 5th February 2027

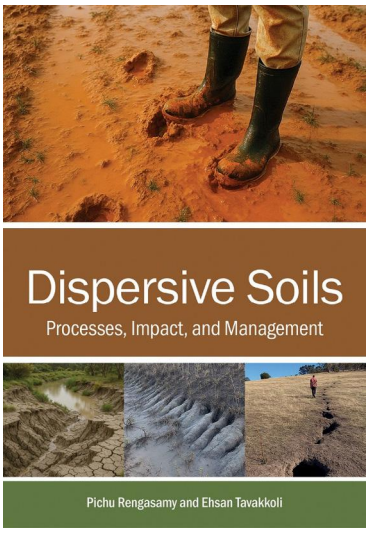
BOOK REVIEW

DISPERSIVE SOILS – PROCESSES, IMPACT AND MANAGEMENT

By: Pichu Rengasamy and Ehsan Tavakkoli

DOI: https://doi.org/10.56295/AGJ6129

When asked to review this book, I was pleased and keen to do so. My professional engineering geology background includes research into modified and stabilised clay soils, which means I have a good understanding of clay mineralogy, cement chemistry and soil science, including dispersive soils. Over the past 15 years or so I have dealt with dispersive soils in earthworks in QLD, specifically their identification and potential remediation as well as being involved from a client's perspective. However, I have tried to review "Dispersive Soils" from the perspective of a practising, generalist geotechnical engineer or engineering geologist without a deep understanding of soils science and dispersive soils chemistry.



Scope and structure

The book is split into a preface and eight chapters, each one with a comprehensive list of references.

The Preface contains the Authors' purpose of the book, which is "both a synthesis and a call to action", with the aim of resolving the "long-standing conundrum of sodic/dispersive soils - to clarify their chemical dynamics, connect these to their physical expressions and provide practical, sustainable remediation strategies'.

Chapter 1 clearly distinguishes between sodic soils and dispersive soils; sodic soil is defined as a soil with a high proportion of sodium ions relative to other cations on the soil's exchange sites (i.e. chemical), whereas a dispersive soil is defined by its behaviour when wetted (i.e. physical). The opening chapter focuses on this difference in detail and discuss the rationale for a dispersive, rather than sodic, soil focus. According to the authors the academic and professional soil community has increasingly embraced this change in recent years, and revised soil classification schemes now emphasise dispersion characteristics alongside or in place of traditional sodicity classes.

Chapter 2 outlines the key processes involved in the formation of dispersive soils beginning with an examination of natural and anthropogenic salinization processes. The chapter also introduces the physio chemical basis for clay dispersion, differentiates between dispersive saline and saline soils, and provides an overview of the global distribution and mapping limitations of dispersive soils with particular emphasis on Australian landscapes.

Chapter 3 discusses the soil chemistry principles relevant to clay dispersion from soil aggregates, the mechanisms of clay dispersion from soil aggregates, the physical behaviour of dispersive soils, and the impact on soil mechanics and engineering properties. The content of this chapter is most pertinent to the geotechnical professional even though the details are, understandably, "chemistry heavy". Discussions around exchangeable cations, the development and ionicity and covalency indices for clay cation bonds, the concept of dispersive potential, and the mechanisms of flocculation of soil aggregates in dispersive soils are covered in detail. Some mention is made of the impact of dispersive soils on soil shear strength and bearing capacity, in terms of shrink swell behaviour, foundations and road subgrades. The influence of dispersive soils on Atterberg limits is also briefly discussed.

Chapter 4 describes impacts on agriculture and management of dispersive soils. The text begins by stating dispersive soils represent a major challenge to sustainable agriculture landscape stability and environmental resilience across vast agricultural regions, and continues to talk about constraints to crop production, yield reduction and the principles of managing dispersive soils. A handy table (Table 4.1) which summarises key problems and management principles for dispersive and saline-dispersive soils across different pH conditions, and a second table summarising the key amelioration methods for managing dispersive and sodic soils, including their expected outcomes and practical limitations (Table 4.2), are provided. This chapter elaborates on chemical amendments to soils including gypsum, lime, organic amendments with chemical properties, calcium chloride and other salts, and emerging materials (e.g. phosogypsum, nano-gypsum, chelated calcium compounds and various others). Mechanical interventions, biological approaches and water management are also discussed.

Chapter 5, titled "Irrigation and Dispersive Soils", explores how irrigation practises contribute to the formation and intensification of dispersive soils, and critically examines the metrics and indices used to evaluate and manage irrigation water quality in such systems. This chapter, like Chapter 3, contains detailed descriptions of soil chemistry and cation exchange. Chapter 5 concludes that the quality of irrigation water is a critical determinant of soil structural stability and long-term productivity in irrigating systems.

Dispersive soils represent a significant challenge for environmental sustainability, ecological function, and resilience of civil infrastructure, so say the Authors, and this is discussed in Chapter 6 which focuses on the broader ecological, environmental, and infrastructural consequences of dispersive soils and considers both the mechanisms of degradation and possible avenues for mitigation. Descriptions of the mechanisms of various types of soil erosion are provided, including tunnel erosion, sinkholes, sheet erosion, rill and gully erosion, with some interesting black and white photos. Damage to civil engineering infrastructure is briefly discussed, including piping in earth dams, dispersive soils and landslides, quick clays and impacts to soil strength and bearing capacity. The chapter also briefly discuss the amelioration of soil dispersivity for engineering purposes.

Chapter 7 is titled "Identification of Dispersive Soils" and provides a comprehensive guide to identifying dispersive soils, beginning with traditional physical tests (the crumb, pinhole, and double hydrometer methods), followed by chemical indices (exchangeable sodium percentage (ESP), sodium adsorption ratio (SAR) as well as cation ratio of soil structural stability (CROSS) and its recent refinement, cationic charge ratio for soil structural stability (CROSSc). Emerging techniques and integrated approaches in dispersivity identification are also discussed including AI based predictive models, dielectric and geophysical assessments, remote and proximal sensing, and others. The main takeaway from the Authors, as a geotechnical practitioner, was that the identification of dispersive soils should not be constrained to isolated one-off tests (e.g. crumb tests). Instead, an evolving toolkit of laboratory, geospatial, and AI enabled methods should be used to support integrated multiscale diagnostics.

Chapter 8 outlines the critical knowledge gaps and innovation priorities that should be addressed to manage dispersive soils effectively. Building on the classification, mechanisms, and management strategies previously covered in the book, this final chapter moves from a national to a global perspective, drawing on recent advances in diagnostic tools, biological restoration, eco engineering and digital monitoring.

Overall Assessment

To conclude, I found the book "Dispersive Soils" by Pichu Rengasamy and Ehsan Tavakkoli to be useful and informative. In my opinion, the book's target audience are those operating in agricultural and soil science, rather than civil or geotechnical engineering. The important distinction between sodic and dispersive soils is clearly defined, and tables relating to key problems and management principles for dispersive soils may be of use to some. This book would be most useful for geotechnical practitioners with an interest in soil science and regular interaction with dispersive soils.

Bari Thomas

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https://www.publishing.csiro.au/book/8207

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TC202 – Transportation	Buddhima Indraratna	**Nominated by Chair**
	Mahdi Miri Disfani	Nominated member
	Mohamed Shahin	Nominated member
	Daichao Sheng	Corresponding member
	Shanyong Wang	Corresponding member
	MD Mizanur Rahman	Corresponding member
	Cholachat Rujikiatkamjorn	Corresponding member
TC203 – Earthquake	Ivan Gratchev	Nominated member
	Behrooz Ghahremannejad	Corresponding member
TC204 – Underground Construction	Hugo Acosta-Martinez	Nominated member
TC205 – Safety and Serviceability	Behzad Fatahi	Nominated member

AGS REPRESENTATION ON ISSMGE TECHNICAL COMMITTEES (CONT.)

TECHNICAL COMMITTEE	NAME	CATEGORY
TC206 – Observational Method	David Zhang	Nominated member
	Jinsong Huang	Corresponding member
TC207 – Soil-Structure		
TC208 – Slope Stability	Meysam Safavian	Nominated member
	Allan Herse	Corresponding member
TC209 – Offshore	Phil Watson	**Chair**
	Noel Boylan	Nominated member
	Christophe Gaudin	Nominated member
	Muhammad Shazzad Hossain	Corresponding member
	James Doherty	Corresponding member
	Shiao Huey Chow	Corresponding member
TC210 – Embankment Dams	Behrooz Ghahremannejad	Nominated member
	Meysam Safavian	Corresponding member
TC211 – Ground Improvement	Babak Hamidi	**Chair**
	Hadi Khabbaz	**Vice Chair**
	Chenhui Lee	Nominated member
	Buddhima Indraratna	Nominated member
	Shanyong Wang	Corresponding member
	Bosco Poon	Corresponding member
TC212 – Deep Foundations	Allan Herse	Nominated member
	Bosco Poon	Nominated member
	Barry Lehane	Corresponding member
	Bindumadhava Aery	Corresponding member
	Partha Mishra	Corresponding member
	Hossein Ahmadi	Corresponding member
TC213 – Scour and Erosion	Ha Bui	Nominated member
	Adnan Sufian	Corresponding member
	Scott Draper	Corresponding member
	Negin Yousefpour	Corresponding member
TC214 – Soft Soils	Shiao Huey Chow	Nominated member
TC215 – Geo-Environmental	Malek Bouazza	Nominated member
	Behzad Fatahi	Corresponding member
TC216 – Frost	Daichao Sheng	**Chair**
	Adrian McCallum	Nominated member
TC217 – Land Reclamation	David Zhang	Nominated member
	Hadi Khabbaz	Nominated member
TC218 - Reinforced Fill Structures	Antonio Ramirez Martinez	Nominated member
TC219 - System Performance		
TC220 - Field Monitoring	Peter Lamb	**Nominated by Chair**

AGS REPRESENTATION ON ISSMGE TECHNICAL COMMITTEES (CONT.)

TECHNICAL COMMITTEE	NAME	CATEGORY
TC221 - Tailing and Mine Wastes	Hongjie Zhou	Nominated member
	Adrian Russell	Nominated member
	Andy Fourie	Corresponding member
	David Reid	Corresponding member
TC222 - Geotechnical BIM and DT	Qianbing Zhang	Nominated member
	Mengqi Huang	Nominated member
TC301 – Historic Sites		
TC302 – Forensic	Bindumadhava Aery	Nominated member
	Malek Bouazza	Nominated member
	Sanjay Nimbalkar	Corresponding member
TC303 – Floods	Hadi Khabbaz	Nominated member
	Buddhima Indraratna	Corresponding member
TC304 – Risk	Jinsong Huang	Nominated member
	Burt Look	Nominated member
	Mark Jaksa	Corresponding member
	Ashley Dyson	Corresponding member
	Jianfeng Xue	Corresponding member
TC305 – Megacities	Sanjay Nimbalkar	Nominated member
TC306 – Geo Education	Kurt Douglas	Nominated member
	David Airey	Nominated member
	Mark Jaksa	Corresponding member
TC307 – Sustainability	MD Mizanur Rahman	**Vice Chair**
	Ali Tolooiyan	Nominated member
	David Hull	Nominated member
	Javad Yaghoubi	Corresponding member
TC308 – Energy Geotechnics	Guillermo Narsilio	**Chair**
	Shanyong Wang	Nominated member
	Asal Bidarmaghz	Nominated member
TC309 – Machine Learning	Ali Karrech	Nominated member
	Behzad Fatahi	Nominated member
	Jinsong Huang	Corresponding member
	Hao Shen	Corresponding member
	Negin Yousefpour	Corresponding member

AGS REPRESENTATION ON ISRM COMMISSIONS AND JOINT TECHNICAL COMMITTEES

The current list of ISRM Commissions is the following. ISRM Members wishing to participate in the work of any of the Commissions shall contact the respective Chair.

COMMISSION	CHAIR	EMAIL	MEMBER FOR AUSTRALIA
Artificial Intelligence in Rock Mechanics and Rock Engineering	Dr. Hongkyu Yoon	hyoon@sandia.gov	Joung Oh
Beyond Limits: Rocks in the Face of Extreme Conditions	Dr Wasantha Liyanage	wasantha.pallewelaliyanage@vu.edu.au	Ranjith Pathegama Gamage, Samintha Perea, Pabasara Wanni-arachchige
Bio-Rock Mechanics	Hitoshi Matsubara	matsbara@tec.u-ryukyu.ac.jp	
Coupled Thermal-Hydro-Mechanical-Chemical Processes in Fractured Rock	Jonny Rutqvist	jrutqvist@lbl.gov	
Crustal Stress and Earthquake	Prof. Furen Xie, Dr Jiayong Tian	xxiefr@263.net; chenlitedtian@263.net	Mojtaba Rajabi
Estimation of Rock Mass Strength and Deformability	Prof. Pinnaduwa Kula-tilake	kulatila@arizona.edu	Hossein Masoumi
Deep Mining	Dr Abbas Taheri	abbas.taheri@queensu.ca	Murat Karakus, Ranjith Pathegama Gamage, Sevda Dehkhoda
Design Methodology	Prof. Xia-Ting Feng	fengxiating@mail.neu.edu.cn	Mostafa Sharifzadeh
Discontinuous Deformation Analysis - DDA	Prof. Yu-Yong Jiao; Prof. Gao-Feng Zhao	yyjiao@cug.edu.cn; gaofeng.zhao@tju.edu.cn	Shan-Yong Wang
Earthquake Motions in Rock Engineering - EMIRE	Dr Naoki Iwata	n.iwata@cecnet.co.jp	Selahattin Akdag
Mechanics of Ancient Rock Structures - MARS	Dr. Takafumi Seiki	tseiki@cc.utsunomiya-u.ac.jp	
Planetary Rock Mechanics	Serkan Saydam	s.saydam@unsw.edu.au	Joung Oh
Radioactive Waste Disposal	Dr Ju Wang	wangju9818@163.com	
Risks and Reliability in Rock Slope Engineering	Neil Bar	neil@geckogeotech.com	Phil de Graaf
Rock Dynamics	Prof. Jianchun Li	jcli@seu.edu.cn	Jian Zhao
Rock Grouting	Mohamed El Tani	md.eltani@rockgro.com	
Rock Weathering and Erosion	Yanli Huang; Zhongwei Chen	huangyanli@cumt.edu.cn; zhongwei.chen@uq.edu.au	Zhongwei Chen
Rockburst	Prof. Manchao He	hemanchao@263.net	Murat Karakus, Ismet Canbulat
Soft Rocks	Prof. Xiaoming Sun	sxmcumtb@163.com sxmcumtb@163.com	Mostafa Sharifzadeh
Sorptive Rocks and Engineering	Dr. Shimin Liu, Dr. Yixin Zhao	szl3@psu.edu; zhaoyx@cumtb.edu.cn	
Testing Methods	Prof. Dr Reşat Ulusay	resat@hacettepe.edu.tr	Sevda Dehkhoda
Ultradeep Rock Mass Mechanics and Engineering	Prof. Yangsheng Zhao, Prof. Derek Elsworth	y-s-zhao@263.net; elsworth@psu.edu	Ranjith Pathegama Gamage

JOINT TECHNICAL COMMITTEE			
JTC 1 - Joint Technical Committee on Natural Slopes and Landslides	Gonghui Wang	Wang.gonghui.3r@kyoto-u.ac.jp	
JTC 2 - Representation of Geo-engineering Data in Electronic Form	Hehua Zhu	zhuhehua@tongji.edu.cn	
JTC 3 - Education and Training	D. Jean Hutchinson	hutchinj@queensu.ca	
JTC 4 - Environment and Geo-Engineering Sustainability			

EDITORIAL POLICY

Australian Geomechanics is published quarterly, in March, June, September and December, by the *Australian Geomechanics* Society. The magazine is edited and produced by the Australian Geomechanics Society. It provides a journal and news magazine for matters of interest to the Australian geotechnical community. The statements made or opinions expressed do not necessarily reflect the views of the AGS.

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All technical papers submitted to *Australian Geomechanics* should be accompanied by a signed AUTHOR DECLARATION FORM which can be downloaded from the AGS website.

No technical paper will be processed unless the form is submitted.

Material will be accepted at any time and published in the next available issue.

The Editorial Panel of *Australian Geomechanics* seeks contributions for future editions. The following comments are offered to assist would-be contributors.

Contributions can include: refereed technical papers; technical papers or notes; or news items and reports.

Technical papers can be refereed to ensure that they are of a standard similar to those published in international geotechnical journals. Authors should aim for a maximum overall length of no more than 10 pages, although shorter papers or technical notes are particularly welcome. Authors should indicate if they want their submission to be refereed; the status of the paper will be indicated on publication.

Refereed technical papers should be original and:

- Papers on geotechnical engineering, engineering geology and environmental geomechanics. Papers should be topical, practically oriented and preferably of national interest. Case studies describing innovative geotechnical work are particularly encouraged.
- Papers on geotechnical or geoscience research undertaken in Australia or of relevance to *Australian Geomechanics*. These should clearly indicate their practical relevance and limitations.
- Authoritative reviews of aspects of geotechnical practice or aspects of geotechnical education.

Technical papers or notes can be: Items as above but submitted for rapid publishing. These will not be refereed but will be reviewed. They will be accepted at the discretion of the editorial panel. The intention is to provide a source for rapid dissemination of technical material to the geotechnical community.

- Discussions on papers published in previous editions.
- News items and reports can be: Items describing significant projects, instructive failures, conferences, courses or other matters of general interest to the Australian geotechnical community.
- Geotechnical book reviews.
- Letters to the Editor.

It is preferable for contributors to submit formatted text, tables and figures in electronic format using Microsoft Word on Windows or Mac compatible hardware. If containing equations a PDF file should also be submitted.

It is preferable that submitted papers are presented in a specific format, detailed below. Papers that have not been properly formatted prior to submission, and are provisionally accepted, will be returned to authors to address peer review comments and proper formatting. A formatted template for technical papers in *Australian Geomechanics* is available for download from the AGS website: https://geomechanics.org.au/australian-geomechanics-journal/editorial-policy/

Details of the correct journal format are:

- Single column format on A4 paper.
- Left and right margins of 20 mm.
- A top margin of 30 mm and a bottom margin of 25 mm.
- 10 point character size of Times New Roman font with single (normal) line spacing.
- Text should be formatted to have 6 pt after paragraphs and after headings.
- No indent at the beginning of paragraphs.
- Title of Paper in 14 point Times New Roman, bold, uppercase, and centred in column.
- Main headings numbered 1, 2, 3…. etc. in 12 point Times New Roman, bold, upper-case and centred in the column.
- Sub-headings numbered 2.1, 2.2, 2.3 … etc. in 10 point Times New Roman, bold, upper-case and left justified.
- Minor headings numbered 2.1.1, 2.1.2 … etc. in 10 point Times New Roman, bold, lower-case and left justified
- Items in bulleted or numbered lists should not be separated by a

line, but should be indented by 10 mm.

- Formulae typed and numbered (1), (2), (3) … etc. and centred in the column.
- Captions for figures should be placed beneath the item and numbered Figure 1.
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- Figures and tables should be referred to in the text as Figure 1, Table 1, etc.
- Figures and tables should be centred in the column.
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- In text citation according to the Harvard system of author (year) or (author, year) as appropriate. Multiple references should be separated by semicolons (author 1, year 1; author 2, year 2)
- References should be listed at the end of the paper in alphabetical order using the Harvard system: Author (year) title, publication, volume, pages, publisher with a 10 mm hanging indent and no blank line between each.
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FIGURES AND TABLES

All the journal is published in colour.

Where possible figures and tables should be placed at the correct position in the text. Figures should be imported into the document as a single image and not constructed in the word document. These should be sharp and of the correct size for incorporation into the finished document. The width of these must be less than or equal to the width of the text column (165 mm).

Where images are included in the paper they should be sent as a separate JPEG file to improve the picture resolution.

Photographs should preferably be good contrast gloss prints and of the correct size for incorporation directly into the copy. Please ensure that all such items are clearly marked to indicate position in paper.

EDITORIAL CONTACTS

The Editor is Hugo Acosta-Martinez, and the Editorial Panel consists of the Executive and State Chapter Representatives on the AGS National Committee.

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Submit Manuscript button on the AGS Scholastica website:
https://ags.scholasticahq.com
or
Submit using Scholastica button on the AGS website:
https://geomechanics.org.au/journals/

Correspondence other than submission of, and queries about, technical papers, may be emailed to:

Editor, *Australian Geomechanics*
E-Mail editor@@geomechanics.org.au

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Every three months, *Australian Geomechanics* reaches more than 2500 professional geotechnical engineers and engineering geologists spread throughout Australia. Most of these are associated with significant site investigations, construction and computer analysis. So *Australian Geomechanics* provides a very targeted delivery for advertising.

Advertising rates include GST and from the 1st January 2020 are:

SIZE*	ONE ISSUE	TWO ISSUES	FOUR ISSUES
Cover Page	$1330	$1920	$3330
Full Page	$1030	$1760	$2640
Half Page	$530	$990	$1320
Quarter Page	$300	$480	$740

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* Files should be supplied at correct size with at least 3 mm bleed for designs that print to the edge of the page.

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Inserts into an individual mail-out of *Australian Geomechanics* can be accepted at a minimum charge of $1330 (including GST).

Advertising queries should be addressed to:

Sara Lanesman, Email: *lanesman@optusnet.com.au*

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If required AGS can arrange the design of adverts for *Australian Geomechanics*. The advertiser shall provide logo (high resolution), heading, text content, other images (photos) and style guide (if advertiser has one), otherwise styles and colours will be made similar to company's website styles or other provided media.

AGS will provide 1-2 design options and allow for two revisions of the chosen concept.

AD SIZE	APPROX. MAXIMUM WORD COUNT	COST
Full Page	250	$350
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Quarter Page	75	$150

If design is required, material should be submitted no later than the first business day of February for the March issue, May for June, August for September and November for the December issue.