

FOURTH AND FINAL CIRCULAR



AGCC Australian Geoscience Council **Convention**

BIG ISSUES AND IDEAS IN GEOSCIENCE

14-18 OCTOBER 2018 | Earth Science Week

Adelaide Convention Centre

www.agcc.org.au

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MESSAGE FROM THE PRESIDENT OF THE AUSTRALIAN GEOSCIENCE COUNCIL

With only a few weeks left to the start of the inaugural Australian Geoscience Council Convention, AGCC 2018, we are preparing to welcome representatives from industry, academia and government to the Adelaide Convention Centre during Earth Science Week from 14 to 18 October 2018.

The program's is finalised, and we have an exceptional line-up of renowned plenary and keynote speakers. Over 700 oral and poster contributions from delegates will deliver a unique insight into the full spectrum of Geoscience from the deep earth to recent surface processes, and will reflect the ever-increasing importance of the earth sciences in every sphere of public life.

On Tuesday, four plenary summits will provide a forum for all delegates to consider some of the Big Issues facing Geoscience and geoscientists today and debate the Big Ideas and strategies that we want to develop and take to Government, our colleagues and the community. This is a day not to be missed!

A special welcome will be extended to early career geoscientists. By presenting the full range of Geoscience knowledge and skills, including theoretical and applied Geoscience, mineral and energy resources, environmental and societal science, emerging technologies and Geoscience education, AGCC 2018 will give our young professionals knowledge that they need in developing a satisfying career. We can all learn from the experience and work of others to improve all aspects of Geoscience and foster collaboration.

On behalf of the Organising Committee, I express my thanks to Geoscience Australia (Patron Sponsor), Santos Limited (Major Sponsor), the South Australian Government (Host Sponsor), all our other sponsors and partners, the exhibitors, attendees and volunteers for their support of this first AGC Convention. The Convention incorporates innovative components (e.g. an on-site crèche), and is structured to be as inclusive as possible, with dedicated meetings and events for students, teachers, and various geoscientist groups.

The Convention planning would have not been possible without the dedicated work of volunteers on the Organising Committee, as well as the invaluable support of our professional conference organisers, Carillion Conference Management.

The significant role of Geoscience in Australian society, the safe-guards it provides for a range of geohazards; its many contributions to fundamental research and the engagement of its practitioners as the custodians of the Earth's natural resources is clearly evident in the scope of the presentations we will be listening to and viewing at AGCC 2018 — there is no doubt that the Convention will be hugely topical and scientifically stimulating.

We look forward to welcoming you all to Adelaide, South Australia, and to the new wing of the Adelaide Convention Centre (ACC), right in the heart of the city and nestled within the beauty of the Riverbank Precinct, surrounded by parklands and the River Torrens.

A major outcome of this Convention will be to have all eight of our Member Organisations working together to maximise the benefit of cooperation in the interest of Australian Geoscience. We hope that the outcomes will be long-lasting and self-perpetuating well after we all return safely home.

See you soon in Adelaide!



Dr Bill Shaw

President Australian Geoscience Council | Chair AGCC 2018 Organising Committee

AGCC 2018 OVERVIEW PROGRAM

The final schedule for AGCC 2018 is presented below, and a detailed program on the following pages. There are two main components:

- A full day (Tuesday 16 October) is dedicated to the overall Convention’s theme **Big Issues and Ideas in Geoscience** – energy security, resource development in Northern and Regional Australia, Geoscience education and communication, and the impact of boom-and- bust commodity cycles. These plenary Summits are expected to generate vigorous discussion led by experts in their respective fields
- On Monday 15, Wednesday 17 and Thursday 18 October, concurrent symposia will address the five main themes and over 60 subthemes selected for the Convention.

The Adelaide Convention Centre numerous venues will allow up to 10 concurrent sessions, accommodating over 500 individual oral presentations during the Convention, in addition to opening and closing ceremonies and plenary talks. 231 posters will be displayed in the central area of the GeoEXPO, right next to the GeoHUB Catering and Networking Café.

Once again, we take this opportunity to thank the Big Ideas leaders, theme convenors and subtheme champions for putting together a broad-ranging, topical and engaging program that will offer delegates the opportunity to examine and consider important issues that affect all geoscientists and other stakeholders in Geoscience.

| Time | 12 – 14 October | Monday 15 October | Tuesday 16 October | Wednesday 17 October | Thursday 18 October | Friday 19 October | | |
|-------|-------------------------------------|---|--|--|--|------------------------|-------------------------------|-------|
| 8:00 | | GeoEXPO Open | GeoEXPO Open | GeoEXPO Open | GeoEXPO Open | | | |
| 8:30 | | Opening Ceremony • Welcome to Country (Major Sumner) • Welcome to Delegates (Dr Bill Shaw, President, Australian Geoscience Council) • Official Opening (Hon Dan van Holst Pellekaan MP, Minister for Energy and Mining SA) • Plenary address (Dr James Johnson, CEO, Geoscience Australia) | Big Issues and Ideas in Geosciences Day Introduction Smoothing the impact of boom and bust commodity cycles | Plenary: Resource Security into the Future Dr Cornel de Ronde | Plenary: Applied Geoscience - Geohazards, Risks and Society Dr Sue Keay | | | |
| 9:00 | | | | | | | | |
| 9:30 | | Plenary: Earth Climate - Past and Future Dr Matthew Huber | | Tech Sessions 3 | CSIRO 3-minute Rapid Fire Presentations | Tech Sessions 6 | | |
| 10:00 | | Morning Tea | Morning Tea | | | | | |
| 10:30 | | | | Morning Tea | Morning Tea | | | |
| 11:00 | Pre-Convention Workshops | Tech Sessions 1 | Our energy trilemma options - security, accessibility and sustainability Lunch | Tech Sessions 4 | CSIRO 3-minute Rapid Fire Presentations | Tech Sessions 7 | | |
| 11:30 | | | | | | Lunch | Diversity in Geoscience Lunch | Lunch |
| 12:30 | | | | | | | | |
| 1:00 | | | | | | | | |
| 1:30 | | | | | | | | |
| 2:00 | | Plenary: Life Origins and Evolution Prof Richard Twitchett | Resource driven development of Northern and Regional Australia | Plenary: The Future of Geoscience in our society Prof Iain Stewart | Plenary: Applied Geoscience - Geohazards, risks and Society Prof Michel Jaboyedoff | | | |
| 3:00 | | Afternoon Tea | Afternoon Tea | Afternoon Tea | | | | |
| 3:30 | | Tech Sessions 2 | Geoscience education and new modes of communication Big Issues and Ideas in Geosciences Day - Synthesis | Tech Sessions 5 | Tech Sessions 8 | | | |
| 4:00 | | | | | | | | |
| 4:30 | | | | | | | | |
| 4:45 | | | | | | | | |
| 5:00 | | Santos Education Workshop | | | Closing remarks | | | |
| 5:30 | Sunday 14 October Welcome Reception | | Posters / Drinks GeoEXPO | Posters / Drinks GeoEXPO | Posters / Drinks GeoEXPO | Closing Drinks | | |
| 6:30 | | Invited Functions/ Meetings | Invited Functions/ Meetings | | | | | |
| 7:00 | | | | Convention Dinner | | | | |
| 7:30 | | | | | | | | |

Note that field trips are held pre-, syn-, and post-Convention.

BIG ISSUES AND IDEAS IN GEOSCIENCE DAY– Tuesday, 16 October 2018

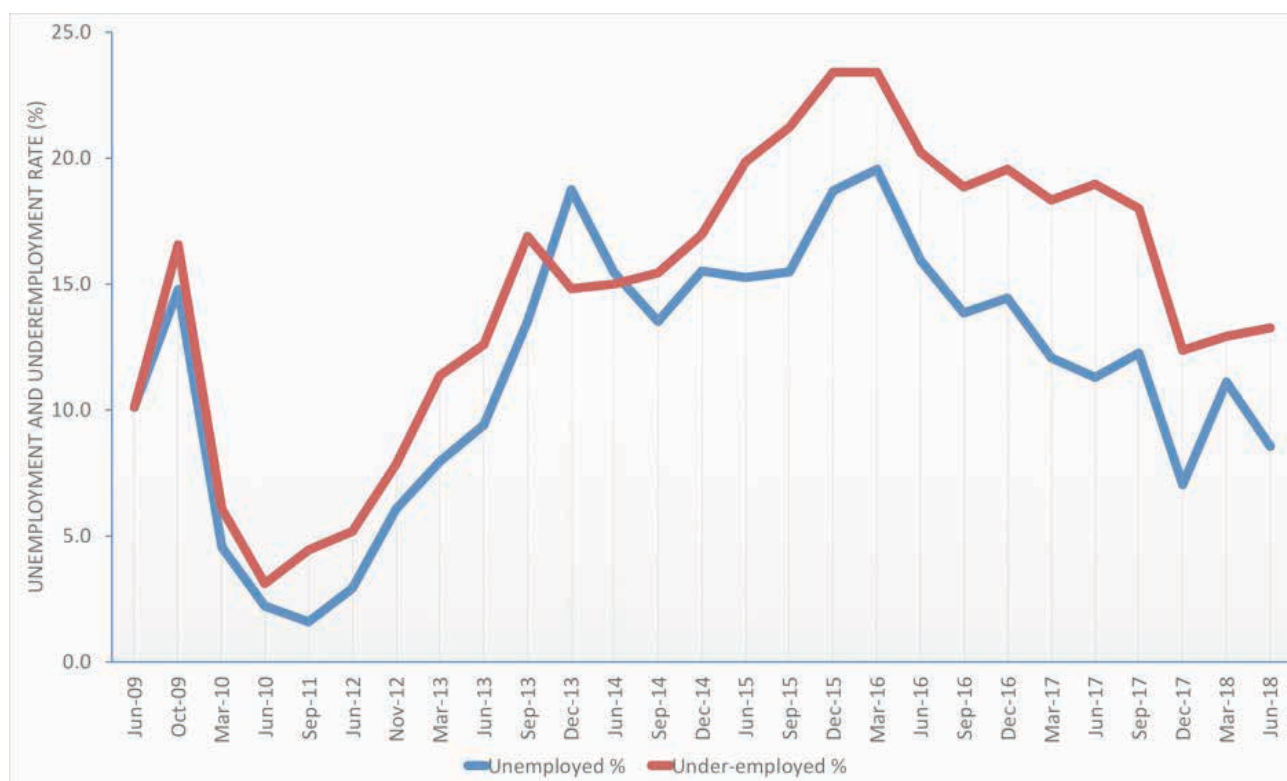
Tuesday 16 October 2018 is set aside in the AGC Convention program to focus on the four Big Issues and Ideas in Geoscience identified for this Convention.

- Smoothing the impact of boom and bust commodity cycles Dr Allan Trench
- Our energy trilemma options – security, accessibility and sustainability Dr Bruce Godfrey
- Resource driven development of Northern and Regional Australia Dr Richard Blewett
- Geoscience education and new modes of communication Professor Iain Stewart

The day is structured around four plenary Summits to be held in Hall A & C (two in the morning and two in the afternoon), each 90 minutes long. Each summit will be introduced and moderated by the respective convenors; a Q&A session and audience discussion will follow each summit.

Invited speakers and titles of presentations are detailed in the program below and in the next section; full biographies of convenors and speakers are available at www.agcc.org.au/big-issues-ideas. The presentations will explore the selected, very topical Issues and we will seek input from you in the audience to develop strategies to move forward. These strategies will be the Ideas that we are seeking to develop and take to Government, our colleagues and the community.

The issues addressed are closely aligned with symposia in the scientific program and are intended to promote discussion and debate.



Geoscientist unemployment in Australia, June 2009 – August 2018. Image courtesy Australian Institute of Geoscientists

| Time | Tuesday 16 October |
|-------|---|
| 8:00 | GeoEXPO - Hall H |
| Room | Hall C |
| 8:30 | <p align="center">Big Issues and Ideas in Geosciences Day Introduction</p> |
| 9:00 | <p align="center">Smoothing the impact of boom and bust commodity cycles</p> <p align="center"><i>Introduction</i> Dr Allan Trench Professor and MBA Director at University of Western Australia Business School; Adjunct Professor Centre for Exploration Targeting, UWA</p> <p align="center"><i>Success case study: Building an Australian Gold Company via counter-cyclical investments</i> Patrick Walta MD, New Century Zinc</p> <p align="center"><i>Industry track record and big picture: How do we grow above the boom and bust cycle mentality?</i> Prabhav Sharma Partner, McKinsey & Company</p> <p align="center"><i>Innovation management as a means to combat boom/bust cycles</i> Miriam Stanborough Group Manager – Productivity & Innovation, Monadelphous Group Ltd</p> <p align="center">Audience discussion Q&A</p> |
| 10:30 | Morning Tea - GeoEXPO - Hall H |
| 11:00 | <p align="center">Our energy trilemma options - security, accessibility and sustainability</p> <p align="center"><i>Introduction</i> Dr Bruce Godfrey Chair of Energy Forum, Academy of Technology and Engineering</p> <p align="center"><i>The transition to clean energy is irreversible</i> Associate Professor Paul Ebert Specialist Advisor - New Energy at Advisian and Global Technology Leader at Advisian/Worley Parsons</p> <p align="center"><i>Engineering the Subsurface: The future of shale gas, enhanced geothermal and remote mining in the context of a global energy revolution</i> Doug Hollett Senior Advisor Energy, Nova Systems</p> <p align="center"><i>CCS for Australia – Why and how</i> Dr Noel Simento MD, ANLEC R&D</p> <p align="center"><i>Social licence to operate in a post scientific truth world</i> Professor Peta Ashworth Chair Sustainable Energy Futures, School of Chemical Engineering; Affiliate Professor Centre for Coal Seam Gas, and Faculty of Humanities and Social Sciences, University of Queensland</p> <p align="center">Audience discussion Q&A</p> |
| 12:30 | Lunch - GeoEXPO - Hall H |

| | |
|------|---|
| 1:30 | <p>Resource driven development of Northern and Regional Australia</p> <p><i>Introduction</i> Dr Richard Blewett General Manager Mineral Systems Branch, Geoscience Australia</p> <p><i>An Indigenous person's perspective of resources and development</i> Nyunggai Warren Mundine AO, Chairman & Managing Director Nyungga Black Group Pty. Ltd.</p> <p><i>The future of Mount Isa and the North West – What it means for Australia</i> Madam Mayor Joyce McCulloch Mayor, Mount Isa</p> <p><i>Revitalising Regional Australia through mining and mineral exploration</i> Warren Pearce CEO, Association of Mining and Exploration Companies Inc.</p> <p><i>The role of government in supporting resource-driven development</i> Dr James Johnson CEO, Geoscience Australia</p> <p>Audience discussion Q&A</p> |
| 3:00 | Afternoon Tea - GeoEXPO - Hall H |
| 3:30 | <p>Geoscience education and new modes of communication</p> <p><i>Introduction</i> Professor Iain Stewart Professor of Geoscience Communication, University of Plymouth</p> <p><i>Selling popular science via broadcast media: Challenges with new digital and on-line media landscapes</i> Aidan Laverty Manager Science & EP Catalyst, ABC</p> <p><i>The revolution and future of communicating geoscience</i> Associate Professor Paul Willis CEO, Media Engagement Services</p> <p><i>Communicating with the Public – Where did we go wrong?</i> Emeritus Professor Susan Stocklmayer AO Australian National Centre for the Public Awareness of Science, Australian National University</p> <p><i>Geotourism – Interpreting geology for non-specialists</i> Professor Ross Dowling OAM Foundation Professor of Tourism, Edith Cowan University</p> <p>Audience discussion Q&A</p> |
| 5:00 | <p>Big Issues and Ideas in Geosciences Day</p> <p>Synthesis</p> |
| 5:30 | <p>Posters/Drinks</p> <p>GeoEXPO – Hall H</p> |
| 6:30 | Invited Functions/Meetings |

Smoothing the impact of boom and bust commodity cycles



Patrick Walta
2018 Mining News Emerging
Leader Award winner



Prabhav Sharma



Miriam Stanborough

Our energy trilemma options – security, accessibility and sustainability



Assoc Prof Paul Ebert



Doug Hollett



Dr Noel Simento



Prof Peta Ashworth

Resource-driven development of Northern and Regional Australia



Nyunggai Warren Mundine AO



**Madam Mayor Joyce
McCulloch**



Warren Pearce



Dr James Johnson

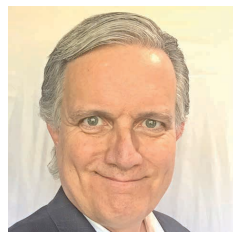
Geoscience education and new modes of communication



Aidan Laverty



**Emeritus Prof
Susan Stockmayer**



Assoc Prof Paul Willis



Prof Ross K. Dowling OAM



The Joint Australian Tsunami Warning Centre is a cooperation between Geoscience Australia (Patron Sponsor of AGCC 2018) and the Bureau of Meteorology. It detects earthquakes that have the potential to generate tsunamis that can impact Australia's coastline, and advise the Bureau of Meteorology of this potential within 10 minutes of the earthquake occurring.

AGCC 2018 SCIENTIFIC AND TECHNICAL PROGRAM

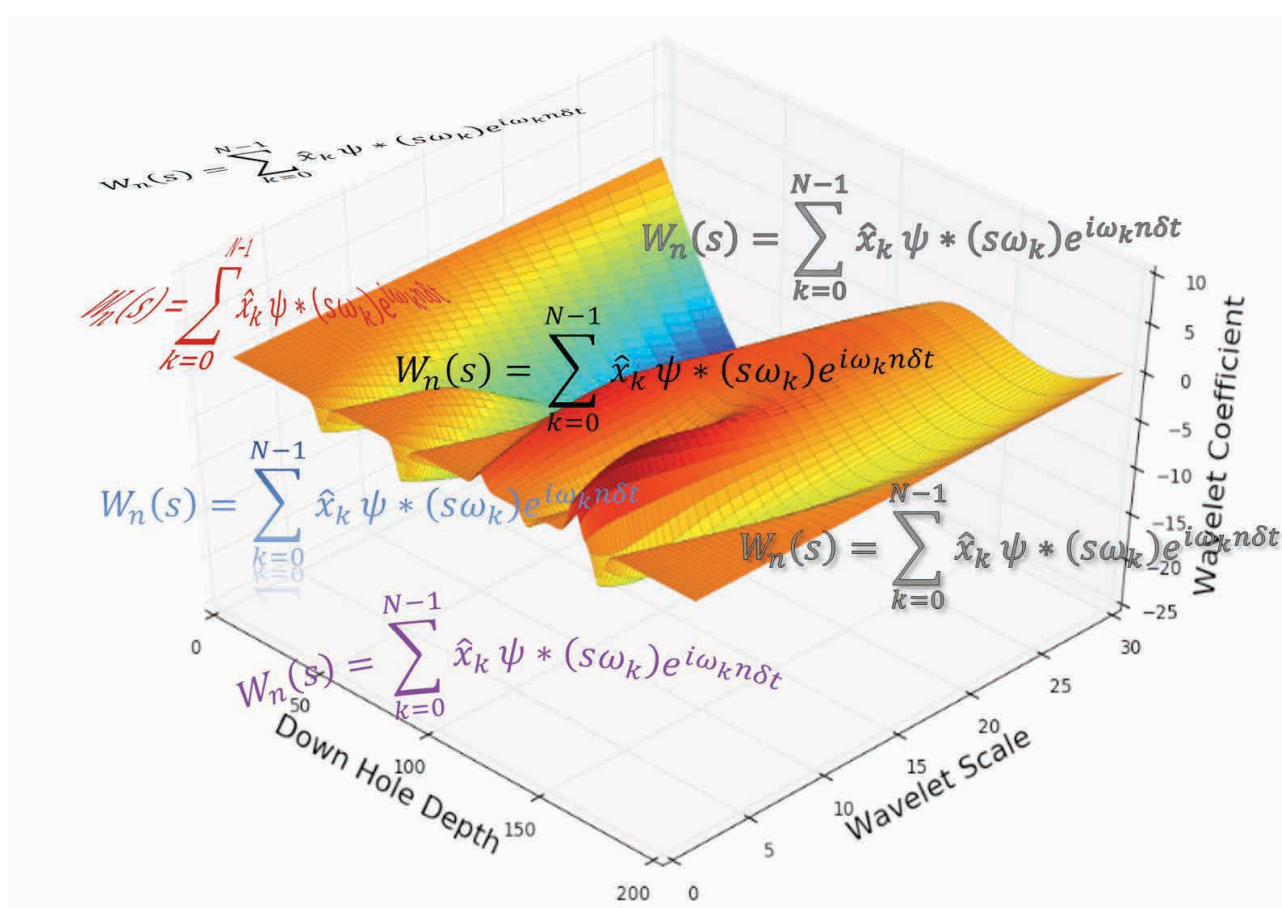
The Scientific Program Committee is delighted to announce that more than 800 abstracts were submitted online, covering presentations in over 60 broad themes and subthemes. Abstracts were submitted by authors from 32 countries, representing geoscientists from academia, government and industry, and covering disciplines from the entire range of the earth sciences.

Theme champions and the proposers of symposia have assessed abstracts, invited keynote speakers, allocated oral and poster presentations and appointed session chairs.

The program is regulated so that talks in all parallel sessions start at the same time – 4 talks an hour, each of 15-minute duration (NB this includes 3 minutes for questions and change-over). Talks will all start on the hour, at hour+15, hour+30, and hour+45. Most keynote presentations will be afforded a double slot.

Posters will be displayed in the central area of the GeoEXPO, right next to the GeoHUB Catering and Networking Café. Poster must be designed in portrait orientation and can be up to A0 in size (1189 mm height x 841 mm width)

We hope you find the proposed program both interesting and exciting. We trust that the scientific sessions and the plenary presentations and panels will stimulate discussion and interest in your area of science and beyond, recognising the increasing need for interdisciplinary and multidisciplinary approaches to addressing contemporary issues in the Geosciences.



Artistic rendition of the Continuous Wavelet Transform (CWT) equation. The CWT equation is used for detecting multiscale boundaries in drill hole data - a 3D plot of a CWT of drill hole data is used as a backdrop. Image courtesy of June Hill, CSIRO.

Plenary program

The AGCC 2018 Scientific Program will feature morning and afternoon Plenary sessions in the Main Hall of the Adelaide Convention Centre, in which distinguished invited speakers will give presentations on major contemporary topics in the Geosciences. These plenary topics are closely aligned with Themes and Symposia in the scientific program and are intended to promote discussion and debate within the symposia.



Dr James Johnson – CEO Geoscience Australia

AGCC 2018 Opening Ceremony



Professor Matthew Huber - Department of Earth, Atmospheric, and Planetary Sciences, Purdue University

The Miocene is the future: what past climates tell us now

Theme 1 - Understanding the Earth



Professor Richard Twitchett - Research Leader, Department of Earth Sciences, Natural History Museum, London

Mass Extinction System Science: a fully integrated field of study or just a MESS?

Theme 2 - Life on Earth - Origins and Diversity



Dr Cornel de Ronde – Offshore Mineral Group Leader, GNS Science in New Zealand.

Modern seafloor hydrothermal systems associated with submarine arcs: how prospective are they for Cu–Au mineralization?

Theme 3 - Resources – discovery, development, use and sustainability



Professor Michel Jaboyedoff - University of Lausanne, Switzerland

Improving the rockfall failure hazard assessment and consequences

Theme 4.1 - Geohazards, risk and mitigation



Dr Sue Keay – Director, Australian Centre for Robotic Vision, QUT (Queensland University of Technology),

Advances in robotics and computer vision and what it means for the Australian resources sector

Theme 5 - Beyond the Rocks - Geoscience in our Society: Current Application and Future Trends



Professor Iain Stewart - Director Sustainable Earth Institute Geoscience, Plymouth University

Selling Planet Earth: communicating contested geoscience to the public

Theme 5.3 - Geoscience, Education and Professional Development (AUGEN Symposium)

Scientific symposia

The schedule for all concurrent symposia for AGCC 2018 is outlined over the following pages, together with the list of keynote speakers. More information is available on the AGCC 2018 website, www.agcc.org.au/themes-symposia, including an outline of the scope of each of the Symposia.

Some adjustments to the schedule are still likely. Delegates are advised to consult the Convention app during the event for the final version of the Program.

The Scientific Program is organised around five Themes, each including numerous Subthemes:

- **Theme 1: Understanding the Earth** Professor Dietmar Müller
- **Theme 2: Life on Earth – origins and diversity** Professor Simon George
- **Theme 3: Resources – discovery, development, use and sustainability** Dr Kevin Cassidy
- **Theme 4: Applied Geosciences in the 21st Century – innovation, technology and the future** Chris Woodfull
- **Theme 5: Beyond the rocks – Geoscience in our society: current application and future trends** Dr Graham Carr

Video-recording of presentations will not be permitted at AGCC 2018.







Dusk at the Olympic Dam processing plant. Source BHP.

| Time | Monday 15 October |
|-------|---|
| 8:00 | Exhibition Open – Hall H |
| Room | Hall C |
| 8:30 | Opening Ceremony <ul style="list-style-type: none"> • Welcome to Country (Major Sumner) • Welcome to Delegates (Dr Bill Shaw, President, Australian Geoscience Council) • Official Opening (Hon Dan van Holst Pellekaan MP, Minister for Energy and Mining, South Australia) • Plenary address – <i>Applying Geoscience to Australia's most important challenges</i> (Dr James Johnson, CEO, Geoscience Australia) |
| 9:30 | Plenary: Earth Climate - Past and Future <i>The Miocene is the Future: What Past Climates Tell Us Now</i> Dr Matthew Huber (Purdue University) |
| 10:30 | Morning Tea |

| Technical Session 1 | |
|--|---|
| Room | Hall C |
| 1.1.1 Decoding Earth's supercycles: from the core to the crust | |
| 11:00 | KEYNOTE: <i>Proxies of the supercontinent cycle and the case for Pannotia</i> Prof Richard Damian Nance (Ohio University) |
| 11:30 | KEYNOTE: <i>Evolution of the structure of the lower mantle over the last billion years</i> Dr Nicolas Flament (University of Wollongong) |
| 12:00 | <i>Decoding Earth's rhythms: Modulation of supercontinent cycles by longer superocean cycles</i> Prof Zheng-Xiang Li (Curtin University) |
| 12:15 | <i>Sulfur isotope cycles in deep time; relationships to ocean chemistry and large igneous provinces</i> Prof Ross Large (University of Tasmania) |
| 12:30 | <i>Fingerprinting mantle plume activities in the oceanic realm through time</i> Dr Luc S Doucet (Earth Dynamics Research Group, Curtin University) |
| 12:45 | <i>Whole Earth harmonics</i> Dr Ross Mitchell (Curtin University) |

| Technical Session 1 | |
|---|--|
| Room | Hall A |
| 1.2.1 Understanding basin formation and evolution from a plate-tectonic perspective | |
| 11:00 | KEYNOTE: <i>Inversion in fold and thrust belts and in passive margins – Basement controls on structural styles</i> Prof Ken McClay (Department of Earth Sciences, Royal Holloway University of London) |
| 11:30 | <i>Marginal fault systems of the Northern Carnarvon Basin: Seismic evidence for multiple Palaeozoic extension events and insights from numerical models</i> Amy l'Anson (EarthByte Group, University of Sydney) |
| 11:45 | <i>Interactions between tectonics and surface processes during rifting and passive margin development: The structural evolution of the North West Shelf</i> Dr Romain Beucher (The University of Melbourne) |
| 12:00 | <i>Numerical modelling of multiphase rifts – Applications to the Bight Margin?</i> Dr Rebecca Farrington (The University of Melbourne) |
| 12:15 | <i>Understanding the Continental Crust and Tectonics of the Norwegian Barents Sea through Regional Deep Seismic Profiles</i> Dr Stuart Clark (UNSW Sydney) |
| 12:30 | <i>Plate to anticline modelling of the Papua New Guinea margin – Predicting gasfield structure</i> Dr Kevin Hill (University of Melbourne) |
| 12:45 | <i>Approach to detrital zircons geochemistry to unravel episodes of crustal growth; A study from the Capricorn Orogen, Western Australia</i> Sonia Armandola (Curtin University) |

| | |
|---|--|
|  | Theme 1. Understanding the Earth |
|  | Theme 2. Life on Earth – origins and diversity |
|  | Theme 3. Resources – discovery, development, use and sustainability |
|  | Theme 4. Applied Geosciences in the 21st Century – innovation, technology and the future |
|  | Theme 5. Beyond the rocks – Geoscience in our society: current application and future trends |

| Time | Monday 15 October |
|-------|--|
| | Technical Session 1 |
| Room | Hall E1 |
| | 1.1.5 Imaging Australia in 3D, 21 Years of ANSIR and beyond |
| 11:00 | KEYNOTE: ANSIR portable seismic facility – 21 years of seismic data acquisition and discovery Dr Michelle Salmon (Australian National University, Research School of Earth Sciences) |
| 11:30 | <i>Lithospheric discontinuities in Central Australia</i> Prof Brian Kennett (Research School of Earth Sciences, Australian National University) |
| 11:45 | <i>Imaging Moho variations across Australia from Bayesian inversion of autocorrelograms</i> Dr Mehdi Tork Qashqai (CSIRO) |
| 12:00 | <i>Retrieval of Interstation Local Body Waves from the Teleseismic Coda Correlations – Australia</i> Dr Erdinc Saygin (CSIRO) |
| 12:15 | <i>Improved Earth imaging beneath the ice cover of Antarctica using passive seismology: Circumventing the problem of strong reverberations</i> Thanh-Son Pham (Research School of Earth Sciences, The Australian National University) |
| 12:30 | <i>Resolving the source parameters of shallow crustal earthquakes in Australia: Examples from three earthquakes in the Musgrave Province</i> Dr Babak Hejrani (The Australian National University) |
| 12:45 | <i>The Past, Present and Future of Earth Imaging in Australia</i> Prof Anya Reading (University of Tasmania) |
| | Technical Session 1 |
| Room | Hall E2 |
| | 3.1.1 Effective exploration and discovery under cover |
| 11:00 | KEYNOTE: Why the Mineral Exploration Industry needs to change and a vision for successful 21st Century under-cover exploration Dr Jon Hronsky (Western Mining Services) |
| 11:30 | <i>Exploration undercover – What can we learn from the Canadian experience?</i> Dr Stephen Rowins (Centre for Exploration Targeting, University of Western Australia) |
| 11:45 | <i>Promising patterns - Expression of basement structures through cover and their role as potential pathways through South Australia's critical zone</i> Dr Carmen Krapf (Geological Survey of South Australia) |
| 12:00 | <i>Airborne electromagnetic inversion for regolith structure</i> Dr Andrew King (CSIRO) |
| 12:15 | <i>Automation of cover sequence geochemistry within a modern mineral exploration environment</i> Dr Caroline Tiddy (MinEx CRC, FII, University of South Australia) |
| 12:30 | <i>Pb isotope geochemistry in exploration under cover – New opportunities from new technologies</i> Dr Graham Carr (CSIRO) |
| 12:45 | <i>Towards an isotopic atlas of northern Australia</i> Chris Lewis (Geoscience Australia) |
| | Technical Session 1 |
| Room | Room R1 |
| | 2.3 Mass Extinctions |
| 11:00 | KEYNOTE: The Chicxulub Impact: The End of an Era Prof Joanna Morgan (Imperial College London) |
| 11:30 | <i>Record of the First Day of the Cenozoic in the Chicxulub Impact Structure</i> Prof Sean Gulick (University of Texas at Austin) |
| 11:45 | <i>The significance of Photic Zone Euxinia at the Chicxulub Impact Crater</i> Bettina Schaefer (Curtin University) |
| 12:00 | <i>Triassic Arctic Ice and the Origin and Ecological Ascent of the Dinosaurs</i> Dr Paul Olsen (Columbia University) |
| 12:15 | <i>Evidence of Microbial Mats and Prolonged Persistent Photic Zone Euxinia during the end – Triassic Mass Extinction and Recovery in the UK</i> Calum Fox (WA-OIGC) |
| 12:30 | <i>Late Permian volcanism in the Sydney Basin and New England Orogen: Cumulative massive volcanism without mass extinction</i> Dr Robert Nicoll |
| 12:45 | <i>A potential 370 ka disparity between the initiation of the Terrestrial and Marine end Permian Mass Extinction events</i> Dr Robert Nicoll |

| Time | Monday 15 October |
|-------|--|
| | Technical Session 1 |
| Room | Room R2 |
| | 3.2.3 Petroleum and its co-products |
| 11:00 | KEYNOTE: Good Geoscience means more gas; more gas means more clean, reliable and affordable energy Bill Ovenden (Santos Ltd) |
| 11:30 | <i>Finding Fractures in the Cooper Basin Deep Coal Play: An Integrated Approach to Predictive Modelling</i> Emma Hissey (Santos) |
| 11:45 | <i>Integrated Earth Data Interpretation – A Recipe for Success in Onshore Frontier Hydrocarbon Exploration</i> Lance Holmes (Santos Ltd) |
| 12:00 | <i>Mafic intrusive complexes in sedimentary basins: A guide for hydrocarbon explorers</i> Assoc Prof Simon Holford (University of Adelaide) |
| 12:15 | <i>Proterozoic petroleum geochemistry of northern Australia</i> Dr Amber Jarrett (Geoscience Australia) |
| 12:30 | <i>An interdisciplinary approach to assessing the prospectivity and potential impacts of unconventional hydrocarbon development in the Isa Superbasin of Queensland</i> Dr Meredith Orr (Geoscience Australia) |
| 12:45 | |
| | Technical Session 1 |
| Room | Room R5 |
| | 3.3.1 Groundwater challenges and opportunities & 3.3.3 Pre-competitive geoscience data and information to understand groundwater systems & 3.3.4 Evaluating the potential impacts to groundwater from resource development |
| 11:00 | KEYNOTE: The Groundwater Grand Challenge Prof Craig Simmons (Flinders University / NCGRT) |
| 11:30 | <i>Groundwater resource development opportunities in northern Australia: Investigations of the Grant Group and Poole Sandstone – Fitzroy catchment, Western Australia</i> Andrew Taylor (CSIRO) |
| 11:45 | <i>Emerging groundwater quality concerns in the Australian context</i> Dr Ilka Wallis (Flinders University) |
| 12:00 | <i>Hydro-illogical cycle, socio-hydrogeology and collective action; lessons learnt from groundwater management in the Angas-Bremer irrigation district (South Australia)</i> James Hopkinson (Flinders University) |
| 12:15 | <i>Use of Industry seismic reflection data for groundwater investigations in the Kimberley region as part of the Exploring for the Future Program</i> Dr Donna Cathro (Geoscience Australia) |
| 12:30 | <i>Mapping and characterising springs for understanding groundwater-surface water interactions in the Upper Burdekin Region, north Queensland</i> Dr Prachi Dixon-Jain (Geoscience Australia) |
| 12:45 | <i>Using a risk framework to guide groundwater modelling and data collection to analyze future environmental impacts from extractive industries</i> Dr Glen Walker (Grounded In Water) |
| | Technical Session 1 |
| Room | Room R6 |
| | 4.7 The National Virtual Core Library |
| 11:00 | <i>The Australian National Virtual Core Library – Accessing geological information from the upper 1–2 km of our Earth’s crust</i> Dr Carsten Laukamp (CSIRO) |
| 11:15 | KEYNOTE: The NVCL in 2030: Development and benefits of building and using the world’s largest public national geological material properties knowledgebase Dr Jon Huntington (HHGeoscience) |
| 11:45 | <i>Reducing the Complexity of Dense Drillcore Spectral Datasets with Spectral Feature Extraction and Clustering</i> Dr Andrew Rodger (CSIRO) |
| 12:00 | <i>Unleashing thermal infrared spectroscopy on the carbonate mineralogy of drill holes</i> Dr David Green (Mineral Resources Tasmania) |
| 12:15 | <i>Spectral logging in skarn systems – Making a difficult task easy</i> Adrian Fabris (Geological Survey of South Australia) |
| 12:30 | <i>Calibrating HyLogger-3 reflectance spectra using Minalyze XRF data</i> Dr Neil Pendock (Corelog Analytics) |
| 12:45 | <i>NVCL Analytics</i> Peter Warren (CSIRO) |

| Time | Monday 15 October |
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| | Technical Session 1 |
| Room | Room R7 |
| | 4.4.1 The Geoscience of Where |
| 11:00 | KEYNOTE: Everything happens somewhere Andrew Barnicoat (Geoscience Australia) |
| 11:30 | <i>Combined usage of GNSS and InSAR to implement and maintain a dynamic Australian datum</i> Dr Thomas Fuhrmann (Geoscience Australia) |
| 11:45 | <i>The infrastructure that lets us ask where? The impact of AuScope on Australian geoscience research</i> Dr Tim Rawling (AuScope) |
| 12:00 | <i>Accurate and precise 'where' determinations: The real challenge of integrating multiple scientific phenomena observed/measured at similar locations.</i> Dr Lesley Wyborn (Australian National University) |
| 12:15 | <i>Utilizing Data Frameworks for Spatial Data</i> Andrew Whiting (Geoscience Australia) |
| 12:30 | <i>Pixels to Answers</i> Nathan Eaton (NGIS Australia Pty Ltd) |
| 12:45 | <i>Mapping in a connected world</i> Mr Jason Beltran (SRK Consulting) |
| | Technical Session 1 |
| Room | Room R8 |
| | 5.5 Planning the Future of Geoscience |
| 11:00 | <i>Launch of Decadal Plan</i> Prof Sue O'Reilly (Macquarie University) |
| 11:15 | KEYNOTE: Decadal Plan for Geoscience: Our planet, Australia's future – A decade of transition in Geoscience Prof Sue O'Reilly (Macquarie University) |
| 11:30 | <i>Australian space and planetary capabilities: Implications for Earth Sciences</i> Assoc Prof Craig O'Neill (Macquarie University) |
| 11:45 | <i>Geophysics in Australia Enters a Decade of Transformation</i> Prof Anya Reading (University of Tasmania) |
| 12:00 | <i>Moving from geosystem to mineral system to discovery–research challenges</i> Dr Graham Begg (Minerals Targeting International PL) |
| 12:15 | <i>The fundamental new science we need to support future discovery success</i> Dr Jon Hronsky (Western Mining Services) |
| 12:30 | <i>AuScope and the decade of predictive geoscience: Research infrastructure to support tackling the next generation of Australian geoscience questions</i> Dr Tim Rawling (AuScope) |
| 12:45 | <i>UNCOVER Australia: A trillion dollar prize</i> Dr Phil McFadden (Australian Academy of Science) |
| 1:00 | Lunch |
| Room | Hall C |
| 2:00 | Plenary: Life Origins and Evolution <i>Mass Extinction System Science: a fully integrated field of study or just a MESS?</i> Prof Richard Twitchett (Natural History Museum, London) |
| 3:00 | Afternoon Tea |

| Time | Monday 15 October |
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| | Technical Session 2 |
| Room | Hall C |
| | 1.1.1 Decoding Earth's supercycles: from the core to the crust |
| 3:30 | <i>Detrital zircons and the distribution of S-type granites through time</i> Ziyi Zhu (Australian National University) |
| 3:45 | <i>Geochemical evidence for a fossil mantle wedge beneath the Gakkel Ridge, Arctic Ocean</i> Marianne Richter (Monash University) |
| 4:00 | <i>Development of the Global Paleomagnetic Database and new global paleogeographic animation for 2000-1600 Ma</i> Dr Sergei Pisarevsky (Curtin University) |
| 4:15 | <i>Long-lived supercontinent Nuna revised – Updated paleomagnetic constraints from Australia</i> Dr Uwe Kirscher (Curtin University) |
| 4:30 | <i>First Precambrian palaeomagnetic data from the Mawson Craton (East Antarctica) and tectonic implications</i> Yebo Liu (Curtin University) |
| 4:45 | <i>Long-lived connection between the North China and North Australia cratons (NCC-NAC) in the supercontinent Nuna: New palaeomagnetic constraints</i> Chong Wang (Curtin University) |
| 5:00 | <i>A global full-plate reconstruction model for the last 2.0 Ga</i> Dr Lei Wu (Curtin University) |
| 5:15 | <i>Recognising base level shifts in the Upper Jurassic Walloon Coal Measures of the Surat Basin, Australia</i> Dr Carmine Wainman (University of Adelaide) |
| | Technical Session 2 |
| Room | Hall A |
| | 1.2.1 Understanding basin formation and evolution from a plate-tectonic perspective |
| 3:30 | <i>How big was that ocean? - Combining new and traditional techniques to inform understanding of ancient ocean basin evolution</i> Prof Jonathan Aitchison (University of Queensland) |
| 3:45 | <i>Tectonic reactivation of basement and its control on basin evolution</i> Dr Lynn Pryer (Frogtech Geoscience) |
| 4:00 | <i>Initiation of the Canning Basin: Extensional magmatism in the middle Cambrian?</i> Dr Peter Haines (Geological Survey of Western Australia) |
| 4:15 | <i>Mantle influence on vertical crustal movements of Australian Paleozoic intracratonic basins</i> Alexander Young (The University of Wollongong) |
| 4:30 | <i>The Amadeus Basin fold-and-thrust belt, central Australia: Stages of intraplate deformation</i> Dr Anett Weisheit (Northern Territory Geological Survey) |
| 4:45 | <i>Triassic Tectonics and Sedimentation on the North West Shelf</i> Prof Chris Elders (Curtin University) |
| 5:00 | <i>Nucleation of rift basins and initiation of the East African Rift System in NW Kenya: The 'Turkana First' model</i> Prof Andrew Gleadow (School of Earth Sciences, University of Melbourne) |
| 5:15 | <i>Tectonic control on the Ordovician Sandstones and Permo-Carboniferous Dwyka Glaciation of Gondwana</i> Dr Geoffrey Grantham (University of Johannesburg) |
| | Technical Session 2 |
| Room | Hall E1 |
| | 1.1.5 Imaging Australia in 3D, 21 Years of ANSIR and beyond |
| 3:30 | KEYNOTE: <i>Tectonic and metallogenic evolution of South Australia: Insights from 5 years of AusLAMP</i> Dr Kate Robertson (Geological Survey of South Australia) |
| 4:00 | <i>Shallow crustal structure of southeast Australia constrained by Rayleigh wave phase velocity and Z/H ratio</i> Guoliang Li (Macquarie University) |
| 4:15 | <i>Palaeomagnetic rotations in the Tasmanides</i> Dr Robert Musgrave (Geological Survey of NSW) |
| 4:30 | <i>Multi-scale geoelectric structure of the Tasmanian Lithosphere</i> Thomas Ostensen (University of Tasmania) |
| 4:45 | <i>Magnetotelluric imaging of intracontinental deformation zones: Example of the Musgraves Province in Central Australia</i> Dr Stephan Thiel (Geological Survey of South Australia) |
| 5:00 | <i>Investigation of the large-scale conductivity structure of the Mount Isa Province from broadband magnetotelluric data</i> Janelle Simpson (Geological Survey of Queensland) |
| 5:15 | <i>Exploring for the Future: South Nicholson Seismic Interpretation</i> Lidena Carr (Geoscience Australia) |

| Time | Monday 15 October |
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| | Technical Session 2 |
| Room | Hall E2 |
| | 3.1.3 Understanding mineral systems for exploration – from craton to micron scale |
| 3:30 | KEYNOTE: The porphyry mineral system – Key targeting criteria for exploration across all scales Prof David Cooke (University of Tasmania, CODES) |
| 4:00 | <i>New indicators of and methods to assess magmatic fertility in the Northparkes district</i> Tristan Wells (University of Tasmania, CODES) |
| 4:15 | <i>The Ernest Henry Inter-lens. Geology, apatite geochronology and trace element analysis; Implications for a reviewed deposit model</i> Bradley Cave (University of Adelaide) |
| 4:30 | <i>Geochronology of Proterozoic metallogenic events in the Mount Isa Province</i> Courtney Dhnaram (Geological Survey of Queensland) |
| 4:45 | <i>Is Mount Isa a zoned carbonate replacement system?</i> Dr Richard Lilly (University of Adelaide - Mount Isa Mines) |
| 5:00 | <i>Micron-scale thallium mapping of drill-core provides evidence for an epigenetic origin for mineralization in the McArthur River (HYC) Zn-Pb Deposit</i> Dr Samuel Spinks (CSIRO) |
| 5:15 | <i>Examining geochemical links between mineralizing fluids in the southern Irish Cu deposits and the Irish Midlands Zn-Pb field</i> Dr Sean Johnson (iCRAG) |
| | Technical Session 2 |
| Room | Room R1 |
| | 2.4 Ancient and Historical Record of Life in Australia |
| 3:30 | KEYNOTE: Riversleigh research: An impossibly condensed overview of the last 43 years Prof Michael Archer (University of New South Wales) |
| 4:00 | <i>Integrating stratigraphic analysis and biostratigraphy to reconstruct Late Paleozoic carbonate platform architecture</i> Assoc Prof Annette George (University of Western Australia) |
| 4:15 | <i>Micro-CT investigations of two well-preserved Middle Cambrian radiolarians from the Georgina Basin, Australia</i> Jiani Sheng (The University of Queensland) |
| 4:30 | <i>Reduction Spheroids from the Tumblagooda Sandstone as Potential Biomarkers for the Terrestrialisation of Arthropods</i> David Fox (CSIRO & Curtin University) |
| 4:45 | <i>How did the Great Barrier Reef develop during the Last Interglacial? New evidence from One Tree Reef</i> Madhavi Anne Patterson (The University of Sydney) |
| 5:00 | <i>Can systematic palaeontology survive modern metrics?</i> Prof Gregory Webb (The University of Queensland) |
| 5:15 | |
| | Technical Session 2 |
| Room | Room R2 |
| | 3.2.3 Petroleum and its co-products & 3.2.5 Geoscience aspects of the storage of energy related waste |
| 3:30 | KEYNOTE: Helium and Australia Dr Michael C Clarke (M.E.T.T.S. Pty Ltd) |
| 4:00 | <i>Identifying new exploration opportunities in a mature basin</i> Sarah Trend (Esso Australia Pty Ltd) |
| 4:15 | <i>The Helium and Hydrogen potential of the Amadeus Basin</i> Eilidh Cassidy (The University of Adelaide) |
| 4:30 | KEYNOTE: CO2CRC Otway Project – Assurance monitoring and verification of a CO₂ storage site Dr Ulrike Schacht (CO2CRC, University of Adelaide) |
| 4:45 | <i>Demonstrating long-term safety of nuclear waste disposal: Geosciences leads the way</i> Dr Dirk Mallants (CSIRO) |
| 5:00 | <i>Lessons learned from microbial mats and carbonate microbialites important to carbon sequestration in mine environments</i> Prof Gordon Southam (The University of Queensland) |
| 5:15 | <i>CO₂ storage in the Central Surat Basin: New core data and predicted CO₂-water-rock reactions</i> Dr Julie Pearce (University of Queensland) |

| Time | Monday 15 October |
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| | Technical Session 2 |
| Room | Room R4 |
| | Santos Education Workshop |
| 3:00 | <p>The program for this event, which is specifically designed for teachers, includes:</p> <ul style="list-style-type: none"> • an education discussion led by Prof Iain Stewart • geoscience-related hands-on and practical activities ready for your classroom <ul style="list-style-type: none"> • access to the AGCC poster & trade displays after the workshop • meeting with the Geoscience community over evening nibbles and drinks |
| | Technical Session 2 |
| Room | Room R5 |
| | 3.3.3 Pre-competitive geoscience data and information to understand groundwater systems & 3.3.4 Evaluating the potential impacts to groundwater from resource development |
| 3:30 | KEYNOTE: <i>Exploring for the Future – New innovative groundwater data and information for Northern Australia</i> Dr Narelle Neumann (Geoscience Australia) |
| 4:00 | KEYNOTE: <i>Using surface and groundwater models to conduct cumulative impact assessments: The Bioregional Assessment Programme</i> Dr David Post (CSIRO) |
| 4:30 | <i>Multiple environmental tracers elucidate anthropogenic and climate change effects since the last glaciation on groundwater in the Peel Area, WA</i> Dr Christoph Gerber (CSIRO) |
| 4:45 | <i>Dolerite Dykes Characterisation in the Hamersley Basin and Significance for Groundwater Compartmentalisation</i> Anne-Audrey Latscha (Rio Tinto) |
| 5:00 | <i>Environmental tracers and geology to investigate groundwater recharge and conceptual model uncertainties in the Pilliga area (Surat Basin, NSW)</i> Dr Matthias Raiber (CSIRO) |
| 5:15 | <i>A multi-environmental tracer study quantifying deep recharge to the Hutton and Precipice Sandstone and detecting cross-formational flow, Surat Basin, Queensland</i> Dr Axel Suckow (CSIRO) |
| | Technical Session 2 |
| Room | Room R6 |
| | 4.7 The National Virtual Core Library |
| 3:30 | <i>Unusual or unfamiliar minerals revealed by the NVCL, their significance and procedures for their recognition and validation</i> Dr Jon Huntington (HHGeoscience) |
| 3:45 | <i>Applications of hyperspectral mineralogy for geoenvironmental characterisation</i> Dr Anita Parbhakar-Fox (UTAS) |
| 4:00 | KEYNOTE: <i>Spectral mineralogy from hand held spectrometers: Third generation technologies driving a revival</i> Dr Sasha Pontual (AusSpec International) |
| 4:30 | <i>Evidence of multiple fluid events at Angularli uranium prospect, Alligator Rivers Uranium Field, Northern Territory from mapping HyLogger mineralogy</i> Belinda Smith (Northern Territory Geological Survey) |
| 4:45 | <i>Spectral studies from the Kanmantoo Copper Mine, South Australia</i> Dr Alan Mauger (Geological Survey of South Australia) |
| 5:00 | <i>Characterisation of New Caledonian nickel laterite using hyperspectral imaging</i> Dr Erick Ramanaidou (CSIRO) |
| 5:15 | <i>High-resolution hyperspectral imagery from the Canadian Malartic gold deposit, Quebec, Canada: Characterizing mineralogy and mineral chemistry</i> Philip Lypaczewski (University of Alberta) |

| Time | Monday 15 October |
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| | Technical Session 2 |
| Room | Room R7 |
| | 4.4.3 Geoscience data delivery & 4.4.2 Understanding the Surface |
| 3:30 | <i>Seamless Geology of NSW: A new paradigm for geological mapping</i> Dr John Greenfield (Geological Survey of NSW) |
| 3:45 | <i>GSWA geoscience data delivery: Where to from here?</i> Dr Angela Riganti (Geological Survey of Western Australia) |
| 4:00 | <i>Access to hazard and risk information to underpin decision-making</i> Dr Jane Sexton (Geoscience Australia) |
| 4:15 | KEYNOTE: SA Land Cover 1987 - 2015 Matthew Miles (SA Department for Environment and Water) |
| 4:45 | <i>Monitoring surface motion from space using Interferometric Synthetic Aperture Radar</i> Sarah Lawrie (Geoscience Australia) |
| 5:00 | <i>Digital Earth Australia – Analysis of the remote sensing time series to understand the land surface</i> Adam Lewis (Geoscience Australia) |
| 5:15 | <i>Land Cover Mapping using Digital Earth Australia</i> Cate Kooymans (Geoscience Australia) |
| | Technical Session 2 |
| Room | Room R8 |
| | 5.5 Planning the Future of Geoscience |
| 3:30 | <i>Geoscience at the frontiers</i> Dr Robert Hough (CSIRO) |
| 3:45 | <i>A fifteen-year longitudinal AGC survey of Australian earth science departments: Results and predictions</i> Assoc Prof David Cohen (University of New South Wales) |
| 4:00 | <i>AuScope's Earth Composition and Evolution Program: Trends, challenges and opportunities facing geochemistry in Australia</i> Prof Brent McInnes (Curtin University) |
| 4:30 | <i>A new era of biogeoscience – Life at the limits</i> Prof Kliti Grice FAA (Curtin University) |
| 4:45 | KEYNOTE: From Rocks to Robots: Life beyond Geosciences Dr Sue Keay (Queensland University of Technology) |
| 5:00 | <i>CSIRO's Deep Earth Imaging Future Science Platform</i> Prof Michael McWilliams (CSIRO) |
| 5:15 | <i>Geoscience and Our Future – A Broad Vision</i> Dr Bill Shaw (Ore Control) |
| 5:30 | <i>Decadal Plan Q&A</i> Prof Sue O'Reilly (Macquarie University) |
| 5:30 | Posters/Drinks Exhibition |
| 6:30 | Invited Functions/Meetings |

| Time | Tuesday 16 October |
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| 8:00 | GeoEXPO - Hall H |
| Room | Hall C |
| 8:30 | Big Issues and Ideas in Geosciences Day Introduction |
| 9:00 | <p>Smoothing the impact of boom and bust commodity cycles</p> <p><i>Introduction</i> Dr Allan Trench Professor and MBA Director at University of Western Australia Business School; Adjunct Professor Centre for Exploration Targeting, UWA</p> <p><i>Success case study: Building an Australian Gold Company via counter-cyclical investments</i> Patrick Walta MD, New Century Zinc</p> <p><i>Industry track record and big picture: How do we grow above the boom and bust cycle mentality?</i> Prabhav Sharma Partner, McKinsey & Company</p> <p><i>Innovation management as a means to combat boom/bust cycles</i> Miriam Stanborough Group Manager – Productivity & Innovation, Monadelphous Group Ltd</p> <p>Audience discussion Q&A</p> |
| 10:30 | Morning Tea - GeoEXPO - Hall H |
| 11:00 | <p>Our energy trilemma options - security, accessibility and sustainability</p> <p><i>Introduction</i> Dr Bruce Godfrey Chair of Energy Forum, Academy of Technology and Engineering</p> <p><i>The transition to clean energy is irreversible</i> Associate Professor Paul Ebert Specialist Advisor - New Energy at Advisian and Global Technology Leader at Advisian/Worley Parsons</p> <p><i>Engineering the Subsurface: The future of shale gas, enhanced geothermal and remote mining in the context of a global energy revolution</i> Doug Hollett Senior Advisor Energy, Nova Systems</p> <p><i>CCS for Australia – Why and how</i> Dr Noel Simento MD, ANLEC R&D</p> <p><i>Social licence to operate in a post scientific truth world</i> Professor Peta Ashworth Chair Sustainable Energy Futures, School of Chemical Engineering; Affiliate Professor Centre for Coal Seam Gas, and Faculty of Humanities and Social Sciences, University of Queensland</p> <p>Audience discussion Q&A</p> |
| 12:30 | Lunch - GeoEXPO - Hall H |

| Time | Tuesday 16 October |
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| 1:30 | <p align="center">Resource driven development of Northern and Regional Australia</p> <p align="center"><i>Introduction</i> Dr Richard Blewett General Manager Mineral Systems Branch, Geoscience Australia</p> <p align="center"><i>An Indigenous person's perspective of resources and development</i> Nyunggai Warren Mundine AO, Chairman & Managing Director Nyungga Black Group Pty. Ltd.</p> <p align="center"><i>The future of Mount Isa and the North West – What it means for Australia</i> Madam Mayor Joyce McCulloch Mayor, Mt Isa</p> <p align="center"><i>Revitalising Regional Australia through mining and mineral exploration</i> Warren Pearce CEO, Association of Mining and Exploration Companies Inc.</p> <p align="center"><i>The role of government in supporting resource-driven development</i> Dr James Johnson CEO, Geoscience Australia</p> <p align="center">Audience discussion Q&A</p> |
| 3:00 | Afternoon Tea - GeoEXPO - Hall H |
| 3:30 | <p align="center">Geoscience education and new modes of communication</p> <p align="center"><i>Introduction</i> Professor Iain Stewart Professor of Geoscience Communication, University of Plymouth</p> <p align="center"><i>Selling popular science via broadcast media: Challenges with new digital and on-line media landscapes</i> Aidan Lavery Manager Science & EP Catalyst, ABC</p> <p align="center"><i>The revolution and future of communicating geoscience</i> Dr Paul Willis CEO, Media Engagement Services</p> <p align="center"><i>Communicating with the Public – Where did we go wrong?</i> Emeritus Professor Susan Stocklmayer AO Australian National Centre for the Public Awareness of Science, Australian National University</p> <p align="center"><i>Geotourism – Interpreting geology for non-specialists</i> Professor Ross Dowling Foundation Professor of Tourism, Edith Cowan University</p> <p align="center">Audience discussion Q&A</p> |
| 5:00 | <p align="center">Big Issues and Ideas in Geosciences Day</p> <p align="center">Synthesis</p> |
| 5:30 | <p align="center">Posters/Drinks GeoEXPO – Hall H</p> |
| 6:30 | <p align="center">Invited Functions/Meetings</p> |

| Time | Wednesday 17 October |
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| 8:00 | GeoEXPO - Hall H |
| Room | Hall C |
| 8:30 | Plenary: Resource Security into the Future <i>Modern seafloor hydrothermal systems associated with submarine arcs: How prospective are they for Cu-Au mineralization?</i> Dr Cornel de Ronde |
| Technical Session 3 | |
| Room | Hall C |
| 1.1.1 Decoding Earth's supercycles: from the core to the crust | |
| 9:30 | <i>Fully-dynamic global models to explore the processes behind continental reorganisations</i> Dr Claire Mallard (The University of Sydney) |
| 9:45 | <i>The effects of supercontinent size on the global mantle structures</i> Dr Nan Zhang (Curtin University) |
| 10:00 | <i>Evolution of the plate-mantle system since the late Paleozoic Period</i> Alexander Young (The University of Wollongong) |
| 10:15 | <i>How the interaction between global mantle flow and lithospheric structure shapes Earth's dynamic topography and volcanic expressions</i> Dr Rhodri Davies (The Australian National University) |
| 10:30 | <i>New insights into the centre of the Earth from the detection of inner core shear waves</i> Assoc Prof Hrvoje Tkalčić (The Australian National University) |
| 10:45 | <i>On the depth of melting of enriched components in the Tasmantid mantle plume</i> Saskia Ruttor (Monash University) |
| Technical Session 3 | |
| Room | Hall A |
| 1.1.4 Crustal evolution of Archean Cratons | |
| 9:30 | KEYNOTE: <i>Constraints on Archean tectonic processes from seismic reflection surveys in the Canadian Superior and Australian Yilgarn cratons</i> Dr Andrew Calvert (Simon Fraser University) |
| 10:00 | <i>Subduction-related magmatism of the western Yilgarn: Implications for damp komatiites</i> Dr Derek Wyman (School of Geosciences, University of Sydney) |
| 10:15 | <i>Earth's Adolescence: Isotopically tracking the global transition from the Hadean to the Modern Earth</i> Prof Vickie Bennett (Australian National University) |
| 10:30 | <i>Statistical re-assessment reveals new REE-compositional trends within TTG's</i> Amrei Ladwig (Monash University) |
| 10:45 | <i>Metamorphism and exhumation of basement gneiss domes in the Quadrilátero Ferrífero: Proterozoic reworking of an Archean dome-and-keel province</i> Dr Kathryn Cutts (Universidade Federal De Ouro Preto) |
| Technical Session 3 | |
| Room | Hall E1 |
| 1.4 Earth's Climate, Past, Present and Future | |
| 9:30 | KEYNOTE: <i>A Proterozoic perspective on global climate change</i> Dr Galen Halverson (McGill University) |
| 10:00 | <i>The aftermath of the Cryogenian glaciations: Intense silicate weathering and large element fluxes to the oceans?</i> Holly Taylor (University of Wollongong) |
| 10:15 | <i>Linking the Neoproterozoic Oxygenation Event to the interplay between global glaciation and the radiation of eukaryotes</i> Dr Grant Cox (University of Adelaide) |
| 10:30 | <i>$\delta^{13}C$ of coals from the Moatize Basin, Mozambique: Evidence for global carbon isotope anomaly associated with the deglaciation of Gondwana</i> Nikola Van De Wetering (University of Queensland) |
| 10:45 | <i>Leaving a trail: Reconstructing past climates from clumped isotope analysis of snail shells</i> Georgy Falster (Geoscience Australia) |

| Time | Wednesday 17 October |
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| | Technical Session 3 |
| Room | Hall E2 |
| | 3.1.4 Tectonic and earth evolution controls on the spatial and temporal |
| 9:30 | KEYNOTE: From geosystem to mineral system: Contextualising ore deposits Dr Graham Begg (Minerals Targeting International PL & Western Mining Services PL) |
| 10:00 | <i>The Continent of Zealandia: Implications for the mineral exploration potential of New Zealand</i> Robert Smillie (GNS Science) |
| 10:15 | <i>Caught in the act: Incipient metal extraction during melting of metasomatically oxidised mantle</i> Dr Andy Tomkins (Monash University) |
| 10:30 | <i>Heterogeneity in the sub-continental lithospheric mantle: Multiple mantle source components identified from ca. 1590 Ma mafic intrusions, Gawler Craton</i> Claire Wade (Geological Survey of South Australia) |
| 10:45 | <i>Deep crustal to SCLM controls on Ni-PGE-Cr and Au mineralisation, northern Superior Province, Canada</i> Prof Lyal Harris (INRS-ETE) |
| | Technical Session 3 |
| Room | Hall E3 |
| 9:30 | CSIRO 3 - minute Rapid Fire Presentations |
| | |
| | Technical Session 3 |
| Room | Room R1 |
| | 2.1 The Origins and Development of Life & 2.2 Ediacaran and Cambrian Symposium |
| 9:30 | <i>New dimensions to biostratigraphy</i> Sarah Kachovich (The University of Queensland) |
| 9:45 | <i>Exploring the evidence for Paleoproterozoic evaporites and their bearing on hypotheses for early microbial metabolisms</i> Prof Bruce Runnegar (University of California, Los Angeles) |
| 10:00 | <i>Origin of the Neoproterozoic Rim Dolomite as Lateral Carbonate Caprock, Patawarta Salt Sheet, Flinders Ranges, South Australia</i> Rachelle Kernen (University of Texas at El Paso) |
| 10:15 | <i>Preliminary analysis of Ediacaran facies-assemblage relationships from the Flinders Ranges</i> Lily Reid (University of South Australia) |
| 10:30 | <i>Arumberia banksii: How well can MISS tell time?</i> Heidi Allen (Geological Survey of Western Australia) |
| 10:45 | |
| | Technical Session 3 |
| Room | Room R2 |
| | 3.4 Resources sustainability – responsible investment and management |
| 9:30 | KEYNOTE: JORC and CRIRSCO reporting codes, a common framework supporting mining investment Steve Hunt (JORC, Joint Ore Reserves Committee) |
| 9:45 | KEYNOTE: The Evolution of a Common Language for Petroleum Resource Classification and Management Barbara Pribyl (Santos) |
| 10:00 | KEYNOTE: How much? Commonalities and differences in resource calculations in the water, minerals and petroleum sectors Peter Baker (Office of Water Science – Technical Analysis Team, Department of Environment and Energy) |
| 10:15 | <i>The Future of Mineral Exploration in Australia – Addressing the Challenges</i> Christopher Cairns (Stavely Minerals Limited) |
| 10:30 | <i>Incremental evolution or radical transformation in mineral exploration - A case for change, Discovery 2.0</i> Robert Rowe (UNCOVER) |
| 10:45 | <i>Australia's mineral inventory – Identified resources, trends, distribution and resource life</i> Allison Britt (Geoscience Australia) |

| Time | Wednesday 17 October |
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| | Technical Session 3 |
| Room | Room R5 |
| | 3.2.4 Sustainable energy sources & 3.2.6 Using geoscience to address social licence concerns for energy projects |
| 9:30 | KEYNOTE: Current and potential uses for geothermal energy in Australia Dr Graeme Beardsmore (Australian Geothermal Association) |
| 10:00 | <i>Pumped hydro energy storage: A key enabler of 100% renewable electricity for Australia</i> Dr Matthew Stocks (ANU) |
| 10:15 | <i>Geothermal energy for heating and cooling projects: Hydrogeology determines viability and design</i> Miranda Taylor (Rockwater Pty Ltd) |
| 10:30 | KEYNOTE: Bursting Bubbles: Can experiments and analogues help stakeholders and the public visualise risks? Dr Linda Stalker (CSIRO) |
| | Technical Session 3 |
| Room | Room R6 |
| | 4.6 Mathematics, modelling, AI, robotics and machine learning applied to the acquisition and interpretation of large or complex geoscience data sets |
| 9:30 | KEYNOTE: Emerging machine learning approaches for mineral prospectivity mapping through space and time Prof Dietmar Müller (The University of Sydney) |
| 10:00 | <i>Forecasting in Mineral Systems</i> Dr Alison Ord (Centre For Exploration Targeting, UWA) |
| 10:15 | <i>Inferring Formation Boundaries through Bayesian Geophysical Inversion</i> Dr Richard Scalzo (University of Sydney) |
| 10:30 | <i>Separating neighbouring geological units within iron ore deposits using measure while drilling data</i> Dr Katherine Silversides (The University of Sydney, Australian Centre for Field Robotics) |
| 10:45 | <i>Automating the geological interpretation of drill hole data</i> Dr June Hill (CSIRO) |
| | Technical Session 3 |
| Room | Room R7 |
| | 4.1 Geohazards, risk and mitigation |
| 9:30 | <i>Slope stabilisation for regional roads in NSW – A case example</i> Dr Sudarshan (Sudar) Aryal (WSP Australia) |
| 9:45 | <i>Monitoring of unstable rock volumes for rockfall hazard assessment</i> Dr Anna Giacomini (The University of Newcastle) |
| 10:00 | <i>Space-based hazard monitoring for Australia and Melanesia using Interferometric Synthetic Aperture Radar</i> Dr Amy Parker (Curtin University) |
| 10:15 | |
| 10:30 | |
| 10:45 | |
| | Technical Session 3 |
| Room | Room R8 |
| | 5.5 Planning the Future of Geoscience & 5.1 Geology in Society: geotourism and geoheritage |
| 9:30 | <i>Building thematic and integrated services for European solid Earth sciences: The EPOS integrated approach</i> Prof John Ludden (British Geological Survey) |
| 9:45 | <i>Future Exploration challenges – Unlocking new energy resources</i> Prof Chris Elders (Curtin University) |
| 10:00 | <i>Overview of Geo-science Development in Papua New Guinea – The Challenges and Way Forward</i> Dulcie Saroa (Mineral Resources Authority) |
| 10:15 | <i>Future of teaching and training in Geoscience</i> Dr Sandra McLaren (University of Melbourne) |
| 10:30 | <i>The Canadian Experience with Public Geoscience in Fostering Innovation in Mineral Exploration</i> Mike Villeneuve (Geological Survey of Canada, Natural Resources Canada) |
| 10:45 | <i>Bringing rocks to life – Outreach activities of the Geological Survey of NSW</i> Dr Chris Yeats (Geological Survey of NSW) |
| 11:00 | Morning Tea - GeoEXPO - Hall H |

| Time | Wednesday 17 October |
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| | Technical Session 4 |
| Room | Hall C |
| | 1.1.1 Decoding Earth's supercycles: from the core to the crust |
| 11:30 | <i>Locating hidden terrane boundaries in East Antarctica with detrital feldspar Pb isotopes</i> Dr Jack Mulder (School of Earth, Atmosphere & Environment, Monash University) |
| 11:45 | <i>The Cambrian island arc basement of the Macquarie Arc, SE Australia</i> Assoc Prof Sebastien Meffre (University of Tasmania) |
| 12:00 | <i>Eastern Gondwana breakup as viewed from northern Zealandia</i> Dr Brian Boston (Japan Agency for Marine-Earth Science and Technology) |
| 12:15 | <i>Conservation of deep crustal heat production rates</i> Kiara Alessio (The University of Adelaide) |
| 12:30 | <i>Episodic extensional exhumation of the Tso Moriri core complex in an intra-oceanic setting prior to the India-Asia collision</i> Dr Marnie Forster (RSES, ANU) |
| 12:45 | <i>Slab decapitation and the formation of metamorphic core complexes</i> Prof Gordon Lister (RSES, ANU) |
| | Technical Session 4 |
| Room | Hall A |
| | 1.1.4 Crustal evolution of Archean Cratons |
| 11:30 | KEYNOTE: <i>A perspective on the formation and evolution of Earth's first stable continents</i> Dr Tim Johnson (Curtin University) |
| 12:00 | <i>Formation of cratonic lithosphere during the initiation of plate tectonics</i> Prof Louis Moresi (University of Melbourne) |
| 12:15 | <i>A new Hadean-Archean global regime: Proto-plates control early Earth's tectonics</i> Dr Fabio Capitanio (Monash University) |
| 12:30 | <i>Some like it hot: Proterozoic reworking of an Archean 'craton' driven by high radiogenic heat-producing crust</i> Stacey Curtis (Geological Survey of South Australia) |
| 12:45 | |
| | Technical Session 4 |
| Room | Hall E1 |
| | 1.4 Earth's Climate, Past, Present and Future |
| 11:30 | <i>A 30000 year sea surface temperature record for the Southern Coral Sea</i> Dr Bradley Opdyke (The Australian National University) |
| 11:45 | <i>Assessing the controls on global contourite distribution: Implications for reconstructing bottom water activity</i> Amanda Thran (University of Sydney) |
| 12:00 | <i>Depositional history of the Condamine Palaeo-valley: A unique sediment record</i> Dr Valeria Bianchi (University of Queensland) |
| 12:15 | <i>Natural climate cycles of past centuries and millennia; are there implications for the next century and millennium?</i> Prof Michael Asten (Monash University) |
| 12:30 | <i>Millennial-scale variability in subtropical precipitation observed in Central Queensland speleothem</i> Dr Kevin Welsh (University of Queensland) |
| 12:45 | |
| | Technical Session 4 |
| Room | Hall E2 |
| | 3.1.4 Tectonic and earth evolution controls on the spatial and temporal |
| 11:30 | <i>Decoding the Cobar orebodies of central NSW: paragenesis, geochronology and isotopic characteristics</i> Dr Joel Fitzherbert (Geological Survey of New South Wales) |
| 11:45 | <i>Cryptic crustal structures as key district-scale metallogenic controls – Examples from orogenic gold provinces in eastern Australia</i> Dr Vladimir Lisitsin (Geological Survey of Queensland) |
| 12:00 | <i>Devonian crustal stretching in the northern Tasmanides (Australia): implications for the origin of the orogenic curvature in the Delamerian-Thomson belt</i> Rashed Abdullah (School of Earth and Environmental Sciences) |
| 12:15 | <i>Quantitative Geodynamics of Mt Isa & McArthur Basins – Implications for Giant Sediment Hosted Mineral Systems</i> Dr Karol Czarnota (Geoscience Australia) |
| 12:30 | <i>Contrasting PCD and IOCG tectono-magmatic settings: Insights from the Gawler Craton and North America</i> Matthew Ferguson (Centre for Ore Deposit and Earth Sciences (UTAS)) |
| 12:45 | <i>D1- and D3-related gold mineralisation in the Agnew district, Eastern Goldfields, Western Australia</i> Dr Sarah Jones (Gold Fields Ltd) |

| Time | Wednesday 17 October |
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| | Technical Session 3 |
| Room | Hall E3 |
| 11:30 | CSIRO 3 - minute Rapid Fire Presentations |
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| | Technical Session 4 |
| Room | Room R1 |
| | 2.6 Geobiology |
| 11:30 | KEYNOTE: Molecules and Cells: A Remarkable Preservation of Life and an Evolutionary Adaptation Prof Kliti Grice FAA (Curtin University) |
| 12:00 | <i>Sequestration of trace metals into framboids: biotic or abiotic?</i> Dr Siyu Hu (CSIRO – Mineral Resources) |
| 12:15 | <i>Shark Bay microbial mat community responses to oil contamination: a lab-controlled time series experiment</i> Yalimay de Duarte (Curtin University WA-OIGC) |
| 12:30 | <i>The dependency of Proterozoic stromatolite abundance on trace elements and temperature</i> Dr Indrani Mukherjee (Center for Ore Deposits and Earth Sciences (CODES), University of Tasmania) |
| 12:45 | <i>Microbially mediated black sludge following a cyclonic event in Shark Bay, Western Australia and its link with cobble formation</i> Matthew Campbell (Western Australian Organic & Isotope Geochemistry Center/Curtin University) |
| | Technical Session 4 |
| Room | Room R2 |
| | 3.1.5 Technology metals and minerals – the importance of non-traditional commodities in the evolving economy & 3.1.6 New frontiers in ore system research |
| 11:30 | KEYNOTE: Strategic & industrial minerals leading the next production revolution Dr Richard Flook (Mosman Resources) |
| 12:00 | <i>Genesis of the Nolans Bore REE deposit</i> Michael Anenburg (Australian National University) |
| 12:15 | <i>Measuring Lithium-Bearing Minerals with Infrared Reflectance Spectroscopy</i> Monica Legras (CSIRO) |
| 12:30 | <i>Diamonds and other kimberlitic minerals from the Webb Kimberlite Field, Western Australia</i> Dr Prokopy Vasilyev (John de Laeter Centre) |
| 12:45 | <i>Identification of basement density heterogeneities through using stratigraphic modelling</i> Dr Vincent Crombez (CSIRO) |
| | Technical Session 4 |
| Room | Room R5 |
| | 3.2.1 Future energy mix & 3.2.6 Using geoscience to address social licence concerns for energy projects |
| 11:30 | KEYNOTE: The emerging energy revolution Prof Peter McCabe (Australian School of Petroleum, University of Adelaide) |
| 12:00 | <i>Trends for gas demand and supply in Australia and Asia</i> Nicholas White (Santos) |
| 12:15 | <i>Germany's geological subsurface can contribute to the energy transition with significant storage potential</i> Prof Michael Kuehn (GFZ German Research Centre for Geosciences) |
| 12:30 | <i>The Critical Role of Geoscience in delivering the Future Energy Mix</i> John O'Brien (Deloitte) |
| 12:45 | <i>Seismic Surveys and Marine Life: A Plea for Evidence-based debate, assessments and Regulation</i> John Hughes (The Norwood Resource) |

| Time | Wednesday 17 October |
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| | Technical Session 4 |
| Room | Room R6 |
| | 4.6 Mathematics, modelling, AI, robotics and machine learning applied to the acquisition and interpretation of large or complex geoscience data sets |
| 11:30 | <i>A Gaussian process regression model for 3D geochemical interpolation supported by geophysical inversion models</i> Tom Horrocks (University of Western Australia) |
| 11:45 | <i>Applications of machine learning to mineral exploration</i> Dr Antoine Caté (SRK Consulting) |
| 12:00 | <i>Reducing Mineral Exploration risk in the Yukon Plateau</i> Nick Parker (Geosoft) |
| 12:15 | <i>Using a Convolutional Neural Network to Classify Downhole Imagery</i> Dr Andrew Rodger (CSIRO) |
| 12:30 | <i>Petrophysical Modelling from 3D Seismic Volumes</i> Wesley Emery (iRPM Pty Ltd) |
| 12:45 | <i>Machine Reading of Geological Documents to Assist Mineral Explorers</i> Prof Eun-Jung Holden (The University of Western Australia) |
| | Technical Session 4 |
| Room | Room R7 |
| | 4.1 Geohazards, risk and mitigation |
| 11:30 | <i>National Guidelines for Tsunami Hazard Modelling: A collaboration between scientists and end-users</i> Dr Jane Sexton (Geoscience Australia) |
| 11:45 | <i>Reassessing the potential threat of submarine landslide tsunamigenesis for Fiji's capital (Suva), from existing coastal boulder evidence</i> Dr Annie Lau (The University of Queensland) |
| 12:00 | <i>The Australian built environment: Are we ready for the next big shake?</i> Mark Edwards (Geoscience Australia) |
| 12:15 | <i>Forecasting earthquakes with hybrid physical / statistical models</i> Prof Sandy Steacy (University of Adelaide) |
| 12:30 | <i>Conservation as a way to reduce risks: Turrialba Volcano, Costa Rica</i> Prof Eliecer Duarte (OVSICORI-UNA) |
| 12:45 | <i>The impact of the Great Barrier Reef on tsunami propagation</i> Amanda Thran (University of Sydney) |
| | Technical Session 4 |
| Room | Room R8 |
| | 5.1 Geology in Society: geotourism and geoheritage |
| 11:30 | KEYNOTE: Development of Geopark and Geotourism: Experience from Malaysia and Asia Pacific Region Prof Emeritus Dr Ibrahim Komoo (Langkawi Research Centre (ppl-ukm), Lestari Ukm) |
| 12:00 | <i>A New Geotrail to Showcase the Spectacular Coastal Geology of Port Macquarie, NSW</i> Dr Ron Boyd (University of Newcastle) |
| 12:15 | <i>Essential Elements of Geotourism Interpretation</i> Prof Ross Dowling OAM (Edith Cowan University) |
| 12:30 | <i>Geotourism – Opportunities for Future Development in Australia</i> Angus M Robinson (Leisure Solutions ©) |
| 12:45 | <i>Findings from a study of Aboriginal cultural association with Geosites and Geotourism in the Gunduwa Conservation Region of Western Australia</i> Alan Briggs (Murdoch University) |
| 1:00 | Lunch - GeoEXPO - Hall H |
| Room | Hall C |
| 2:00 | Plenary: Applied Geoscience - Geohazards, risks and Society <i>Improving the rockfall failure hazard assessment and consequences</i> Prof Michel Jaboyedoff |
| 3:00 | Afternoon Tea - GeoEXPO - Hall H |

| Time | Wednesday 17 October |
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| | Technical Session 5 |
| Room | Hall C |
| | 1.1.2 Optimisation and uncertainties in Earth models |
| 3:30 | KEYNOTE: Machine learning: A route to better geoscience models? Dr Andrew Valentine (Research School of Earth Sciences, The Australian National University) |
| 4:00 | <i>Quantifying the fit of paleogeographically-constrained mantle flow models to present-day dynamic topography and lower mantle structure</i> Dr Nicolas Flament (University of Wollongong) |
| 4:15 | <i>Advancing the particle-in-cell scheme to an adaptive, unstructured computational framework</i> Christopher Mathews (Australian National University) |
| 4:30 | <i>The controlling variables in landscape evolution: numerical models of the erosion-deposition-subsidence patterns of the Great Artesian Basin</i> Carmen Braz (Earthbyte Group, The University of Sydney) |
| 4:45 | <i>BayesLands: Distributed parallel tempering for uncertainty quantification in basin and landscape evolution via Badlands</i> Dr Rohitash Chandra (University of Sydney) |
| 5:00 | <i>The Australian Newer Volcanics Province as an Example of the Interaction of a Mantle Plume and a Lithospheric Step</i> Thomas Duvernay (Australian National University) |
| 5:15 | <i>BayesReef: A Bayesian inference framework for modelling vertical reef growth and responses to environmental change</i> Jodie Pall (Centre for Translational Data Science) |
| | Technical Session 5 |
| Room | Hall A |
| | 1.1.6 Proterozoic Tectonics |
| 3:30 | KEYNOTE: Towards a Whole Earth System Reconstruction of the Neoproterozoic Prof Alan Collins (The University of Adelaide) |
| 4:00 | <i>Genesis of the Archean–Paleoproterozoic Tabletop Domain, Rudall Province, and its endemic relationship to the West Australian Craton</i> Dr Naomi Tucker (University of South Australia) |
| 4:15 | <i>Reassessing the amalgamation of Proterozoic Australia by redefining the Mesoproterozoic evolution of the Rudall Province</i> Dr Justin Payne (University of South Australia) |
| 4:30 | <i>A ~1600-1580 Ma metamorphic core complex in the northern Gawler Craton</i> Prof Peter Betts (Monash University) |
| 4:45 | <i>Tearing the Coompana Province: Was crustal-scale transtension focussed and triggered by transient shortening?</i> Dr Mark Pawley (Geological Survey of South Australia) |
| 5:00 | <i>Sampling the anatomy of a continental-oceanic arc system; geochemical evidence for subduction modified lithosphere in the Coompana Province</i> Dr Rian Dutch (Geological Survey of South Australia) |
| 5:15 | <i>Dropping the bottom LIP: Magmatic processes in an expanded Warakurna LIP</i> Tom Wise (Geological Survey of South Australia) |
| | Technical Session 5 |
| Room | Hall E1 |
| | 1.4 Earth's Climate, Past, Present and Future |
| 3:30 | KEYNOTE: Recent and rapid ice unloading in Antarctica unveils the solid Earth's viscoelastic rheology (GSA Mawson Medal Lecture) Prof Matt King (University of Tasmania) |
| 4:00 | <i>Controls on the flux of sedimentary carbon to the mantle during the Cenozoic</i> Prof Peter Cliff (Louisiana State University, Baton Rouge) |
| 4:30 | <i>Stable and radiogenic strontium isotope systematics in hypersaline coastal environments: constraints for paleo-hydrology in the Coorong, South Australia</i> Yuexiao Shao (University of Adelaide) |
| 4:45 | <i>What controls d18O of precipitation in subtropical settings? A 5-year, daily resolved rainfall record from Krabi, Thailand</i> Dr Ludvig Löwemark (National Taiwan University) |
| 5:00 | <i>The timing and drivers of the expansion of C4 vegetation in Australia</i> Jake Andrae (University of Adelaide) |
| 5:15 | <i>Global sea level fluctuations and uncertainties through a Wilson cycle based on ocean basin volume reconstructions</i> Dr Maria Seton (University of Sydney) |

| Time | Wednesday 17 October |
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| | Technical Session 5 |
| Room | Hall E2 |
| | 3.1.6 New frontiers in ore system research |
| 3:30 | KEYNOTE: New Tools for Mineral Systems Dr Bruce Hobbs (CSIRO & Centre for Exploration Targeting, UWA) |
| 4:00 | <i>Geomechanics: A new approach to targeting structurally controlled mineralisation</i> Dr John McLellan (GMEX) |
| 4:15 | <i>Geoscience Australia's contribution to the AusLAMP program: Results from NSW, Victoria and Northern Australia</i> Dr Alison Kirkby (Geoscience Australia) |
| 4:30 | <i>Detrital rutile: A new tool for gold exploration under cover</i> Prof Neal McNaughton (John De Laeter Centre for Isotope Research, Curtin University) |
| 4:45 | <i>Fluid flow drivers for sediment-hosted Pb-Zn-Ag mineralisation at McArthur River, Northern Territory, Australia</i> Dr Heather Sheldon (CSIRO) |
| 5:00 | <i>The MAIA Mapper: A powerful new tool for investigation of magmatic ores by microbeam XRF imaging of drill core</i> Dr Stephen Barnes (CSIRO Mineral Resources Flagship) |
| 5:15 | <i>The OSNACA Project: Updates to the map of Magmato-Hydrothermal space</i> Dr Carl Brauhart (CSA Global) |
| | Technical Session 5 |
| Room | Room R1 |
| | 2.6 Geobiology & 2.8 Earth, Life and Ores |
| 3:30 | <i>Impact of hydrocarbon contamination on compound-specific carbon and hydrogen isotopic signatures of n-alkanes</i> Dr Richard Schinteie (CSIRO) |
| 3:45 | <i>Cambrian Series 3 and 4 faunas from Northern Victoria Land, Antarctica: A summary</i> Prof Jim Jago (University of South Australia) |
| 4:00 | KEYNOTE: Seeing Red: The myth of an arid Triassic Dr Jessica Whiteside (University of Southampton) |
| 4:30 | <i>Conditioning of the Precambrian ocean: competing influences of atmospheric composition, ocean ventilation and make-up of the land surface</i> Prof Balz Kamber (Trinity College Dublin and Queensland University) |
| 4:45 | <i>Organic matter-metal interactions in the Cambrian metalliferous shales from South China</i> Dr Anais Pages (CSIRO) |
| 5:00 | <i>Correlation of large igneous provinces and black shales during "the Boring Billion"</i> Prof Shuan-Hong Zhang (Institute of Geomechanics, Chinese Academy of Geological Sciences) |
| 5:15 | <i>What pyrite textures reveal about Proterozoic sedex deposits</i> Dr Peter McGoldrick (University of Tasmania) |
| | Technical Session 5 |
| Room | Room R2 |
| | 3.4 Resources sustainability – responsible investment and management & 3.5 Technology integration |
| 3:30 | KEYNOTE: Mineral resources, mining & sustainability: Critical issues, critical metals and Australia's opportunities Dr Gavin Mudd (RMIT) |
| 4:00 | KEYNOTE: Innovative government geoscience to drive new discoveries: <i>An integrated approach to defining Australia's resource potential</i> Dr Andrew Heap (Geoscience Australia) |
| 4:30 | <i>Drilling and sampling with RoXplorer®: Coiled tubing drilling for mineral exploration</i> Prof David Giles (University of South Australia, MinEx CRC) |
| 4:45 | <i>Collaborative Research: How to drive your exploration dollar further?</i> Greg Hall (Golden Phoenix International Pty Ltd) |
| 5:00 | <i>Direct economic return to government of Public Geoscience Information investments in Chile:</i> <i>First evaluation of the National Mapping Program</i> Dr Felipe Espinoza (Servicio Nacional De Geología Y Minería – Chile) |
| 5:15 | <i>Revitalising Botswana's mineral exploration potential</i> Tiyapo Ngwisanyi (Botswana Geoscience Institute) |

| Time | Wednesday 17 October |
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| | Technical Session 5 |
| Room | Room R5 |
| | 3.3.2 New groundwater technologies and approaches & 3.3.5 Groundwater science for policy development and decision making |
| 3:30 | KEYNOTE: Groundwater and Critical Zone Science: Innovation and Transformation Dr Ken Lawrie (Geoscience Australia) |
| 4:00 | <i>You've got the water, but can you save the trees? Using innovative geophysical techniques to inform River Murray floodplain management</i> Chris Li (CSIRO) |
| 4:15 | <i>Airborne EM for Integrated 3D Mapping of Groundwater, Seawater Intrusion and Relationship with Sustainable Yield in Exmouth, WA</i> Karen Gilgallon (Southern Geoscience Consultants) |
| 4:30 | <i>Rapid assessment of groundwater levels in the Northern Adelaide Plains using seismic data</i> Dr Brady Flinchum (CSIRO) |
| 4:45 | <i>Supporting groundwater characterization and management using space geodesy</i> Dr Pascal Castellazzi (CSIRO) |
| 5:00 | <i>Uncovering an ancient landscape and helping the exploration for groundwater and minerals – The Musgrave province, South Australia</i> Dr Timothy Munday (CSIRO) |
| 5:15 | <i>Catchment salt balance and historical salinity flushing quantified in a high rainfall stream (Mount Lofty Ranges, South Australia)</i> Tom Anderson (Flinders University) |
| | Technical Session 5 |
| Room | Room R6 |
| | 4.6 Mathematics, modelling, AI, robotics and machine learning applied to the acquisition and interpretation of large or complex geoscience data sets |
| 3:30 | <i>Impact of the neighbourhood selection strategy on autonomously generated 3D volumetric models</i> Dr Mehala Balamurali (University of Sydney) |
| 3:45 | <i>Efficient new approaches for optimal geological exploration and characterisation</i> Dr Ayham Zaitouny (CSIRO) |
| 4:00 | KEYNOTE: Understanding uncertainty in predictive geosciences Prof Peter Dowd (The University of Adelaide) |
| 4:30 | <i>Using Augmented Reality (AR) to improve communications and decision making with stakeholder at a former chemical manufacturing facility</i> Tom Fewless (GHD) |
| 4:45 | <i>Running for cover in the Capricorn Orogen: Mapping regolith thickness on a regional scale</i> Dr Aaron Davis (CSIRO) |
| 5:00 | <i>Assessment of interpretation and spatial uncertainty of spatial domains</i> Scott McManus (Charles Sturt University) |
| 5:15 | <i>Big data paradox and modelling strategies in geological modelling based on horizontal wells data</i> Dr Huang Wensong (Research Institute of Petroleum Exploration & Development, PetroChina Company Limited) |
| | Technical Session 5 |
| Room | Room R7 |
| | 4.1 Geohazards, risk and mitigation |
| 3:30 | KEYNOTE: Emerging technologies for characterisation of slope stability - managing misinterpretation, misuse and over-confidence Dr Marc Elmouttie (CSIRO) |
| 4:00 | KEYNOTE: Individual and regional risk assessments of landslides Dr Jinsong Huang (The University of Newcastle) |
| 4:30 | <i>What should we do about naturally occurring fibrous amphiboles: Do they pose the same health risk as asbestiform varieties?</i> Marc Hendrickx (Marc Hendrickx and Associates) |
| 4:45 | <i>Mapping alluvial gully environments using regolith terrain mapping techniques</i> Dr Robin Thwaites (Griffith University) |
| 5:00 | |
| 5:15 | |

| Time | Wednesday 17 October |
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| | Technical Session 5 |
| Room | Room R8 |
| | 5.1 Geology in Society: geotourism and geoheritage & 5.6 Diversity in the Geosciences |
| 3:30 | <i>Developing Geotrails for a large continent</i> Ian D Lewis (GSA (SA Division)) |
| 3:45 | <i>Virtual reality makes outback and armchair geotourism real in SA</i> Prof Patrick James (University of South Australia) |
| 4:00 | <i>Geotourism and the Digital Age</i> Ken Moule (Global GBM) |
| 4:15 | <i>Discovering geological stories in every postcode through online self-guided fieldtrips: An example of small geotourism</i> Lauren Swann (Kirkland Lake Gold) |
| 4:30 | <i>What do non-geologists think of geotourism?</i> Bronwyn Witham |
| 4:45 | <i>The development of a national rock garden in the Nation's capital</i> Michael Smith (Austpac Resources NI) |
| 5:00 | <i>Diversity in Deep Earth Imaging: A perspective from establishing a new collaborative geoscience hub</i> Richard Chopping (CSIRO) |
| 5:15 | <i>The Women in Earth and Environmental Sciences Australasia Network (WOMEESA)</i> Assoc Prof Heather Handley (Macquarie University) |
| 5:30 | Posters/Drinks GeoEXPO – Hall H |
| 7:00 | Convention Dinner – Hall F & Foyer F |



Geologists examining ripple marks in sandstone outcrops of the McArthur Basin (Northern Territory). Image courtesy of Santos Limited.

| Time | Thursday 18 October |
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| 8:00 | GeoEXPO - Hall H |
| Room | Hall C |
| 8:30 | Plenary: Applied Geoscience - Geohazards, Risks and Society <i>Advances in Robotics and Computer Vision and what this means for the Australian Resources Sector</i> Dr Sue Keay |
| | Technical Session 6 |
| Room | Hall C |
| | 1.1.6 Proterozoic Tectonics |
| 9:30 | <i>Patterns of Proterozoic tectonism in central and South Australia from detrital zircon and rutile geochronology</i> Matthew Campbell (University of Queensland) |
| 9:45 | <i>Antipodean fugitive terranes in Laurentia and how Proterozoic Australia built the American west</i> Dr George Gibson (Australian National University) |
| 10:00 | <i>Detrital zircon age, oxygen and hafnium isotope systematics record rigid continents after 2.5 Ga</i> Dr Linda Iaccheri (University of Witwatersrand) |
| 10:15 | <i>New insights into the subglacial geology of the remote interior of Western Wilkes Land, East Antarctica</i> Alessandro Maritati (Institute for Marine and Antarctic Studies, University of Tasmania) |
| 10:30 | <i>Tectonic evolution of the Neoproterozoic Bemarivo Belt in northern Madagascar: From Rodinia to Gondwana</i> Sheree Armistead (The University of Adelaide) |
| 10:45 | <i>Detrital provenance of the greater McArthur Basin, with implications for Palaeoproterozoic to Tonian tectonic geography of northern Australia</i> Dr Morgan Blades (The University of Adelaide) |
| | Technical Session 6 |
| Room | Hall A |
| | 1.1.7 Advances in Volcanology and Igneous Geochemistry |
| 9:30 | KEYNOTE: <i>The role of the ocean in modulating the dynamics of the Havre 2012 silicic submarine eruption</i> Dr Rebecca Carey (University of Tasmania) |
| 10:00 | <i>New insights into volcanic eruption triggers from trace element zoning in clinopyroxene</i> Dr Teresa Ubide (The University of Queensland) |
| 10:30 | <i>Permian pumice to Miocene magmas: a new geological map of Warrumbungle National Park</i> Dr Kate Bull (GSNSW) |
| 10:45 | <i>The diverse origins of breccias within the Gawler Range Volcanics: lithological characteristics, formation processes and implications for mineral prospectivity</i> Dr Mario Werner (Geological Survey of South Australia) |
| | Technical Session 6 |
| Room | Hall E1 |
| | 1.3 Marine Geoscience - the Evolving Oceans |
| 9:30 | <i>The Holocene initiation of the Great Barrier Reef: Where, when and how did the reef start to grow?</i> Kelsey Sanborn (University of Sydney) |
| 9:45 | <i>Modern Halimeda Algal Bioherms in the Great Barrier Reef</i> Dr Luke Nothdurft (Queensland University of Technology) |
| 10:00 | <i>Active tectonics and mass transport deposits on the North West Shelf of Australia</i> Dr Myra Keep (University of Western Australia) |
| 10:15 | <i>Geomorphic mapping of Perth submarine canyon, southwest Australia: Insights into canyon evolutionary processes</i> Dr Rachel Nanson (Geoscience Australia) |
| 10:30 | <i>Palaeoshorelines on the Australian continental shelf</i> Dr Brendan Brooke (Geoscience Australia) |
| 10:45 | <i>Displacement of mega boulders across coastal rock platforms south of Wollongong, Australia, by large storm waves or tsunamis?</i> Dr Glen Bann (Australian National University) |

| Time | Thursday 18 October |
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| | Technical Session 6 |
| Room | Hall E2 |
| | 3.1.2 Making better exploration decisions through an integrated geoscience approach |
| 9:30 | KEYNOTE: Managing risk with quantitative integrated 3D mineral system characterisation Warren Potma (CSA Global) |
| 10:00 | <i>Mineral potential mapping for pre-competitive data delivery in NSW Zone 54</i> Dr Arianne Ford (Kenex Ltd) |
| 10:15 | <i>Linking regolith-landform mapping with surface geochemistry in a regolith dominated terrain to inform mineral exploration</i> Alicia Caruso (The University of Adelaide) |
| 10:30 | <i>Applying GIS in regional sedimentary basin evaluation studies</i> Ben Jupp (SRK Consulting) |
| 10:45 | <i>Complex systems thinking and mineral systems</i> Dr Bruce Hobbs (CSIRO & Centre for Exploration Targeting, UWA) |
| | Technical Session 6 |
| Room | Room R1 |
| 9:30 | 1.3 Marine Geoscience - the Evolving Oceans/IODP |
| 9:30 | KEYNOTE: Preliminary insights of deep-sea coring of Australia's frontier Bight and Mentelle basins – IODP Expedition 369 Dr Lloyd White (University of Wollongong) |
| 10:00 | <i>Tasman frontier subduction initiation and Paleogene climate: Preliminary results from IODP Expedition 371</i> Dr Saneatsu Saito (Japan Agency for Marine-Earth Science and Technology) |
| 10:15 | <i>The response of the Great Barrier Reef to major environmental changes: lessons from geologic past</i> Assoc Prof Jody Webster (University of Sydney) |
| 10:30 | KEYNOTE: Achievements of scientific ocean drilling in the Australasian region Prof Neville Exon (Australian National University) |
| | Technical Session 6 |
| Room | Room R2 |
| | 3.2.2 Energy from coal |
| 9:30 | KEYNOTE: Back to basics – Deciphering rank, type and grade variation Prof Joan Esterle (University of Queensland) |
| 10:00 | <i>Why are we still mining coal?</i> David Green (Adamelia Global Pty Ltd) |
| 10:15 | <i>Application of a "Best Practices" approach to the Leigh Creek Energy Insitu Gasification Demonstration Project</i> Justin Haines (Leigh Creek Energy Limited) |
| 10:30 | <i>CSG Exploration in Queensland</i> Mel Wilkinson (Santos) |
| 10:45 | <i>Is coal seam gas dead in SE Asia? Opportunities and impediments</i> Dr Tim Moore (Cipher Consulting Pty Ltd) |
| | Technical Session 6 |
| Room | Room R5 |
| | 3.3.2 New groundwater technologies and approaches |
| 9:30 | <i>Hydrogeochemistry of Australia: Providing baselines for Lithology mapping, Mineral exploration, Health and Agriculture</i> Dr Nathan Reid (CSIRO) |
| 9:45 | <i>Offshore freshwater: A new freshwater resource or a poorly understood existing freshwater input?</i> Andrew Knight (Flinders University) |
| 10:00 | <i>The use of heat as a groundwater tracer</i> Dr Dylan Irvine (Flinders University) |
| 10:15 | <i>Addressing conceptual uncertainty through a multi-model approach using bold hypotheses</i> Trine Enemark (CSIRO) |
| 10:30 | <i>A stochastic approach to estimating mine dewatering requirements at an open pit mine</i> Keith Brown (Rio Tinto Iron Ore) |
| 10:45 | <i>The importance of measuring flows in long-screened or open wells</i> David Poulsen (NCGRT, Flinders University) |

| Time | Thursday 18 October |
|-------|---|
| | Technical Session 6 |
| Room | Room R6 |
| | 4.3 Engineering geology – from underpinning our civil infrastructure to mine closure |
| 9:30 | KEYNOTE: Sustainable Geotechnical and Geological Data Management for Infrastructure in New South Wales Dr David Och (WSP) |
| 10:00 | <i>The legacy for engineering geology from the Snowy Mountains Hydro-electric Scheme, New South Wales</i> Robert Goldsmith (SMEC) |
| 10:15 | <i>Relevance of engineering geological models in modern tunnel design and construction</i> Tim Nash (Pells Sullivan Meynink) |
| 10:30 | <i>Exploring the structure of the Snowy Highlands, NSW</i> Dr Cara Jacques (SMEC Australia) |
| 10:45 | KEYNOTE: Geological assessment and landslide risk mitigation at Bulli Pass, Princes Highway, Illawarra Region, NSW Dr Phil Flentje (University of Wollongong) |
| | Technical Session 6 |
| Room | Room R7 |
| | 4.5 Exploration technology: future trends and adoption challenges |
| 9:30 | KEYNOTE: Introducing New Technologies into Exploration: Pitfalls and Opportunities from an Early Adopters Perspective Andrew Scott |
| 10:00 | <i>Real time decision making in exploration - the technologies that enable it and its application to date</i> Dr Michelle Carey (Imdex Limited) |
| 10:15 | <i>Exploration on the edge</i> Mark Gabbitus (Micromine) |
| 10:30 | <i>Sampling from coiled tubing drilling in mineral exploration</i> Dr Ben van der Hoek (University of South Australia) |
| 10:45 | <i>Do we really want it? New technology adoption in the mineral exploration</i> Dr James Cleverley (Imdex Limited) |
| | Technical Session 6 |
| Room | Room R8 |
| | 5.2 Prediction, Process, Place: Geomorphology |
| 9:30 | KEYNOTE: The role of geomorphic research in Great Barrier Reef Water Quality Management Assoc Prof Andrew Brooks (The Centre for Coastal Management, Griffith University) |
| 10:00 | <i>Preliminary archaeological investigations into the submerged continental shelf of South Australia: Geomorphology, context and significance</i> Adeena Fowke (Flinders University) |
| 10:15 | <i>A geomorphological maze: Martian valley networks and impact craters</i> Dr Graziella Caprarelli (Hypatia Scientifica Pty Ltd) |
| 10:30 | <i>Process geomorphology for rangeland management: Better outcomes by looking beyond outdated ideas</i> Dr Gresley Wakelin-King (Wakelin Associates) |
| 10:45 | <i>The filling and spilling of Lake George, New South Wales</i> Prof Brad Pillans (Australian National University) |
| 11:00 | Morning Tea - GeoEXPO - Hall H |

| Time | Thursday 18 October |
|-------|---|
| | Technical Session 7 |
| Room | Hall C |
| | 1.1.6 Proterozoic Tectonics |
| 11:30 | <i>Insights into the structural architecture and tectonic evolution of the Batten Fault Zone (southern McArthur Basin) from geophysical modelling</i> Dr Teagan Blaikie (CSIRO) |
| 11:45 | <i>Insights on the geological evolution and mineral resources of the Mount Isa inlier from mafic geochronology and geochemistry and petrology</i> Dr Laurie Hutton (Geological Survey of Queensland) |
| 12:00 | <i>Northeast-Australian collisional tectonics during the assembly of Nuna unravelled by multi-method petrochronology</i> Dr Amaury Pourteau (Curtin University) |
| 12:15 | <i>Unravelling the structural and metamorphic evolution from MT–MP to LP–HT: A journey through the crust in the Georgetown Inlier (NE Australia)</i> Silvia Volante (Curtin University) |
| 12:30 | <i>Proterozoic tectonic evolution of North Queensland, Australia: new insights from thermal cooling history</i> Dr Jiangyu Li (Curtin University) |
| 12:45 | <i>150 Myr of episodic metamorphism, magmatism and intraplate deformation catalysed by rehydration and localised weakening of the deep crust</i> Assoc Prof Tom Raimondo (University of South Australia) |
| | Technical Session 7 |
| Room | Hall A |
| | 1.1.7 Advances in Volcanology and Igneous Geochemistry |
| 11:30 | <i>The highs and lows of Archean dolerites and the controls on gold mineralisation: examples from the Eastern Goldfields, Western Australia</i> Dr Patrick Hayman (Queensland University of Technology) |
| 12:00 | <i>A new emplacement origin for the world famous, highly Au-endowed, Archean Golden Mile Dolerite, Kalgoorlie, Western Australia</i> Prof Raymond Cas (Monash University) |
| 12:15 | <i>Interpretation of zircon U-Pb ages on volcanoclastic rocks: A case study on the Fairbridge Volcanics of the Macquarie Arc, southeastern Australia</i> Qing Zhang (University of Wollongong, Australia) |
| 12:30 | <i>Complex evolution of volcanic arcs and accreting plates: Case-study of the Cambrian Mount Stavelly Volcanic complex</i> Nathan Bowman (School of Earth, Atmosphere and Environment, Monash University) |
| 12:45 | |
| | Technical Session 7 |
| Room | Hall E1 |
| | 1.2.2 Source-to-sink sedimentary Basin Processes |
| 11:30 | <i>The terminal deposits of rivers in drylands</i> Dr Kathryn Amos (University of Adelaide) |
| 11:45 | <i>Neoproterozoic stratigraphic revisions to key drillholes in the Amadeus Basin, NT; implications for basin paleogeography, and petroleum and mineral potential</i> Dr Verity Normington (Northern Territory Geological Survey) |
| 12:00 | <i>Signal or noise? Isolating grain size effects on Nd isotope variability in Indus delta sediment provenance</i> Dr Tara Jonell (The University of Queensland) |
| 12:15 | <i>Revised stratigraphy and facies architecture of Cycle 2 and 3 formations of the Drummond Basin and sediment transport implications</i> Kasia Sobczak (QUT) |
| 12:30 | <i>Architecture and trigger mechanisms of the Cretaceous gravity deposits in Lingshan Island, Eastern China</i> Dr Shunli Li (China University of Geosciences, Beijing) |
| 12:45 | <i>Provenance study and the first radiometric age constraints on the Indus molasse in the India-Eurasia collision zone</i> Dr Renjie Zhou (The University of Queensland) |

| Time | Thursday 18 October |
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| | Technical Session 7 |
| Room | Hall E2 |
| | 3.1.2 Making better exploration decisions through an integrated geoscience approach & 3.1.3 Understanding mineral systems for exploration – from craton to micron scale |
| 11:30 | <i>Intrusion-related geochemical and alteration mineral zonation associated with low sulphidation epithermal fields and exploration implications</i> Ned Howard (Evolution Mining Ltd) |
| 11:45 | <i>Uncertainty quantification for informed decision-making</i> Dr Ilnur Minnaikhmetov (BHP) |
| 12:00 | <i>Observation of basement proxies for mineral provinces in the Gawler Craton aided by satellite gravity data interpretation</i> João Motta (University of Campinas) |
| 12:15 | <i>SA3D – Multi-Scale 3D Mineral System Maps</i> Simon Van Der Wielen (Geoscience Australia) |
| 12:30 | <i>Basin–basement contacts as base metal exploration targets: Evidence for mineralising basin brines in central Australia</i> Dr Matthew McGloin (Northern Territory Geological Survey) |
| 12:45 | <i>The application of mineral potential mapping to the southern New England Orogen of NSW</i> Dr Phillip Blevin (Geological Survey of New South Wales) |
| | Technical Session 7 |
| Room | Hall E3 |
| | 4.2 Mining geology and geometallurgy |
| 11:30 | KEYNOTE: Next generation applied geoscience for the complex orebodies of the future Prof Rick Valenta (WH Bryan Mining and Geology Research Centre – Sustainable Minerals Institute, UQ) |
| 12:00 | KEYNOTE: Geometallurgy at Olympic Dam: Mineralogical characterisation at the deposit scale, why it matters Dr Kathy Ehrig (BHP Olympic Dam) |
| 12:30 | KEYNOTE: Future Geoscience Jillian Terry (BHP) |
| | Technical Session 7 |
| Room | Room R1 |
| | 1.3 Marine Geoscience - the Evolving Oceans/IODP |
| 11:30 | <i>Erosional response to monsoon intensity change and rock uplift in the Western Himalaya since the Late Miocene</i> Prof Peter Clift (Louisiana State University, Baton Rouge) |
| 11:45 | <i>Paleoceanography and monsoonal history of the Japan Sea over the last 460,000 years</i> Assoc Prof Stephen Gallagher (The University of Melbourne) |
| 12:00 | <i>From continental crust to ocean basin – Rapid rifting in the South China Sea – Site U1501, IODP EXP 367/368</i> Dr Kelsie Dadd (University of Sydney) |
| 12:15 | <i>Origin of Moho Reflections</i> Dr Yoshihiko Tamura (Jamstec) |
| 12:30 | KEYNOTE: ECORD mission-specific platform expeditions in the International Ocean Discovery Program: Flexible operations and technological developments Dr Carol Cotterill (European Consortium for Ocean Research Drilling) |
| | Technical Session 7 |
| Room | Room R2 |
| | 3.1.1 Effective exploration and discovery under cover |
| 11:30 | <i>The Northern Australia geochemical survey – A potential method for discovering undercover mineralisation</i> Philip Main (Geoscience Australia) |
| 11:45 | <i>Biogeochemical mapping in mineral exploration</i> Assoc Prof David Cohen (University of New South Wales) |
| 12:00 | <i>Ultrafine soil fractions for improved near surface exploration through cover</i> Dr Ryan Noble (CSIRO) |
| 12:15 | <i>Establishing geochemically appropriate sampling media in the critical zone of South Australia – A 4D journey through datasets and geology</i> Dr Anna Petts (Geological Survey of South Australia) |
| 12:30 | <i>Significance of ferruginous pisoliths in exploring areas covered by sand dunes: An example from the Yamarna Terrane, Western Australia</i> Dr Walid Salama (CSIRO) |
| 12:45 | <i>Groundwater hydrogeochemistry of the Capricorn Orogen and mineral exploration through cover</i> Dr Robert Thorne (CSIRO) |

| Time | Thursday 18 October |
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| | Technical Session 7 |
| Room | Room R5 |
| | 3.3.5 Groundwater science for policy development and decision making |
| 11:30 | KEYNOTE: <i>Groundwater science contributions to water policy development and decision making in the 21st century</i> Jane Coram (CSIRO) |
| 12:00 | <i>Public perceptions of groundwater issues</i> Philip Commander (DP Commander Hydrogeology) |
| 12:15 | <i>Impediments in using science for decision making – Case studies from SA</i> Steve Barnett (Department for Environment and Water) |
| 12:30 | <i>Best practice for determining baseline methane conditions in aquifers – Practical application for tight shale developments</i> David Gornall (Santos) |
| 12:45 | <i>Sensitivity analysis and value of information in groundwater exploration: A case study from the APY lands, South Australia</i> Dr Luk Peeters (CSIRO) |
| | Technical Session 7 |
| Room | Room R6 |
| | 4.3 Engineering geology – from underpinning our civil infrastructure to mine closure |
| 11:30 | <i>Case study – Desk study and ground investigation at the offshore area of Outer Harbour, Adelaide</i> Ming Chit Fergus Cheng (Arup) |
| 11:45 | <i>Shear strength of materials that cannot be tested in the laboratory due to their large particles size</i> Sandra Linero Molina (University of Newcastle – SRK Consulting Australasia) |
| 12:00 | <i>Ground movement changes due to climate effects on roads and infrastructure founded on shallow expansive clays</i> Dr Dominic Lopes (USL Group Pty Ltd) |
| 12:15 | <i>Developing an engineering geological ground model in a remote part of Papua New Guinea for a new tailings storage facility</i> Mark Rynhoud (Klohn Crippen Berger) |
| 12:30 | <i>NDRRA Gold Coast Springbrook Road slope remediation – Digital innovation in the Hinterland</i> Thomas Casey (Arup Pty Ltd) |
| 12:45 | <i>Correlation between inferred strength and apparent degree of weathering in felsic pyroclastic rocks</i> Prof Stephen Fityus (The University of Newcastle) |
| | Technical Session 7 |
| Room | Room R7 |
| | 4.5 Exploration technology: future trends and adoption challenges |
| 11:30 | <i>2008-2018 – The portable XRF decade</i> Aaron Baensch (Olympus Scientific Solutions) |
| 11:45 | <i>Low level gold determinations using pXRF: Towards a new paradigm in gold exploration</i> Simon Bolster (Portable PPB Pty Ltd) |
| 12:00 | <i>Are we there yet? – Effectiveness of handheld IR spectrometers for exploration and mining</i> Dr Sasha Pontual (AusSpec International) |
| 12:15 | <i>New developments in analytical techniques for efficient characterization of geologic materials: Research outcomes of the Deep Exploration Technologies CRC</i> Dr Yulia Uvarova (CSIRO) |
| 12:30 | <i>Industry take-up on real-time geological data</i> Annelie Lundström (Minalyze) |
| 12:45 | <i>Adjustments for Airborne Induced Polarization Effects – A joint conductivity induced polarization inversion update for 2.5D</i> Dr Jovan Silic (Jovan Silic and Associates) |

| Time | Thursday 18 October |
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| | Technical Session 7 |
| Room | Room R8 |
| | 5.2 Prediction, Process, Place: Geomorphology & 5.3 Geoscience, Education and Professional Development (AUGEN Symposium) |
| 11:30 | <i>A technical classification for erosion gullies in Queensland</i> Dr Robin Thwaites (Griffith University) |
| 11:45 | <i>The Australian Earth and Environmental Science Olympiad: An Australian science innovations initiative inspiring students to think about Earth Systems Science</i> Greg McNamara (Australian Science Innovations) |
| 12:00 | <i>Planning for a strong, diverse and inclusive future geoscience workforce</i> Kylie Walker (Science & Technology Australia) |
| 12:15 | <i>Welcoming diverse groups to the classroom – How tiny changes can create big outcomes</i> Dr Penny King (Australian National University) |
| 12:30 | <i>The journey of curious minds to the Earth Science Olympiad</i> Dr Leslie Almberg (Earth and Environmental Science Olympiad) |
| 12:45 | <i>An alternative future for Applied Geoscience training? Micro-credentialing, universities, professionals and industry</i> Dale Sims (Dale Sims Consulting) |
| 1:00 | <i>All hands on deck! Voyage 1 for the Collaborative Australian Postgraduate Sea Training Alliance Network (CAPSTAN)</i> Dr Leah Moore (University of Canberra) |
| 1:00 | Lunch - GeoEXPO - Hall H |
| Room | Hall C |
| 2:00 | Plenary: The Future of Geoscience in our society <i>Selling Planet Earth: Communicating contested geoscience to the public</i> Prof Iain Stewart |
| | Technical Session 8 |
| Room | Hall C |
| | 1.5 The Solar System and Beyond |
| 3:00 | KEYNOTE: <i>The role of reactions between gases and solids on the surfaces of Earth and Mars</i> Dr Penny King (Australian National University) |
| 3:30 | <i>Formation and multiple impact events on the IIE iron parent body as recorded by the Miles meteorite</i> Rachel Kirby (The Australian National University) |
| 3:45 | <i>Could meteorite bombardment have kick-started the plate tectonic machine?</i> Assoc Prof Craig O'Neill (Macquarie University) |
| 4:00 | KEYNOTE: <i>GSA Ringwood Medal Lecture: Illuminating Mantle Metasomatism</i> Stephen Foley (Macquarie University) |
| | Technical Session 8 |
| Room | Hall A |
| | 1.1.7 Advances in Volcanology and Igneous Geochemistry |
| 3:00 | <i>The 1595Ma Gawler Range Volcanics: A template for petrogenesis of a Silicic Large Igneous Province (SLIP)</i> Emeritus Prof John Foden (University of Adelaide) |
| 3:15 | <i>The geology and geochemistry of intraplate volcanoes offshore of Australia's Southern Margin</i> Dr Joanna Parr (CSIRO) |
| 3:30 | <i>Heterogeneous mantle source of mid-ocean ridge basalts from the Macquarie Ridge Complex</i> Qiang Jiang (School of Earth and Planetary Sciences, Curtin University) |
| 3:45 | <i>A new pathway for chemical fractionation resulting from SO₂ – basaltic glass reactions</i> Andrew Palm (Australian National University) |
| 4:00 | <i>Reappraisal of MORB redox state using both Fe and S speciation</i> Dr Olivier Alard (Macquarie University) |
| 4:15 | <i>Towards an understanding of boninite genesis and their role in probing the sub-arc mantle, Cape Vogel, Papua New Guinea</i> Dr Oliver Nebel (School of Earth, Atmosphere And Environment, Monash University) |

| Time | Thursday 18 October |
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| | Technical Session 8 |
| Room | Hall E1 |
| | 1.2.2 Source-to-sink sedimentary basin processes |
| 3:00 | <i>The late Palaeoproterozoic Glyde package in the greater McArthur Basin, Northern Territory</i> Dr Tim Munson (Northern Territory Geological Survey) |
| 3:15 | <i>Long-lived supercontinental-scale source to sink system from Gondwana</i> Dr Sara Morón (The University of Melbourne) |
| 3:30 | <i>Basin redox and provenance analysis of the Upper Roper Group, Beetaloo Sub-basin, North Australia</i> Bo Yang (University of Adelaide) |
| 3:45 | <i>Towards improved stratigraphy of Proterozoic Basins: Telling the time from a single glauconite grain based on in-situ Rb/Sr dating</i> Dr Juraj Farkas (University of Adelaide) |
| 4:00 | <i>An investigation of deepwater sedimentation in submarine canyon and fan on a typical passive margin using stratigraphic forward modelling</i> Li Wan (University of Queensland) |
| 4:15 | <i>Zircon provenance of Late Palaeozoic glaciogene sedimentary rocks in the Troubridge and Arckaringa basins, South Australia</i> Dr Verity Normington (Northern Territory Geological Survey) |
| | Technical Session 8 |
| Room | Hall E2 |
| | 3.1.3 Understanding mineral systems for exploration – from craton to micron scale |
| 3:00 | <i>Trace element concentrations in ore minerals: Implications for ore genesis and mineral processing</i> Prof Nigel Cook (The University of Adelaide) |
| 3:15 | <i>Multiple sulfur isotopes as indelible tracers of ore-forming processes in magmatic and hydrothermal mineral systems</i> Stefano Caruso (University of Western Australia) |
| 3:30 | <i>Platinum group elements to identify sulphide saturation in evolving magmas: Application to the Rio Blanco Cu-Porphyry Deposit, central Chile</i> Yamila Cajal Contreras (The Australian National University) |
| 3:45 | <i>Archean sulphur identified in Mesoproterozoic skarn deposits associated with the Olympic Dam iron oxide–copper–gold (IOGC) event</i> Dr Laura Morrissey (University of South Australia) |
| 4:00 | <i>Trace element signatures in the Noril'sk-Talnakh deposits as possible indicators for magmatic sulphide prospectivity</i> Dr Louise Schoneveld (CSIRO) |
| 4:15 | <i>Zircon composition as a fertility indicator of Archean granites</i> Dr Yongjun Lu (Geological Survey of Western Australia) |
| | Technical Session 8 |
| Room | Room R1 |
| | 1.6 Advances in structural, igneous metamorphic and sedimentary geology |
| 3:00 | <i>Technologies for change: How magnetotellurics, geochronology and drilling have revitalised our view of South Australian geology</i> Dr Anthony Reid (Geological Survey of South Australia) |
| 3:15 | <i>The misplaced Mesozoic history of eastern Australia is found in Papua New Guinea</i> Dr Robert Holm (Frogtech Geoscience) |
| 3:30 | <i>Revised geology of the Central Lachlan Orogen: New insights from the East Riverina Mapping Project</i> Phil Gilmore (Geological Survey Of NSW) |
| 3:45 | <i>Devonian twins? The age, stratigraphy and provenance of the Cocoparra and Mulga Downs groups, NSW</i> Steven Trigg (Geological Survey of New South Wales) |
| 4:00 | <i>Clues to Broken Hill structural history and geometry from mapped megastructures</i> Barney Stevens (Broken Hill Expertise) |
| 4:15 | |

| Time | Thursday 18 October |
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| | Technical Session 8 |
| Room | Room R2 |
| | 3.1.7 Studies on the Thomson Orogen |
| 3:00 | KEYNOTE: The Southern Thomson Project Dr Ian Roach (Geoscience Australia) |
| 3:15 | <i>New results from the southern Thomson Orogen: Implications for geodynamics and mineral systems in NSW</i> Dr Chris Folkes (Geological Survey of NSW) |
| 3:30 | <i>Results of stratigraphic drilling in the southern Thomson Orogen, Queensland</i> David Purdy (Geological Survey of Queensland) |
| 3:45 | <i>Geochronology and geochemistry of the Early Devonian Gumbardo Formation: Evidence for Silurian basement rocks beneath the Adavale Basin</i> Pascal Asmussen (Queensland University of Technology) |
| 4:00 | <i>Tectono-metamorphic evolution of the southern Thomson Orogen</i> Dr Michael Doublier (Geoscience Australia) |
| 4:15 | <i>SHRIMPing beneath the Eromanga Basin: Insights into the evolution of the Thomson Orogen from SHRIMP U–Pb geochronology of basement drillcore</i> Dr Andrew Cross (Geoscience Australia) |
| | Technical Session 8 |
| Room | Room R5 |
| | 3.3.5 Groundwater science for policy development and decision making |
| 3:00 | <i>The water budget myth and a resource condition limit approach</i> Dr Roger H Cranswick (Department for Water and Environment) |
| 3:15 | <i>New technologies and supporting policies to counteract urban development impacts on groundwater recharge, stormwater discharge and evapotranspiration</i> Dr Peter Dillon (CSIRO Land and Water / Flinders University) |
| 3:30 | <i>Optimal multi-objective pumping/injection strategy to mitigate seawater intrusion</i> Dr Yun Yang (Hohai University / Flinders University) |
| 3:45 | <i>How to ensure your groundwater science is used in policy development and decision-making</i> Simone Stewart (Department for Environment and Water) |
| 4:00 | |
| 4:15 | |
| | Technical Session 8 |
| Room | Room R6 |
| | 4.2 Mining geology and geometallurgy |
| 3:00 | <i>Is technology helping us?</i> Richard Buerger (Mining Plus Pty Ltd) |
| 3:15 | <i>Leveraging seismic acquisition in mining</i> Dr Heather Schijns (BHP) |
| 3:30 | <i>Lithochemical discrimination of a fractionated sill at Cowal Gold Mine, NSW, and implications for exploration and resource estimation</i> Zachary Murphy (Evolution Mining) |
| 3:45 | <i>What is your confidence in your simulated confidence interval?</i> Danny Kentwell (SRK Consulting) |
| 4:00 | KEYNOTE: Geostatistics for Mining Geology and Grade Control Dr Bill Shaw (Ore Control) |
| | Technical Session 8 |
| Room | Room R7 |
| | 4.5 Exploration technology: future trends and adoption challenges |
| 3:00 | KEYNOTE: MinEx CRC: Addressing future trends and adoption challenges of exploration technology Andrew Bailey (MinEx CRC) |
| 3:30 | <i>The challenges associated with new ground-shaking technology: How seismic could be the technological game-changer for miners</i> Dr Greg Turner (HiSeis) |
| 3:45 | <i>Magnetic depths to volcanic sills using regional scale data</i> Dr Evren Pakyuz-Charrier (Intrepid Geophysics) |
| 4:00 | <i>Targeted inversions of airborne electromagnetic data for mineral exploration</i> Dr Juerg Hauser (CSIRO) |
| 4:15 | <i>Surface heat flow measurements: A new window on the subsurface</i> Dr Graeme Beardsmore (Australian Geothermal Association) |

| Time | Thursday 18 October |
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| | Technical Session 8 |
| Room | Room R8 |
| | 5.3 Geoscience, Education and Professional Development (AUGEN Symposium) |
| 3:00 | <i>The efficacy of virtual education in undergraduate geoscience units</i> Dr Michael Roach (University of Tasmania) |
| 3:15 | <i>Supporting geoscience educators and students – A responsibility of geological surveys?</i> Simone Meakin (Geological Survey of NSW) |
| 3:30 | <i>Giving a good grounding, earlier – Exploring methods for geoscience engagement in early childhood</i> Marianne Harvey (MEGMS) |
| 3:45 | <i>Engaging students and teachers with Earth Sciences Education – The Earth Science Western Australia Story</i> Jo Watkins (Earth Science Western Australia) |
| 4:00 | <i>Problem based learning: A real-world approach for secondary students to solve complex problems using geoscience knowledge and skills</i> Dr Bronte Nicholls (Adelaide Botanic High School) |
| 4:15 | <i>Why should Australian schools offer Earth & Environmental Science at senior secondary year levels?</i> Len Altman (Geoscience Pathways Project) |
| Room | Hall C |
| 4:30 | Closing Remarks |
| 5:00 | Closing Drinks – Riverbank Promenade |

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KEYNOTE SPEAKERS

Confirmed Keynote Speakers for the AGCC 2018 themes and subthemes are introduced below. Affiliation and biographies can be viewed at www.agcc.org.au/speakers.

Theme 1: Understanding the Earth

The Australian Geoscience Council Convention is pleased to announce that the Mawson Medallist for 2018, Professor Matt King, will be presenting the Mawson Medal Lecture as a Keynote address at the Convention in session 1.4.1 – Earth's Climate - past, present and future.



Dr Andrew Valentine

1.1 – Deep Earth systems and planetary fluxes



Dr Nicolas Flament

1.1.1 – Decoding Earth's supercycles: from the core to the crust



Prof Damian Nance

1.1.1 – Decoding Earth's supercycles: from the core to the crust



Dr Andy Calvert

1.1.4 – Crustal evolution of Archean Cratons



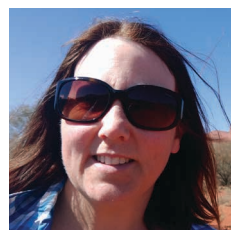
Dr Tim Johnson

1.1 – Deep Earth systems and planetary fluxes



Kate Robertson

1.1.5 Imaging Australia in 3D: 21 years of ANSIR and beyond



Michelle Salmon

1.1.5 - Imaging Australia in 3D: 21 years of ANSIR and beyond



Dr Rebecca Carey

1.1.7 – Advances in volcanology and igneous geochemistry



Dr Teresa Ubide

1.1.7 Advances in volcanology and igneous geochemistry



Prof Ken McClay

1.2 – Sedimentary basins



Dr Caroll Cotterill

1.3 – Marine Geoscience - the evolving oceans



Prof Neville Exon

1.3 – Marine Geoscience - the evolving oceans



Dr Lloyd White

1.3 – Marine Geoscience - the evolving oceans



Galen Halverson

1.4.1 Earth's climate - past, present and future



Prof Matt King

Mawson Medal Lecture
1.4.1 – Earth's climate - past, present and future



Dr Penny King

1.5 The solar system and beyond

Theme 2: Life on Earth – origins and diversity



Prof Joanna Morgan
2.3 – Mass extinctions



Prof Michael Archer
2.4 – Ancient and historical record of life in Australia



Prof Kliti Grice FAA
Theme 2.6 - Geobiology



Jessica Whiteside
2.8 - Earth, Life and Ores

Theme 3: Resources – discovery, development, use and sustainability



Dr Jon Hronsky
3.1.1 - Effective exploration and discovery under cover



Warren Potma
3.1.2 - Making better exploration decisions through an integrated geoscience approach



Prof David Cooke
3.1.3 -Understanding mineral systems for exploration – from craton to micronscale



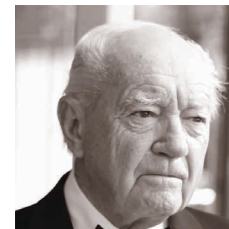
Dr Ian Roach
3.1.3 - Understanding mineral systems for exploration – from craton to micronscale



Dr Graham Begg
3.1.4 - Tectonic and earth evolution controls on the spatial and temporal localisation of ore deposits



Dr Richard Flook
3.1.5 - Technology metals and minerals – the importance of non-traditional commodities in the evolving economy



Prof Bruce Hobbs
3.1.6 - New frontiers in ore system research



Prof Peter McCabe
3.2.1 - Future energy mix

Theme 3: Resources – discovery, development, use and sustainability (cont.)



Prof Joan Esterle

3.2.2 - Energy from coal



Dr Michael Clarke

3.2.3 Petroleum and its co-products



Bill Ovenden

Theme 3.2.3 - Petroleum and its co-products



Dr Graeme Beardsmore

3.2.4 - Sustainable energy sources



Dr Linda Stalker

3.2.6 - Using geoscience to address social licence concerns for energy projects



Professor Craig Simmons FTSE

3.3.1 - Groundwater challenges and opportunities



Dr Ken Lawrie

3.3.2 - New groundwater technologies and approaches



Dr Narelle Neumann

3.3.3 - Pre-competitive geoscience data and information to understand groundwater systems



Dr David Post

3.3.4 - Evaluating the potential impacts to groundwater from resource development



Jane Coram

3.3.5 - Groundwater science for policy development and decision making



John Kilroe

3.4.1 - Resource investment and management



Dr Gavin Mudd

3.4.2 - Trends in resource exploration and development



Peter Baker

3.4.3 - Resources definition



Steve Hunt

3.4.3 - Resources definition



Barbara Pribyl

3.4.3 - Resources definition



Dr Andrew Heap

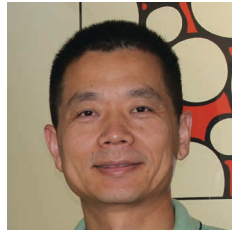
3.5 - Technology integration

Theme 4: Applied Geosciences in the 21st Century – innovation, technology and the future



Dr Marc Elmouttie

4.1 – Geohazards, risk and mitigation



A/Prof Jinsong Huang

4.1 – Geohazards, risk and mitigation



Dr Kathy Ehrig

4.2 – Mining geology and geometalurgy



Ms Jill Terry

4.2 – Mining geology and geometalurgy



Prof Rick Valenta

4.2 Mining geology & geometalurgy



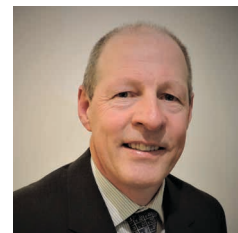
Dr Phil Flentje

4.3 - Engineering geology – from underpinning our civil infrastructure to mine closure risk and mitigation



Dr David Och

4.3 - Engineering geology – from underpinning our civil infrastructure to mine closure risk and mitigation



Andrew Bailey

4.5 - Exploration technology: future trends and adoption challenges



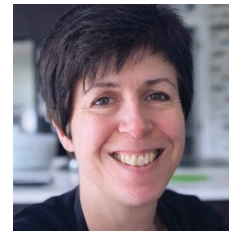
Prof Peter Dowd

4.6 - Mathematics, modelling, AI, robotics and machine learning applied to the acquisition and interpretation of large or complex geoscience data sets



Prof Dietmar Müller

4.6 - Mathematics, modelling, AI, robotics and machine learning applied to the acquisition and interpretation of large or complex geoscience data sets



Dr Sasha Pontual

4.7 - National Virtual Core Library

Theme 5: Beyond the rocks – Geoscience in our society: current application and future trends



**Prof Emeritus
Dr Ibrahim Komoo**

5.1 – Geology in Society:
geotourism and geoheritage



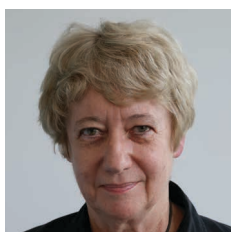
Andrew Brooks

5.2 - Prediction, Process, Place:
Geomorphology



Prof Iain Stewart

5.3 - Geoscience, Education
and Professional Development
(AUGEN Symposium)



Prof Sue O'Reilly

5.5 Planning the Future of
Geoscience



Dr Bill Shaw

5.5: Planning the Future of
Geoscience



The BGP Prospector vessel conducting seismic surveys. Image courtesy of Searcher Seismic.

AGCC 2018 SPONSORS

We would like to thank the following organisations for their invaluable support in making the Convention a success.

Patron Sponsor



Australian Government
Geoscience Australia

Geoscience Australia

Geoscience Australia is Australia’s pre-eminent public-sector Geoscience organisation. They are Australia’s trusted advisor on the geology and geography of the country. Geoscience Australia applies science and technology to describe and understand the Earth for the benefit of Australia.

Geoscience Australia Chief Executive Officer Dr James Johnson said sponsoring the Convention was a great opportunity to showcase the importance of Geoscience and the work of the organisation in the lives of all Australians, from maps that support decision making and GPS positioning on your mobile phone, to environmental monitoring and understanding the nation’s resource wealth: “The Convention is a great opportunity for us to come together with representatives from around the world and across the field of Geoscience to discuss not only scientific developments and emerging technologies, but also new approaches to education and communication”.

Please visit www.ga.gov.au

Major Sponsor



Santos

Santos is an Australian natural gas company. Established in 1954, the company is proud to deliver the economic and environmental benefits of natural gas to homes and businesses throughout Australia and Asia. Five core long-life natural gas assets sit at the heart of a disciplined, focused strategy to drive sustainable shareholder value: the Cooper Basin, GLNG, Papua New Guinea, Northern Australia and Western Australia Gas. Each of these core assets provide stable production, long-term revenue streams and significant upside opportunities. With one of the largest exploration and production acreages in Australia, a significant and growing footprint in Papua New Guinea and a strategic infrastructure position, Santos is well positioned to benefit from the growing global demand for energy. Santos is pleased to be a Major Sponsor of the inaugural Australian Geoscience Convention in Adelaide in October 2018.

Please visit www.santos.com

Host Sponsor



Government of South Australia Dept of Energy and Mining

The Government of South Australia is delighted to be hosting the inaugural Australian Geoscience Council Convention which will bring together for the first time Geoscience professionals from all member societies of the AGC in Adelaide in October 2018. As a sponsor, through the Department for Energy and Mining, it supports and commends the goals of the AGCC organisers to develop broader cooperation, synergies and strong linkages between industry and academia, researchers and practitioners, educators and community stakeholders.

Principal Partners



Contributors



Supporting Partners



AGCC 2018 also acknowledges the support of one anonymous geoscientist.

CONVENTION EVENTS

Numerous events are scheduled for the duration of the Convention, offering everyone the opportunity to network, socialise, and interact with fellow delegates, speakers, exhibitors, Geoscience students and Early Career Geoscientists (ECG). Use the map on p. xxx or the Convention app to locate the venues.

Social Events

Welcome Reception Sunday 14 October | Halls CDE & Foyer E, Adelaide Convention Centre | 17:30 - 19:30

Join Convention participants in a casual setting and network with fellow delegates, exhibitors, sponsors and speakers at the AGCC 2018's Welcome Reception. Open to all delegates and exhibitors.

Poster/Exhibition Drinks Monday 15 - Tuesday 16 - Wednesday 17 | GeoEXPO, Adelaide Convention Centre | 17:30 - 18:30

Enjoy complementary drinks while viewing delegate posters and browsing the exhibitors stands in the GeoEXPO. Posters presenters will be available to answer questions and talk about their work. Open to all delegates and exhibitors.

ECG networking event Monday 15 October | Strathmore Hotel, 129 North Terrace, Adelaide | 18:30 - 20:30

Sponsored by the Geological Society of Australia and Australian Institute of Geoscientists, a networking opportunity in a relaxed environment, this event will allow Early Career Geoscientists and students to build on professional networks that could support them throughout their career. Open to ECGs and invitees only.

Presidents' Dinner Monday 15 October | State Library of South Australia | 19:00 - 23:00

By invitation only. Hosted by AGC President Bill Shaw, this informal dinner will allow Presidents and Chairpersons of all AGC's Member Organisations to discuss synergies, commonalities and solutions to the challenges faced by their organisations, as well as the role of AGC as the umbrella Geoscience organisation for Australia.

Geoscience Australia private reception Tuesday 16 October | South Australian Museum | 18:30 - 20:30

By invitation only.

Trivia Night Tuesday 16 October | The Historian Hotel, 18 Coromandel Pl, Adelaide | 18:30 - 20:30

Sponsored by Anglo American Australia. An event for early career geoscientists, students and established Geoscience professionals looking at building their networks while having some fun. Networking will be facilitated by randomly assigning individual to teams. Open to all delegates and exhibitors.

Convention Dinner Wednesday 17 October | Halls F & G, Adelaide Convention Centre | 19:00 - 23:00

Join AGCC 2018's delegates, exhibitors, speakers and their partners at the official Convention Dinner. The new *National Geoscience Champions* will be announced at the dinner. Dress code: Smart casual. If you haven't purchased your ticket for the dinner, please visit the Registration desk before 17:00 on Monday 15.

Closing Drinks Thursday 18 October | Riverbank Promenade, Adelaide Convention Centre | 16:30 - 18:00

Say good-bye to fellow delegates over final complimentary drinks after the AGCC 2018 closing session. Open to all delegates and exhibitors.

A **Booth and Scavenger Hunt** is planned for the duration of the Convention. The objective of the hunt is to encourage early career professionals and students to engage and interact with other exhibitors and delegates. Setting small challenges acts as an effective ice-breaker to augment introductions with new industry contacts.

If you are interested in sponsoring the ECG Networking Event, the Trivia Night or the Scavenger Hunt, please contact Al Harvey at alistairharvey2@gmail.com or Mike Smith at mike_rpg@optusnet.com. Please visit the ECG booth in the GeoEXPO (Stand 85) to find out more about these networking opportunities for early career professionals, students and established Geoscience professionals.

Geoscience events

In addition to the scientific presentations, numerous Geoscience events will take place at the Convention.

Decadal Plan for Australian Geoscience Monday 15 October | Meeting Room R8, Adelaide Convention Centre | 11:00- 11:30

The result of two years of deliberations by a Committee drawn together by the Australian Academy of Science and with input from the wider Earth Sciences community, the new Decadal Plan for Australian Geoscience will be released at AGCC 2018 on Monday 15 October and will be showcased in a full technical session where speakers will focus on the many aspects of the way forward for Geoscience.

Santos Geoscience Education Workshop Monday 15 October | Meeting Room R4, Adelaide Convention Centre | 15:00 - 17:00

This workshop is reserved to science teachers who have registered. Sponsored by Santos Limited and coordinated by Greg McNamara (TESEP), attendees of this workshop will meet renowned Geoscience educator and documentary film-maker Professor Iain Stewart, and will have the chance to interact with Suzy Urbaniak and Len Altman, both geologists and winners of the Prime Minister's prize for science teaching. Other renowned Australian Geoscience Educators from AGC-supported organisations (see below) will be on hand to facilitate the education discussion and coordinate geoscience-related hands-on and practical activities ready for your classroom.



Teachers will have the opportunity to visit the GeoEXPO after completion of the workshop.

To register, please contact Greg McNamara at geoservices@geod.com.au before Friday 7 October 2018 – places are limited!



Greg McNamara

TESEP, Earth & Environmental Science Olympiad, GEOED



Kelly Sharrad

TESEP, Earth & Environmental Science Olympiad, South Australia Dept of Education



Leslie Almberg

TESEP, Earth & Environmental Science Olympiad, Curious Minds



Bronte Nicholls

Adelaide Botanic High School, South Australia Dept of Education



Kelsie Dadd

AUGEN Curious Minds



Michael Roach

University of Tasmania/AusGeol



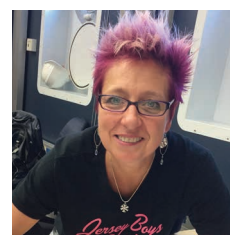
Jo Watkins

ESWA, Curious Minds



Len Altman

Prime Minister's Prize winner



Suzy Urbaniak

CoRE, Prime Minister's Prize winner

Mineral Exploration Cooperative

Research Centre (MinEx CRC) Launch

Monday 15 October | Meeting Room 4, Adelaide Convention Centre | 13:15 – 14:00

By invitation only.

This is one of two Australian launches of the new CRC program. MinEx CRC is the world’s largest mineral exploration collaboration bringing together Industry, Government and Research organisations to address the threat of declining mineral discovery and realise the opportunity of novel drilling technologies. Over the next 10 years, the CRC program will create new opportunities for mineral discovery by delivering industry-led, outcome-focused research in three areas:

- More productive, safer and environmentally friendly methods to discover and drill out deposits, including novel Coiled Tubing drilling technology
- New technologies for collecting data while drilling
- Acquiring previously unobtainable data on prospective rocks under deep, barren cover.

Australian Ore Deposit Monograph

Monday 15 October | GeoEXPO – AusIMM Exhibitor Stands 10–11 | 17:30 - 18:30

Attend the Adelaide launch of the latest update of this comprehensive data source of the great mineral resources and exploration successes of the vibrant Australian mining industry.

From its beginnings in 1953, this volume has proven indispensable to geologists working in Australia. More than 170 papers are included in this latest version. Overview papers summarise regional geology and mineralisation for the different geological provinces, and these are followed by numerous descriptions of existing mines. Papers are descriptive and long-lasting in their focus and include geochemistry and geophysical aspects wherever possible. Major mining districts of national significance are also included.

Core Viewing: Mines and Projects across

South Australia

Tuesday 16 October | Meeting Room R1, Adelaide Convention Centre | 18:00 – 19:00

View drill core from key South Australian prospects.

CSIRO Three-minute Rapid Fire presentations

Wednesday 17 October | Hall E3, Adelaide Convention Centre | 9:30 - 11:00 & 11:30 – 13:00

Listen to Geoscience Students and Early Career Geoscientists competing in a test of their abilities to rapidly and effectively communicate their science to a diverse audience.

Each speaker is allowed three minutes and three slides to communicate the core of their research or work in geology, geochemistry, geophysics, hydrogeology, engineering and related fields. One short question (10 seconds) and one short response (20 seconds) will be permitted. Total time allocated to each presenter is 4 minutes, which includes a minimal introduction and speaker change-over.

PRIZES: CSIRO is generously sponsoring prizes for two categories; Geoscience Students (Hons, MSc or PhD) and Early Career Geoscientists. The prize money is to go toward professional development such as attending an international or national conference, a geological field trip or a geoscience workshop. Each category has prizes* of:

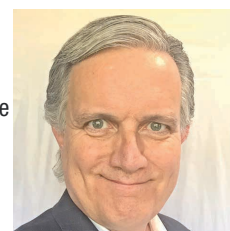
- 1st Place - AU\$5,000
- 2nd Place - AU\$2,000
- 3rd Place - AU\$1,000

*the awarding of 2nd and 3rd prizes is dependent on the merit of presentation and the number of participants in each category.

CRITERIA FOR JUDGING WINNERS: Presentations will be assessed on three key parameters:

- i. Has the speaker clearly enunciated the scientific question or problem investigated?
- ii. Was the research undertaken novel or challenging, and were the key results clearly outlined?
- iii. Quality and effectiveness of the 3 slides presented

Associate Professor **Paul Willis**, a palaeontologist and one of Australia’s leading science communicators, will moderate the event. Best known for his presentations on ABC TV’s Catalyst program, Paul was also the Director of the Royal Institution of Australia where he set up Australia’s Science Channel. He now owns and runs Media Engagement Services, teaching researchers how to communicate their own stories to the world.



Diversity in Geoscience Lunch

Wednesday 17 October | Hall E1, Adelaide Convention Centre | 13:00 - 14:00

Debate diversity, inclusion and equality in Geoscience by taking part in a panel discussion and Q&A session sponsored by Beach Energy. The session will be moderated by Verity Normington (Northern Territory Geological Survey), co-chair of the Early Career Geoscientists and Volunteers Subcommittee. Join the conversation led by an expert panel as they discuss their experiences and thoughts about diversity, inclusion and equality in the geoscience community. Tickets are AU\$20 (email register@ccm.com.au).



Dr Verity Normington

Northern Territory
Geological Survey
Panel Host



Dr Heather Handley

Macquarie University/
WOMEESA President
Panel Member



Dr Richard Lily

University of Adelaide/NExUS
Panel Member

Crèche facilities

We want to make AGCC 2018 as accessible as possible to all Geoscientists, including those with young children and who may need assistance with their care. With the generous sponsorship of NExUS (National Exploration Undercover School), a crèche will be set up at the Adelaide Convention Centre in support of Convention delegates for the duration of AGCC 2018.

The facility would be operated and managed independently by Hessel Group (www.hesselgroup.com.au) and all arrangements must be made by parents with the contractor directly (rhiannon@hesselgroup.com.au).

Additional details: for ages 0 - 6 years (or older after discussion and agreement with Hessel Group), provide own snacks, lunch and drink bottle; breastfeeding friendly; Private - available to AGCC 2018 delegates, trade and staff only.



ESWA activity: Sandpit mining at Pearsall Primary School, Perth. Image courtesy of Jo Watkins, Earth Science Western Australia.

REGISTRATION FEES AND DAY ATTENDANCE RATES

Registration for the Convention is open and available through the **online registration portal**.

Day registration rates are now available – see table below.

6 October 2018 Standard and Early Career Geoscientist registrations close. No online registration will be accepted after this date.

Discounts are available to members of AGC Member Organisations (see p. 64), and reciprocal arrangements they have with international organisations will be honoured. Please refer to the www.agcc.org.au/registration portal for the full details.

All registration fees shown are in Australian Dollars (AU\$) and include 10% GST.

| Full Delegate Registration Fees | |
|---|--|
| Early Career Geoscientist - ECG Available to geoscientists who are eligible* Closes 6 October 2018 | AU\$765 |
| Standard (Member) Closes 6 October 2018 | AU\$1,200 (+ AU\$25 extra discount per society) |
| Standard (Non-Member) Closes 6 October 2018 | AU\$1,400 |
| Student (Member) | AU\$250 |
| Student (Non-Member) | AU\$500 |
| Concession - Early Bird (Member) The concession rate is available to retired and unemployed geoscientists. Status of employment at time of registration will be assessed by the relevant Member Organisations. | AU\$600 |
| Concession - Standard (Member) The concession rate is available to retired and unemployed geoscientists. Status of employment at time of registration will be assessed by the relevant Member Organisations. | AU\$800 |
| Concession - Late (Member) The concession rate is available to retired and unemployed geoscientists. Status of employment at time of registration will be assessed by the relevant Member Organisations. | AU\$1,000 |
| Day registration (Member) | AU\$475 |
| Monday, Wednesday, Thursday Day registration (Non-Member) | AU\$550 |
| Tuesday - Big Issues & Ideas Day (Non-Member) | AU\$475 |
| Day registration (Concession) The concession rate is available to retired and unemployed geoscientists. Status of employment at time of registration will be assessed by the relevant Member Organisations. | AU\$250 |

*Early Career Geoscientists (ECG) are defined as individuals in the initial stages of a professional career in Geoscience, i.e. those with five years or less experience as an employed professional geoscientist at the date of payment. For many of our eligible ECGs, this will mean that you have 5 years or less professional experience since your highest qualification (whether BSc, MSc or PhD). Some geoscientists may have undertaken, or be enrolled in a postgraduate degree part-time, while working full time as a professional geoscientist in their early years of employment, and such circumstances will be considered on merit. ECG delegates will be provided with a visually distinctive delegate badge.

Delegate registration fees include:

- Convention attendance
- Morning & afternoon refreshments
- Lunch during the Convention
- Attendance at the Welcome Reception
- Delegate bag including the Convention materials
- Program & abstract access

Exhibitor staff registration includes:

- Morning & afternoon refreshments
- Lunch during the Convention
- Access to the Exhibition area
- Attendance at the Welcome Reception
- Excludes access to the Convention sessions
- Excludes access to the Convention Dinner

FIELD TRIPS – important information

Booking for field trips is now closed.

Insurance: All field trip participants must organise their own insurance to cover risks including (but not limited to) injury, medical, death, property and travel costs.

Participants will be emailed details on itinerary and others.

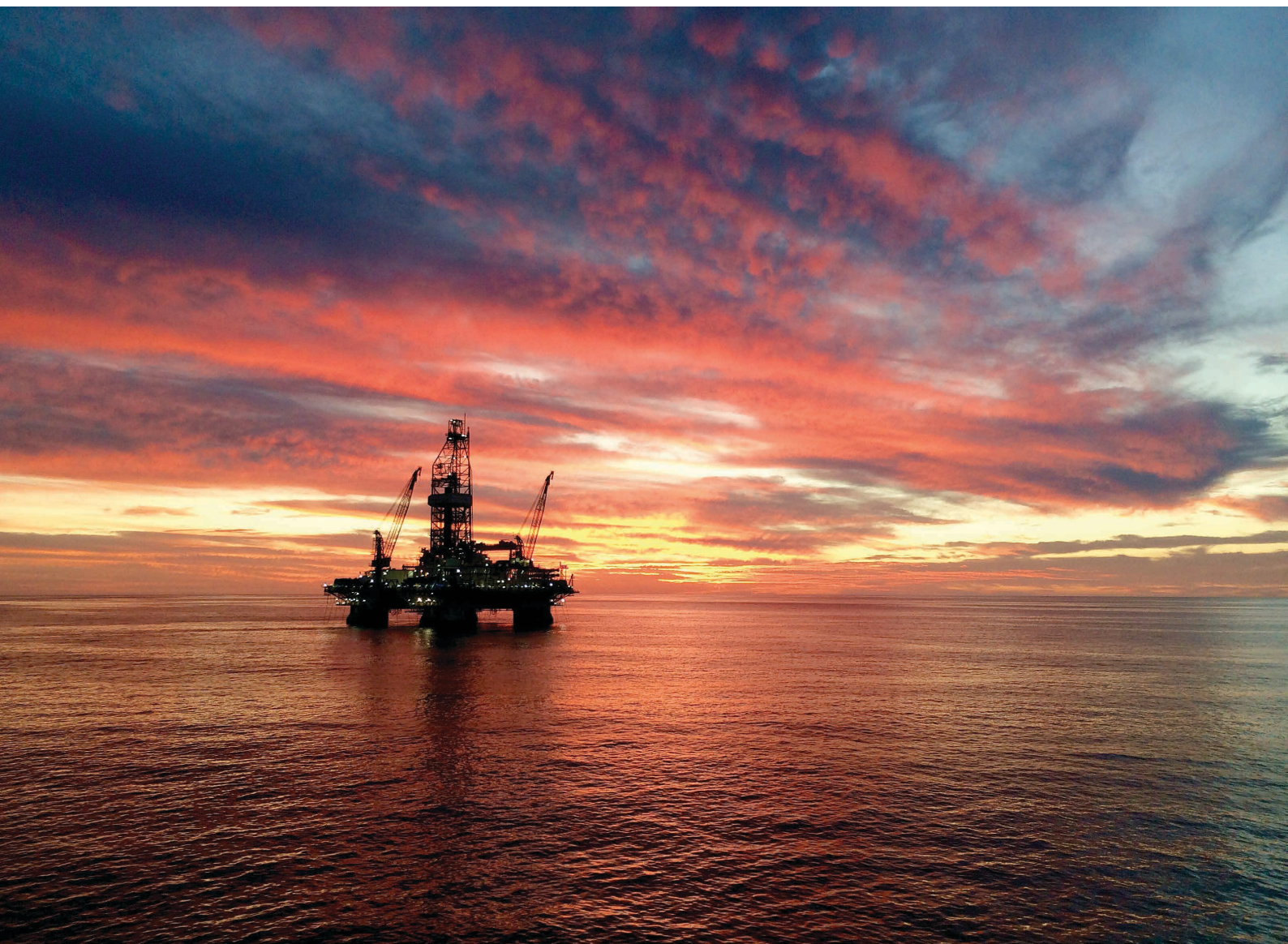
PROFESSIONAL DEVELOPMENT WORKSHOPS

Booking for workshop closes on 3 October.

Please consult the website to confirm the exact room number closer to the time.

| PRE-CONVENTION WORKSHOPS | | |
|---|---|--|
| WORKSHOP TITLE | PRESENTER | VENUE |
| WK 6 - Surface processes modelling – Badlands Saturday 13th October 9am - 4pm | Tristan Salles, Xuesong Ding, Sara Moron-Polanco University of Sydney tristan.salles@sydney.edu.au | UoA Mawson Room, The University of Adelaide |
| WK 7 - Introduction to numerical geodynamic modelling using Underworld Sunday 14th October 9am- 4pm | Romain Beucher and Julian Giordani University of Melbourne romainbeucher@unimelb.edu.au | UoA Mawson Room, The University of Adelaide |
| WK 9 - Geotourism for geoscientists Sunday 14th October 9am - 5pm | Professor Ross Dowling OAM, and Angus M Robinson FAusIMM (CP) Geotourism Standing Committee of the Geological Society of Australia angus@leisuresolutions.com.au | Stamford Plaza Adelaide Barossa Room |
| WK 21 - Women in Earth and Environmental Sciences Australasia (WOMEESA) - Mentoring Workshop Sunday 14th October 12.30pm - 5pm | Associate Professor Heather Handley WOMEESA heather.handley@mq.edu.au | Stamford Plaza Adelaide Hotel GC Torrens Room 2 |
| WK24 – 3D Modelling and machine learning for exploration Saturday 13th and Sunday 14th October 9am - 5pm | Ben Jupp and Antoine Cate bjupp@srk.com.au | UoA Madigan Room, The University of Adelaide |

| POST-CONVENTION WORKSHOPS | | |
|--|---|--|
| WORKSHOP DETAILS | PRESENTER | VENUE |
| WK 13 - Introduction to Python for geoscientists Friday 19th October 10am - 4pm | Nathaniel Butterworth, Madhura Killedar University of Sydney nathaniel.butterworth@sydney.edu.au | Stamford Plaza Adelaide Grosvenor Pioneer |
| WK 16 - Unrealised billions: deposits hidden in legacy data Friday 19th October 10am - 3pm | AGIA – Australian Geoscience Information Association Inc. president@agia.org.au | South Australia Drill Core Reference Library 5 Tonsley Boulevard Clovelly Park SA 5042 |
| WK 25 - Project LIVE: Learning through Immersive Virtual Environments Friday 19th October 9am - 1pm | Associate Professor Tom Raimondo, UniSA, AUGEN tom.raimondo@unisa.edu.au | Mawson Lakes campus, The University of Adelaide |



Santos operations in offshore northern Australia. Image courtesy of Santos Limited.

BUSINESS MEETINGS

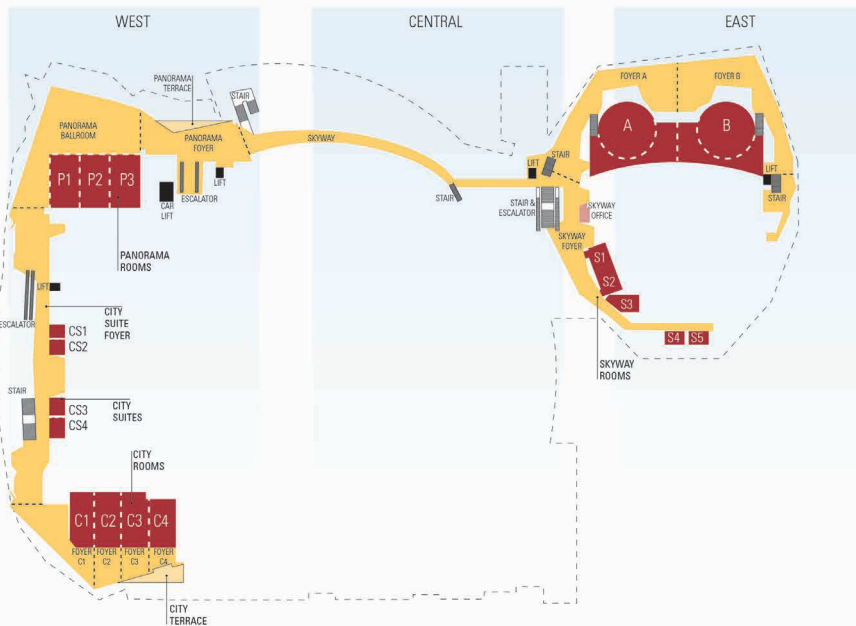
Meetings of AGC's Member Organisations and affiliated bodies, Specialist Groups and other Geoscience organisations will take place during the Convention.

The list of business meetings is accurate at time of publication. Please consult the Convention app or the notice board at reception to confirm time and venue of the meetings during the Convention.

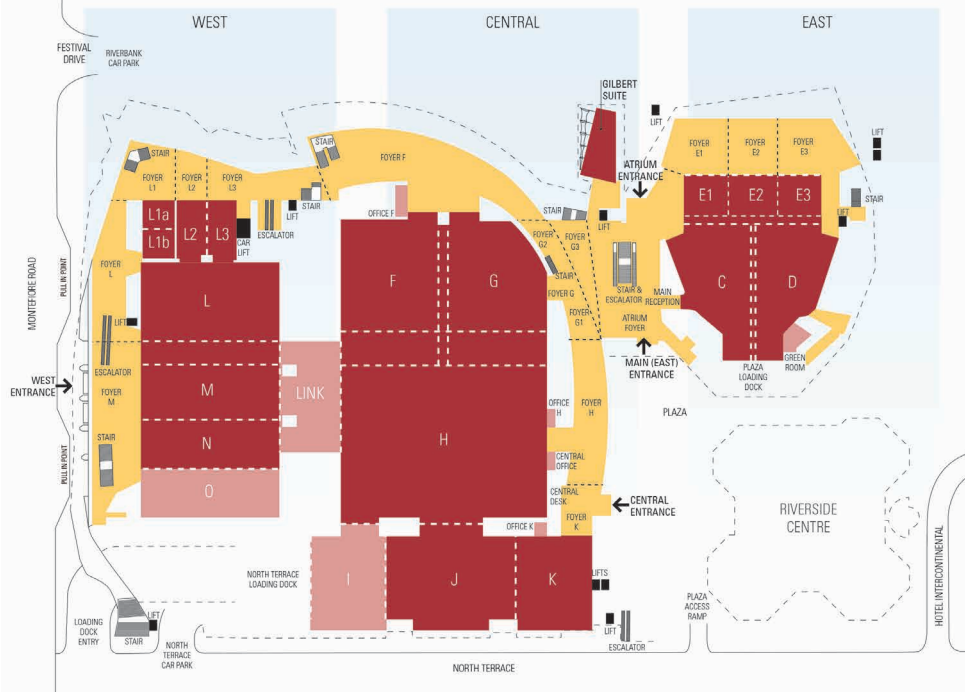
| BUSINESS MEETING | | | |
|----------------------|---|---------------|-----------------|
| DATE | MEETING / FUNCTION | TIME | VENUE |
| Sunday 14 October | Geological Society of Australia Governing Council Meeting | 10:00 – 12:00 | Meeting room R1 |
| | Geological Society of Australia Open Meeting for Divisions, Specialist Groups and Standing Committees | 13:00 – 15:00 | Meeting room R1 |
| | Geological Society of Australia Annual General Meeting | 15:30 – 17:00 | Meeting room R1 |
| | ANSIR Steering Committee Annual Meeting | 15:00 – 17:00 | Meeting room R2 |
| Monday 15 October | Women in Science, Technology, Engineering and Mathematics (STEM) Decadal Plan Discussion Meeting | 07:00 – 08:15 | Meeting room R1 |
| | Australasian Palaeontologists Annual general Meeting | 18:00 – 20:00 | Meeting room R1 |
| | Earth Science History Group - GSA Business Meeting | 18:00 – 19:00 | Meeting room R2 |
| | AGC Executive and Member Organisation Presidents | 17:30 - 18:45 | Meeting Room R6 |
| Tuesday 16 October | ASEG: 2018, an a priori model for geophysics in 2050 | 07:00 – 08:00 | Meeting room R1 |
| | Australian Journal of Earth Sciences Editorial Board Meeting | 18:00 – 19:00 | Meeting room R5 |
| | Core Viewing: Mines and Projects across South Australia | 18:00 – 19:00 | Meeting room R1 |
| | Australian Stratigraphy Commission | 18:00 – 19:00 | Meeting room R2 |
| | SGTSG and SGSEG specialist group, Science Theme meeting | 18:00 – 19:00 | Meeting room R3 |
| | Sedimentology Special Interest Group Meeting - GSA | 18:00 – 19:00 | Meeting room R4 |
| Wednesday 17 October | Geological Society of Australia Prize Giving Ceremony | 18:00 – 19:00 | Meeting room R5 |
| | AGC Executive and Member Organisation Presidents | 17:30 - 18:45 | Meeting Room R6 |

ADELAIDE CONVENTION CENTRE FLOOR PLAN

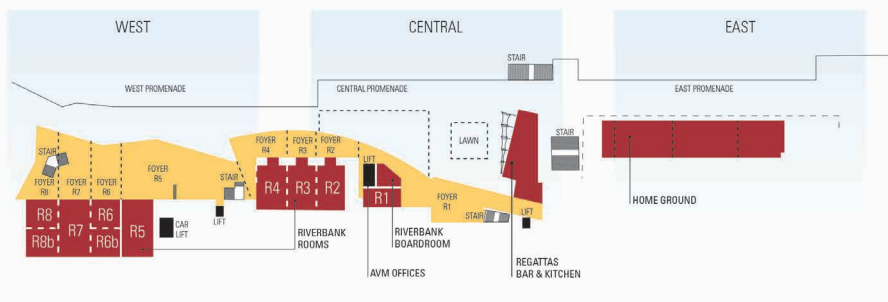
UPPER LEVEL



GROUND LEVEL



LOWER LEVEL



GeoEXPO OPEN — BE SEEN AT THE AGCC 2018!

Displays and exhibits will be at the centre of attention during refreshment breaks and lunches at the Convention. Don't miss this opportunity to showcase your products and services to delegates and the Geoscience community at the GeoEXPO. Positioned in Hall H at the Adelaide Convention Centre, the GeoEXPO will feature a large central catering area, the GeoHUB, with refreshments, device charging facilities, casual seating, information providers and the poster display area.

To view the costing table and to book immediately, please visit www.agcc.org.au/geoexpo

DON'T LET YOUR COMPETITORS GET AHEAD OF YOU – see the list of sold booths below

| ORGANISATION |
|--|
| 36th International Geological Congress |
| AAG |
| AGC |
| AGIA & IAH |
| AGS - Australian Geomechanics Society |
| Anzic |
| ASEG |
| AUGEN, ESWA & TESEP |
| Auscope Limited |
| AusIMM |
| Australian Institute of Geoscientists |
| BHP |
| CSIRO |
| Department for Environment and Water |
| Early Career Geoscientists and Volunteer committee |
| Geological Survey of NSW |
| Geological Survey Of Queensland |
| Geoscience Australia |
| Geosensor |
| Geosoft |
| Gnomic Exploration Services |
| GSA |

| ORGANISATION |
|--|
| HiSeis |
| Intrepid Geophysics |
| JAMSTEC |
| Kinometrics Inc. |
| Leica Microsystems |
| MAPCIS Research |
| Minalyze |
| National Rock Garden |
| PESA |
| Phoenix Geophysics Ltd. |
| Prospectors Supplies Pty Ltd |
| Robertson Geo |
| Sandvik Mining And Rock Technology |
| Santos Limited |
| Spectral Evolution |
| SRK Consulting |
| Taylor & Francis |
| The University of Adelaide, Australian School of Petroleum |
| University Of Tasmania |
| Velseis Pty Ltd |
| Zz Resistivity Imaging Pty Ltd |

Set up and opening times for the GeoEXPO are as follows:

| Sunday 14 October | |
|---|---|
| 0400 – 1400 | Adelaide Expo Hire has access to build standard partitions and delivers furniture |
| 0600 – 2300 | Custom stand contractors have access to build |
| 1400 – 2300 | Exhibitors have access to dress their stand |
| 1730 – 1930 | Welcome Reception in adjacent Halls CDE & Foyer E |
| Monday 15, Tuesday 16, Wednesday 17 October | |
| 0800 – 1830 | GeoEXPO opens |
| 0830 – 1730 | Convention Day 1, 2 and 3, with morning tea, lunch and afternoon tea breaks |
| 1730 – 1830 | Happy Hour Drinks around poster display in GeoEXPO |
| Thursday 18 October | |
| 0800 – 1400 | GeoEXPO opens |
| 0830 – 1600 | Convention Day 4 with a morning tea and lunch break |
| 1400 – 1700 | Exhibitor bump out – ensure all boxes are clearly labelled with your office address |
| 1700 – 2359 | Adelaide Expo Hire and custom stand builders dismantle GeoEXPO |

AGCC Exhibitor Loyalty Plan

The AGCC 2018 Organising Committee has adopted an Exhibitor Loyalty Plan, effective as of AGCC 2022, for companies whose business operations entail regular attendance at successive Geoscience Conventions. The program is essentially based on a points system whereby previous exhibitors and Convention sponsors get higher priority than new exhibitors. The program is described here.

For all sponsor and exhibition enquiries please contact Jess Tuffley at CCM (Convention Secretariat) E: sponsor@ccm.com.au

T: +61 7 3368 26

PUBLICATION BAR

AGCC 2018 is pleased to announce there will be a Publication Bar during the Convention to offer distribution of approved items to delegates – this will be the only way to distribute printed material at the Convention. In the interest of sustainability and to avoid waste, no satchel will be provided to delegates.

This service will be available for Sponsors and Exhibitors at no extra cost. Non-sponsors and non-exhibitors are welcome to use the Publication Bar upon payment of AU\$800 plus GST.

The Publications Bar will be a counter set up in the core café area at the centre of the GeoEXPO. This will be a high traffic area and all approved items will be displayed on the counter, allowing delegates to select and take items of interest.

CONVENTION APP

The Convention app for AGCC 2018 will feature the detailed program and will provide access to all abstracts for talks and posters. The program will also be available in hard copy in the Convention handbook. To avoid waste no satchel will be provided at the Convention. Abstracts will also be made available on the AGCC 2018 website during and after the Convention.

A Publication Bar will be available during the Convention to distribute approved items to delegates (see above for details) during the Convention.

VOLUNTEER PROGRAM

Volunteering expressions of interest for AGCC 2018 are now open and will close on 3 October 2018. We are seeking enthusiastic students currently registered for Geoscience and related courses at educational institutions, as well as retired or disadvantaged Geoscience practitioners keen to assist in the running of the Convention in Adelaide.

As a volunteer at the Convention, you will be provided with an incentive: for your time offered as a volunteer, you will be compensated with equal time outside of your scheduled shift to spend at the Convention to fulfil your geoscience curiosities. Volunteers are sought for morning (8am to 12pm) and afternoon shifts (1pm to 5pm). Morning and/or afternoon refreshments for the day of registration are included (but not lunch).

Volunteers will have the invaluable opportunity to engage with geoscience professionals, academics, early career geoscientists, students and an array of people from different backgrounds, all sharing at least one thing in common – an interest in Geoscience. Join us and build your professional network at the Convention!

Learn more about the emerging frontiers of Geoscience – [register](#) to become a volunteer today, or forward the [flyer](#) to anyone who may be interested!

SOCIAL MEDIA PROGRAM

Follow AGCC 2018 on social media and join the conversation by using #AGCC2018Adelaide.

 LinkedIn

 Facebook

 Twitter

 Instagram

AGCC 2018 VENUE – ADELAIDE CONVENTION CENTRE

The Convention is held at the Adelaide Convention Centre (ACC), North Terrace, Adelaide, South Australia

Details of the facilities on offer at the ACC (e.g. parking), how to get there, and more are listed below.

The Adelaide Convention Centre is conveniently located in the heart of the city centre and nestled within the beauty of the Riverbank Precinct, surrounded by parklands and the River Torrens.

Close to the medical hub, entertainment, cultural and sport precincts, the Centre is a short walk to international and boutique hotels and accommodation. Public transport, the Adelaide Railway Station and a taxi ramp are on our doorstep. Please visit www.adelaidecc.com.au for more information.

The international airport is just seven kilometres from the Centre, easily and economically accessible by taxi.

Adelaide Convention Centre
North Terrace, Adelaide
South Australia 5000
Australia
Telephone +61 8 8212 4099

Getting to ACC via public transport

Three main taxi companies operate in the Adelaide metropolitan area and can be booked for pick up or drop off from the North Terrace and Morphett Street Bridge entrances.

The historic **Adelaide Railway Station** is located a two-minute walk from the Adelaide Convention Centre, and a Tram stop is just in front of the Railway Station.

The free **City Connector** bus is an easy way of navigating around Adelaide.

Please visit www.adalaidemetro.com.au for information on timetables, maps and planning your journey.

Parking at the ACC

The Adelaide Convention Centre offers two undercover car parking options: the North Terrace and the Riverbank car parks. Both are located directly under the Centre and are open 24 hours a day, 7 days a week. Clearance is 2.0 metres and automated payment stations accept credit/debit cards (1.5% surcharge applicable).

Both car parks are fitted with video surveillance camera systems and security patrols these areas.

Free WIFI

Free wireless internet is provided by the ACC and can be accessed throughout the venue. The service is suitable for checking emails and basic web browsing, however connections are not guaranteed due to the varying number of users connected at any time.

TRAVELLING TO ADELAIDE

Qantas is the exclusive airline partner for AGCC 2018. Qantas is offering registered delegates and travel partner's special discounted airfares which are easily booked online via the dedicated booking portal on the Convention registration [travel page](#). Please note: multiple stopover flights are excluded from this offer.

ACCOMMODATION IN ADELAIDE

AGCC 2018 has negotiated preferential hotel rates for Convention delegates/exhibitors – all bookings must be done via the Convention registration portal to qualify for these reduced rates. Visit www.agcc.org.au/accommodation to find out more.

All official accommodation offerings are located in the centre of Adelaide, within easy walking distance of the Convention venue.

If you plan to stay on for some sightseeing, there are plenty of hotels to choose from in Adelaide and regionally in South Australia. Along the coast and throughout South Australia you will find a range of accommodation to suit single travellers, couples or families. Please visit www.southaustralia.com/plan-your-trip/places-to-stay/ for more information.



Mottled red clay in the towering coastal cliffs at Ardrossan, Yorke Peninsula. Image courtesy of Carmen Krapf, GSSA.

GENERAL INFORMATION

Visas

Unless you are a citizen of Australia or New Zealand, you will need to apply for and obtain a visa prior to your journey to Australia.

For full information on Australian visas, please visit the Australian Government Department of Immigration and Border Protection website:

www.border.gov.au

The Convention will provide (on request) a letter of invitation for visa purposes to delegates who have paid the full registration fee and are from those countries that need an invitation letter to enter Australia.

Things to do in South Australia

Flinders Chase National Park

Western end of Kangaroo Island features magnificent coastal landscapes coupled with vast wilderness areas and diverse wildlife. Flinders Chase National Park is the home of the iconic Admiral's Arch with its colony of New Zealand fur seals and the truly Remarkable Rocks. Open every day except Christmas day.

Tandanya – National Aboriginal Cultural Institute

Tandanya is the leading Aboriginal and Torres Strait Islander (ATSI) Arts and Cultural organisation nationally. Its mission is to develop, promote and showcase the diversity of ATSI arts, practice and foster debate and discourse through an exciting program of visual and performing arts, workshops, artist/curator talks, forums, cultural presentations and film screenings.

Tandanya is open from 9.30am to 4.30pm Monday to Saturday. Closed Sunday and public holidays.

Semaphore Beach

Take a dip in the clean waters of Semaphore Beach with its stunning white sandy beaches and low dune background, only 20 minutes from Adelaide's CBD. The foreshore is a hive of activity, with its famous expanse of lawn foreshore, offering two kilometres of public space preserved and reserved for what beach holidays are supposed to be all about.

Play mini golf, slither down the waterslide, ride the vintage carousel or ferris wheel, walk, cycle or jog along the coast path, while kite-surfers, windsurfers and all-weather swimmers make the waters their playground. Or take a ride on the steam train that puffs along the shoreline during the summer months.

South Australia Museum

The South Australian Museum is renowned for its world-class natural history and cultural collections. The Museum is home to the world's largest collection of Australian Aboriginal cultural material, with over 3,000 artefacts on display, and the culturally significant Yuendumu Doors. The South Australian Biodiversity Gallery brings into sharp focus the land and marine wildlife of South Australia, with touch screens, interactive elements and a wealth of information.

Other galleries include the Pacific Cultures, Megafauna, Opalised Fossils, Polar, Ediacaran, Minerals and the Ancient Egyptian Room. The ever-popular Discovery Centre on level one contains a wealth of information and direct access to the collections, with staff available for identification of objects and assistance with research.

Adelaide Central Market

The Market offers a huge range of fresh food including fruit and vegetables, meat and poultry, seafood, cheeses, bakery, smallgoods and health foods, along with some of Adelaide's most popular cafes and eateries. With more than 9 million visitors every year, the Adelaide Central Market has remained the food mecca for multicultural cuisine and fresh produce for almost 150 years.

Adelaide Himeji Garden

The Adelaide Himeji Garden contains features which are of profound religious significance to the Japanese people. It contains features designed to recall the beauty of nature. The Garden blends two classic styles. The first is the 'senzui' (lake and mountain garden), where water and the imagination create images of vastness and grandeur. The second is the 'kare senzui' (dry garden), where rocks and sand evoke the presence of water, even the sea itself.

The Adelaide Himeji Garden is open from 8am to 5.30pm, seven days a week except during April to September when it closes at 4.30pm on weekends and public holidays.

Adelaide Oval

Since its inception in 1871, Adelaide Oval has been widely regarded as one of the most picturesque sporting grounds in the world and attracts visitors in their thousands from within South Australia, interstate and overseas.

Prominently located as the centerpiece of the Adelaide CBD revitalised riverbank precinct, the Oval is home to cricket, football, concerts, functions and major events at the highest level. Visitors can experience the Oval in a myriad of ways by going behind the scenes on an Adelaide Oval Tour, embarking on a sky high RoofClimb adventure to soak up spectacular views of the city and surrounds, or sampling the best of South Australia's food and wine offering at the Hill of Grace Restaurant.

Please visit www.southaustralia.com for more information.

AGCC 2018 PARTNERS

The legal entity responsible for AGCC 2018 is the Australian Geoscience Council Inc. (AGC), the Council of Earth Science Societies in Australia and the peak body for Geoscience. It represents eight major Australian Geoscientific organisations with a total membership exceeding 8,000 individuals:

- Association of Applied Geochemists
- Australian Geoscience Information Association
- Australian Institute of Geoscientists
- Australasian Institute of Mining and Metallurgy
- International Association of Hydrogeologists Australia
- Australian Society of Exploration Geophysicists
- Geological Society of Australia
- Petroleum Exploration Society of Australia

All AGC Member Organisations are involved in the organisation of the AGCC 2018, and have invested in underwriting the costs of this event.

Carillon Conference Management has been appointed as the Convention Secretariat for AGCC 2018. Please direct all enquiries to: Carillon Conference Management admin@ccm.com.au

T: +61 7 3368 2644 PO Box 177

Red Hill QLD 4059 Australia

CONVENTION ORGANISING COMMITTEE

AGCC 2018 SUBCOMMITTEES

Scientific and Technical Program

Dr Chris Yeats **chris.yeats@industry.nsw.gov.au**

This Subcommittee has oversight of all aspects of the scientific program including invited speakers and the abstract submission, review and approval process.

Big Issues and Ideas Day

Dr Caroline Tiddy **caroline.tiddy@unisa.edu.au**

This Subcommittee is developing the program of Big Issues and Ideas in Geoscience which will include invited speakers and discussions around topics of concern to all geoscientists and the public.

Sponsorship and Exhibition

Mr Mike Smith **mike_rpgeo@optusnet.com.au**

Recruitment of sponsors and exhibitors, design and sale of exhibition and management of commercial engagement with the Convention.

Field Trips and Workshops

Mr Dale Sims **dalesims@tpg.com.au**

Field trip selection, content and management and oversight of workshops to be held before or after the Convention.

Early Career Geoscientists and Volunteers

Ms Genna McDonagh **genna.mcdonagh@gmail.com**

Dr Verity Normington **verity.normington@nt.gov.au**

Management of the volunteer and early career delegate programs.

Education

Associate Professor Dr David Cohen **d.cohen@unsw.edu.au**

Connection with the extensive group of Geoscience educators at all levels, including primary and secondary schools, tertiary institutions, ongoing professional development for geoscientists and raising the general awareness of the public about Geoscience.

Advocacy, Media, Protocol

Dr Angela Riganti **angela.riganti@dmirs.wa.gov.au**

Representation of and engagement between Convention and government agencies and media; management of protocol matters.

Engagement with Stakeholders

Dr Steve Mackie **steve.mackie@geosimconsulting.com.au**

Management and liaison with Convention stakeholders.



AGCC 2018 CIRCULARS

General distribution of this Circular will be by email.
Please, feel free to forward circulars to interested friends and colleagues.
All circulars are available online via www.agcc.org.au/circulars

AGCC 2018 CONTACT DETAILS

AGCC 2018 Secretariat | agcc@ccm.com.au | +61 7 3368 2644

Please, complete the 'Join the mailing list' form when you visit the www.agcc.org.au – you will then automatically receive updates and news.

Seagrass ball next to a block of Cambrian Heatherdale Shale of the Stansbury Basin (Adelaide Geosyncline) at Carrickalinga, Fleurieu Peninsula. Image courtesy of Carmen Krapp, GSSA.

We look forward to meeting up with you in Adelaide



AGCC Australian Geoscience
Council **Convention**

BIG ISSUES AND IDEAS IN GEOSCIENCE

14-18 OCTOBER 2018 | Earth Science Week

Adelaide Convention Centre