





AUSTRALIAN SOCIETY OF EXPLORATION GEOPHYSICISTS  
**1<sup>ST</sup> ASEG DISCOVER SYMPOSIUM**  
 15-18 OCTOBER • Wrest Point Hotel, Hobart, Tasmania

## Tuesday 15 October 2024

10am-12:30pm	Sponsors & Exhibitors bump in				
12 noon	Registration Desk open <i>Delegates attending the workshops, please note, that lunch is not included on this day.          The Boardwalk Café or Boardwalk Bistro at Wrest Point have meals available for a quite bite to eat.</i>				
1pm –1:30pm	Trade Exhibition Open <span style="float: right;">Exhibition Foyer</span>				
Time	Plenary Hall Workshop	Tasman Room A Workshop	Tasman Room B&C Workshop	Wellington Room Workshop	Boardwalk Gallery Workshop
1:30pm –3pm	<b>Workshop 1</b> <b>Electrical Geophysics Case Studies and New Developments</b>  <i>Daniel Eremenco, Gap Geophysics Australia; Mr Ronny Stolz, Jonathan Rudd, Dias Geophysical and Dias Airborne; Christopher Parker, IPHT</i>	<b>Workshop 2</b> <b>Passive Seismic – a tool for early stage exploration</b>  <i>Dr Richard Lynch, Dr Anais Lavoué, Sisprobe</i>	<b>Workshop 3</b> <b>Forward Stratigraphic Modelling and Geophysical Inverse Models</b>  <i>Cedric Griffiths, StrataMod Pty Ltd.</i>	<b>Workshop 4</b> <b>DAS, Machine Learning, Interferometry &amp; Beyond: A Tour of Modern Geophysical Buzzwords</b>  <i>Tjaart de Wit, Institute of Mine Seismology</i>	<b>Workshop 5</b> <b>Towed time domain electromagnetic and direct current electrical resistivity surveying</b>  <i>Dr David Allen, Groundwater Imaging Pty Ltd</i>
3pm –3:30pm	Afternoon Refreshments and Trade Exhibition <span style="float: right;">Exhibition Foyer</span>				
3:30pm – 5pm	Workshop 1: continuation	Workshop 2: continuation	Workshop 3: continuation	Workshop 4: continuation	Workshop 5: continuation
5pm-7pm	Welcome Event, Wrest Point Exhibition Foyer			<i>With thanks to our Sponsor</i> 	

## Wednesday 16 October 2024

Time	Plenary Hall	Tasman Room A	Tasman Room B&C	Wellington Room	Boardwalk Gallery
8am – 8:30am	<i>Registration and Trade Exhibition Open + Arrival Tea and Coffee</i>				<i>Exhibition Foyer</i>
8:30am – 10am	<b>Workshop 6</b> <b>SIMPEG open source modelling and inversion with Geoscience ANALYST Pro Geophysics - Session 1</b>  <i>Dr James Reid, Glenn Pears, Mira Geoscience</i>	<b>Workshop 7</b> <b>QGIS for Exploration Geophysics</b>  <i>Thomas Schaap, Mark Grujic, Dr Thomas Ostersen, Datarock</i>	<b>Workshop 8</b> <b>Using CoFI to experiment with geophysical inversions</b>  <i>Professor Malcolm Sambridge, Research School of Earth Sciences, The Australian National University</i>	<b>Workshop 9</b> <b>Geological interpretation of aeromagnetic data</b>  <i>Dr Teagan Blaikie, Yvonne Wallace, Sharon Lowe, Southern Geoscience Consultants</i>	<b>Workshop 10</b> <b>NMR: The missing link in hydrogeology that connects other data sets to water in the ground</b>  <i>Mike Hatch, Vista Clara Inc and CSIRO</i>
10am – 10:30am	<i>Morning Refreshments and Trade Exhibition</i>				<i>Exhibition Foyer</i>
10:30am-12pm	Workshop 6: continuation	Workshop 7: continuation	Workshop 8: continuation	Workshop 9: continuation	Workshop 10: continuation
12pm – 1pm	<i>Lunch and Trade Exhibition</i>				<i>Exhibition Foyer</i>
1:00pm – 2:30pm	<b>Workshop 11</b> <b>SIMPEG open source modelling and inversion with Geoscience ANALYST Pro Geophysics - Session 2</b>  <i>Dr James Reid, Glenn Pears, Mira Geoscience</i>	<b>Workshop 12</b> <b>Teaching Geophysics through Interactive Notebooks and Team-Based Learning</b>  <i>Prof Stuart Clark, Dr. Patrick Makuluni, UNSW Sydney</i>	<b>Workshop 13</b> <b>D.I.Y. Multiphysics Interpretation</b>  <i>Jarrod Dunne, Tom McNamara, James Parsons, QIntegral Pty Ltd</i>	<b>Workshop 14</b> <b>Adding value to governmental AEM data. The East Isa VTEM case study</b>  <i>Dr Andrea Viezzoli, Emergo, Italy</i>	<b>Workshop 15</b> <b>Natural Hydrogen Workshop</b>  <i>Hugo Beldame, Hamish Gordon, Mick Small and guest presenters, Natural Hydrogen Association of Australia</i>
2:30pm – 3pm	<i>Afternoon Refreshments and Trade Exhibition</i>				<i>Exhibition Foyer</i>
3pm – 4:30pm	Workshop 11: continuation	Workshop 12: continuation	Workshop 13: continuation	Workshop 14: continuation	Workshop 15: continuation
6pm – 8pm	<b>Early Career Networking Event</b> – (ticketed event)  Royal Yacht Club of Tasmania				With thanks to our Sponsor 

# Thursday 17 October 2024

Time	Plenary Hall				
7am – 7:50am	Registration and Trade Exhibition Open + Arrival Tea and Coffee				Exhibition Foyer
7:50am-7:55am	<b>Opening Address</b> Janelle Kerr, ASEG President				Plenary Hall
7:55am –8:10am	<b>Welcome to Country - Uncle Rodney Dillon and Linton Burgess, Wayti Culture &amp; Knowledge</b>				
8:10am –8:15am	<b>Dignitary Address - The Hon Madeleine King MP (Pre-recorded)</b>				
8:15am –8:25am	Welcome from our Platinum Sponsor - Asmita Mahanta, Global Practice Lead Geophysics				<b>BHP</b>
8:25am –8:30am	<b>Welcome Remarks and Introduction to the Symposium Program</b> Eric Battig, ASEG DISCOVER Chairperson				
8:30am –9:00am	<b>Keynote Presentation</b> <b>Evolution of 3D electromagnetic inversions and their transition to an open-source ecosystem</b> <i>Lindsey Heagy, University of British Columbia</i>				
Time	Plenary Hall Concurrent Session 1.1	Tasman Room A Concurrent Session 1.2	Tasman Room B&C Concurrent Session 1.3	Wellington Room Concurrent Session 1.4	Boardwalk Gallery Concurrent Session 1.5
Chair:	Carsten Scholl, Viridian	Vincent Ganivet, Shearwater	Michael Hatch, University of Adelaide	Kate Hine, Mitre Geophysics	Gerrit Olivier/ Nick Smith, Fleet Space
9:00am –9:20am	<b>1.1.1</b> <b>Simultaneous three-dimensional inversion of large-scale AEM data for changeability and conductivity using the GEMTIP model and moving sensitivity domain</b>  <i>Leif Cox, TechnoImaging</i>	<b>1.2.1</b> <b>Measuring Variations in the Seismic Velocity as a Diagnostic of Rock Damage and Healing</b>  <i>R Snieder, Colorado School of Mines</i>	<b>1.3.1</b> <b>TEMConfigurator, a new transient electromagnetic forward modelling interface, and evaluation of AgTEM-Wallaby and AgTEM-Wallaroo towed Transient Electromagnetic Systems capabilities and limitations.</b>  <i>David Allen, Groundwater Imaging</i>	<b>1.4.1</b> <b>Geophysical response of alteration and mineralisation in the Wafi-Golpu porphyry system, Papua New Guinea</b>  <i>Terry Hoschke, Alterrex</i>	<b>1.5.1</b> <b>Geological hypothesis testing via inference-mode multiphysics inversion</b>  <i>Gerrit Olivier, Fleet Space Technologies</i>

**THURSDAY 17 OCTOBER 2024**

Time	Plenary Hall Concurrent Session 1.1	Tasman Room A Concurrent Session 1.2	Tasman Room B&C Concurrent Session 1.3	Wellington Room Concurrent Session 1.4	Boardwalk Gallery Concurrent Session 1.5
9:20am –9:40am	<p><b>1.1.2</b> Equivalent circuits for inductive EM and galvanic IP to predict IP sensitivity</p> <p><i>James Macnae, CD3D</i></p>	<p><b>1.2.2</b> Tackling rugose seabed, strike-shooting, short offset NAZ data in the Otway Basin with advanced processing technologies</p> <p><i>Robert To, Viridien</i></p>	<p><b>1.3.2</b> Towards Efficient Bayesian MASW Analysis using JAX</p> <p><i>Aaron Glanville , Velseis</i></p>	<p><b>1.4.2</b> Geophysical Signatures of a +5.4Moz gold deposit, NE Bankan, Guinea, West Africa</p> <p><i>Thomas Harris, Merlin Geophysics</i></p>	<p><b>1.5.2</b> P-wave Travel-Time Tomography for Mineral Exploration</p> <p><i>Tjaart de Wit, Institute of Mine Seismology</i></p>
9:40am –9:50am	<p><b>1.1.3</b> Closing the gap between galvanic and inductive methods: EEMverter, a new inversion tool for Electric and Electromagnetic data with focus on Induced Polarization</p> <p><i>Gianluca Fiandaca, University of Milano</i></p>	<p><b>1.2.3</b> Accelerating PINN Convergence for Signal Reconstructions</p> <p><i>Amarjeet Kumar, Shearwater Geoservices</i></p>	<p><b>1.3.3</b> Seasonal Temperature effect compensation in ERT monitoring without thermal measurements</p> <p><i>Alessandro Signora, University of Milan</i></p>	<p><b>1.4.3</b> A Multi-Physics IP Approach to Encuentro Porphyry Deposit</p> <p><i>Héctor Verdejo, GRS LTDA Chile</i></p>	<p><b>1.5.3</b> The effect of 1-bit normalization on ANT data, 3D velocity models, and their geological interpretation</p> <p><i>Patime Osman, Fleet Space Technologies</i></p>
9:50am – 10am					
10am – 10:30am	Morning Refreshments and Trade Exhibition				Exhibition Foyer

**THURSDAY 17 OCTOBER 2024**

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Time	Plenary Hall				
10:30am – 11am	<b>Keynote Presentation</b> <b>Hardrock 3D Seismic for BHP’s Copper South Australia</b> <i>Jared Townsend, Think &amp; Act Differently, Powered by BHP</i>				
	<i>Plenary Hall</i>				
Time	Plenary Hall Concurrent Session 2.1	Tasman Room A Concurrent Session 2.2	Tasman Room B&C Concurrent Session 2.3	Wellington Room Concurrent Session 2.4	Boardwalk Gallery Concurrent Session 2.5
Chair:	Jared Townsend, BHP	Leif Cox, Technolmaging	Amarjeet Kumar, Shearwater	Nick Direen, Mitre Geophysics	Alan Meulenbroek, Velseis
11am – 11:20am	<b>2.1.1</b> <b>Redefining copper exploration at Oak Dam IOCG deposit through high-end hardrock seismic processing</b> <i>Robert To, Viridien</i>	<b>2.2.1</b> <b>Joint Inversion of Electrical and Electromagnetic data including IP: a methodological breakthrough</b> <i>Alessandro Signora, University of Milan</i>	<b>2.3.1</b> <b>Reaching the Pantheon: A Multidisciplinary Approach to Data Reprocessing and Depth Imaging in the Vulcan Sub-basin</b> <i>Alexey Artemov, Shearwater Geoservices</i>	<b>2.4.1</b> <b>Low-Frequency UAV SAM trials at Forrestania Electromagnetics Test Range in Western Australia</b> <i>Daniel Eremenco, Gap Geophysics Australia</i>	<b>2.5.1</b> <b>WA Array and MT – Phase 1 and 2 updates</b> <i>Ruth Murdie, DEMIRS</i>
11:20am - 11:30am	<b>2.1.2</b> <b>Cosmic-ray Muon Tomography: Applications at Olympic Dam</b> <i>Nigel Phillips, Ideon Technologies</i>	<b>2.2.2</b> <b>Three-dimensional AEM inversion considering IP effect using Octree mesh</b> <i>Gianluca Fiandaca, University of Milan</i>	<b>2.3.2</b> <b>Effectiveness of Reprocessed Legacy 2D Seismic for Regional Evaluation: Examples from the Southern Browse Basin</b> <i>Satoshi Ishikawa, Inpex</i>	<b>2.4.2</b> <b>Three examples of modern exploration for nickel in the Kimberley Region</b> <i>Tom Harding, IGO</i>	<b>2.5.2</b> <b>Real-Time Ambient Noise Tomography For Uranium Exploration : Case Study From Roughrider Project In Athabasca Basin, Canada</b> <i>Laleh Khadangi, Fleet Space Technologies</i>
11:30am – 11:40am					<b>2.5.3</b> <b>Scale Reduction in Porphyry Cu-Au Exploration using Ambient Noise Tomography</b> <i>Nick Smith, Fleet Space Technologies</i>

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Time	Plenary Hall Concurrent Session 2.1	Tasman Room A Concurrent Session 2.2	Tasman Room B&C Concurrent Session 2.3	Wellington Room Concurrent Session 2.4	Boardwalk Gallery Concurrent Session 2.5
Chair:	Jared Townsend, BHP	Leif Cox, TechnoImaging	Amarjeet Kumar, Shearwater	Nick Direen, Mitre Geophysics	Alan Meulenbroek, Velseis
11:40am – 12pm	<p><b>2.1.3</b> Integration by design: quantitative mineral system characterisation, and a new framework for evaluation of exploration “near-misses” <i>James Austin, CSIRO</i></p>	<p><b>2.2.3</b> Airborne IP driven exploration for a green-field research project <i>Gianluca Fiandaca, University of Milano</i></p>	<p><b>2.3.3</b> Velocity model building of VSP data through Semblance analysis <i>Javad Khoshnavaz, EPIROC KLS</i></p>	<p><b>2.4.3</b> Outcomes from characterisation of the Moornambool Metamorphic Complex megaclasts in the Stawell Corridor with potential field modelling and neural network predictive targeting <i>Tom McNamara, University of Melbourne</i></p>	<p><b>2.5.4</b> 21 Basalt Street: Undercover mineral exploration of the Mount Read Volcanics in north-western Tasmania <i>George Taylor, Institute of Mine Seismology</i></p>
12pm – 12:10pm	<p><b>2.1.4</b> Utilizing DAS VSP for orebody imaging at Oak Dam IOCG <i>Min Lee Chua, Viridien</i></p>	<p><b>2.2.4</b> Modelling IP in Tempest data: the first preliminary steps and insights <i>Andrea Viezzoli, Emergo</i></p>	<p><b>2.3.4</b> Stratya2D: Kinematic Backstripping and Decompaction Enhanced by Image-Based 2D Horizon Integration <i>Harikrishnan Nalinakumar, UNSW</i></p>	<p><b>2.4.4</b> Geophysical Exploration of Graphite in the Eyre Peninsula <i>Claire Mortimore, Terra Resources</i></p>	<p><b>2.5.5</b> A Novel yet Simple Approach to the Interpretation of HVSR Data in Australia – A Data Rich Case Study from the Pilbara <i>Nathan Tabain, BHP</i></p>
12:10pm – 12:20pm					
12:20pm – 12:30pm	<p><b>2.1.5</b> Multi-physics imaging of an iron-oxide copper gold (IOCG) deposit under thick cover <i>Ben Kay, University of Adelaide</i></p>	<p><b>2.2.5</b> Correcting EM responses at Girilambone for IP effects <i>Kate Hine, Mitre Geophysics</i></p>	<p><b>2.3.5</b> Seismic velocity analysis – recent experiences using a new approach to QC based on integrated geophysical modelling <i>Jarrod Dunne, QIntegral</i></p>		<p><b>2.5.6</b> Passive seismic imaging of Mt Isa Province <i>Ao Chang, QUT/GSQ</i></p>

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<b>Time</b>	<b>Plenary Hall Concurrent Session 2.1</b>	<b>Tasman Room A Concurrent Session 2.2</b>	<b>Tasman Room B&amp;C Concurrent Session 2.3</b>	<b>Wellington Room Concurrent Session 2.4</b>	<b>Boardwalk Gallery Concurrent Session 2.5</b>
<b>Chair:</b>	Jared Townsend, BHP	Leif Cox, Technolmaging	Amarjeet Kumar, Shearwater	Nick Direen, Mitre Geophysics	Alan Meulenbroek, Velseis
12:30pm – 12:40pm	<p><b>2.1.6</b> <b>Australia-wide 3D Density and Magnetic Susceptibility Models: Reducing the search space for IOCG deposits</b></p> <p><i>James Goodwin, Geoscience Australia</i></p>	<p><b>2.2.6</b> <b>Interpreting airborne electromagnetic data unburdened from induced polarisation effects: an unconventional mineral discovery case study from the eastern Yilgarn region of Western Australia</b></p> <p><i>Regis Neroni, NewGen Geo</i></p>	<p><b>2.3.6</b> <b>Uplift and subsidence history of the Barents Sea Basin: analysis of dynamic topography contribution</b></p> <p><i>Elena Babina, UNSW</i></p>		<p><b>2.5.7</b> <b>Detection of aircraft noise with buried distributed acoustic sensors</b></p> <p><i>Boris Gurevich, Curtin University</i></p>
12:40pm – 1:40pm	<i>Lunch and Trade Exhibition</i>				<i>Exhibition Foyer</i>
<b>Time</b>	<b>Plenary Hall</b>				
1:40pm – 2:10pm	<p><b>Keynote Presentation</b> <b>Integrating geophysical data with mineral systems models from the lithospheric to prospect scale</b></p> <p><i>Dr Kate Selway, Vox Geophysics</i></p>				<b>Plenary Hall</b>

**THURSDAY 17 OCTOBER 2024**

<b>Time</b>	<b>Plenary Hall Concurrent Session 3.1</b>	<b>Tasman Room A Concurrent Session 3.2</b>	<b>Tasman Room B&amp;C Concurrent Session 3.3</b>	<b>Wellington Room Concurrent Session 3.4</b>	<b>Boardwalk Gallery Concurrent Session 3.5</b>
<b>Chair:</b>	Stephan Thiel , CSIRO	Jared Townsend, BHP	Steve Hearn, Velseis	James Macnae, CD3D	James Reid, Mira Geoscience
2:10pm – 2:30pm	<p><b>3.1.1</b> <b>Three-dimensional MobileMT and TMI Data Inversions for Mineral Exploration</b> <i>Leif Cox, TechnoImaging</i></p>	<p><b>3.2.1</b> <b>How deep is the basement beneath the Otway Basin? Insight from semi-automated magnetic depth estimates</b> <i>Yvette Poudjom Djomani, Geoscience Australia</i></p>	<p><b>3.3.1</b> <b>Application of pseudo-3D reflection seismic arrays to map mafic-ultramafic intrusions at the Silver Knight Prospect in the Albany Fraser Orogen, Western Australia</b> <i>Antonio Huizi, IGO</i></p>	<p><b>3.4.1</b> <b>Heterodyne method for sulphide mapping. Latest field data</b> <i>Steve Collins</i></p>	<p><b>3.5.1</b> <b>Preliminary assessment of an alluvial aquifer system using airborne and ground-based geophysics: Upper Darling River Floodplain, New South Wales</b> <i>Andrew McPherson, Geoscience Australia</i></p>
2:30pm – 2:50pm	<p><b>3.1.2</b> <b>Interpretation of electromagnetic multifrequency natural field data from Red Setter prospect (Paterson area, Western Australia)</b> <i>Alexander Prikhodko, Expert Geophysics</i></p>	<p><b>3.2.2</b> <b>A Review of Physics-Based Machine Learning Approaches for Geological Modelling</b> <i>Vladislav Alekseev, UNSW</i></p>	<p><b>3.3.2</b> <b>Offering new geological insights to the Mawson Ni-Cu-Co prospect via seismic data reprocessing</b> <i>Alan Meulenbroek, Velseis</i></p>	<p><b>3.4.2</b> <b>Application of 3D Cole-Cole inversion by Offset Pole-Dipole Time-Domain IP data for mineral exploration in South Australia</b> <i>Takafumi Murakita, Joggmec</i></p>	<p><b>3.5.2</b> <b>Results from three large-area ground TEM surveys over highly salinised floodplains on the River Murray, South Australia</b> <i>Michael Hatch, University of Adelaide</i></p>



**THURSDAY 17 OCTOBER 2024**

<b>Time</b>	<b>Plenary Hall Concurrent Session 3.1</b>	<b>Tasman Room A Concurrent Session 3.2</b>	<b>Tasman Room B&amp;C Concurrent Session 3.3</b>	<b>Wellington Room Concurrent Session 3.4</b>	<b>Boardwalk Gallery Concurrent Session 3.5</b>
2:50pm – 3pm	<p><b>3.1.3</b>  <b>New insights into the electrical structure of the Mount Isa Province from the Carpentaria Conductivity Anomaly Magnetotelluric Survey</b>  <i>Dominic Brown, Geological Survey of Queensland</i></p>	<p><b>3.2.3</b>  <b>A field trial of cross-well seismic with DAS and a high-frequency source: A field trial of cross-well seismic with DAS and a high-frequency source</b>  <i>Nikita Beloborodov, Curtin University</i></p>	<p><b>3.3.3</b>  <b>Marrying depth to top of basement mapping from magnetic field data with depth to base of cover mapping from gravity data: an example from the Mulgathing Trough of South Australia</b>    <i>Philip Heath, GSSA</i></p>	<p><b>3.4.3</b>  <b>The impact of geometry on Resistivity/IP surveys</b>  <i>Emilio Rodriguez Nieves, ExploreGeo</i></p>	<p><b>3.5.3</b>  <b>Three-Dimensional Mapping of Palaeovalleys in the West Musgrave Region, Central Australia</b>  <i>Joshua Lester, Geoscience Australia</i></p>
3:00pm – 3:10pm	<p><b>3.1.4</b>  <b>Innovations in airborne natural field electromagnetics for deep exploration</b>  <i>Alexander Prikhodko, Expert Geophysics Limited</i></p>	<p><b>3.2.4</b>  <b>Monitoring underwater sounds using distributed acoustic sensing: a pilot study from Australia’s North West Shelf</b>  <i>Boris Gurevich, Curtin University</i></p>			
3:10pm – 3:40 pm	<p><i>Afternoon Refreshments and Trade Exhibition</i></p>				<p><i>Exhibition Foyer</i></p>

**THURSDAY 17 OCTOBER 2024**

THURSDAY 17 OCTOBER 2024					
Time	Plenary Hall				
3:40pm – 4:10pm	<b>Keynote Presentation</b> <b>Using Deep Learning to find impact structures in continental-scale datasets</b> <i>Mark Grujic, Datarock</i>				
Time	Plenary Hall Concurrent Session 4.1	Tasman Room A Concurrent Session 4.2	Tasman Room B&C Concurrent Session 4.3	Wellington Room Concurrent Session 4.4	Boardwalk Gallery Concurrent Session 4.5
Chair:	Gerrit Olivier, Fleet Space Technologies	Aaron Davis, CSIRO	James Macnae, CD3D	Ruth Murdie, DMIRS	Prof Ronny Stolz, Leibniz Institute Of Photonic Technology
4:10pm – 4:20pm	<b>4.1.1</b> <b>Ambient Noise Tomography (ANT) as a scalable data platform for Machine-Learning driven mineral discovery</b> <i>Jack Muir, Fleet Space Technologies</i>	<b>4.2.1</b> <b>Joint inversion of gravity and MT for mineral systems mapping</b> <i>Stephan Thiel, CSIRO</i>	<b>4.3.1</b> <b>Geophysical Assessment of Mine Tailings for New-Economy Minerals</b> <i>Wei Heng, GHD Pty Ltd</i>	<b>4.4.1</b> <b>Modernising Australian geophysics datasets to enable National-scale multiphysics computation at Exascale: one size can no longer fit all</b> <i>Lesley Wyborn, Australian National University</i>	<b>4.5.1</b> <b>Subsurface Velocity Structure of the Tasmanian Midlands using Ambient Noise Tomography: Implications for Geothermal Potential</b> <i>Tjaart De Wit, Institute of Mine Seismology</i>
4:20pm – 4:30pm			<b>4.3.2</b> <b>MAPRad – A miniaturised magnetic antenna Ground Penetrating Radar</b> <i>Matthew Auld, RMIT University</i>		
4:30pm – 4:50pm	<b>4.1.2</b> <b>Computer vision tools for geophysicists</b> <i>Thomas Schaap, Datarock</i>	<b>4.2.2</b> <b>3D joint inversion of ground and airborne EM</b> <i>Carsten Scholl, Viridien</i>		<b>4.4.2</b> <b>AusLAMP – mapping lithospheric architecture and mineral potential in central and eastern Australia</b> <i>Jingming Duan, Geoscience Australia</i>	<b>4.5.2</b> <b>Geothermal exploration using SQUID TEM survey and 3D inversion, Southern Sumatra, Indonesia</b> <i>Leif Cox, Technolmaging</i>

**THURSDAY 17 OCTOBER 2024**

<b>Time</b>	<b>Plenary Hall Concurrent Session 4.1</b>	<b>Tasman Room A Concurrent Session 4.2</b>	<b>Tasman Room B&amp;C Concurrent Session 4.3</b>	<b>Wellington Room Concurrent Session 4.4</b>	<b>Boardwalk Gallery Concurrent Session 4.5</b>
4:50pm – 5pm	<b>4.1.3</b> <b>Leveraging Machine Learning and Geophysical Data for Automated Detection of Interior Structures of Cratons</b> <i>Hojat Shirmard, The University of Sydney</i>	<b>4.2.3</b> <b>A decade-long between-system comparison of AEM conductivities at Menindee Lake using deterministic and stochastic inversion</b> <i>Anandaroop Ray, Geoscience Australia</i>	<b>4.3.3</b> <b>WA Array Site Characterisation – Enhanced Shear Wave Velocity Profiling from Passive Seismic Data</b> <i>Reza Ebrahimi, Geological Survey of Western</i>	<b>4.4.3</b> <b>Tomographic model of the Australian region from seismic full waveform inversion</b> <i>Josef Holzschuh, Geoscience Australia</i>	<b>4.5.3</b> <b>Lemont, a blind geothermal power plus lithium project</b> <i>John Bishop, Mitre Geophysics</i>
5pm – 5:10pm	<b>4.1.4</b> <b>Integration of Advanced Machine Learning Techniques in Mineral Exploration: Prospectivity Mapping of Porphyry Mineralisation in New South Wales, Australia</b> <i>Elnaz Heidari, The University of Sydney</i>			<b>4.4.4</b> <b>Electrical structure of the Newer Volcanics Province, SE Australia, from 3-D Magnetotelluric Imaging</b> <i>Xinpeng Ma, Jilin University</i>	<b>4.5.4</b> <b>Is there a hotspot under NE Tasmania?</b> <i>Dave Bennett, Devil Resources</i>
5:10pm	Day 1 Close				
5:10pm	Free Time				
6:40pm	<b>Meet at the Wrest Point Exhibition Hall for Ferry transport to the Dinner Venue (Exclusive for delegates attending the dinner)</b> <b>Ferry departs at 7:00pm sharp</b>				
7:20pm – 10:20pm	<b>Symposium Dinner (ticketed event)</b> <b>Waterline Berthing Deck</b> <b>Brooke Street Pier</b>				

## Friday 18 October 2024

Time	Plenary Hall					
8am– 8:30am	Registration and Trade Exhibition Open + Arrival Tea and Coffee					Exhibition Foyer
8:30am – 8:35am	<b>Welcome Day 2</b> <b>Eric Battig, ASEG DISCOVER Chairperson</b>					Plenary Hall
8:35am – 9:05am	<b>Keynote Presentation</b> <b>The Value of Geological Analogues for Unlocking the Subsurface for the Energy Transition</b> <i>Simon Lang, The University of Western Australia</i>					
Time	Plenary Hall Concurrent Session 5.1	Tasman Room A Concurrent Session 5.2	Tasman Room B&C Concurrent Session 5.3	Wellington Room Concurrent Session 5.4	Boardwalk Gallery Concurrent Session 5.5	
Chair:	Jack Muir, Fleet Space	Shane Mule, CSIRO	Phil Heath, GSSA South Australia	Jarrod Dunne, Qintegral	Teagan Blaikie, SGC	
9:05am – 9:15am	<b>5.1.1</b> <b>Real-Time Multiphysics Sensors Derived from Space Exploration Technology for Scalable Mineral Exploration</b>  <i>Gerrit Olivier, Fleet Space Technologies</i>	<b>5.2.1</b> <b>Drill core scale petrophysical zonation of Jupiter and Taurus, Mount Woods, SA</b>  <i>Andreas Bjork, Minex CRC - University of South Australia</i>	<b>5.3.1</b> <b>Seafloor geophysical mapping: Renewable energy use case and the importance of open access data</b>  <i>Christopher Yule, CSIRO</i>	<b>5.4.1</b> <b>Capturing high-resolution lithological heterogeneity in geological CO2 storage reservoir models using stochastic seismic inversion</b>  <i>Seyed Ahmad Mortazavi, University of Melbourne</i>	<b>5.5.1</b> <b>Large geophysical surveys over NSW released in 2024</b>  <i>Astrid Carlton, Geological Survey of NSW</i>	
9:15am – 9:25am	<b>5.1.2</b> <b>Observations from acquisition and processing of deep crustal 2D seismic data over Southwest and Midwest Western Australia</b>  <i>Greg Turner, HiSeis</i>				<b>5.5.2</b> <b>An investigation of wing-tip TMI gradiometry using data from the Yathong Survey near Cobar, NSW</b>  <i>Clive Foss, CSIRO</i>	

FRIDAY 18 OCTOBER 2024

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Chair:	Jack Muir, Fleet Space	Shane Mule, CSIRO	Phil Heath, GSSA South Australia	Jarrold Dunne, Qintegral	Teagan Blaikie, SGC
9:25am – 9:35am	<b>5.1.3</b> <b>A comparison of 3D active seismic and ambient noise models</b> <i>Timothy Jones, Fleet Space Technologies</i>	<b>5.2.2</b> <b>Remanence remembered – an exploration case history from western Tasmania</b> <i>Mark Duffett, Mineral Resources Tasmania</i>	<b>5.3.2</b> <b>The Plumes of Maralinga: Mapping nuclear fallout patterns over sixty years after atomic bomb testing</b> <i>James Cunneen, Eit Pty Ltd</i>	<b>5.4.2</b> <b>Time-lapse 3D reverse VSP monitoring of a 16.5-tonne CO2 injection into a shallow fault at the Otway site</b> <i>Roman Isaenkov, Curtin University</i>	<b>5.5.3</b> <b>Quantitative determination of airborne Mag/Rad survey quality</b> <i>Sam Matthews, Geological Survey Of NSW</i>
9:35am – 9:45am		<b>5.2.3</b> <b>Geoscience at the Core Scale: A Comparison of Petrophysical Data, Geologic Classifications, and Assay Results for Two South American Porphyry Deposits Using Entry Level Statistics and Cluster Analysis</b> <i>Blake Cross, Condor Consulting, Inc</i>			
9:45am – 9:55am		<b>5.2.4</b> <b>GSWA petrophysics update: insights from physical property cross plots</b> <i>Sasha Banaszczyk, DEMIRS - GSWA</i>	<b>5.3.3</b> <b>Advancing Space Weather Hazard Research in Australia: a Journey of Discovery from AWAGS to AusLAMP</b> <i>Liejun Wang, Geoscience Australia</i>	<b>5.4.3</b> <b>Re-evaluating the Stratigraphy of the Polda Basin: Implications for Underground Hydrogen Storage in Onshore Salt Caverns</b> <i>Timothy Rady, Geomorph Energy Consulting Pty Ltd</i>	<b>5.5.4</b> <b>Georgetown AEM survey: Preliminary Results</b> <i>Sasha Aivazpourporgou, Geological Survey Of Queensland</i>

**FRIDAY 18 OCTOBER 2024**

<b>Time</b>	<b>Plenary Hall Concurrent Session 5.1</b>	<b>Tasman Room A Concurrent Session 5.2</b>	<b>Tasman Room B&amp;C Concurrent Session 5.3</b>	<b>Wellington Room Concurrent Session 5.4</b>	<b>Boardwalk Gallery Concurrent Session 5.5</b>
<b>Chair:</b>	Jack Muir, Fleet Space	Shane Mule, CSIRO	Phil Heath, GSSA South Australia	Jarrod Dunne, Qintegral	Teagan Blaikie, SGC
9:55am – 10:05am					<b>5.5.5</b> <b>Maximising the Value of Geophysical Data for Mineral Exploration: A Case Study from the Yilgarn Craton</b> <i>Mosayeb Khademi, Minex CRC/University of South Australia</i>
10:05am – 10:30am	<i>Morning Refreshments and Trade Exhibition</i>				<i>Exhibition Foyer</i>

**FRIDAY 18 OCTOBER 2024**

FRIDAY 18 OCTOBER 2024						
Time	Plenary Hall					
10:30am – 11:00am	<b>Keynote Presentation</b> <b>From Skeletons to Pegmatites – Navigating the Hype of GPR</b> <i>Jan Francke, Groundradar Inc</i>					Plenary Hall
11am – 12pm	<b>ASEG Awards and Closing Ceremony</b>					
12pm – 1pm	Lunch and Trade Exhibition					Exhibition Foyer
Time	Plenary Hall Workshop	Tasman Room A Workshop	Tasman Room B&C Workshop	Wellington Room Workshop	Boardwalk Gallery Workshop	
1:00pm – 4:00pm		<b>Workshop 16</b> <b>Airborne electromagnetic (AEM) surveying from farm to table -- an interactive overview of acquisition, processing and inversion of AEM data</b>  <i>Dr Anandaroop Ray, Dr Yusen Ley-Cooper, Geoscience Australia</i>	<b>Workshop 17</b> <b>Advances in Geothermal Energy Exploration and Development</b>  <i>Mick Small, AGA</i>	<b>Workshop 18</b> <b>MT for mineral exploration: Tips, traps and interpretation</b>  <i>Dr Kate Selway, Vox Geophysics and University of Tasmania</i>	<b>Workshop 19</b> <b>D.I.Y. Multiphysics Interpretation</b> <i>Jarrod Dunne, Tom McNamara, James Parsons, QIntegral Pty Ltd</i>	
4pm – 5pm	Farewell Refreshments					Exhibition Foyer

The ASEG DISCOVER 2024 reserves the right to amend or alter any advertised details relating to dates, program and speakers if necessary and without notice, as a result of circumstances beyond their control.  
 All attempts will be made to keep any changes to an absolute minimum.

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