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# 1st Australian Conference on Engineering Geology 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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# 1st Australian Conference on Engineering Geology 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*

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**11:15 - 11:30**      **Understanding Critical Stability Factors: Integrating Old and New Data to Improve Foundation Stability Assessments**  
*Ben Speakman, Entura*

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**11:15 - 11:30**      **The Specification of Unprocessed Rockfill for Highway Applications – A Case Study from the Coffs Harbour Bypass**  
*Andrew Tait, Ferrovial Construction*

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**11:30 - 11:45**      **Rockfall hazard assessments and remediation for the major cliff precincts of Brisbane**  
*Tharindu Abeykoon, SMEC*

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**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*

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**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*

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**12:15 - 12:30**      **Session Questions**

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**11:00 - 12:30**      **Session 2: Geohazards (Stream 2)**  
*Session Chairs: Andrew Hunter & Sam Webber*

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**11:00 - 11:15**      **Application of a Copula Approach to Quantify Rainfall-Induced Rockfall**  
*Farshad Bahootorody, University of Newcastle*

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**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*

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**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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# 1st Australian Conference on Engineering Geology 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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# 1st Australian Conference on Engineering Geology Program

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

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- 13:30 - 15:00**     **Session 3: Geohazards (Stream 2)**  
*Session Chairs: Julia Bota & Simon Foley*
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- 13:30 - 13:45**     **GIS Mapping Of Landslide Susceptibility And Life Risk In Blue Mountains National Park**  
*Zack Tuckey, Jacobs*
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- 13:45 - 14:00**     **Engineering Geology Consideration for Development on Bringelly Shale in Western Sydney**  
*Minly So, Arup*
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- 14:00 - 14:15**     **Neotectonic Fault Significance**  
*Tim Mote, GHD*
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- 14:15 - 14:30**     **Importance of Detailed Geomorphic Interpretation in the Landslide Characterisation Component of Risk Assessment**  
*Nick Roberts, State Growth Tasmania*
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- 14:30 - 14:45**     **Analysis of the Mechanism of Landsliding, Garie Road, Royal National Park, NSW**  
*Tim Donovan, Aurecon*
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- 14:45 - 15:00**     **Session Questions**
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- 15:00 - 15:25**     **Afternoon Tea**  
*Coffee Cart sponsored by GHD*
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- 15:25 - 17:30**     **Session 4: Defining the next challenges for Engineering Geology**  
*Session Chairs: Ann Williams & Martin Brook*
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- 15:25 - 15:30**     **Gold Sponsor Presentation**  
*Scopegeo*
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- 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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# 1st Australian Conference on Engineering Geology 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*

## 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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# 1st Australian Conference on Engineering Geology 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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# 1st Australian Conference on Engineering Geology 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*
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- 13:30 - 14:15**      **GUEST SPEAKER**  
**Landslides and Reservoirs, The Clyde Dam Experience**  
*Don Macfarlane, Engineering New Zealand Fellow*
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- 14:15 - 14:30**      **Engineering Geological Mapping for Dam Foundations – Examples from Recent Work**  
*Jo Darby, GHD*
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- 14:30 - 14:45**      **Geological Challenges of Brisbane's Cross River Rail Project**  
*Ralph Cammack, PSM*
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- 14:45 - 15:00**      **Site Investigation and Geological Challenges for a Rail Level Crossing Project in SEQ**  
*Craig Brock & Pramod Thakur, WSP*
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- 15:00 - 15:25**      **Afternoon Tea**  
*Coffee Cart sponsored by PSM*
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- 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*
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- 15:30 - 16:00**      **SPECIAL REPORT**  
**Update to the AGS 2007 Landslide Guidelines Review**  
*Darren Paul & Tony Miner, AGS-NZGS Steering Committee Representatives*
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- 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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# 1st Australian Conference on Engineering Geology 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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