

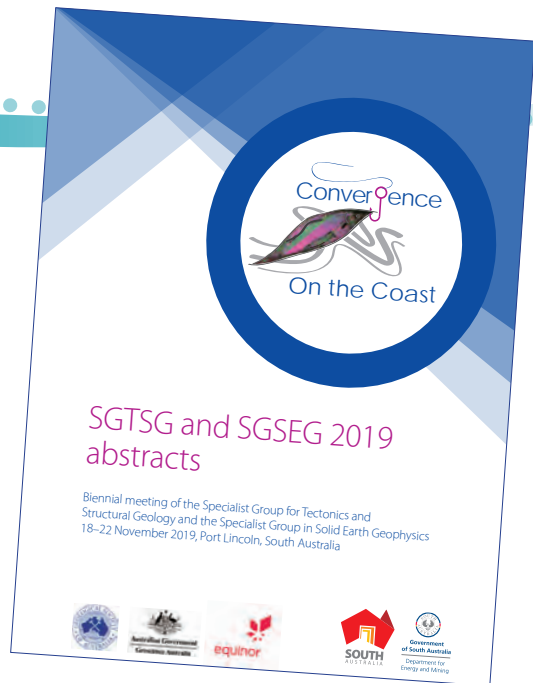


Program

18–22 November 2019

Port Lincoln, South Australia





SGTSG and SGSEG 2019 abstracts

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***Exploring for the Future* is a four-year (2016–2020) initiative by the Australian Government delivering pre-competitive geoscience knowledge and data.**

The program is assessing minerals, energy and groundwater resources across northern Australia to boost exploration investment, drive new discoveries and inform communities.

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MONDAY

Monday 18 November 2019

Session 1 Multi-scale structures and fluid-rock interaction

8:30	Welcome
8:45	Keynote: Quantifying volumetric fluid flow rates in fault-controlled hydrothermal systems: insights from contemporary and exhumed seismogenic hydrothermal systems. <i>Stephen Cox</i>
9:15	Shear heating during exhumation: An example from the Nordfjord-Sogn Detachment, Hyllestad, Norway. <i>Sean Makin</i>
9:30	The influence of metamorphic reactions on localisation of deformation. <i>Bruce Hobbs</i>
9:45	The North Cycladic Detachment System: Insights from the Upper Cycladic Unit of Tinos MCC, Cyclades, Greece. <i>Rabii Chaarani</i>
10:00	In-situ U-Pb calcite geochronology of tectonic veins: a case study on the brittle deformation history of Thailand. <i>Alex Simpson</i>
10:15	<i>Morning tea</i>

Session 2 Multi-scale structures and fluid-rock interaction

10:45	Reactivation of high-angle inherited structures. <i>Peter Betts</i>
11:00	An Integrated study on Cleavage development in the contractional zone of a Paleo- Mesoproterozoic sedimentary cover deformed by gravity gliding: An example from Kaladgi Basin, South western India. <i>Mrinal Mukherjee</i>
11:15	Multi-scale structural analysis of the Fraser Shear Zone. <i>Raphael Quentin de Gromard</i>
11:30	Kinematic plate reconstruction of New South Wales using Leapfrog and GPlates. <i>Sizah Nawzad</i>
11:45	Loop: an open source 3D probabilistic geological and geophysical modelling platform. <i>Laurent Aillieres</i>
12:00	Incorporating fault kinematics into implicit 3D geological modelling. <i>Lachlan Grose</i>
12:15	<i>Lunch</i>

Session 3 Experimental Studies in Rocks and Structure	
13:30	Keynote: Using experiments to understand dynamic earthquake processes. <i>Kathryn Hayward</i>
14:00	Microstructural and stress variations in the mantle section of an oceanic transform zone: records of the seismic cycle. <i>Vasileios Chatzaras</i>
14:15	Assessing structural variability from geological and geophysical data in the western Wabigoon subprovince, Ontario, Canada. <i>Rebecca Montsion</i>
14:30	Deciphering the Bar-Code of Earthquakes. <i>Klaus Regenauer-Lieb</i>
Geodynamics and Thermodynamics	
14:45	Relationships between the configuration of continents and of basal mantle structures. <i>Nicolas Flament</i>
15:00	Subduction dynamics, continental collision and the formation of cratons. <i>Louis Moresi</i>
15:15	Collisional Processes from Subduction to Collision and Collapse: What Could Field Geologists Possibly Learn from Computer Models? <i>Patrice Rey</i>
15:30	<i>Afternoon tea</i>
Session 4 Geodynamics and Thermodynamics	
16:00	Thermal controls on rifting regimes in earth history – insights from 2-D geodynamic modelling. <i>Bowen Mi</i>
16:15	Integrating isotopic signatures and geodynamic numerical models to fingerprint geodynamic settings. <i>Fariba Kohanpour</i>
16:30	A Nonlinear Theory of Structures in Layered Intrusions. <i>Alison Ord</i>
16:45	Rudall Province- witness to assembly of Western and Northern Australia Cratons, but how did it happen? <i>Weronika Gorczyk</i>
17:00	Evidence for resubduction of lawsonite-eclogite during return flow, Southern New England Orogen, Australia. <i>Renee Tamblyn</i>
17:15	Statewide 3D fault model of NSW. <i>Giovanni Spampinato</i>
17:30	Poster session
18:15	<i>Dinner</i>
19:30	Keynote: What can we learn from numerical experiments about continental collision during the Phanerozoic and Precambrian Eons? <i>Elena Sizova</i>

TUESDAY

Tuesday 19 November 2019

Session 1 Plate margin and intra-plate orogenesis

8:45	Keynote: The role of inheritance in forming and reactivating rifted margins and building collisional orogens. <i>Gianreto Mantaschal</i>
9:15	Syn-rift basin inversions and the interplay between tectonic extension, surface processes, and gravitational stress. <i>Luke Mondy</i>
9:30	Crustal architecture of the inter-plate region between the Pilbara and Kimberley cratons and implications for its geodynamic evolution. <i>Polyanna Moro</i>
9:45	The Old Wrench: a 300 my history of strike-slip and oblique-slip reactivation, and inversion along the northern Australian margin from the Permian to the Present. <i>Myra Keep</i>
10:00	Distal Footprints of the Alice Springs Orogeny - Thermochronology of the Pine Creek Orogen, Northern Territory. <i>Angus Nixon</i>
10:15	<i>Morning tea</i>

Session 2 Plate margin and intra-plate orogenesis

10:45	P-T and age constraints on metamorphism in Mabel Creek Ridge, Northern Gawler Craton, Australia. <i>Jie Yu</i>
11:00	Late Jurassic subduction initiation and Tectono-Magmatic Evolution of southern Karakoram, NE Pakistan: A new concept of Neo-Tethys subduction. <i>Sher Sultan Baig</i>
11:15	Crustal hot spot metamorphism powered by anomalous high heat producing Th-U concentrations. <i>Alex Van Leeuwen</i>
11:30	Tectonic and isotopic evolution of the Dharwar craton, south India: Insights from archean magmatic and meta-igneous zircon U-Pb, REE and Hf isotopes. <i>Pavan Katuru</i>
11:45	The c. 1515 Ma Spilsby Event: Syn-tectonic A-type magmatism and lithospheric controls on the localisation of late-stage deformation in the Gawler Craton, South Australia. <i>Stacey Curtis</i>
12:00	The Papuan Orogen: A misplaced Mesozoic belt of the Tasman Orogenic Zone? <i>Robert Holm</i>
12:15	<i>Lunch</i>

Session 3 Plate margin and intra-plate orogenesis

13:30	Scissor detachments and oroclinal warps in the Grampians Ranges, western Victoria - a case study of semi-ductile cover sequence deformation driven by brittle trans-tensional bedrock deformation. <i>Ross Cayley</i>
13:45	Cambrian eclogite-facies metamorphism in the central Transantarctic Mountains, East Antarctica: extending the record of early Palaeozoic high-pressure metamorphism along the eastern Gondwanan margin. <i>Dillon Brown</i>

Observational Geophysics

14:00	Keynote: Seismic imaging of the upper mantle structure beneath the western Mediter-ranean: influence of mantle flow on continental deformation. <i>Meghan Miller</i>
14:30	Stagnant slabs at the transition zone linked to widespread volcanism in Eastern Australia and Zealandia. <i>Ben Mather</i>
14:45	The lithospheric architecture of Australia from multi-observable probabilistic inversion. <i>Marcus Haynes</i>
15:00	Towards updatable, national high-resolution seismic velocity models of the lithosphere. <i>Alexei Gorbatov</i>
15:15	AusLAMP across the Delamerian Orogen and Curnamona Province. <i>Kate Robertson</i>
15:30	<i>Afternoon tea</i>

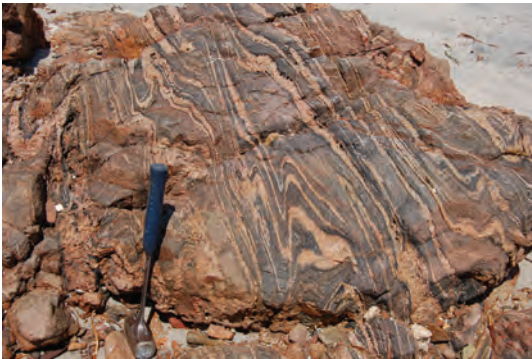
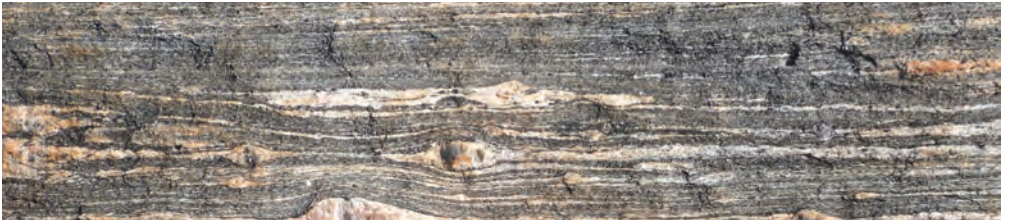
Session 4 Observational Geophysics

16:00	Imaging shear zones (?) and mafic underplates: examples of 3D forward and inverse gravity modelling from the East Albany–Fraser Orogen and Yilgarn Craton margin. <i>Lucy Brisbout</i>
16:15	State of the arc: long-wavelength geophysics and Macquarie Arc basement. <i>Robert Musgrave</i>
16:30	Lithospheric architecture of the North Australia Craton: insights from passive seismic imaging and integration with other techniques. <i>Marcus Haynes</i>
16:45	A trapdoor mechanism for slab tearing and melt generation in the northern Andes. <i>Gideon Rosenbaum</i>
17:00	Magnetic field inversion of Gairdner dyke anomalies from the new GCAS data. <i>Clive Foss</i>
17:15	Geochronology and multi-scale geophysics reveal lithospheric architecture of the North Australia Craton between Tennant Creek and Murphy inlier. <i>Andy Clark</i>
17:30	Poster session
18:15	<i>Dinner</i>
19:30	Keynote: Public Lecture

WEDNESDAY

Wednesday 20 November 2019

Mid conference field trip



Mid conference field trip continued

Conference dinner at the Line & Label

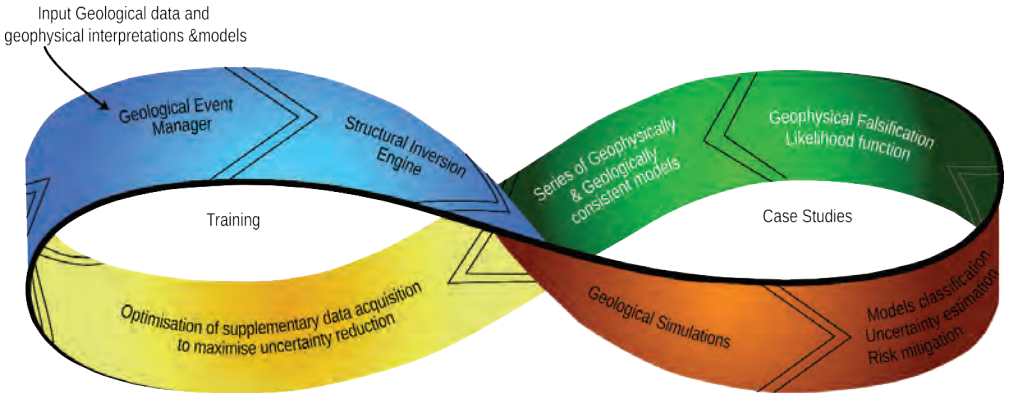
Presentation of the Hobbs and Powell medals



THURSDAY

Thursday 21 November 2019

8:45	Loop stochastic geological 3D modelling workshop <i>Port Lincoln Yacht Club</i>
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Session 1 Observational Geophysics	
15:00	Exploring for the Future in Australia: Characterizing and Assessing the Lithosphere for Resource Discovery. <i>Karol Czarnota</i>
15:30	Significance of primary lithospheric architecture in magmatic and hydrothermal copper, gold and nickel deposits: common threads across multiple deposit types. <i>Stephan Thiel</i>
15:45	Magnetotellurics – Imaging Lithospheric Architecture and Linking to Mineral Potential in Northern Australia. <i>Wenping Jiang</i>
16:00	<i>Afternoon tea</i>
Session 2 The Australia-Antarctic Connection	
16:30	How far does it go? Investigating the extent of the Mawson Craton beneath the interior of East Antarctica using ‘agrid’ and multiple geophysical datasets. <i>Anya Reading</i>
16:45	The probable geology of the Aurora Basin, East Antarctica. <i>Tobias Staal</i>
17:00	New Insights into the subglacial geology of interior of Wilkes Land, East Antarctica: implications for supercontinent evolution. <i>Alessandro Maritati</i>
17:15	The Necessity of a Neoproterozoic Full Plate Reconstruction to Quantify the Global Earth System and Understand Deep Time Plate Tectonics. <i>Alan Collins</i>
17:30	Poster session
18:15	<i>Dinner</i>
19:30	Keynote: Australian crust under ice: what the Bunger Hills tell us about the Proterozoic assembly of Australia. <i>Naomi Tucker</i>

FRIDAY

Friday 22 November 2019

Session 1 Tectonic controls on mineral systems

8:45	Keynote: IOCG and affiliated deposits in tectonically active regions: Impact on deposit types and structural attributes of ore systems. <i>Louise Corriveau</i>
9:15	Structural controls of the Ernest Henry IOCG deposit: Insights from integrated structural, geophysical and mineralogical analyses. <i>Jim Austin</i>
9:30	Are the Peake and Denison Ranges the missing link between the Gawler Craton and the Mt Isa Province? Correlations in the timing and style of alteration with implications for continental reconstructions and IOCG exploration. <i>Mitchell Bockmann</i>
9:45	The importance of the Uno Fault for the southern Gawler Ranges: regional controls on volcanism, magmatism, fluid flow and alteration. <i>Mario Werner</i>
10:00	Towards an Isotopic Atlas of Australia: tracing tectonics through time and space. <i>Geoff Fraser</i>
10:15	<i>Morning tea</i>

Session 2 Tectonic controls on mineral systems

10:45	A multiscale investigation of a gold mineral system in the eastern Yilgarn. <i>Mark Lindsay</i>
11:00	Role of regional stress change in evolution of orogenic gold deposits in central Victoria. <i>Christopher Wilson</i>
11:15	Geophysical interpretation and tectonic synthesis of the Palaeoproterozoic southern McArthur Basin. <i>Teagan Blaikie</i>
11:30	Structural geology of the Horn Island gold deposit and implications for the structure and tectonics of the Torres Strait Islands. <i>Ben McCormack</i>
11:45	Thermochronological and geochemical footprints of post-orogenic fluid alteration recorded in apatite: Implications for mineralisation in the Uzbek Tian Shan. <i>Stijn Glorie</i>
12:00	Metamorphic architecture of the Mount Woods domain, northeastern Gawler Craton. <i>Laura Morrissey</i>
12:15	<i>Lunch</i>

Session 3 Domes, basins and dynamic topography

13:30	Keynote: Source to Sink: The Impacts of Mantle Convection on Sediment Routing Systems. <i>Mark Hoggard</i>
14:00	Geology and geophysics-based lithological classification for structural interpretation in the Yerrida basin (Western Australia). <i>Jeremie Giraud</i>
14:15	What do rift structures on the North West Shelf tell us about Gondwana break-up? <i>Chris Elders</i>
14:30	Constraining upland erodibility and marine deposition: Late Quaternary source-to-sink sediment transfer in the Gulf of Papua. <i>Rhiannon Garrett</i>
14:45	Multiscale 3D Geological Model of the Yalgoo Dome Through Subsampling of Vector Maps Based on Stratigraphic Hierarchy. <i>Ranee Joshi</i>
15:00	The State-of-play of geochronology and provenance in the Neoproterozoic Adelaide Rift Complex. <i>Jarred Lloyd</i>
15:15	<i>Afternoon tea</i>

Session 4 Domes, basins and dynamic topography

15:45	Dynamic Uplift – Mantle Flow, Asthenospheric Temperature Anomalies or Lithospheric Thickness? <i>Marthe Kloecking</i>
16:00	Shear induced dynamic tilting of the Australian plate. <i>Omer Bodur</i>
16:15	The influence of mantle flow on the evolution of the Canning, Southern Carnarvon and Cooper basins since Paleozoic times. <i>Alexander Young</i>
16:30	Closing drinks and AGM

NOTES

Notes



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Ten companies selected for Equinor's Techstars Energy Accelerator 2019

Equinor has selected the second wave of global start-up companies to participate in its Techstars Energy Accelerator, an intensive 13-week program for innovators working on disruptive solutions within oil and gas, renewables and digitalisation.

The ten start-up companies have been selected from hundreds of applicants across 42 countries. They will seek to accelerate their solution by tapping into a global network of experts from Equinor and Techstars as well as the partnering companies Kongsberg and Capgemini.

"The energy industry is changing fast, and these companies are at the forefront of that change. Following the success of our first accelerator program last year, we are

excited to have a new class of innovative startups working with us. I look forward to supporting the teams – and learning from them," says Al Cook, Equinor's executive vice president for Global Strategy and Business Development.

The accelerator is hosted at Equinor's offices in Oslo, Norway.

To find out more, see www.techstars.equinor.com
www.equinor.com.au



