

# ACEG 2025

## 1st Australian Conference on Engineering Geology

### 23-25 July 2025

**Defining the Next Challenges for Engineering Geology  
– Shaping our Future Together**



**AUSTRALIAN  
GEOMECHANICS  
SOCIETY**



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# Conference Welcome

The AGS and IAEG are delighted to invite you to attend the inaugural Australian Conference on Engineering Geology. The conference will bring together geopractitioners from around the country who work on engineering and geohazard projects. The aim is to showcase the valuable work being carried out by engineering geologists to support Australia's economic and social development.

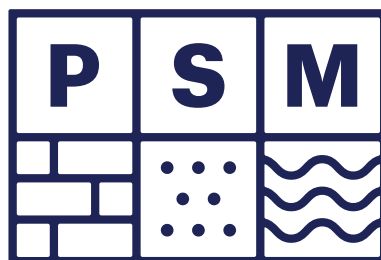
## Acknowledgement of Country



The ACEG 2025 organising committee acknowledges that we are meeting on the traditional Country of the Turrbal people of the Brisbane and pays respect to Elders past and present. We recognise and respect their cultural heritage, beliefs and relationship with the land. We acknowledge that they are of continuing importance to the Turrbal people living today.

# Gold Sponsors

We are grateful for the generous support of our sponsors.  
Their contributions make this conference possible.



# Sponsors

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## CONFERENCE PARTNERS



# 1<sup>st</sup> Australian Conference on Engineering Geology Brisbane - Queensland, Australia July 2025

## ORGANISING COMMITTEE

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<b>Megan Packer</b>	Co-Chair	PSM
<b>Christopher Bennett</b>	Co-Chair	GHD
<b>Mark Eggers</b>	Technical Committee	PSM
<b>Anthony Bowden</b>	Technical Committee	Bowden Geotechnical
<b>Jon Gibbs</b>	General Manager	Australian Geotechnical Society Limited

## SUB-EDITORS

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<b>Alex Petty</b>	Civil Infrastructure	PTG Consulting
<b>Felicia Weir</b>	Mining	PSM
<b>Nick Roberts</b>	Geohazards	State Growth
<b>Tim Mote</b>	Energy	GHD

## REVIEWERS

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<b>Andrew Barclay</b>	<b>Jason Hellmuth</b>	<b>Andy Law</b>
<b>Joanna Sylvester</b>	<b>Bari Thomas</b>	<b>Julia Bota</b>
<b>Chris Hathaway</b>	<b>Nick Roberts</b>	<b>Christopher Bennett</b>
<b>Marc Hendrickx</b>	<b>Craig O'Neill</b>	<b>Mark Eggers</b>
<b>Darren Paul</b>	<b>Martin Brook</b>	<b>Debra Fellows</b>
<b>Megan Packer</b>	<b>Felicia Weir</b>	<b>Peter Elson</b>
<b>Graeme Jardine</b>	<b>Ross Roberts</b>	<b>Helen Baxter-Crawford</b>
<b>Tim Cartledge</b>	<b>Ian Shipway</b>	<b>Tim Nash</b>

## FIELD TRIP GUIDES

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<b>Warwick Wilmot</b>	Maleny Bus Trip
<b>Laurie Hutton</b>	Brisbane Walking Tour

## PUBLISHED BY

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**Australian Geomechanics Society Limited**

# Organising Committee Chairs' Welcome

## Welcome to the 1st Australian Conference on Engineering Geology (ACEG)

It is with great enthusiasm that we welcome you to the inaugural Australian Conference on Engineering Geology (ACEG), taking place in Brisbane, Australia, from 23 to 25 July 2025. This landmark event is the first of its kind in the country, dedicated to enhancing the profile of engineering geology and celebrating the invaluable contributions of the professionals who contribute to our industry. Engineering geology is often overlooked by institutions, owners and companies as a key part of developing and maintaining infrastructure and mining in Australia. In the absence of a firm knowledge in how to apply geological understanding to engineering then key decisions can be missed. This application of geology was established in Australia through many of the previous practitioners like Daniel Moye, David Stapledon, and Alan Moon who helped shape how we investigate, describe, record and construct with the geological model and engineering application both in mind.

Supported by the Australian Geomechanics Society Limited (AGS) and the International Association for Engineering Geology and the Environment (IAEG), along with industry partners including the Australian Institute of Geoscientists (AIG) and the Geological Society of Australia (GSA), this conference is a testament to the collaborative efforts of organisations committed to fostering career development, expanding technical knowledge and supporting engineering geology as a specific discipline.

With approximately 40 industry specific technical papers, two keynote speakers, three invited speakers, and a panel session, ACEG 2025 offers a diverse and engaging program that highlights both the latest advancements and the enduring challenges within engineering geology. We are fortunate to have local engineering geologist, Warwick Wilmot, host the field trip to Maleny to view the landslides of the basalt terrains. Warwick's extensive publications have significantly contributed to the understanding of the southeast Queensland (and beyond) geological landscape. For those staying more local on Friday, Laurie Hutton is kindly providing a walking tour of the city and its geology.

This conference is more than an opportunity to exchange technical insights; it is a celebration of the people who drive progress in engineering geology. We are delighted to have had the opportunity to bring together researchers, practitioners, and industry leaders to forge meaningful connections, inspire innovation, and strengthen the community that underpins this essential field.



**Christopher Bennett**  
*ACEG Co-Chair*



**Megan Packer**  
*ACEG Co-Chair*

# Technical Committee Welcome

Dear Attendees,

On behalf of the Technical Committee we welcome you to the first ever conference in Australia dedicated to Engineering Geology. The idea for this conference was born over a beer after a long day teaching in the field on the Adelaide based Geology for Engineers course. We were reflecting on the state of our profession in Australia and felt it was time that Engineering Geology had a stronger voice in the engineering and geohazard communities. The idea for this conference is to bring Engineering Geologists together to learn, collaborate, spark ideas and build more connections. Consider this gathering as a starting point with the vision to repeat this conference every four years to help keep the conversations and connections going in the long term.

Technically we have four themes centred around engineering geology in mining, energy, civil infrastructure and geohazards with around 40 papers, two keynote and several invited speakers from Australia, China, Nepal, Canada and New Zealand. We also have a panel discussion, which is an opportunity to talk about current issues centred around education, training and professional registration.

This is a conference of the Australian Geomechanics Society, which is the Australian National Group of the International Association for Engineering Geology and the Environment. We sincerely thank the AGS for wholeheartedly embracing the idea for this conference and making a commitment to future ACEG events in the future. The IAEG is the organisation that represents our profession at the international level and we encourage all Engineering Geologists in Australia to be affiliated to the IAEG via membership of the AGS. Being involved in IAEG events and initiatives around the world is a fantastic way to take your engineering geology experience to the next level and see the strength of our profession in the global setting.

Thank you for participating in this conference, we hope you find it a memorable and fulfilling experience.



**Mark Eggers**  
*IAEG Advisory Committee*



**Anthony Bowden**  
*IAEG Vice-President for Australasia*

# Australian Geomechanics Society National Chair Welcome

## Welcome from the AGS National Chair

In a guest editorial for Australian Geomechanics in December 1999, Fred Baynes included a personal ad:

*SEEKING SIMILAR.....*

*Consulting engineering geologist, gosh [good sense of humour], social drinker, occasionally argumentative, enthusiast, seeks similar to develop ideas, synergy, commercial opportunities. Is it possible to connect?*

I want to welcome you to the 1st Australian Conference on Engineering Geology, what might be the ultimate 25 year response to Fred's personal ad. Little could anyone have imagined that the passage of time would bring what I now see in the conference program from Fred is a formal call to arms!

In all seriousness, Fred's editorial from 1999 is insightful, because parts of it could have been written this cool Brisbane month of July 2025. An Australian scheme for the registration of engineering geologists has not been satisfactorily resolved, and the paucity of engineering geology courses in Australia is more acute now than then. On the question of whether engineering geology is suitably appreciated by the broader geotechnical engineering community, this will always be hard to define or measure (unless anchored to the two issues of the previous sentence), but my suspicion is that some engineering geologists practicing through the last three decades may not have perceived much change. The reasons for this state of affairs are complex and to some degree may extend into market forces and educational trends that are hard to influence. But opinions vary. You can find Fred's editorial on the AGS website, as you can the September 2024 issue of Australian Geomechanics dedicated to Engineering Geology, with related editorials from several of you. There is much to discuss at ACEG1, and to occasionally argue about.

I want to thank the speakers and authors who have taken the time to engage, mostly on topics of immediate interest to Australian practice. And for wider context, just from the keynote and invited speakers, I look forward to hearing about the management of geohazards in China, Nepal and New Zealand, as well as mines in Canada and engineering geological models everywhere.

Finally, I want to thank Mark, Anthony, Megan and Christopher for their time and efforts on the organising committee, and the AGS General Manager Jon Gibbs for his efforts in supporting the planning. From preparing a proposal I read in early 2024 to making 'it' all happen, there is a lot of work, especially when considering that 'it' is an inaugural event, the stuff of precedent and future tradition.

I look forward to the conference and to speaking with many of you.



**Timothy Thompson**  
*Australian Geomechanics Society National Chair*

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# Keynote Speakers



**Xuanmei Fan**

*Director, State Key Laboratory of Geohazard Prevention and Geoenvironment Protection (SKLGP), Chengdu University, China*

This lecture explores advancements in engineering geology, including China's extensive experience in disaster risk reduction and innovative technologies such as big data analytics, artificial intelligence, advanced remote sensing, and numerical and physical modelling. It emphasizes how these developments can address multi-hazard risks and support sustainable development in an era of rapid climate change.

**BIOGRAPHY**

Professor Dr. Xuanmei Fan is the Paul Marinos Distinguished World Lecturer and is the Director of the State Key Laboratory of Geohazard Prevention and Geoenvironment Protection (SKLGP) at Chengdu University of Technology, China. She obtained her PhD in Engineering Geology from the Faculty of Geo-Information Science and Earth Observations (ITC) at the University of Twente, Netherlands. Her research focuses on earthquake- and climate change-induced geological hazard chains, long-term landscape evolution, and disaster risk reduction. Her work has been extensively applied in emergency response and rescue operations following major earthquakes. Prof. Fan has served as the Principal Investigator for more than 20 national and international research projects, including a UK-China collaboration project, European initiatives, and multiple projects funded by the National Natural Science Foundation of China (NSFC). As the founding chair of the Global Partnership for Smart Informatics and Multi-hazard Reduction (SIMR), she seeks to address global challenges associated with increasing multi-hazard risks and climate change in a rapidly evolving world.



**Fred Baynes**

*Engineering Geologists – A Call to Arms!*

The implementation progress of the IAEG C25 Guidelines on Engineering Geological Models will be reviewed and lessons learnt during the roll out will be discussed. Some outstanding issues facing engineering geologists within Australia that require further effort will be suggested along with a global perspective of key issues that engineering geologists will face and their potential future contributions.

**BIOGRAPHY**

Fred Baynes was educated in the UK, obtaining a BSc in geology from Bristol University, an MSc in engineering geology from Imperial College and a PhD from Newcastle University relating to research on weathered rocks. After working for a site investigation contractor in the UK for a couple of years, he immigrated to Australia in 1980, where he has worked as an engineering geologist for contractors, consultants and utilities. Since 1996, Fred has been an independent consultant-engineering geologist with a continuing love of fieldwork and is now based in Central Victoria, Australia. He provides advice to major projects in the civil, mining and oil and gas sectors throughout the world. The advice provided invariably centres around "getting the geology right" and developing effective engineering geological models of all sorts to facilitate project delivery. He regularly teaches engineering geology and geology for engineers to both undergraduates and practitioners and has developed and delivered a variety of professional development courses. He has been actively involved in the IAEG since 2002 and had the honour of serving as President between 2006 and 2010.

# Invited Speakers



**Dr Ranjan Kumar Dahal**

*Uncovering geohazards impacting infrastructure in the Himalayas*

This presentation will illustrate and discuss the broad range of geohazards affecting Himalayan infrastructure and society. It will discuss the part that engineering geologists are playing to address these problems and will review the impact that they and other ground engineering professionals are having on a range of projects.

## **BIOGRAPHY**

Dr Dahal is Vice President for Asia of the IAEG and is an associate Professor of engineering geology at Tribhuvan University and a visiting professor at the Universities of Ehime and Kagawa in Japan. He has consulted extensively on projects in the Himalayas and in particular in his home nation of Nepal.



**Prof D Jean Hutchinson**

*The impact of industry supported field courses on educational and professional outcomes*

This presentation will reflect on a field school that Prof. Hutchinson taught during her career, and which covered the mining cycle and all the ways that Geological Engineers could have an impact. This course was a significant contributor to the engagement of Geological Engineers in the mining industry in Canada and on the way that mine closure planning is done.

## **BIOGRAPHY**

Jean Hutchinson is Professor Emerita at Queens University Canada. President of Innovative Geomechanics Inc. past Vice-President for North America of the IAEG and currently a member of the IAEG Advisory Committee. During her years as Professor in Geological Engineering at Queen's University, she conducted research into slope stability (open pit and natural) and landslide hazards and risks, risk-based decision-making using monitoring techniques, applications utilizing LiDAR surveys, with applications to landslides adjacent to hydro reservoirs, and ground hazards affecting railway corridors.



**Don Macfarlane**

*Landslides and reservoirs, the Clyde dam experience*

This presentation will outline the role of engineering geology in the scoping and management of the investigations, design and construction of remedial works undertaken on 10 large landslides flanking the Clyde Dam reservoir prior to lake filling in 1992-93. It will outline the ongoing management and performance of the landslides and the role of engineering geology in that work.

## **BIOGRAPHY**

Don Macfarlane is an applied engineering geologist with more than 45 years of experience as consultant, manager and reviewer in investigation, construction and monitoring aspects of dam and other infrastructure projects, slope stability assessments and groundwater investigations in a range of geological environments, mostly in Australia and New Zealand.

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# Field Trips



**Warwick Wilmot**

*Landslide prone environments on basalt terrains in the Glasshouse Mountains*

The slopes of the Maleny Plateau in the Glass House Mountains are well known to be prone to landslides. This field trip will visit several local sites to view the basaltic geology, its structure, the derived colluvial soils and the impacts of ground water outflows on ground stability.

## **BIOGRAPHY**

Warwick Wilmot is a retired geologist who has had a wide experience in Queensland where he was employed since 1972 by the Geological Survey of Queensland in the Department of Mines. For 30 years he worked in a variety of fields, including engineering geology of dam sites, location of construction resources, mapping of urban areas, land use planning, and geological hazards.

Warwick likes to bring geology to the public, and since his retirement has written and edited numerous guidebooks in a 'Rocks and Landscape' series for the Geological Society of Australia, and has assisted national park and council staff with information signs and brochures, as well as hosting numerous public talks, community lectures and excursions.

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**Laurie Hutton**

*Walking tour of Brisbane Geology*

This half-day walking tour of Brisbane City will explore the two principle geological units within which much of the Brisbane is constructed.

The Neranleigh Fernvale beds underlie much of the Brisbane CBD and therefore form the bedrock to almost all the high-rise development we see today. During the walk we will discuss how the geological history of these rocks has impacted the engineering of the city buildings.

The Brisbane tuff will be examined during the walk along the Kangaroo Point cliffs and perhaps some cliffs on the north side of the river toward New Farm. These cliffs preserve more than 20 metres of hard rock which was used extensively as a building stone for much of Brisbane's history. Its impact on the development of Brisbane will be discussed on the walk. As we will be walking beside the Brisbane River, we will also comment on the effects of the river on the city's development. We can also observe some recent sediments and discuss how we as geologists use these deposits to interpret older depositional settings.

## **BIOGRAPHY**

Laurie Hutton is a retired Queensland geologist. He was employed for many years by the Geological Survey of Queensland as part of a team producing geological maps and has worked extensively around Queensland. Laurie retired in 2019 but maintains an active interest in geology through the Geological Society of Australia.

# Program

## Tuesday July 22<sup>nd</sup> 2025 – Pre-Conference

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**16:00 - 19:30** Check-in & Registration

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**17:30 - 19:30** **Welcome Drinks**  
*Hosted by AGS Queensland Chapter and sponsored by Scopegeo*

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## Wednesday July 23<sup>rd</sup> 2025 – Day 1

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**08:00 - 08:30** Registration & Coffee

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**08:30 - 09:00** **Welcome to Country & Opening Address**  
*Christopher Bennett, GHD & Megan Packer, PSM*

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**09:00 - 09:45** **KEYNOTE ADDRESS**  
**Paul Marinos Lecture: Towards the Next Generation of Engineering Geology**  
*Xuanmei Fan, Director of SKLGP at Chengdu University of Technology, China*

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**09:45 - 10:35** **Session 1: General Engineering Geology**  
*Session Chairs: Tim Thompson & Sally Roberts-Kelly*

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**09:45 - 10:00** **Slope Stability in Weathered Basalts**  
*Stephen Fityus, Douglas Partners*

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**10:00 - 10:15** **Coal Mine Engineering Geology as a Trans-Tasman Learning Experience in a University Postgraduate Course**  
*Martin Brook, University of Auckland*

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**10:15 - 10:30** **Engineering Geology Model as a Tool for the Effective Management of Open Pit Slopes**  
*Felicia Weir, PSM*

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**10:30 - 10:35** **Gold Sponsor Presentation**  
*Geobrugg*

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**10:35 - 11:00** **Morning Tea**  
*Coffee Cart sponsored by GHD*

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# Program

## Wednesday July 23<sup>rd</sup> 2025 – Day 1 (continued)

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- 11:00 - 12:30**      **Session 2: Civil Infrastructure (Stream 1)**  
*Session Chairs: Joanna Sylvester & James Cox*
- 
- 11:15 - 11:30**      **Understanding Critical Stability Factors: Integrating Old and New Data to Improve Foundation Stability Assessments**  
*Ben Speakman, Entura*
- 
- 11:15 - 11:30**      **The Specification of Unprocessed Rockfill for Highway Applications – A Case Study from the Coffs Harbour Bypass**  
*Andrew Tait, Ferrovial Construction*
- 
- 11:30 - 11:45**      **Rockfall hazard assessments and remediation for the major cliff precincts of Brisbane**  
*Tharindu Abeykoon, SMEC*
- 
- 11:45 - 12:00**      **Management of Complex Geological Structures using Engineering Geological Models during Tunnel Construction: The Luna Park Fault Zone, Sydney**  
*Richard Brehaut, PSM*
- 
- 12:00 - 12:15**      **Case Study On Snowy 2.0, Australia: Use of Lidar and Endoscopy for Assessing and Modelling Geological Features in Underground Caverns**  
*Ben Potter, Snowy Hydro*
- 
- 12:15 - 12:30**      **Session Questions**
- 
- 11:00 - 12:30**      **Session 2: Geohazards (Stream 2)**  
*Session Chairs: Andrew Hunter & Sam Webber*
- 
- 11:00 - 11:15**      **Application of a Copula Approach to Quantify Rainfall-Induced Rockfall**  
*Farshad Bahootoroody, University of Newcastle*
- 
- 11:15 - 11:30**      **Susceptibility and Mitigation of Debris Floods and Flows in the Jenolan Karst Conservation Reserve, NSW, Australia: Bushfire And La Niña Impacts**  
*Adam Irvine, PSM*
- 
- 11:30 - 11:45**      **The use of Empirical Methods to Predict Landslide Runout for use in Rapid Landslide Risk Assessments Following Cyclone Gabrielle, New Zealand**  
*Ryan Hayes, GHD*
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# Program

## Wednesday July 23<sup>rd</sup> 2025 – Day 1 (continued)

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11:45 - 12:00	<b>Engineering Geological Models in Remote and Difficult Access Terrain: A Case Study from Bogong High Plains Road</b> <i>Daive Casagrande, PSM</i>
12:15 - 12:15	<b>Slope Hazard Management on the Toowoomba Range Rail Corridor</b> <i>Bruce Cheesman, SMEC Australia</i>
12:15 - 12:30	<b>Session Questions</b>
12:30 - 13:30	<b>Lunch</b> <i>Coffee Cart sponsored by GHD</i>
13:30 - 15:00	<b>Session 3: Geohazards (Stream 1)</b> <i>Session Chairs: Helen Baxter-Crawford &amp; Ross Roberts</i>
13:30 - 13:45	<b>Experiences Communicating Landslide Risk to Non Technical Stakeholders</b> <i>Chris Coulson, AECOM</i>
13:45 - 14:00	<b>Risk Management Of Coastal Cliff Hazards – A Case Study From The Surf Coast, Southwest Victoria</b> <i>Kris Jelly-Butterworth, GHD</i>
14:00 - 14:15	<b>Slope Risk Management of Glasshouse Mountain Summit Routes: Balancing Safety, Accessibility, and Tolerable Risk</b> <i>Sally Roberts-Kelly, EDG Consulting</i>
14:15 - 14:30	<b>Rockfall Risk Assessment at North Head, Sydney Harbour National Park, NSW</b> <i>Paul Roberts, JK Geotechnics</i>
14:30 - 14:45	<b>Landslide Risk Assessment in Coastal Settings – Recognizing the Challenges and Uncertainty</b> <i>Andrew Hunter, GHD</i>
14:45 - 15:00	<b>Session Questions</b>

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# Program

## Wednesday July 23<sup>rd</sup> 2025 – Day 1 (continued)

- 
- 13:30 - 15:00**     **Session 3: Geohazards (Stream 2)**  
*Session Chairs: Julia Bota & Simon Foley*
- 
- 13:30 - 13:45**     **GIS Mapping Of Landslide Susceptibility And Life Risk In Blue Mountains National Park**  
*Zack Tuckey, Jacobs*
- 
- 13:45 - 14:00**     **Engineering Geology Consideration for Development on Bringelly Shale in Western Sydney**  
*Minly So, Arup*
- 
- 14:00 - 14:15**     **Neotectonic Fault Significance**  
*Tim Mote, GHD*
- 
- 14:15 - 14:30**     **Importance of Detailed Geomorphic Interpretation in the Landslide Characterisation Component of Risk Assessment**  
*Nick Roberts, State Growth Tasmania*
- 
- 14:30 - 14:45**     **Analysis of the Mechanism of Landsliding, Garie Road, Royal National Park, NSW**  
*Tim Donovan, Aurecon*
- 
- 14:45 - 15:00**     **Session Questions**
- 
- 15:00 - 15:25**     **Afternoon Tea**  
*Coffee Cart sponsored by GHD*
- 
- 15:25 - 17:30**     **Session 4: Defining the next challenges for Engineering Geology**  
*Session Chairs: Ann Williams & Martin Brook*
- 
- 15:25 - 15:30**     **Gold Sponsor Presentation**  
*Scopegeo*
- 
- 15:30 - 15:45**     **What is the Future of Engineering Geology as a Discipline in Western Australia and Australia?**  
*Julia Bota, HATS Consulting*
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# Program

## Wednesday July 23<sup>rd</sup> 2025 – Day 1 (continued)

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**15:45 - 16:15**      **GUEST SPEAKER**  
**The Impact of Industry Supported Field Courses on the Education and Professional Training of Geological Engineers at Queen's University, Canada**  
*Jean Hutchinson, Professor Emerita at Queen's University, Canada*

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**16:15 - 17:30**      **PANEL DISCUSSION**  
**Improving the Development and Recognition of Engineering Geology in Australia**  
*Facilitator: Mark Eggers*  
*Panellists: Anthony Bowden, Jean Hutchinson, Joanna Sylvester, Megan Packer*

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**Break**

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**18:30 for 19:00**      **Conference Dinner**  
*Sponsored by Geobrugg*

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## Thursday July 24<sup>th</sup> 2025 – Day 2

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**08:30 - 08:45**      **Opening Address**  
*Christopher Bennett, GHD & Megan Packer, PSM*

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**08:45 - 09:30**      **KEYNOTE ADDRESS**  
**Engineering Geologists – A Call to Arms!**  
*Fred Baynes, Past President IAEG (2007-10)*

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**09:30 - 10:30**      **Session 1: Geohazards**  
*Session Chairs: Bari Thomas & Ranjan Dahal*

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**09:30 - 09:45**      **The Bogong Landslide, A Case Study Into An Australian Landslide In Unsaturated Soils**  
*Darren Paul, WSP*

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**09:45 - 10:00**      **Landslide Vulnerability: Learnings From The Impacts Of Debris Flows On Buildings To Inform Quantitative Loss Of Life Risk Assessments**  
*Luke Agnew, GHD*

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**10:00 - 10:15**      **Effect of Discontinuities on the Survival Probability of Spherical Block upon Impact**  
*Davide Guccione, University of Newcastle*

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# Program

## Thursday July 24<sup>th</sup> 2025 – Day 2 (continued)

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10:15 - 10:30	<b>Scoping for Geohazards – Environmental Contrasts Comparing the Engineering Geologist’s Role between Mining, Civil Road Tunnels, Dam Design and Pumped Hydro</b> <i>Helen Baxter-Crawford, SMEC Australia</i>
10:30 - 10:55	<b>Morning Tea</b> <i>Coffee Cart sponsored by PSM</i>
10:55 - 12:30	<b>Session 2: Mining &amp; Energy</b> <i>Session Chairs: Felicia Weir &amp; Davide Guccione</i>
10:55 - 11:00	<b>Gold Sponsor Presentation</b> <i>GHD</i>
11:00 - 11:15	<b>Assessing the Geotechnical Susceptibility of Caves in Pilbara Iron Formations to Instability</b> <i>Duncan Noble, PSM</i>
11:15 - 11:30	<b>Project Phoenix Pumped Hydro Energy Storage Project – Successful Implementation of the Engineering Geological Model Approach in support of the Energy Transition</b> <i>Alistair Schofield, GHD</i>
11:30 - 11:45	<b>Development of a Geotechnical Rock Mass Model using Geochemical Data and Machine Learning</b> <i>Megan Baker &amp; Sue Chan, PSM</i>
11:45 - 12:00	<b>Finite Element Check of GSI Adjustment Equation Reconciling Hoek-Brown and Step-Path Strengths</b> <i>Norbert Baczynski, Prime Geotechnics</i>
12:00 - 12:15	<b>Engineering Terrain Evaluations – Opportunities and Challenges of the Energy Transition</b> <i>Tom Casey, Arup</i>
12:15 - 12:30	<b>Session Questions</b>
12:30 - 13:25	<b>Lunch</b> <i>Coffee Cart sponsored by PSM</i>

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# Program

## Thursday July 24<sup>th</sup> 2025 – Day 2 (continued)

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- 13:25 - 15:00**      **Session 3: Civil Infrastructure**  
*Session Chairs: Tom Casey & Peter Elson*
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- 13:25 - 13:30**      **Gold Sponsor Presentation**  
*Ischebeck Titan*
- 
- 13:30 - 14:15**      **GUEST SPEAKER**  
**Landslides and Reservoirs, The Clyde Dam Experience**  
*Don Macfarlane, Engineering New Zealand Fellow*
- 
- 14:15 - 14:30**      **Engineering Geological Mapping for Dam Foundations – Examples from Recent Work**  
*Jo Darby, GHD*
- 
- 14:30 - 14:45**      **Geological Challenges of Brisbane's Cross River Rail Project**  
*Ralph Cammack, PSM*
- 
- 14:45 - 15:00**      **Site Investigation and Geological Challenges for a Rail Level Crossing Project in SEQ**  
*Craig Brock & Pramod Thakur, WSP*
- 
- 15:00 - 15:25**      **Afternoon Tea**  
*Coffee Cart sponsored by PSM*
- 
- 15:25 - 17:00**      **Session 4: General Engineering Geology**  
*Session Chairs: Andrew Doe & Elyssa de Carli*
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- 15:25 - 15:30**      **Gold Sponsor Presentation**  
*PSM*
- 
- 15:30 - 16:00**      **SPECIAL REPORT**  
**Update to the AGS 2007 Landslide Guidelines Review**  
*Darren Paul & Tony Miner, AGS-NZGS Steering Committee Representatives*
- 
- 16:00 - 16:30**      **GUEST SPEAKER**  
**Uncovering Geohazards Impacting Infrastructure in the Himalayas**  
*Ranjan Kumar Dahal, IAEG Regional Vice President for Asia*
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# Program

## Thursday July 24<sup>th</sup> 2025 – Day 2 (continued)

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**16:30 - 17:00**      **Closing Remarks**  
*Mark Eggers, PSM*

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**17:00 - 18:00**      **Networking Drinks**  
*Hosted by Women in Engineering Geology and sponsored by Ischebeck Titan*

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## Friday July 25<sup>th</sup> 2025 – Field Trips

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**08:00 - 16:30**      **Landslide prone environments on basalt terrains in Glasshouse Mountains, Maleny**  
*Warwick Wilmot*

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**08:00 - 13:00**      **Walking tour of Brisbane Geology**  
*Laurie Hutton*

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