34th International Geological Congress (IGC): AUSTRALIA 2012

Unearthing Our Past And Future – Resourcing Tomorrow

Brisbane Convention and Exhibition Centre
Queensland, Australia

5 - 10 August, 2012 | www.34igc.org

34th IGC CIRCULARS

General distribution of this and subsequent Circulars for the 34th IGC is by email. Please feel free to forward it to others who may be interested.

The Third Circular is scheduled for electronic distribution in September 2011.
AUSTRALIA 2012
An unparalleled opportunity for all to experience the geological and other highlights “downunder”

MAJOR SPONSOR AND GEOHOST SPONSOR

VALE

MAJOR SPONSORS
Message from the President and Secretary General

It is with great pleasure that we provide you with the 34th IGC’s Second Circular.

This circular represents a major milestone in the organisation of the 34th IGC. The Scientific Program, Call for Abstracts and GeoHost Support Scheme are all announced in this circular, as are details of the GeoExpo exhibition that will be held in conjunction with the 34th IGC.

We would like to take this opportunity to thank sincerely the many members of the global Geoccientific community who have made valuable contributions to the Scientific Program. Literally hundreds of suggestions were received from around the world and the Scientific Program committee faced the daunting task of considering all of these suggestions and collating them into the program that appears in this circular. In the process of creating the program, the committee often had to weigh up overlapping suggestions. Every effort has been made to accommodate as divergent a range of interests as possible within the limitations of available resources. If you are submitting an abstract, you will be asked to nominate the Theme and Symposium for which you would like your submission to be considered. It will be necessary for you to nominate the Theme, however if you are unsure as to which actual Symposia would best suit your abstract, you may select the “Reviewer’s choice” option. The reviewers will then make a determination as to the most appropriate Symposium for your submission.

In recognition of the tight economic circumstances that prevail in some regions and the continuing strength of the Australian Dollar, the Organising Committee is pleased to announce a Super Early Bird registration offer that rewards those who register early with very significant discounts. These Super Early Bird registration fees will only be available to the first 500 delegates and this offer will definitely end in September 2011 with the release of the Third Circular. Individual and group Super Early Bird registrations are available and full details are provided in this circular.

The Pre- and Post-Congress tours are an important element of the 34th IGC. Outlines of the tours offered are provided herein and full tour details, including prices, will be released in the Third Circular, due in September 2011.

We are also announcing the release of GeoExpo information and the sale of commercial exhibition space in this circular. Any organisation wishing to exhibit at the 34th IGC is well advised to book their exhibition space at their earliest opportunity.

Thank you for your interest in the 34th IGC. We are very much looking towards your participation in the Congress in Brisbane, 5 to 10 August, 2012.

Neil Williams
PRESIDENT, 34th IGC

Ian Lambert
SECRETARY GENERAL, 34th IGC - ian.lambert@ga.gov.au
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Important Dates

15 July 2011  Closing of proposals for (i) Professional Development Workshops and Short Courses and (see page 35) (ii) business meetings (see page 32)

  Super Early Bird registrations close (see page 5)

1 November 2011  GeoHost support applications close (see page 37)

17 February 2012  Abstract submissions close (see page 33)

31 March 2012  Field trip bookings close (full payment)

30 April 2012  Presenters’ registration deadline
  Early Bird registrations close

1 July 2012  Standard Congress registrations close. Late registrations commence.
Super Early Bird Registration Offer

The Organising Committee is pleased to announce the Super Early Bird registration offer, which is aimed particularly at international delegates. This offer enables delegates to register for the 34th IGC before September 2011, at significantly reduced fees. These reduced fees are available for individual delegates or for groups of up to 20 delegates from the same organisation.

The Super Early Bird fees represent a significant discount on the Early Bird and Standard registrations, which will be released in Third Circular (September, 2011) along with accommodation options and social events.

Super Early Bird – Individual delegate: $895
Super Early Bird – Group registration: $850 per delegate

Available to groups of 3 to 20 delegates from the same organisation.

To take advantage of the Super Early Bird discount registration fees, please visit www.34igc.org and select the “Congress Registration” option.

About Super Early Bird registration fees:

• The fees are shown in Australian Dollars (AUD) and include Goods and Services Tax
• Super Early Bird registration fees include participation in the 34th IGC scientific program, delegate resources, lunch and morning and afternoon refreshments each day of the scientific program
• The Super Early Bird registration offer is limited to 500 delegates and will expire with the release of the Third Circular (due in September, 2011)
• Payment of Super Early Bird registration fees must be made in full by credit card (American Express, Diners Club, Visa and MasterCard accepted) when registration forms are completed. Registrations cannot be processed without full payment by credit card
• Super Early Bird fees are non-refundable, however the registration may be transferred to an alternative delegate up until 60 days prior to the Congress
• Registrations for groups of delegates (from a minimum of 3 to a maximum of 20 delegates) may be purchased now and the names of delegates can be provided later, up until May 2012.
Message from
Scientific Program Chair

Welcome to the Scientific Program of the 34th International Geological Congress. The overall theme of Australia 2012, Unearthing our Past and Future – Resourcing Tomorrow, reflects the crucial roles the geosciences play in meeting the needs of societies while sustaining the Earth.

A broad scientific program based on 37 Themes has been developed by the Scientific Program Committee and the Scientific Theme Coordinators, with input from International Union of Geological Sciences (IUGS) affiliated groups and individual scientists.

On behalf of the Scientific Program Committee I hope you find the program both interesting and exciting. We hope 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.

Lynton Jaques
Chair, 34th IGC Scientific Program Committee

Scientific Program Committee

Lynton Jaques, Committee Chair, Canberra, ACT
Mike Smith, Chair Australian Geoscience Council, Sydney, NSW
Ian Lambert, Secretary General 34th IGC, Canberra, ACT
Mike Archer, University of New South Wales, Sydney, NSW
Mark Berry, Australian Institute of Geoscientists, Brisbane, Queensland
David Denham, Australian Society of Exploration Geophysicists, Canberra, ACT
George Gibson, Geoscience Australia, Canberra, ACT
Andrew Gleadow, University of Melbourne, Melbourne, Victoria
David Lumley, University of Western Australia, Perth, WA
Alex Malahoff, Chief Executive, GNS Science, Lower Hutt, New Zealand
Colin Simpson, Councillor, IUGS, Canberra, ACT
Paulo Vasconcelos, University of Queensland, Brisbane, Queensland
Malcolm Walter, University of New South Wales, Sydney, NSW
Paul Kay, Deputy Secretary General 34th IGC, Canberra, ACT
# Draft Program Timetable

The timetable for the 34th IGC Scientific program is outlined in the table which follows. The program will take place over five days, between the Opening Session in the morning of Monday 6 August and the Closing Ceremony in the late afternoon Session on Friday 10th August, 2012. Each day will comprise around 35 concurrent Symposia and a plenary “Hot Topic” session in the middle of each day.

Most business meetings will be held after 7pm, 6-9 August. Requests for business meetings are to be made by 15 July 2011 (see page 32).

<table>
<thead>
<tr>
<th>Time</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0830-1015</td>
<td>Opening ceremony</td>
<td>Scientific program Session 4</td>
<td>Scientific program Session 8</td>
<td>Scientific program Session 12</td>
<td>Scientific program Session 16</td>
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<tr>
<td>1015-1045</td>
<td>Break</td>
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<td>Break</td>
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<tr>
<td>1045-1230</td>
<td>Scientific program Session 1</td>
<td>Scientific program Session 5</td>
<td>Scientific program Session 9</td>
<td>Scientific program Session 13</td>
<td>Scientific program Session 17</td>
</tr>
<tr>
<td>1230-1400</td>
<td>Plenary session lunch</td>
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<td>Plenary session lunch</td>
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<tr>
<td>1400-1545</td>
<td>Scientific program Session 2</td>
<td>Scientific program Session 6</td>
<td>Scientific program Session 10</td>
<td>Scientific program Session 14</td>
<td>Scientific program Session 18</td>
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<tr>
<td>1545-1615</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
</tr>
<tr>
<td>1615-1800</td>
<td>Scientific program Session 3</td>
<td>Scientific program Session 7</td>
<td>Scientific program Session 11</td>
<td>Scientific program Session 15</td>
<td>Closing ceremony</td>
</tr>
<tr>
<td>1800-1900</td>
<td>Poster session</td>
<td>Poster session</td>
<td>Poster session</td>
<td>Poster session</td>
<td></td>
</tr>
<tr>
<td>1900-Onwards</td>
<td>Evening program including business meetings</td>
<td>Evening program including business meetings</td>
<td>Evening program including business meetings</td>
<td>Evening program including business meetings</td>
<td></td>
</tr>
</tbody>
</table>

Oral presentations will be 15 minutes including discussion, but invited keynote addresses may occupy two 15 minute slots.

Poster papers will be accorded a prominent place in the Congress program – abstracts for all poster papers will be published in the Congress Abstracts and posters will be located in high traffic areas adjacent to rooms used for oral sessions and catering points.
Scientific Symposia

The Scientific Program is outlined over the following pages. It is also available on the 34th IGC website, www.34igc.org, where a summary of each of the Symposia can be accessed. This is the basis for the call for abstracts and for inviting speakers. It will not be revised further until March-April 2012, when the number and range of abstracts submitted will be taken into account in designing the final program and timetable for the 5 day program.

The broad ranging Scientific Program for the 34th IGC includes some 218 Symposia under the 37 Themes. All of these will be open for any delegate with full IGC registration to attend.

All Symposia in the Scientific Program are expected to include both oral and poster presentations. Individuals will only be permitted to deliver one oral presentation in the Symposia program, but they may co-author multiple oral presentations and may give multiple poster presentations. Invited keynote speakers and presenters in IUGS related specialist Symposia may deliver a second oral paper in the Symposia program.

The Scientific Program also includes the Second YES (Young Earth Scientists) Network Congress which will include a Symposium on overcoming geoscience challenges in the 21st Century and an evening program. Further details will be provided on the YES Network website (www.networkyes.org) and in the Third Circular for the 34th IGC, which is scheduled for release in September 2011.

The official language of the Congress will be English and translation services will not be provided.

Symposia outlines are accessible via live links from the IGC website (www.34igc.org). Any questions or requests for further information should be addressed to the Communicating Theme Coordinators or Symposium Convenors, whose email addresses are listed in the program following.

Video-recording of presentations will not be permitted at the 34th IGC.
Theme 1. Geoscience for Society

Coordinator: Hamish CAMPBELL  h.campbell@gns.cri.nz (New Zealand)

Symposia

1.1 Geoheritage, geoparks and geotourism
Bernie JOYCE  ebj@unimelb.edu.au (Australia), José BRILHA (Portugal), Ian GRAHAM (New Zealand), Patrick MCKEEVER (Ireland), Nickolas ZOUROS (Greece), Changxing LONG (China), Ross DOWLING (Australia) and Angus M ROBINSON (Australia)

1.2 Geoscience education
Jesus MARTINEZ-FRIAS  jmfrias@cab.inta-csic.es (Spain), Gary LEWIS (USA), Sarah GAINES (USA), Julian THOMSON (New Zealand) and Bronte NICHOLLS (Australia)

1.3 Geoscience outreach (public communication, museums and media)
Hamish CAMPBELL  h.campbell@gns.cri.nz (New Zealand) and Alex COOK (Australia)

1.4 Forensic geoscience
Rob FITZPATRICK  rob.fitzpatrick@csiro.au (Australia), Laurance DONNELLY (UK) and Dallas MILDENHALL (New Zealand)

1.5 Gemstones - Diamonds
Lin SUTHERLAND  l.sutherland@uws.edu.au (Australia), Ian T GRAHAM (Australia) and Lee GROAT (Canada)
Theme 2. Geoscience Benefiting Low Income Countries
[Association of Geoscientists for International Development (AGID)]

Coordinators: Mike KATZ m.katz@unsw.edu.au (Australia), Shrikant LIMAYE (India), Afia AKHTAR (Bangladesh) and Antony REEDMAN (UK)

Symposia

2.1 Improving rural health and mitigating rural poverty through sustainable ground water development
Shrikant LIMAYE limaye@vsnl.com (India) and Afia AKHTAR (Bangladesh)

2.2 Creating social awareness, preparedness and capacity-building for mitigating geohazards
Karen VILLHOLTH kgv@geus.dk (Denmark), Shrikant LIMAYE (India) and Antony REEDMAN (UK)

2.3 Developing geoscience education and awareness for the benefit of society
Nurul HASAN mn_hasan@ymail.com (Bangladesh), Mike KATZ (Australia), Gbenga OKUNLOLA (Nigeria) and Antony REEDMAN (UK) and Chris KING (UK)

2.4 Geoplanning for urban development and infrastructure and protecting ecosystems
Afia AKHTAR afia@agni.com (Bangladesh), Mehedi Ahmed ANSARY (Bangladesh), Shrikant LIMAYE (India), Sospeter MUHONGO (Tanzania) and Gbenga OKUNLOLA (Nigeria)

2.5 Geoethics
Vaclav NEMEC lidmila.nemcova@quick.cz (Czech Republic), Jesus MARTINEZ-FRIAS (Spain), Nataliya NIKITINA (Russia), Niichi NISHIWAKI (Japan) and Silvia PEPPOLONI (Italy)

2.6 Role of women geoscientists in resource development
Afia AKHTAR afia@agni.com (Bangladesh), Madhumita DAS (India), Ezzoura ERRAMI (Morocco), Mike KATZ (Australia), Sharon LOCKE (USA) and Antony REEDMAN (UK)

2.7 Mineral and energy resources, construction and industrial minerals
Mike KATZ m.katz@unsw.edu.au (Australia), Afia AKHTAR (Bangladesh), Gbenga OKUNLOLA (Nigeria) and Nehal UDDIN (Bangladesh)

2.8 The role of Geological Surveys in the development and management of natural resources, groundwater and disaster risk reduction
Antony REEDMAN antony@areedman.wanadoo.co.uk (UK), Afia AKHTAR (Bangladesh), David DENHAM (Australia), Siyan MALOMOS (Nigeria) and Qincheng HE (Thailand)
Theme 3. Climate Change: Lessons from the Past; Implications for the Future

Coordinators: Chris HOLLIS c.hollis@gns.cri.nz (New Zealand) and Michael BIRD (Australia)

Symposia

3.1 Climate change and food security: archaeological and palaeoenvironmental evidence for past interactions between food producers and environment
David TAYLOR taylord@tcd.ie (Ireland) and Yongqiang ZONG (China)

3.2 Geology and Archaeology: submerged landscapes of the continental shelf.
Jan HARFF jan.harff@io-warnemuende.de (Germany), Geoff BAILEY (United Kingdom) and Friedrich LÜTH (Germany)

3.3 Monsoons, droughts and extreme weather events: deciphering climate variability from the geological record
Jonathan NOTT jonathan.nott@jcu.edu.au (Australia) and James SHULMEISTER (Australia)

3.4 Climate in a warmer world: Late Quaternary evidence from land, sea and ice records
Lionel CARTER lionel.carter@vuw.ac.nz (New Zealand), Giuseppe CORTESE (New Zealand), Rewi NEWNHAM (New Zealand) and Nancy BERTLER (New Zealand)

3.5 The silent majority: Cenozoic (Paleocene-Pliocene) records of climatic warmth
David GREENWOOD greenwoodd@brandonu.ca (Canada), Matt HUBER (USA) and Patrick MOSS (Australia)

3.6 Greenhouse world and rapid climate change during the Mesozoic [International Geoscience Program (IGCP) 555, IGCP 507 and International Continental Drilling Program (ICDP) Songliao Project]
Chengshan WANG chshwang@cugb.edu.cn (China), Michael WAGREICH (Austria) and Xiaoqiao WAN (China)

3.7 Pre-Mesozoic climates and global change [IGCP 591]
Kathleen HISTON catherine.histon@unimore.it (Italy), Vinod TEWARI (India) and Michael MELCHIN (Canada)

3.8 Climate change and biodiversity patterns in the Mid-Palaeozoic (Early Devonian to Early Carboniferous) [IGCP 596]
Peter KÖNIGSHOF peter.koenigshof@senckenberg.de (Germany) and Thomas SUTTNER (Austria)

3.9 Climate variability in the Holocene
Gert J. DE LANGE gdelange@geo.uu.nl (Netherlands) and Francis JIMENEZ-ESPEJO (Spain)
Theme 4. Environmental Geoscience

Coordinators: Colin SIMPSON simpsons@grapevine.com.au (Australia) and Michael LEGGO (Australia)

Symposia

4.1 Environmental aspects of mining
Bernd LOTTERMOSER bernd.lottermoser@utas.edu.au (Australia) and Kirk NORDSTROM (USA)

4.2 Global geochemical mapping: understanding chemical Earth (The 2nd Arthur Darnley Symposium)
David SMITH dsmith@usgs.gov (USA), Xueqiu WANG (China) and Patrice DE CARITAT (Australia)

4.3 Advances in the evaluation and interpretation of geochemical data at the continental scale
Eric GRUNSKY egrunsky@nrcan.gc.ca (Canada) and Patrice DE CARITAT (Australia)

4.4 Medical geology
Phil WEINSTEIN phil.weinstein@unisa.edu.au (Australia) and Jose CENTENO (USA)

4.5 Man-made strata and geopollution
Jonas SATKUNAS jonas.satkunas@lgt.lt (Lithuania) and Hisashi NIREI (Japan)

Theme 5. Geoscience Information

Coordinators: Bruce SIMONS bruce.simons@dpi.vic.gov.au (Australia), Simon COX (Australia), Robert TOMAS (Europe), Richard HUGHES (UK), June HILL (Australia) and Lesley WYBORN (Australia)

Symposia

5.1 Geoscience spatial data infrastructure
Bruce SIMONS bruce.simons@dpi.vic.gov.au (Australia) and Robert TOMAS (Czech Republic)

5.2 Information Management - Interoperability and Standards
Simon COX simon.cox@csiro.au (Australia) and John LAXTON (UK)

5.3 Delivery, dissemination and exploitation of geoscience data and information
Richard HUGHES rah@bgs.ac.uk (UK) and Oliver RAYMOND (Australia)

5.4 Tools – software, hardware, open source
Peter BAUMANN p.baumann@jacobs-university.de (Germany) and Robert WOODCOCK (Australia)

5.5 Model fusion, visualisation, exploration and 3D and 4D modelling
Laurent AILLERES laurent.ailleres@monash.edu (Australia) Holger KESSLER (UK) and Mark JESSELL (France)

5.6 Mathematical geosciences [International Association of Mathematical Geologists (IAMG)]
June HILL june.hill@csiro.au (Australia) and Ricardo OLEA (USA)
Theme 6. Energy in a Carbon Constrained World

Coordinators: Peter COOK pjcook@co2crc.com.au (Australia) and David LUMLEY (Australia)

Symposia

6.1 CO₂ geosequestration
David LUMLEY david.lumley@uwa.edu.au (Australia), Kevin DODDS (USA) and John KALDI (Australia)

6.2 Geothermal resources
Anthony BUDD anthony.budd@ga.gov.au (Australia), T HARINARAYANA (India), Greg BIGNALL (New Zealand) and Klaus REGENAUER-LIEB (Australia)

6.3 Nuclear energy and waste disposal
Charles MCCOMBIE charles.mccombie@arius-world.org (Switzerland), Andrew ORRELL (USA), John WATERHOUSE (Australia), Tomas PACES (Czech Republic) and Peter WIKBERG (Sweden)

6.4 Clean energy: options and limitations
Peter COOK pjcook@co2crc.com.au (Australia), Sally BENSON (USA) and Mike SANDIFORD (Australia)

Theme 7. Mineral Resources and Mining

Coordinators: Graham CARR graham.carr@csiro.au (Australia) and Dale SIMS (Australia)

Symposia

7.1 New age metals: the geology and genesis of ores required for a changing economy and a carbon constrained world [Society for Geology Applied to Mineral Deposits (SGA)]
David HUSTON david.huston@ga.gov.au (Australia) and Bernd LEHMAN (Germany)

7.2 Future sources of industrial minerals and construction materials
John SIEMON john@siemon.id.au (Australia), Björn SCHOUENBORG (Sweden) and Lola PEREIRA (Spain)

7.3 Resource and reserve reporting, international codes and the valuation of mineral assets
Peter STOKER pstoker@amcconsultants.com.au (Australia) and Charlotte GRIFFITHS (Switzerland)

7.4 Resource modelling, estimation and visualisation for project and mine development
Scott DUNHAM sd@qgroup.net.au (Australia) and Rodrigo MELLO (Brazil)

7.5 Mining geology, technology, geophysics and geometallurgy
Dale SIMS dalesims@tpg.com.au (Australia) and Simon DOMINY (UK)

7.6 The future mine and geoscience
Jock CUNNINGHAM jock.cunningham@csiro.au (Australia) and Alberto ELFES (USA)

7.7 Qualitative and quantitative methods of assessing undiscovered mineral resources
Subhash JAIRETH subhash.jaireth@ga.gov.au (Australia), Mike CUNNINGHAM (Australia), Susan HALL (USA) and Stephen PETERS (USA)
Theme 8. Mineral Exploration Geoscience

Coordinators: Cam MCCUAIG campbell.mccuaig@uwa.edu.au (Australia) and David GILES (Australia)

Symposia

8.1 Footprints of mineralised systems: new concepts and data for exploration
Roger SKIRROW roger.skirrow@ga.gov.au (Australia), Richard TOSDAL (Canada) and Zengqian HOU (China)

8.2 The science of exploration targeting
Cam MCCUAIG campbell.mccuaig@uwa.edu.au (Australia), Graham BEGG (Australia) and Zengqian HOU (China)

8.3 Probing the Earth from near-surface to the mantle - techniques, modelling software and case histories to aid mineral exploration
Richard LANE richard.lane@ga.gov.au (Australia), Ken WITHERLY (USA), Bob MUSGRAVE (Australia), Asbjorn CHRISTENSEN (Australia), Hans-Juergen GOETZE (Germany) and Ned STOLZ (Australia)

8.4 Advances in geochemical exploration
David COHEN d.cohen@unsw.edu.au (Australia), Ravi ANAND (Australia), Ryan NOBLE (Australia), David LAWIE (Australia), Graham CLOSS (USA) and Andrew RATE (Australia) and Mark ARUNDALL (Australia)

8.5 Exploration and discovery: diagnosis, prognosis - are we in need of cure? [Society for Geology Applied to Mineral Deposits (SGA)]
David HUSTON david.huston@ga.gov.au (Australia) and Mike HULEATT (Australia)
Theme 9. Mineral Deposits and Ore Forming Processes

Coordinators: Ross LARGE ross.large@utas.edu.au (Australia) and Cornel DE RONDE (New Zealand)

Symposia

9.1 Orogen to district scale structural and tectonic controls on porphyry and epithermal deposits
Dick GLEN dick.glen@dpi.nsw.gov.au (Australia), Dave COOKE (Australia), Reimar SELTMANN (UK) and Eduardo CAMPOS (Chile)

9.2 Volcanic and basin-hosted ores (Fe, Zn-Pb, Cu, U)
Bruce GEMMELL bruce.gemmell@utas.edu.au (Australia), Cornel DE RONDE (New Zealand), Stuart BULL (Australia) and David LEACH (USA)

9.3 Dating of ore deposits
Anthony HARRIS a.harris@utas.edu.au (Australia), Sebastien MEFFRE (Australia) and Alain CHEILLETZ (France)

9.4 Iron oxide copper - gold deposits (IOCG); the unhappy family
Gary DAVIDSON garry.davidson@utas.edu.au (Australia), Roberto XAVIER (Brazil) and Murray HITZMAN (USA)

9.5 Sediment and/or greenstone-hosted gold
Ross LARGE ross.large@utas.edu.au (Australia), Steve COX (Australia) and Richard GOLDFARB (USA)

9.6 Global sulfur cycle and impact on metallogenesis
Andy TOMKINS andy.tomkins@monash.edu (Australia), Iain PITCAIRN (Sweden) and Katy EVANS (Australia)

9.7 Mineral deposits: episodes, accumulation of metals and related geodynamic processes in China and adjacent regions [IAGOD]
Jingwen MAO jingwenmao@263.net (China), Franco PIRAJNO (Australia) and Reimar SELTMANN (UK)

9.8 Metallogeny of the Tasmanides [Australian Institute of Geoscientists]
Doug YOUNG d.young@findex.net.au (Australia) and Kaylene CAMUTI (Australia)

9.9 Giant and super giant orebodies
Dave COOKE d.cooke@utas.edu.au (Australia), PEI Rongfu (China) and Richard GOLDFARB (USA)
Theme 10. Coal - a Myriad of Resources

Coordinator: Joan ESTERLE j.esterle@uq.edu.au (Australia)

**Symposia**

10.1 Finding resources, making reserves
Joan ESTERLE j.esterle@uq.edu.au (Australia)

10.2 Coal - a record of change
Robert LANGFORD robert.langford@ga.gov.au (Australia)

10.3 Clean coal - what is the global reality?
Leslie RUPPERT lruppert@usgs.gov (USA)

Theme 11. Petroleum Systems and Exploration

Coordinators: Marita BRADSHAW marita.bradshaw@ga.gov.au (Australia), Chris URUSKI (New Zealand) and Sylvia ANJOS (Brazil)

**Symposia**

11.1 Petroleum prospectivity of divergent and transform passive margin basins of North and South Atlantic, Arctic, India and Australasia
Marita BRADSHAW marita.bradshaw@ga.gov.au (Australia) and Luciano MAGNAVITA (Brazil)

11.2 Pacific Rim petroleum system architecture
Chris URUSKI c.uruski@gns.cri.nz (New Zealand), Hermann LEBIT (USA), Bruce AINSWORTH (Australia), Lawrence MECKEL (Indonesia) and Ian BREWER (USA)

11.3 Petroleum system modelling: geochemistry, basins and source rock
Rob FUNNELL r.funnell@gns.cri.nz (New Zealand)

11.4 Petroleum reservoir modelling, seals and enhanced oil recovery (EOR)
Carlos Henrique BRUHN bruhn@petrobras.com.br (Brazil) and Robert SEGGIE (Australia)

11.5 Petroleum exploration in frontier basins
Irina BORISSOVA irina.borrisova@ga.gov.au (Australia), Julien COLLOT (New Caledonia) and Sylvia ANJOS (Brazil)

11.6 Putting the geo into geophysics - adding clout through better datasets and joint interpretation
Ron HACKNEY ron.hackney@ga.gov.au (Australia), Jörg EBBING (Norway), Hans-Jürgen GÖTZE (Germany) and Bernd LAHMEYER (Norway)
Theme 12. Unconventional Hydrocarbons – Emerging Fuels

Coordinators: James UNDERSCHULTZ james.underschultz@csiro.au (Australia) and Ingo PECHER (New Zealand)

Symposia

12.1 Coal seam gas
Mohinudeen FAIZ mohinudeen.faiz@originenergy.com.au (Australia) and Romeo FLORES (USA)

12.2 Shale and tight gas
Dan MOOS dmoos@bakerhughes.com (USA) and Scott TINKER (USA)

12.3 Gas hydrates
Reem FREIJ-AYOUB reem.freij-ayoub@csiro.au (Australia) and Ingo PECHER (New Zealand)

12.4 Heavy oil
Rick RICHARDSON richardson@woosh.co.nz (New Zealand), Fran HEIN (Canada) and Darrell COTTERILL (Canada)

Theme 13. Sedimentation and Sedimentary Processes

Coordinators: Chris FIELDING cfielding2@unlnotes.unl.edu (USA) and Peter MCCABE (Australia)

Symposia

13.1 Continental depositional systems
Peter MCCABE peter.mccabe@csiro.au (Australia)

13.2 Deposits of coastal and shallow marine systems
Bruce AINSWORTH bainsworth@asp.adelaide.edu.au (Australia)

13.3 Deepwater sedimentation
Peter KING p.king@gns.cri.nz (New Zealand) and Greg BROWNE (New Zealand)

13.4 Depositional controls on reservoirs
Simon LANG simon.lang@woodside.com.au (Australia)

13.5 Applied ichnology
Kerri BANN kerriebann@ichnofacies.com (USA) and James MACEACHERN (Canada)

13.6 Sedimentation in icehouse versus greenhouse epochs
Chris FIELDING cfielding2@unlnotes.unl.edu (USA)

13.7 Modelling sedimentary systems
Cedric GRIFFITHS cedric.griffiths@csiro.au (Australia) and Gary KARNER (USA)

13.8 Global controls on sediment accumulation
Tom ALGEO algeot@ucmail.uc.edu (USA)

13.9 River-dominated shelf sediments in Asian seas
Peter CLIFT p.clift@abdn.ac.uk (UK), Jan HARFF (Germany) and Qui YAN (China)
Theme 14. Basin Formation and Continental Margin Processes

Coordinators: George GIBSON george.gibson@ga.gov.au (Australia) and Francois ROURE (France) [International Lithosphere Program Task Force on sedimentary basins]

Symposia

14.1 Linking multiple scales of deformation for basin modelling
Christian HEINE christian.heine@sydney.edu.au (Australia), Peter JAPSEN (Denmark) and Simon WILLIAMS (Australia)

14.2 Convergent margin sedimentary basins
Francois ROURE francois.roure@ifpen.fr (France) and Kevin HILL (Australia)

14.3 Divergent and transform passive margins: observations, imaging and case studies
Magdaena SCHECK-WENDEROTH leni@gfz-potsdam.de (Germany), Jennie TOTTERDELL (Australia), Christophe BASILE (France) and Jean MASCLE (France)

14.4 Passive to hyper-extended continental rift margins in the geological record: their recognition, diagnostic elements and comparison with present-day analogues
George GIBSON george.gibson@ga.gov.au (Australia) and Gianreto MANATSCHAL (France)

Theme 15. A Dynamic Earth

Coordinators: Dietmar MÜLLER dietmar.muller@sydney.edu.au (Australia)

Symposia

15.1 Plate tectonics, plate-mantle coupling and associated deformation
Maria SETON maria.seton@sydney.edu.au (Australia) and Giampiero IAFFALDANO (Australia)

15.2 Large asteroid impacts and crustal evolution
Andrew GLIKSON andrew.glikson@anu.edu.au (Australia), Don LOWE (USA), Vic GOSTIN (Australia) and Peter HAINES (Australia)

15.3 Evolution and dynamics of the Indo-Australian Plate
Myra KEEP myra.keep@uwa.edu.au (Australia) and Wouter SCHELLART (Australia)

15.4 Linking deep earth to plate tectonic and surface processes
Dietmar MÜLLER dietmar.muller@sydney.edu.au (Australia), Mike GURNIS (USA) and ZHAO Yue (China)

15.5 Orogenes and orogenesis: accretionary, cordilleran and collisional processes, products and metallogenesis [with IGCP 600]
Patrice REY patrice.rey@sydney.edu.au (Australia), Richard GLEN (Australia), Christian TEYSSIER (USA), Donna WHITNEY (USA) and Zengqian HOU (China)
Theme 16. The Deep Earth

Coordinators: Sue O’REILLY sue.oreilly@mq.edu.au (Australia) and Bill GRIFFIN (Australia)

Symposia

16.1 The lithosphere-asthenosphere boundary: nature, formation and evolution from Hadean to now
Craig O’NEILL coneill@els.mq.edu.au (Australia) and Manel FERNANDEZ (Spain)

16.2 Fluids in the lithospheric mantle
Alan JONES alan@cp.dias.ie (Ireland) and Anne POMMIER (USA)

16.3 The crust-mantle lithosphere system
Bill GRIFFIN bill.griffin@mq.edu.au, (Australia), Ramon CARBONELL (Spain), Adrian LENARDIC (USA) and Norman PEARSON (Australia)

16.4 Deep earth circulation
Shijie ZHONG shijie.zhong@colorado.edu (USA), Julian PEARCE (UK), Leonid DUBROVINSKY (Germany) and Jingsui YANG (China)

16.5 Lithosphere structure from ambient noise and other seismology
Michael RITZWOLLER michael.ritzwoller@colorado.edu (USA), Ling CHEN (China), Yingjie YANG (Australia) and Juan Carlos AFONSO (Australia)

Theme 17. The Early Earth: Hadean and Archean Development of a Habitable Planet

Coordinators: Vickie BENNETT vickie.bennett@anu.edu.au (Australia), Malcolm WALTER (Australia) and Martin VAN KRANENDONK (Australia)

Symposia

17.1 Building planet Earth – the first 500 million years
Vickie BENNETT vickie.bennett@anu.edu.au (Australia) and Tony KEMP (Australia)

17.2 Rates and mechanisms of Archean crust formation – the relative contribution of plume vs plate tectonics
Patrice REY p.rey@usyd.edu.au (Australia), Kent CONDIE (USA) and Martin VAN KRANENDONK (Australia)

17.3 The habitats and palaeobiology of early life on Earth, and the rise of oxygen
Malcolm WALTER malcolm.walter@unsw.edu.au (Australia), Dave WACEY (Australia) and Ariel ANBAR (USA)

17.4 Early Earth geodynamics and evolution – uncovering links between changing early Earth and biological diversification
Martin Van KRANENDONK martin.vankranendonk@dmp.wa.gov.au (Australia), Ian CAMPBELL (Australia) and Craig O’NEILL (Australia)

17.5 The origin and settings of Archean mineral systems
Nicolas THÉBAUD nthebaud@cyllene.uwa.edu.au (Australia), Wolf MAIER (Finland) and Kevin CASSIDY (Australia)
Theme 18. The Proterozoic Earth

Coordinators: Peter BETTS peter.betts@sci.monash.edu.au (Australia) and Martin HAND (Australia)

Symposia

18.1 Building the Australian continent
Richard BLEWETT richard.blewett@ga.gov.au (Australia) and Dorothy CLOSE (Australia)

18.2 The Neoproterozoic Earth
Martin KENNEDY martin.kennedy@adelaide.edu.au (Australia), Louis DERRY (USA) and Nicholas CHRISTIE-BLICK (USA)

18.3 Proterozoic supercontinents, processes, models, myths, and possibilities
David EVANS dai.evans@yale.edu (USA) and Zheng-Xiang LI (Australia)

18.4 Proterozoic magmatism: implication for tectonic models
Kent CONDIE kcondie@nmt.edu (USA) and Justin PAYNE (Australia)

18.5 Metallogenic systems of the Proterozoic
Franco PIRAJNO franco.pirajno@dmp.wa.gov.au (Australia) and Tom BLENKINSOP (Australia)

Theme 19. Geochronology and Isotope Geology

Coordinators: Paulo VASCONCELOS paulo@earth.uq.edu.au (Australia), Donald DEPAOLO (USA) and Igor VILLA (Switzerland)

Symposia

19.1 Dating earth and planetary evolution - cosmochronology and isotope cosmochemistry
Yuri AMELIN yuri.amelin@anu.edu.au (Australia) and Claudine STIRLING (New Zealand)

19.2 Dating our recent past - analytical methods in quaternary geochronology and palaeoclimatology
Jian-xin ZHAO j.zhao@earth.uq.edu.au (Australia), Chuan-Chou (River) SHEN (Taiwan) and Gangjian WEI (China)

19.3 Dating landscape evolution - low-temperature thermochronology and cosmogenic nuclides
Paulo VASCONCELOS paulo@earth.uq.edu.au (Australia), Ken FARLEY (USA), Paul BIERMAN (USA) and Andrew GLEADOW (Australia)

19.4 Unravelling the complexities of high and low temperature geologic processes: light and heavy stable isotope geochemistry
Sue GOLDING s.golding1@uq.edu.au (Australia), Torsten VENNEMANN (Switzerland) and Allan CHIVAS (Australia)

19.5 Advances in radiogenic isotope geochemistry and geochronology
Kurt KNESEL k.knesel@uq.edu.au (Australia) and Márcio PIMENTEL (Brazil) and Robert CREASER (Canada)

19.6 Conventions on decay constants and isotopic compositions
Igor VILLA igor@geo.unibe.ch (Switzerland) and Paul RENNE (USA)
Theme 20. Planetary Sciences

Coordinators: Graziella CAPRARELLI graziella.caprarelli@uts.edu.au (Australia), Monica PONDRELLI (Italy), Charles LINEWEAVER (Australia), James HEAD (USA) and Phil NICHOLSON (USA)

Symposia

20.1 Surface processes on Mars
Angelo PIO ROSSI; an.rossi@jacobs-university.de (Germany), Gian Gabriele ORI (Italy) and Monica PONDRELLI (Italy)

20.2 Bio-geomarkers and models in astrobiology
Jesus MARTINEZ-FRIAS jmfrías@cab.inta-csic.es (Spain) and Howell EDWARDS (UK)

20.3 Radar in planetary exploration
Roberto OROSEI roberto.orosei@fisi-roma.inaf.it (Italy) and Jani RADEBAUGH (USA)

20.4 Lunar research and exploration in the 21st century
Robert PIDGEON r.pidgeon@curtin.edu.au (Australia) and Jennifer HELDMANN (USA)

20.5 Planets and satellites of the solar system
Graziella CAPRARELLI graziella.caprarelli@uts.edu.au (Australia)

Theme 21. Magmatism – Settings, Compositions and Processes

Coordinators: Janet HERGT jhergt@unimelb.edu.au (Australia) and Jon BLUNDY (UK)

Symposia

21.1 Felsic magmas: petrogenesis to metallogenesis
Phil BLEVIN phil.blevin@industry.nsw.gov.au (Australia), Bruce CHAPPELL (Australia) and Shunso ISHIHARA (Japan)

21.2 Granite versus orogenic style
Bill COLLINS bill.collins@newcastle.edu.au (Australia) and Bernard BONIN (France)

21.3 Subduction zone magmatism including a special session on magmatism in the SW Pacific
Richard WYSOCZANSKI rwysoczanski@niwa.co.nz (New Zealand) and Monica HANDLER (New Zealand)

21.4 Magmatism in extensional environments (continental rifts and MORB)
Trevor FALLOON trevor.falloon@utas.edu.au (Australia) and Yaoling NIU (UK)

21.5 Intraplate magmatism, including ocean island basalts, continental basin provinces, kimberlites and lamproites
Ben COHEN b.cohen@uq.edu.au (Australia), Ian MCDOUGALL (Australia) and Godfrey FITTON (UK)

21.6 Large Igneous Provinces (LIPS): magmatism impacts on atmosphere and biosphere
Scott BRYAN scott.bryan@qut.edu.au (Australia), Steve SELF (UK) and Ingrid UKSTINS-PEATE (USA)
Theme 22. Metamorphic Rocks and Processes

Coordinators: Jörg HERMANN joerg.hermann@anu.edu.au (Australia), Geoff CLARKE (Australia) and Simon HARLEY (UK)

**Symposia**

**22.1 From ocean floor to subduction zone metamorphism**
Katie EVANS k.evans@curtin.edu.au (Australia), Phillipe AGARD (France), Carl SPANDLER (Australia), Marco SCAMBELLURI (Italy) and Joerg HERMANN (Australia)

**22.2 Rates of metamorphic processes**
Geoff FRASER geoff.fraser@gov.au (Australia), Ethan BAXTER (USA) and Sue BALDWIN (USA)

**22.3 Mechanisms of metamorphic reactions and fluid-rock interaction**
Andrew PUTNIS putnis@uni-muenster.de (Germany), Lukas BAUMGARTNER (Switzerland), Bill CARLSON (USA) and Jay AGUE (USA)

**22.4 Quantification of extreme metamorphism and implications for tectonics**
Chris CLARKE c.clark@curtin.edu.au (Australia), Brad HACKER (USA), Yong Fei ZHENG (China) and Yasu OSANAI (Japan)

**22.5 Anatexis**
Geoffrey CLARKE geoffrey.clarke@sydney.edu.au (Australia), Michael BROWN (USA), Bernardo CESARE (Italy) and Gary STEVENS (South Africa)

**22.6 Accessory phases and trace elements in metamorphic processes**
Daniela RUBATTO daniela.rubatto@anu.edu.au (Australia), Nigel KELLY (USA), Ian BUICK (South Africa) and Simon HARLEY (UK)
Theme 23. Evolution of the Biosphere

Coordinators: John LAURIE john.laurie@ga.gov.au (Australia) and Andrew KNOLL (USA)

Symposia

23.1 Martin Glaessner Symposium: The Ediacaran and the Cambrian Explosion
John LAURIE john.laurie@ga.gov.au (Australia), Glenn BROCK (Australia) and Guy NARBONNE (Canada)

23.2 John Talent Symposium: Palaeozoic biofacies, biogeography and bioevents
Ian PERCIVAL ian.percival@industry.nsw.gov.au (Australia), Tony WRIGHT (Australia) and Guang SHI (Australia)

23.3 Evolution of hominins
Colin GROVES colin.groves@anu.edu.au (Australia), Chris STRINGER (Australia) and Darren CURNOE (Australia)

23.4 General palaeontology
Alex COOK alex.cook@qm.qld.gov.au (Australia) and Alexander NUTZEL (Germany)

23.5 Oxygen and evolution
Andrew KNOLL aknoll@oeb.harvard.edu (USA) and Jochen BROCKS (Australia)

23.6 Proterozoic life
Kathleen GREY kath.grey@dmp.wa.gov.au (Australia) and Stanley AWRAMIK (USA)

23.7 Gondwanan Mesozoic vertebrates
Benjamin KEAR benjamin.kear@geo.uu.se (SWEDEN) and Thomas RICH (Australia)

23.8 Mesozoic bioevents
David HAIG david.haig@uwa.edu.au (Australia), Stephen MCLOUGHLIN (Sweden) and Mikael SIVERSSON (Australia)

23.9 Origin and evolution of marsupials
Michael ARCHER m.archer@unsw.edu.au (Australia) and Suzanne HAND (Australia)

23.10 Early vertebrate evolution
Kate TRINAJSTIC k.trinajstic@curtin.edu.au (Australia), Gavin YOUNG (Australia) and Carole BURROW (Australia)

23.11 Cenozoic marine environments
Stephen GALLAGHER sigall@unimelb.edu.au (Australia) and Bridget WADE (UK)
**Theme 24. Reefs and Carbonates**

Coordinators: Gregory E WEBB g.webb@uq.edu.au (Australia) and Noel P JAMES (Canada)

**Symposia**

24.1 Reefs and climate change  
Gilbert CAMOIN gcamoin@cerege.fr (France) and Bradley OPDYKE (Australia)

24.2 Ancient reefs  
Wolfgang KIESSLING wolfgang.kiessling@mfn-berlin.de (Germany) and Jody WEBSTER (Australia)

24.3 Understanding microbial carbonates  
Robert RIDING riding@cf.ac.uk (USA) and Gregory E WEBB (Australia)

24.4 Secular change in carbonate sedimentology/geochemistry  
Vinod TEWARI vtewari@wihg.res.in (India) and Annette GEORGE (Australia)

**Theme 25. Marine Geoscience and Oceanography**

Coordinators: Peter HARRIS peter.harris@ga.gov.au (Australia) and Neville EXON (Australia)

**Symposia**

25.1 Integrated Ocean Drilling Program (IODP), the results of deep drilling in the oceans  
Neville EXON neville.exon@anu.edu.au (Australia) and Mike MOTTL (USA)

25.2 Palaeoceanography and sea-level records  
Colin WOODROFFE colin@uow.edu.au (Australia) and Leanne ARMAND (Australia)

25.3 Physical processes of coastal and shelf sedimentation  
Peter HARRIS peter.harris@ga.gov.au (Australia), James SYVITSKI (USA) and Charitha PATTIARATCHI (Australia)

25.4 Source to sink sediment pathways and the evolution of continental margins  
Chuck NITTROUER nittroue@ocean.washington.edu (USA) and Alan ORPIN (New Zealand)

25.5 Geoscience applications for ocean management and also for supporting jurisdictional claims under the United Nations Law of the Sea  
Andrew HEAP andrew.heap@ga.gov.au (Australia) and Brian TODD (Canada)

25.6 Marine minerals in Oceania  
David CRONAN d.cronan@imperial.ac.uk (UK), Cornel DE RONDE (New Zealand) and Neville EXON (Australia)
Theme 26. Antarctic and Arctic Geoscience

Coordinators: Phil O’BRIEN phil.obrien.ant@gmail.com (Australia) and Tim NAISH (New Zealand)

Symposia

26.1 The geology of Antarctic life: history and habitats
Phil O’BRIEN phil.obrien.ant@gmail.com (Australia) and Jeff STILWELL (Australia)

26.2 Antarctic marine biogeochemistry
Simon GEORGE simon.george@mq.edu.au (Australia) and Leanne ARMAND (Australia)

26.3 Arctic tectonics
Loïc LABROUSSE loic.labrousse@upmc.fr (France), Oleg PETROV (Russia) and Christopher HARRISON (Canada)

26.4 Rodinia to Gondwana: evolution of the southern supercontinent
Chris CARSON chris.carson@ga.gov.au (Australia) and Mark FANNING (Australia)

26.5 Polar climate archives and their global significance
Tim NAISH timothy.naish@vuw.ac.nz (New Zealand) and Henk BRINKHUIS (The Netherlands)

Theme 27. Biogeoscience

Coordinators: Matthew STOTT m.stott@gsn.cri.nz (New Zealand) and Jill BANFIELD (USA)

Symposia

27.1 Biogeochemical cycling
John MOREAU jmoreau@unimelb.edu.au (Australia)

27.2 Understanding biogeological processes using “-omic” technologies
Jill BANFIELD jbanfield@berkeley.edu (USA) and Matthew STOTT (New Zealand)

27.3 Microbes and extreme environments
Lesley WARREN warrenl@mcmaster.ca (Canada) and Don COWAN (South Africa)

27.4 The deep biosphere
Anna KAKSONEN anna.kaksonen@csiro.au (Australia) and Katrina EDWARDS (USA)

27.5 Bioprocessing technologies
Racquel QUATRINI rquatrini@yahoo.com.ar (Chile) and Carol DAVIS-BELMAR (Chile)

27.6 Austral Portals: palaeobiogeography and palaeogeography of Gondwana breakup
Jo WHITTAKER jo.whittaker@sydney.edu.au (Australia), Ross MCPHEE (USA) and Dave BARBEAU (USA)
**Theme 28. Groundwater/Hydrogeology**

Coordinators: Ken LAWRIE ken.lawrie@ga.gov.au (Australia) and Chris DAUGHNEY (New Zealand)

**Symposia**

28.1 Groundwater resources and sustainable management  
Gil ZEMANSKY g.zemansky@gns.cri.nz (New Zealand) and Ross BRODIE (Australia)

28.2 Groundwater processes: interactions, dynamics and response  
Chris DAUGHNEY c.daughney@gns.cri.nz (New Zealand), Uwe MORGENSTERN (New Zealand) and Bear MCPHAIL (Australia)

28.3 Geoscientific mapping, characterisation and conceptualisation of hydrogeological systems  
Ken LAWRIE ken.lawrie@ga.gov.au (Australia), Jon CLARKE (Australia) and Mal COX (Australia)

28.4 Groundwater for energy and mining  
Ken LAWRIE ken.lawrie@ga.gov.au (Australia) and Steven LEWIS (Australia)

28.5 Hazards and risks to groundwater systems  
Ken LAWRIE ken.lawrie@ga.gov.au (Australia), Baskaran SUNDERAM (Australia) and Chris DAUGHNEY (New Zealand)

28.6 Visualisation and modelling of groundwater systems  
Malcolm COX m.cox@qut.edu.au (Australia), Mauricio TAULIS (Australia) and Bruce GILL (Australia)

**Theme 29. Surficial Processes and Landscape Evolution**

Coordinators: Allan CHIVAS toschi@uow.edu.au (Australia) and Brad PILLANS (Australia)

**Symposia**

29.1 Landscape response to climate change: quantifying present and ancient rates of Earth-surface processes  
Anthony DOSSETO tonyd@uow.edu.au (Australia) and Arjun HEIMSATH (USA)

29.2 Karst: processes, environment and palaeoenvironmental records  
Jianhua CAO jhcao@mail.karst.ed.cn (China) and Yaoru LU (China)

29.3 History of aridity: evidence from the continents and the oceans  
Paul HESSE paul.hesse@mq.edu.au (Australia) and Matt TELFER (UK)

29.4 Deep weathering through deep time: regolith processes and ore deposits  
Ravi ANAND ravi.anand@csiro.au (Australia) and Allan CHIVAS (Australia)

29.5 Gondwana landscapes: tectonics and denudation  
Brad PILLANS brad.pillans@anu.edu.au (Australia) and Paul BISHOP (UK)

29.6 Clays and clay minerals: geology, properties and uses  
Chun-Hui ZHOU chunhui09clay@yahoo.cn (China) and John KEELING (Australia)
Theme 30. Geohazards

Coordinators: Phil CUMMINS phil.cummins@anu.edu.au (Australia), Terry WEBB (New Zealand) and Kelvin BERRYMAN (New Zealand)

Symposia

30.1 Subaerial and submarine landslide hazards [IGCP585]
Jason CHAYTOR jchaytor@usgs.gov (USA), Ashvin WICKRAMASOORIYA (Sri Lanka) and Diana ZAKHIDOVA (Romania)

30.2 Natural hazards and climate change
Bob CECHET bob.cechet@ga.gov.au (Australia), Graeme SMART (New Zealand) and Martyn HAZELWOOD (Australia)

30.3 Improving the interaction between natural/physical and social sciences to increase the effectiveness of natural disaster risk reduction
Irina RAFLIANA irina_rafliana@hotmail.com (Indonesia), Dale DOMINEY-HOWES (Australia) and Michelle DALY (New Zealand)

30.4 Geohazards in subduction zones
Laura WALLACE l.wallace@gns.cri.nz (New Zealand), Phil CUMMINS (Australia) and Danny NATAWIDJAJA (Indonesia)

30.5 Geohazard risk analysis: the state of the art
Jane SEXTON jane.sexton@ga.gov.au (Australia)

30.6 Earth monitoring for improved forecasting of natural hazards
Phil CUMMINS phil.cummins@anu.edu.au (Australia) and Ken GLEDHILL (New Zealand)

Theme 31. Engineering Geology and Geomechanics

Coordinators: Mark EGGERS mark.eggers@psmconsult.com.au (Australia) and Francisco DE JORGE (Brazil)

Symposia

31.1 Engineering geological challenges for our ever growing cities
Martin CULSHAW martin.culshaw2@ntlworld.com (UK)

31.2 Engineering geology in major infrastructure developments
Francisco DE JORGE francisco.dejorge@engeocons.com.br (Brazil)

31.3 Engineering geology in mining
Mark EGGERS mark.eggers@psmconsult.com.au (Australia)

31.4 Engineering geology in managing risk from geohazards and impacts of climate change
Anders SOLHEIM anders.solheim@ngi.no (Norway)

31.5 Improving the development of geological models for engineering studies
Steve PARRY sparry@georisksolutions.com (Hong Kong, China)

31.6 Interaction of engineering geology and geomechanics
Phil PAIGE-GREEN ppaigegr@csir.co.za (South Africa)
Theme 32. Geoscience Information from Proximal and Remote Sensing Technologies

Coordinators: Tom CUDAHY thomas.cudahy@csiro.au (Australia), Adam LEWIS (Australia) and Carlos DE SOUZA FILHO (Brazil) [UNESCO- IUGS Geological Applications of Remote Sensing (GARS) program]

**Symposia**

32.1 Mineral exploration
Fred KRUSE fakruse@nps.edu (USA)

32.2 Mining and geometallurgy
Kai YANG kai.yang@csiro.au (Australia)

32.3 Energy: hydrocarbons, uranium and geothermal
Carlos DE SOUZA FILHO beto@ige.unicamp.br (Brazil)

32.4 Environmental monitoring in resource development
Tom CUDAHY thomas.cudahy@csiro.au (Australia) and Cindy ONG (Australia)

32.5 Earth's environment: geology, landforms, soils, water and biomass
Sabine CHABRILLAT chabri@gfz-potsdam.de (Germany)

32.6 Disaster management
Mike ABRAMS michael.j.abrams@jpl.nasa.gov (USA)

32.7 Second National Virtual Core Library (NVCL) Symposium
Jon HUNTINGTON jon.huntington@csiro.au (Australia)

Theme 33. History of the Geosciences

Coordinators: Barry COOPER barry.cooper@unisa.edu.au (Australia) and S F de M FIGUEIRÓA (Brazil) [37th Conference of the International Commission on the History of Geological Sciences - INHIGEO]

**Symposia**

33.1 Biographical studies of eminent geologists: a Symposium in honour of David Branagan
David OLDROYD doldroyd@bigpond.com (Australia)

33.2 The early history of continental drift: a centenary tribute to Alfred Wegener (1912)
Allan KRILL allan.krill@ntnu.no (Norway) and Homer Le GRAND (Australia)

33.3 Major achievements in 20th century geology
Carol BACON cbacon@mrt.tas.gov.au (Australia)

33.4 Geology in tropical regions
Bernie JOYCE ebj@unimelb.edu.au (Australia)

33.5 Geologists, resource exploration and development: an historical perspective
Ken MCQUEEN ken.mcqueen@canberra.edu.au (Australia)

33.6 General contributions on the history of geology
Barry COOPER barry.cooper@unisa.edu.au (Australia)
Theme 34. Major Geoscience Initiatives, Geosurveys and Maps

Coordinators: Ian LAMBERT ian.lambert@ga.gov.au (Australia) and Ian WITHNALL (Australia)

Symposia

34.1 Geological processes of the construction of Asia  
Manuel PUBELLIER manupub.pubellier@gmail.com (France), REN Jishun (China) and JIN Xiaochi (China)

34.2 Geological and metallogenic responses to deep processes in eastern Asia and continental margins  
DONG Shuwen dic@cags.ac.cn (China) and Oleg PETROV (Russia)

34.3 SinoProbe—deep exploration in China  
DONG Shuwen dic@cags.ac.cn (China), LI Tingdong (China), Larry BROWN (USA) and LIU Mian (USA)
Theme 35. Geostandards

Coordinators: Colin SIMPSON simpsons@grapevine.com.au (Australia) and William CAVAZZA (Italy)

Note – The Geostandards sessions are organised by groups associated with the IUGS. Presentations may be by invitation of the convenors.

Symposia

35.1 GSSPs (Global boundary-stratotype section and point) as global geostandards
Stan FINNEY scfinney@csulb.edu (USA), Marco BALINI (Italy) and Jim OGG (USA)

35.2 International Subcommission on Precambrian stratigraphy: a chronostratigraphic division of the Precambrian: possibilities and challenges
Martin VAN KRANENDONK martin.vankranendonk@dmp.wa.gov.au (Australia)

35.3 International Subcommission on Neoproterozoic stratigraphy: Neoproterozoic chronostratigraphy and the evolution and diversification of metazoa and evolution of the Earth system
James GEHLING jim.gehling@samuseum.sa.gov.au (Australia)

35.4 International Subcommission on Cambrian stratigraphy: Cambrian chronostratigraphy and evolution and diversification of early Cambrian life
Shanchi PENG pengshanchi@hotmail.com (China) and Loren BABCOCK (USA)

35.5 International Subcommission on Ordovician stratigraphy: Ordovician intercontinental correlations: developing global and regional chronostratigraphy
David HARPER dharper@snm.ku.dk (Denmark) and Ian PERCIVAL (Australia)

35.6 International Subcommission on Devonian stratigraphy: the Devonian of Asia and Australia
Thomas BECKER rbecker@uni-muenster.de (Germany)

35.7 The Devonian-Carboniferous-Permian correlation chart
Manfred MENNING menne@gfz-potsdam.de (Germany)

35.8 International Subcommission on Quaternary stratigraphy: short-time divisions in the Quaternary; and onshore-offshore correlation during the Quaternary
Phil GIBBARD plg1@hermes.cam.ac.uk (UK)

35.9 Other geostandards
Colin SIMPSON simpsons@grapevine.com.au (Australia)
Theme 36. Regional, Thematic and Specialist Symposia

Coordinator: Ian LAMBERT ian.lambert@ga.gov.au (Australia) and Paul KAY (Australia)

These Symposia are organised by groups associated with the IUGS and other international and national associations. Oral presentations may be by invitation of the convenors.

Symposia

36.1 From the Caspian Sea to the Mediterranean Corridor: palaeoenvironmental change and human response from the Last Glacial Maximum into the future [International Union for Quaternary Research (INQUA) 0501 and IGCP 521]
Valentina YANKO-HOMBACH valyan@avalon-institute.org (Canada), Olena SMYNTYNA (Ukraine) and Tamara YANINA (Russia)

36.2 Dust from geological sources: impacts on the economy, environment and society [IUGS – Commission on Geoscience for Environmental Management (GEM) Working Group on Dust]
Brian MARKER brian@amarker.freeserve.co.uk (UK) and Jose CENTENO (USA)

36.3 Natural hazards and ancient societies [IGCP 567]
Patrick NUNN pnunn3@une.edu.au (Australia), Bruce MCFADGEN (New Zealand), Iain STEWART (UK) and Manuel SINTUBIN (Belgium)

36.4 Environmental change and sustainability in karst systems: relations to climate change and anthropogenic activities (2011-2016) [IGCP Project 598]
Cheng ZHANG chzhang@karst.ac.cn (China), Chris GROVES (USA) and Augusto AULER (Brazil)

36.5 International perspectives on teaching geological mapping [GSA International Section]
Joann STOCK jstock@gps.caltech.edu (USA) and Anke FRIEDRICH (Germany)

36.6 Greater Altai – a unique rare-metal-gold-polymetallic province in central Asia [National Committee of Kazakhstan Geologists]
Ginayat BEKZHANOV bekzhanov@nursat.kz (Kazakhstan)

36.7 Overcoming geoscience challenges in the 21st century by developing and improving the skills of early-career geoscientists [YES Network]
Joanne VENUS eejhv@leeds.ac.uk (UK), Gabriela PERLINGEIRO (Australia) and Michelle COOPER (Australia)

36.8 Inclusions in minerals [International Mineralogical Association Working Group on Inclusions in Minerals]
Pei NI peini@nju.edu.cn (China), Ronald BAKKER (Austria) and Fanus VILJOEN (South Africa)

36.9 Uranium resources, supply and demand [IAEA-OECD/NEA Uranium Group]
Ian LAMBERT ian.lambert@ga.gov.au (Australia)

Theme 37. Alternative Concepts

Coordinator: Paul KAY paul.kay@ga.gov.au (Australia)

Note – these sessions will be arranged by the convenors listed and presentations may be by invitation.

Symposia

37.1 Expanding Earth (Sam Carey Memorial)
Giancarlo SCALERA giancarlo.scalera@ingv.it (Italy), James MAXLOW (Australia), Cliff OLLIER (Australia) and Stefan CWOJDZINSKI (Poland)

37.2 Pursuit of a new global geodynamic paradigm
Dong CHOI raax@ozemail.com.au (Australia), Ismail BHAT (India) and Karsten STORETVEDT (Norway)
Other Major Forums

Further details will be given in the Third Circular.

**F.1 YES Network – evening program**
Gabriela PERLINGEIRO gabrielaperlingeiro@yahoo.com (Australia), Joanne VENUS (UK) and Michelle COOPER (Australia)

**F.2 GeoSurvey directors’ forum**
Alex MALAHOFF a.malahoff@gns.cri.nz (New Zealand) and Chris PIGRAM (Australia)

**F.3 Global Geoscience Initiative**
Edmund NICKLESS Edmund.nickless@geolsoc.org.uk (UK), John LUDDEN (UK), Pat LEAHY (USA) and Jack HESS (USA)

**F.4 Planet Earth Institute (PEI) – successor to the International Year of Planet Earth initiative (IYPE)**
Ed DE MULDER e.demulder@planet.nl (Netherlands), Wolfgang EDER (Germany), Sierd CLOETINGH (Netherlands), Sospeter MUHONGO (Tanzania)

**F.5 Geological Society of America - International Section**
Joann STOCK jstock@gps.caltech.edu (USA)

Business Meetings

Organisations wishing to conduct business meetings during the 34th IGC are invited to make a meeting request by visiting www.34igc.org and selecting the Program and then Business Meetings options. The closing date for meeting requests is 15 July 2011.

- Full day business meetings will need to be held on Sunday, 5 August 2012, between 10.00am and 5.00pm.
- Other business meetings will be held between 7.00pm and 10.30pm on the following evenings:
  - Monday, 6 August
  - Tuesday, 7 August
  - Wednesday, 8 August (note that the congress dinner will be held on this night)
  - Thursday, 9 August

Rooms will be provided in theatre style seating format at no charge. Any special room set up arrangements and/or audio visual and catering requirements will be at the cost of the meeting organisers and such arrangements will need to be made by meeting organisers directly with the convention centre.
Call for Abstracts

You are invited to submit abstracts for the 34th IGC scientific program via the 34th IGC abstract submission website at www.34igc.org. Please note that abstract submission opens: Monday 23 May 2011. All abstracts must be received by the cut-off date: Friday 17 February 2012.

Abstracts are limited to 250 words. Tables, figures, references and other graphics cannot be accepted in abstracts. Abstracts must be submitted by the presenting author (oral and poster). All abstracts will be reviewed by the appropriate Symposium convenors.

Summary of Abstract Submission Instructions

Abstracts should be submitted via the Symposia abstract submission tab of the IGC website: www.34igc.org. Authors should select the Symposium they wish to present (oral and poster) in from the drop down menu. If they are uncertain where their paper best fits, they should use the “Reviewer’s choice” category at the very bottom of the drop-down menu for each Theme.

Authors are permitted to submit only one presenting author abstract for oral presentation, but may also submit abstracts for poster papers and be non-presenting co-authors on other oral presentations. Keynote speakers and invited presenters in IUGS symposia/sessions in Themes 34 and 35 may submit an additional offered abstract for oral presentation.

Abstracts must be prepared and submitted in the required format. Please carefully read through the submission instructions below for preparing and submitting your abstract:

STEP 1. Download the Abstract Guidelines which describe how to prepare your abstract and the Abstract Template from www.34igc.org/submit-abstracts.php save as a .doc document to your computer.

STEP 2. Prepare your abstract exactly following instructions given in the Guidelines and Abstract Template. Abstracts must not exceed the 250 word limit.

STEP 3. Log onto the 34th IGC Abstract Submission website, enter the details of the presenting author, and nominate the number of abstracts to be submitted. ABSTRACT(S) MUST BE SUBMITTED BY THE PRESENTING AUTHOR. You will be required to pay a non-refundable A$40 author abstract fee by credit card.

STEP 4. Enter the title of your abstract and nominate your preference for oral or poster presentation.

STEP 5. Carefully read and accept the terms and conditions of abstract submission.

STEP 6. Print a copy of the abstract submission form for your records prior to clicking “upload”. Attach/Upload your abstract.
Special Arrangements for Abstracts under the GeoHost Program

Young geoscientists and geoscientists from low income countries can apply for support under the GeoHost Funded Delegate Program. Successful applicants under this program will not be required to pay the abstract submission fee. The GeoHost support application form is available on the website: www.34igc.org - select the GeoHost Support Scheme option.

Publications

The 34th IGC will publish standard abstracts electronically at the time of the event, but will not publish papers presented. Symposium convenors and groups wishing to publish papers presented at the 34th IGC are free to enter independently into agreements with publishing houses.

The scientific sponsor of the IGC, the IUGS, has an arrangement with The Geological Society of London (GSL) Publishing House for the publication of books arising from its programs and other activities, including International Geological Congresses. GSL will approach selected IGC Symposia Convenors to encourage them to consider producing a Geological Society Special Publication. Special Publications are published online and as hardback books which will be included in ISI Web of Science and Scopus.

The Special Publications do not have to be comprehensive treatments, but they do need to be balanced and have a strong subject focus. Ideally they comprise 18-25 papers, although there have been longer and shorter ones. More information can be found at www.geolsoc.org.uk/sp.

Alternatively, Convenors are free to negotiate publication of their Symposia with other publishing houses, or to elect not to publish full papers.
Professional Development Workshops and Short Courses

The 34th International Geological Congress 2012 offers the opportunity to individuals, companies, institutions or organisations to run Professional Development Workshops and Short Courses in association with the Congress.

Four options for running Professional Development Workshops and Short Courses will be available:

(a) **PRE-Congress**: At an alternative venue to the Congress.
(b) **Evening**: During the Congress, but after 6pm each day, at the Congress venue.
(c) **Post-Congress**: At an alternative venue to the Congress.

Approved Professional Development Workshops and Short Courses will be included in the 34th IGC Program and Congress delegates will be invited to register for these workshops and courses. Note that participation in the workshops and short courses will be limited to persons registered to attend the 34th IGC as full delegates.

All pre-Congress and post-Congress Workshop organisers will need to arrange and pay for all costs associated with running their workshop. EVENING Workshops will be provided with a room free of charge, however all other requirements will need to be arranged by the organisers. In the case of pre- and post-Congress Workshops/Short Courses organised by international groups or individuals, the IGC can facilitate this process.

Where workshop/short course participation fees are applicable, these will be collected by the managers of the 34th IGC. These participation fees, as determined by the respective Workshop/Short Course organisers, will be listed in the Third Circular. The fees will be remitted to the workshop/short course organisers less the costs of handling, credit card transaction fees and Goods and Services Tax (where applicable).

Organisations and individuals interested in running a workshop or short course are requested to complete the on-line Professional Workshops and Short Courses Expression of Interest Form at [www.34igc.org](http://www.34igc.org) – select the “Professional Development Workshops” option.

**Note that this form must be completed on or before 15 July 2011.**
The 34th IGC Organising Committee is pleased to announce the GeoHost Support Scheme. This program will provide financial support to a limited number of young Earth scientists and scientists from low income countries to participate in the 34th IGC.

Two programs are available under the GeoHost Support Scheme:

- GeoHost Training Workshop Program (TWP)
- GeoHost Funded Delegate Program (FDP)

Applications are now open for both GeoHost programs. Applications can only be made using the online application process which can be found at www.34igc.org – select the “GeoHost Support Scheme” option.

About the GeoHost Support Scheme:

- Applications will close on 1 November 2011;
- Successful applicants will be notified in March 2012;
- All GeoHost applicants (under the FDP program) must be (i) the presenting author of an abstract that is selected for presentation at the 34th IGC; and/or (ii) a Symposium Convenor, as recognised in the scientific program published in the Second Circular and on the Congress website;
- Applicants can apply for support under either the Training Workshop Program (TWP) or the Funded Delegate Program (FDP), not both;
- The application process must be completed in full for an applicant to be considered. Non-compliant or incomplete applications will not be considered or acknowledged.

GeoHost Training Workshops Program (TWP)

The IGC Committee is developing four Training Workshops which will provide expert training in topics of importance to low income nations. The workshops are being scheduled immediately before the 34th IGC and will be held at the Queensland University of Technology, which is located in Brisbane’s central business district.

The IGC Committee is reasonably confident that support will be confirmed for each of the four Training Workshops (TW1-TW4), below. The final list of Training Workshops will be provided in the Third Circular and at www.34igc.org in September 2011.
Applications are now invited for the GeoHost Training Workshop Program

- Individuals may only apply for one of the proposed Training Workshops.
- Applications must be made via the GeoHost Application Form which can be found at www.34igc.org – select the “GeoHost Support Scheme” option.
- It is essential that applicants demonstrate the relevance of their selected workshop to their employment situation.
- Applicants for TWP support are not required to submit an abstract for the 34th IGC.

Applicants will be selected through a competitive process. Successful applicants will receive the following support:
- Air travel from their home location to Brisbane and return (economy class and using the most direct routes possible).
- Accommodation in Brisbane for the duration of the workshop and the 34th IGC (hotel to be nominated by the Congress managers).
- Meals and/or an appropriate living allowance.
- Registration to attend the 34th IGC as full Congress delegates.
Workshop Topics:

**TW1. Sustainable mining in Africa**

Funding for this workshop has been agreed in principle under the Australian Government’s AusAID agency’s Australia-Africa Partnerships Facility.

The objective is to improve technical, environmental, social policy and regulatory skills with regard to sustainable mining for up to 90 African participants from many African countries. On the delegates’ return to their respective nations they will have a heightened level of expertise in the promotion and regulation of mining, with a view to improved economic, social and environmental outcomes for mining projects.

**TW2. Geological sequestration of carbon dioxide**

This workshop will be supported by the Global Carbon Capture and Storage Institute.

A workshop on the geological storage of carbon dioxide will be held for some twenty delegates from developing countries around the world. Technical aspects relating to the long term geological storage of carbon dioxide in Earth’s subsurface will include; site selection, reservoir characterisation, storage assessment, containment security, measurement, resource conflicts, monitoring and verification systems, along with dealing with uncertainty and risk.

**TW3. Capacity building in risk modelling for natural hazards in the Asia-Pacific region**

Funding for this workshop will be provided by the Australian Government’s AusAID agency.

The objective is to increase participants’ understanding of practical approaches to reducing and managing the impacts that disasters have on communities. It will increase the capacity to understand the potential impacts of tsunami, tropical cyclone, volcanic (ash) eruption, earthquake and changes to groundwater resources through the development of fundamental natural hazard modelling skills. It will also include a module on social impacts and communication of geohazards, including warnings.

**TW4. Subsea exploration and production**

This workshop is tentative pending negotiations for funding.

Subsea exploration and production of metals and petroleum is of increasing interest to nations in the Asia-Pacific region. The proposed workshop would improve understanding of the technologies involved, and appropriate regulatory and policy regimes.
GeoHost Funded Delegate Program (FDP)

The Funded Delegate Program (FDP) has been designed to assist young Earth scientists and geoscientists from low-income countries participate in the 34th IGC as full delegates. Applications are invited from young scientists (being under 35 years of age) and scientists who live and work or study in low-income countries. The number of delegates supported will be determined by the IGC budget and will not be confirmed until early 2012.

Successful FDP applicants will be offered one of the following levels of support. The determination of support level will be based on available funding and the selection panel’s understanding of the applicant’s support needs.

- **FDP 1**
  - A free registration to attend the 34th IGC as a full delegate
  - A grant of $1500 (Australian Dollars) towards travel and living expenses.

- **FDP 2**
  - A free registration to attend the 34th IGC as a full delegate.

All applicants for FDP support must have an abstract accepted for oral or poster presentation at the 34th IGC. There will not be any fee for submission of abstracts under the FDP program.

For further information and to apply for these GeoHost programs, please go to [www.34igc.org](http://www.34igc.org) and select the “GeoHost Support Scheme” option.
Field Trips

The references on the map above show locations of one of the primary points of interest for each field trip.
The 34th IGC is an ideal opportunity for delegates to explore the fascinating geology of Australia, New Zealand and the Asia Pacific region.

Delegates will be able to select from an impressive range of pre- and post-Congress tours designed to cater to the many divergent interests of the geoscientific community.

Descriptions of each tour, together with the start and end points and duration, are provided over the following pages. Full tour itineraries and prices will be released in Third Circular (due in September 2011).

**In-Congress Day Trips**

**QLD D-1 - Geology of Brisbane at Walking Pace**
- This is a self-guided IGC tour with the Brisbane start and finish location up to the participant
- Tour does not have a maximum number of participants. Participants will undertake the tour at their own time and own pace
- Tour leader/s: Self-guided tour at own leisure
- Duration: up to 1 day
- From metamorphosed Palaeozoic deep sea sediments to Mesozoic ignimbrite, building stones on historical and heritage listed buildings to the Museum’s collections of recently discovered dinosaurs, aboriginal artifacts, native animals, all within three kilometres of the conference centre. Bring a camera, no geological hammers, easy walking
- Points of interest: Brisbane River, Botanical Gardens, Queensland Museum

**QLD D-2 - The Glasshouse Mountains: Geological Icons of Queensland**
- This is a pre-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 40 participants (limited by size of bus)
- Tour leader/s: Benjamin Cohen, Tony Ewart and Kurt Knesel
- Duration: 1 day
- The Glasshouse Mountains were named by Lieutenant James Cook in 1770, and have Aboriginal names like Ti Rogers, Coonowrin, Ngungun. The 27 million year old group of 15 hypabyssal plugs and laccoliths is composed of metaluminous trachytes and peralkaline rhyolites which exhibit unusual and extreme geochemical characteristics indicating intensive fractional crystallisation
- Points of interest: Glasshouse Mountains, hilly hinterland, subtropical rainforest
QLD D-3 - Stradbroke Island and Moreton Bay - Quaternary Sandcastles East of Brisbane

- This is a pre- or post-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 20-30 participants (limited by size of bus)
- Tour leader/s: Kevin Walsh
- Duration: 1 day
- Stradbroke Island is one of the world’s largest sand islands with 285 square kilometres of vegetated dunes. It has heavy mineral and pure quartz sand mining adjacent to National Park. Complex palaeoclimatic history, freshwater lakes, aeolian deposits and sand dunes formed by wind transport, longshore drift during Quaternary high and low sea levels
- Points of interest: Stradbroke Island - large sand island, Moreton Bay Marine Park and National Park, sand mining, wildlife

QLD D-4 - The Tweed Shield: Australia’s Largest Cenozoic Volcano

- This is a pre or post IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 30 participants
- Tour leader/s: Benjamin Cohen, Warwick Willmott and John Jackson
- Duration: 1 day
- 100-km wide Tweed Volcano formed 25 to 23 million years ago. Stunning panoramic view points on edge of massive erosion caldera with vistas to Mt Warning at the volcanic core. 100-metre high waterfalls plunge over rhyolitic cliffs, with a chilled margin of perlite glass at their base
- Points of interest: Gold Coast hinterland. Part of World Heritage Listed Gondwana Rainforests of Australia
QLD D-5 - The Scenic Rim of Queensland: Volcanism, Xenoliths, Megacrysts, and Geomorphology of the Early Miocene Main Range Volcano

- This is a post-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 40 participants
- Tour leader/s: Edwin Willey and Benjamin Cohen
- Duration: 1 day
- Miocene mafic volcanic units display nature of explosive and eruptive processes and mantle-derived materials with abundant xenocrysts and ultramafic xenoliths. Quarry outcrops display mafics ranging from hawaiites, olivine nephelenites, leucite basanites to nepheline benmoreites. Excellent and sometimes complex exposures
- Points of interest: Great Divide, Toowoomba (Garden City), Volcanic centres

QLD D-6 - Coal in Southeast Queensland

- This is a pre- or post-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 30 participants
- Tour leader/s: Joan Esterle
- Duration: 1 day
- Late Jurassic to Triassic coal deposits in southeast Queensland occur in the Clarence Moreton Basin. The tour will include visits to outcrops demonstrating sedimentary structure and depositional environments as well as the coal mines. Most of Queensland’s coal mines occur in the Permo-Triassic Bowen Basin in central Queensland
- Points of interest: Coal mines close to Brisbane, Clarence Moreton Basin

QLD D-7 - Engineering Geology in Southeast Queensland

- This is a pre- or post-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 30 participants
- Tour leader/s: Ron Bathurst
- Duration: 1 day
- Visits to sites where infrastructure projects encounter difficult and demanding geological conditions. Like the “Moving Mountain”, Wivenhoe Dam spillway and the vast gravel deposits in the Brisbane River, around the productive farmland in the Lockyer Valley west of Brisbane
- Points of interest: Moving Mountain, Lockyer Valley and Toowoomba bypass pilot tunnel
QLD D-8 - Toowoomba Industrial Minerals

- This is a pre-, post- or during IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to the number of participants on one large coach bus, or if fewer participants, a smaller coach bus can be organised
- Tour leader/s: John Siemon
- Duration: 1 day
- Visit a number of sites supplying clay and shale for making clay bricks, bentonite and palygorskite from lake deposits underlying Cenozoic basalt, and also the Triassic-Jurassic Helidon Sandstone used for many famous Queensland buildings
- Points of interest: Garden City of Toowoomba

QLD D-9 - Sunshine Coast Construction Materials

- This is a pre-, post- or during IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to the number of participants on one large coach bus, or if fewer participants, a smaller coach bus can be organised
- Tour leader/s: John Siemon and Kyle Waye
- Duration: 1 day
- Quarries supply major deposits of coastal/dune and riverine sand and also from Carboniferous-Permian greenstones, hornfelsed carboniferous sediments, and oligocene trachytes, as well as large quarries of Triassic rhyolites and andesites
- Points of interest: Sunshine Coast

Pre- and Post-Congress Field Trips

Q-1-A&B - Heron Island Carbonate Pre- and Post-IGC Field Trips

- This is a pre- and post-IGC tour that starts and finishes at the Gladstone Marina, Gladstone
- Tour is limited to 30 participants
- Tour leader/s: John Jell
- Duration: 6 Days
- Heron Island is part of the Capricorn-Bunker group located at the southern end of the Great Barrier Reef. The reef can be examined for reef zonation, reef-building processes during the Holocene, carbonate sediment types, their erosion and dispersal, carbonate facies distribution and early diagenetic phenomena
- Points of interest: Beautiful tropical Heron Island, cays, corals, and reefs, part of the World Heritage Listed Great Barrier Reef
Q-2 - Mineralisation of the Mount Isa Region

- This is a pre-IGC tour that starts and finishes in Mount Isa
- Tour is limited to 20 participants
- Tour leader/s: Laurie Hutton and Geoff Derrick
- Duration: 6 days
- The world-class mineral province includes major Cu, Pb, Zn, Ag, iron oxide Cu-Au, Mo, Re, phosphate and rare earth resources. Most mines are in Proterozoic host rocks and visits will cover origin, structure, and stratigraphy, with a comprehensive Time Space Chart detailing major events in the Mount Isa - Cloncurry region
- Points of interest: Mount Isa, major mines, outback Queensland, wildlife

Q-3 - Mount Isa Crustal Evolution

- This is a pre-IGC tour that starts and finishes at Mount Isa Airport, Mount Isa
- Tour is limited to 22 participants (including tour leaders)
- Tour leader/s: George Gibson and a staff member from Xstrata for Mount Isa Mines Leases Visit (Max Shawcross or Ben Young)
- Duration: 6 days
- Study crustal evolution of the Mount Isa region, with its Proterozoic sequences, its relationships to the Precambrian Rodinia and Nuna (Columbia) supercontinents. Examine aspects of regional structure, chronostratigraphy, magmatic history and basin architecture in the western and eastern successions
- Points of interest: Mount Isa, outback Queensland, wildlife, mine

Q-4 - Coal, Coal-seam Gas, Oil, Traditional Gas, Groundwater, and Carbon Capture and Storage in Queensland Sedimentary Basins

- This is a post-IGC tour that starts and finishes in Gladstone
- Tour is limited to 30 participants
- Tour leader/s: To be confirmed
- Duration: 4 days
- The most famous of Queensland’s sedimentary basins, the Permo-Triassic Bowen Basin, with its huge coking coal, thermal coal and coal-seam gas resources will be explored for its depositional characteristics. Visit some large coal mines deposited under boreal conditions in between periods of compression within the fold belts of eastern Australia
- Points of interest: Gladstone - booming coal, CSG, LNG town, inland scenery
Q-5 - Cretaceous Volcanics and Tectonism of the Whitsunday Large Igneous Province

- This is a post-IGC tour that starts and finishes at Hamilton Island
- Tour is limited to 25 participants
- Tour leader/s: Scott Bryan
- Duration: 5 days
- This Early Cretaceous Silicic Large Igneous Province with its large extrusive volume led to a different style of volcanic rifted margin. Visit spectacular views of tilted and partly exhumed volcanic sequences. Unsuitable for people who suffer from motion sickness
- Points of interest: Great Barrier Reef World Heritage Area, Whitehaven Beach, yacht charter, marine life, shared accommodation space

Q-6 - Cretaceous Faunas, Events and Geology of the Northern Great Artesian Basin

- This is a pre-IGC tour that starts and finishes in Longreach
- Tour is limited to 48 participants
- Tour leader/s: Alex Cook
- Duration: 5 days
- Visit key Cretaceous (Aptian-Late Albian) dinosaur, marine reptile and invertebrate fossil sites in the Northern Eromanga Basin. Visit the Lark Quarry Dinosaur trackways and see specimens of Australovenator, Diamantinasaurus and Kronosaurus. Some collecting is permitted, but fossil experts from Australia need a letter of clearance
- Points of interest: Dinosaur fossils, Qantas Museum, Stockman's Hall of Fame, wildlife, outback hospitality

Q-7 - Plio-Pleistocene Faunas and Chronology of Southeast and Central Queensland

- This is a post-IGC tour that starts and finishes in Brisbane
- Tour is limited to 30 participants
- Tour leader/s: Gilbert Price
- Duration: 5 days
- Rich sites of the Darling Downs continue to provide new data on the late Neogene development of the biota. The unique faunas of the Plio-Pleistocene of southeast Queensland provide valuable insights into the development, diversity and demise of the Australian Megafauna, and the evolution of rainforest faunas during the Pleistocene
- Points of interest: Isla Gorge National Park, local wildlife
Q-8 - Fraser Island - Natural and Geological Beauty on the World’s Largest Sand Island

- This is a pre- or post-IGC tour that starts in Brisbane and finishes in Hervey Bay
- Tour is limited to 30 participants
- Tour leader/s: Mark Reilly
- Duration: 4 days
- Fraser Island is the world’s largest sand island and is a fantastic modern analogue for the formation of sand dominated sedimentary deposits - both onshore and offshore, including at abyssal depths. See parabolic dunes up to 5-km long, economic concentrations of ilmenite, rutile and zircon, perched lakes and coloured sands
- Points of interest: World Heritage Listed Fraser Island, Noosa, “Coloured Sands” lakes, rainforests, surf beaches, land and marine life

Q-9 - Granite Belt (including visits to wineries)

- This is a pre- or post-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 30 participants
- Tour leader/s: Commercial tour operator
- Duration: 2 days
- Only three hours drive from the subtropical city of Brisbane is a very different landscape – the cool, mountainous Granite Belt. This region is home to Bald Mountain (Australia’s “second largest rock monolith”, as well as the large granitic intrusions of The Pyramids, Balancing Rock and Castle Rock. Involves an optional walk for about 5 km through Girraween National Park (some steep gradients). A good level of fitness is required
- Points of interest: Granite Belt scenery, Bald Mountain, Balancing Rock

Q-10 - Cracow-Gympie Gold

- This is a pre- or post-IGC tour that starts and finishes at the Brisbane Convention and Exhibition Centre
- Tour is limited to 30 participants
- Tour leader/s: Mike Erceg and Doug Young
- Duration: 3 days
- The trip visits the historic gold mining town of Gympie, discovered in 1867. Noted for its high-grade collector’s quality nuggety gold in lateral quartz veins. Visit the historic mining areas of Kilkivan and the Esk Trough, a volcanic trough of Permian-Triassic age with examples of porphyry style copper-gold deposits at Booubyjan and Coalstoun. Visit the Cracow epithermal gold mine of low sulphidation style. Visit the Mt Rawdon gold deposit hosted by breccias and altered volcanics related to a dacite intrusive event of late Triassic age
- Points of interest: Cracow, Gympie, Mount Rawdon Mines, southeast Queensland scenery
Q-11 - North Queensland: 1700 million years of Earth History on the Proterozoic-Phanerozoic Margin of Eastern Australia

- This is a post-IGC tour that starts in Cairns and finishes in Townsville
- Tour is limited to 30 participants
- Tour leader/s: Ian Withnall and Bob Henderson
- Duration: 5 days
- Traverse the Silurian to Devonian rocks of the Mossman Orogen in the scenic Cairns hinterland, cross the Tasman Line, a major north-south structure that separates largely Palaeozoic rocks to the east from the Proterozoic rocks of the North Australian Craton. The Palaeoproterozoic to Mesoproterozoic Etheridge Province, the Quaternary lavas at Copperfield Gorge, the world famous Undara Lava Tubes, the voluminous Carboniferous to Permian ignimbrite fields. Visit past and current mining at Chillagoe (gold and base metals) and Georgetown and Charters Towers (gold)
- Points of interest: Tropical rainforest to savannah woodland, wildlife, outback scenery and culture, world-famous Undara Lava Tubes, mining history

NSW-1 - Lake Mungo - Early Man, Regolith, Landform Evolution

- This is a pre- or post-IGC tour that starts and finishes in Sydney
- Tour is limited to 30 participants
- Tour leader/s: Commercial tour operator
- Duration: 4 days
- Scenic Lake Mungo, is in the Willandra Lakes World Heritage Area. The study of the regolith has also revealed a fascinating history of landform evolution and climate change. Initially a freshwater lake, water levels gradually receded and prevailing westerly winds shaped an extensive lunette on its eastern shore, which has since been eroded to form the spectacular “Walls of China”. Aboriginal occupation of the area is believed to extend back at least 40 000 years. Fossils of extinct megafauna have also been found
- Points of interest: Indigenous History, Willandra National Park
**NSW-2 - Lachlan Orogen, World Class Porphyries in the Macquarie Arc**

- This is a post-IGC tour that starts in Brisbane and finishes in Sydney
- Tour is limited to 50 participants
- Tour leader/s: David Cooke, Dick Glen and Cam Quinn
- Duration: 6 days
- The Macquarie Arc has a rich mineral endowment consisting of world-class porphyry copper–gold deposits as well as other deposit styles. Examine the nature and geneses of some key deposits (Cadia, Northparkes, Cowal among others) within the tectonic framework of the evolution and then accretion of the arc. The Macquarie Arc system records ~50 million years of subduction-related development along the boundary between east Gondwana and the palaeo-Pacific plate
- Points of interest: Copper-gold mines, central New South Wales

**NSW-3 - Broken Hill Mines and the New South Wales Proterozoic**

- This is a post-IGC tour that starts and finishes in Broken Hill
- Tour is limited to 20 participants
- Tour leader/s: Ian Plimer
- Duration: 4 days
- The super-giant Broken Hill silver-lead-zinc deposit is hosted by the Palaeoproterozoic Willyama Supergroup. Examine the stratigraphy, mineralisation and regional structure of the Willyama Supergroup and also visit famous mining heritage sites including remnants of the outcropping gossan of the orebody. The Neoproterozoic Adelaidean cover to the Willyama Supergroup
- Points of interest: Broken Hill city and mines, outback New South Wales
NSW-4 - The New England Batholith - Felsic Magmatism and Lithophile Dominated Mineral Systems in a Primitive Continental Marginal Arc

- This is a pre-IGC tour that starts in Sydney and finishes in Brisbane
- Tour is limited to 20 participants
- Tour leader/s: Phillip Blevin and Bruce Chappell
- Duration: 5 days
- Trace the magmatic record present in the granites and volcanics in the New England Orogen and their metallogenesis. The southern New England Orogen contains an extensive record of Carboniferous to Triassic S-, I- and A-type plutonic-volcanic felsic dominated magmatism emplaced in a continental marginal arc setting. The southern portion of the Orogen is characterised by voluminous high-K, highly fractionated granites associated with lithophile dominated Sn, W, Mo, Au, Bi, Zn-Ag-In mineralisation
- Points of interest: New England scenery, mines

NSW-5 - Bega - Murrumbidgee Batholiths Pluton Construction Revealed: Looking Within and Below Batholiths

- This is a post-IGC tour that starts in Canberra and finishes in Sydney
- Tour is limited to 20 participants
- Tour leader/s: Bill Collins and Simon Richards
- Duration: 5 days
- This field trip will focus on two contrasting, classic batholiths in the Lachlan Orogen, the I-type Bega and S-type Murrumbidgee batholith of southeast Australia. Examine incremental growth and differentiation processes in plutons, including depositional features such as load casts, cross-beds, graded beds, collapsed rafts of roof and wall-rocks, magma mixing zones, syn-plutonic composite dykes, mafic enclave swarms in the making, and complex but spectacular migmatites plus a classic metamorphic complex
- Points of interest: Exquisite and rugged coastal and mountainous scenery of the southern New South Wales coast and highlands, passing through Canberra

NSW-6 - A Banquet of New South Wales Geology, Geohistory, Dead Fish and Great Wines!

- This is a post-IGC tour that starts and finishes in Sydney
- Tour is limited to 30 participants
- Tour leader/s: Monica Yeung (Gondwana Dreaming Pty Ltd) and local specialists including Alex Ritchie, Andrew Wooldridge
- Duration: 6 days
- View the geology and geohistory of four distinct regions, the Hunter Valley, the Blue Mountains, the Central West and the Canberra – Wee Jasper areas. See how the region’s geology underpins its ecology, local history, industry, agriculture as well as every other aspect of life in these areas today. Travel into the Paleozoic Lachlan orogen with its extensive copper-gold deposits and famous Late Devonian Canowindra Fish Fossils. Participants can dig for fish fossils at a nearby quarry and enjoy the prizewinning wines of this region
- Points of interest: Hunter Valley, Blue Mountains, fish fossils, mines, wines, and Canberra
NSW-7 - Oroclinal Bending in the Southern New England Orogen

- This is a post-IGC tour that starts in Brisbane and finishes in Sydney
- Tour is limited to 25 participants
- Tour leader/s: Gideon Rosenbaum
- Duration: 5 days
- The southern New England belt, in the area between Brisbane and Sydney, is a Late Palaeozoic to Early Mesozoic subduction-related orogen. The field trip will explore the tectono-magmatic evolution of the orogen and the development of a series of tight oroclines. See the different components of the bent orogen and make observations on the multiple episodes of magmatism and deformation
- Points of interest: Spectacular coastal and mountainous scenery, fascinating geology, world-class wineries

V-1 - Factors Influencing Volcanic Eruption Styles, in the Intraplate, Basaltic, Late Cainozoic Newer Volcanics Province, Victoria and South Australia

- This is a pre-IGC tour that starts and finishes in Melbourne
- Tour is limited to 40 participants
- Tour leader/s: Ray Cas
- Duration: 5 days
- The Newer Volcanics Province is the youngest and arguably the only still active volcanic province in Australia. It last erupted 4,500 years ago and preserves some 400 eruption centres and lava flow plains, including some of the most spectacular maars worldwide. Visit some of the best preserved volcanoes and volcanic successions in the province, en route to Mt Gambier in South Australia, the youngest volcano in Australia. Return via the Great Ocean Road and to visit a Tertiary surtseyan volcanic succession
- Points of interest: Great volcanology, great scenery, some great Australian wines, and the opportunity to see different native animals
V-2 - Central Victorian Historical Gold Mines and Recent Wines

- This is a post-IGC tour that starts and finishes in Melbourne
- Tour is limited to 20 participants
- Tour leader/s: Adele Seymour
- Duration: 5 days
- The central Victorian region is one of the classic orogenic gold provinces of the world. The 19th century gold boom left an indelible economic legacy on the Australian economy, the results of which can be seen in the many beautiful and historic towns and cities. Trace the Palaeozoic evolution of the region, with an overview of the structure, mineralogy and alteration products of gold mineralisation through visits to road cuttings, historic workings and underground mines in the Bendigo region
- Points of interest: Eureka Stockade show, Bendigo mines, and wines

V-3 - Otway Basin Carbon Capture and Storage

- This is a post-IGC tour that starts and finishes in Melbourne
- Tour is limited to 15 participants
- Tour leader/s: Rob Langford and Peter Tingate
- Duration: 4 days
- Investigate the carbon capture and storage activity and research in the Otway Basin. View the energy and environmental aspects of the region including the carbon capture and storage facility at Port Campbell, methane storage, gas processing, CO2 production at Boggy Creek, as well as geothermal and wind operations. Drive along the scenic coastal Great Ocean Road and pass through the Pliocene-Pleistocene volcanoes in the Kanawinka Global Geopark
- Points of interest: Great Ocean Road, Kanawinka Global Geopark

V-4 - The Brown Coal Mines of Gippsland

- This is a post-IGC tour that starts and finishes in Melbourne
- Tour is limited to 20 participants
- Tour leader/s: Boyd B. Dent
- Duration: 5 days
- The massive brown coal deposits of the Latrobe Valley (Gippsland Region, Victoria) are mined for just-in-time supply of base load power for the state. The 3 mines excavate seams up to 130 m thick. The lignite lithotypes and degree of coalification have sufficiently affected properties of the various seams that the boilers of each power station are atuned differently to the local fuel feeds
- Points of interest: Yallourn, Hazelwood/Morwell, Loy Yang Mines; immersion in an industrial-rural landscape; historic Walhalla Gold Mine and town; superb natural timber and scenic landscapes
T-1 - North Coast Tectonic and Sedimentary Sequences

- This is a post-IGC tour that starts and finishes in Launceston
- Tour is limited to 20 participants
- Tour leader/s: Ron Berry and Stuart Bull
- Duration: 5 days
- The trip provides an overview of the late Proterozoic to late Palaeozoic geology of Western Tasmania Terrane. There are Late Proterozoic shallow water sedimentary rocks, Middle Cambrian ophiolite obduction, middle Cambrian volcanic and sedimentary sequences. To the east a deep water clastic sequence forms the East Tasmania Terrane and this transition is exposed in northern Tasmania
- Points of interest: Cave Tour (Ordovician limestone) and a winery visit in the Tamar River region. Spectacular coastal, highland and forest scenery

T-2 - Ore Deposits of Tasmania

- This is a post-IGC tour that starts in Brisbane and finishes in Hobart
- Tour is limited to 24 participants
- Tour leader/s: Geoffrey Green
- Duration: 5 days
- Visit the highly mineralized and scenic Cambrian Mt Read Volcanics which host the Mt Lyell copper deposits, the Rosebery, Hercules and Hellyer Pb/Zn/Cu/Au deposits, and the Henty gold deposit. See the Renison and Mt Bischoff tin deposits, the new Avebury Nickel mine, and the Savage River magnetite deposits
- Points of interest: Spectacular mountain and forest scenery, abundant and unusual wildlife, and a colourful mining-related history, Cradle Mountain National Park

S-1 - Insights into the Archaean and Proterozoic Geology of the Gawler Craton: a Field Trip through the Southern Gawler Craton

- This is a pre-IGC tour that starts in Adelaide and finishes at Ceduna (on the west coast of Eyre Peninsula). Participants will have the option of flying back to Adelaide from Ceduna or returning via road. The journey back to Adelaide will take 8 hours and will be a whole day
- Tour is limited to 16 participants.
- Tour leader/s: Martin Hand and Anthony Reid
- Duration: 7 days
- Early Mesoproterozoic mineralisation in the eastern Gawler Craton encompasses an IOCG–U province and a Au-dominated province. Investigate lithological, structural, metamorphic and metallogenic features covering a c. 1600 million year history of the Gawler Craton across the beautiful Yorke and Eyre Peninsulas of South Australia
- Points of interest: Spectacular coastal outcrops, semi-arid grazing lands and wheat-sheep farming country
S-2 - Arkaroola - Flinders Ranges - Astrobiology and Planetary Geology

- This is a pre- or post-IGC tour that starts and finishes in Adelaide
- Tour is limited to 20 participants
- Tour leader/s: Matilda Thomas, Jonathan Clarke, Malcolm Walter and/or Vic Gostin
- Duration: 6 days
- The spectacular Mt Painter Inlier is host to some of the oldest rocks in Australia and some of the earliest signs of life. Visit a range of interesting planetary/geology sites as: Piche Rich Gorge, Bunyeroo Gorge, the Brachina Gorge, Paralana radioactive hot springs, stromatolite occurrences, the Mt Gee fossil hydrothermal system, Mt Fitton talc occurrence, stony deserts, sand dunes
- Points of interest: Spectacular Mount Painter topography, stony deserts, sand dunes, springs and gorges.

S-3 - Uranium Geology of South Australia

- This is a pre- or post-IGC tour that starts and finishes in Adelaide
- Tour is limited to 12 participants (which includes two trip leaders)
- Tour leader/s: Martin Fairclough and Steve Hore
- Duration: 3 days
- This trip will be a transect through the ages of a uranium-rich mineral system originating in the earliest Mesoproterozoic of South Australia. The field trip will examine various uranium-mineralised areas in the context of Mineral Systems, and the relationship between each type. See various breccia-hosted, iron oxide-copper-gold and sediment hosted systems in a sequence from older to younger to illustrate (re)mobilisation of metal. The importance of structural controls, even on younger systems, will be demonstrated
- Points of interest: Gawler and Curnamona provinces, charter flights over vast areas of South Australia

S-4 - Ediacaran-Cambrian of South Australia

- This is a pre-IGC tour that starts and finishes in Adelaide
- Tour is limited to 25 participants
- Tour leader/s: Jim Gehling, Jim Jago, John Paterson, Glen Brock, Elinor Alexander, David McKirdy and Guy Narbonne
- Duration: 7 days
- Examine the oldest preserved multicellular organisms in the Ediacaran of the Flinders Ranges, as well as some of the spectacular Cambrian biodiversity of South Australia. Visit the fossiliferous carbonate successions at Ajax Mine and Mt Scott Range, plus a visit to the lower Cambrian Emu Bay Shale Lagerstätte on Kangaroo Island, which preserves a diverse marine biota including soft-bodied animals
- Points of interest: Spectacular scenery, wildlife and geology
NT-1 - Geology of Uluru - Alice Springs Region, Ayers Rock, Meteorite Crater

- This is a post-IGC tour that starts and finishes in Alice Springs
- Tour is limited to 20 participants
- Tour leader/s: Christine Edgoose
- Duration: 5 days
- Traverse through the entire Amadeus Basin sequence, including Neoproterozoic carbonates and glacials and Devonian foreland basin deposits. See the complex structural interaction between basement and cover in Ormiston Gorge and producing gas fields at Mereenie or Palm Valley. Visit Gosses Bluff, which forms the exposed remnants of the central uplift of a Cretaceous comet impact, Kings Canyon, which will combine spectacular scenery and geomorphology with an opportunity to view well-exposed Ordovician fluvial and marine deposits. The trip will end at the iconic Uluru and Kata-Tjuta (Ayers Rock and the Olgas) which preserve arkoses and conglomerates that were deposited in a deep foreland basin during the late Neoproterozoic to Cambrian
- Points of interest: Uluru, Kings Canyon, indigenous culture, wildlife

NT-2 - Geology of Kakadu-Litchfield, Aboriginal Culture

- This is a pre- or post-IGC tour that starts and finishes in Darwin
- Tour is limited to 20 participants
- Tour leader/s: Andrew Wygralak and Julie Hollis
- Duration: 6 days
- This trip combines the world heritage wetlands, scenery and indigenous culture of Kakadu National Park with an opportunity to visit one of Australia’s premier Palaeoproterozoic mineral fields. View the geology and mineral deposits of the Pine Creek Orogen, the Ranger unconformity-related uranium mine in Kakadu, the historical Rum Jungle uranium and polymetallic mineral field and the Pine Creek goldfield. See the Palaeoproterozoic geology and tectonic evolution of the Pine Creek Orogen, including Archean basement
- Points of interest: Kakadu National Park, wetlands, indigenous culture, aboriginal art

WA-1 - Yilgarn Craton: Geological Setting of Gold and Nickel Deposits in the Eastern Goldfields

- This is a post-IGC tour that starts and finishes in Kalgoorlie
- Tour is limited to 20 participants
- Tour leader/s: Stephen Wyche
- Duration: 5 days
- The Eastern Goldfields Superterrane of the Yilgarn Craton hosts world-class gold and komatiite-hosted nickel deposits within classic Neoarchean granite-greenstones. See the historic gold mining town of Kalgoorlie. Visit major mines and examine their geological setting. The Yilgarn is covered by a thick regolith blanket that includes salt lakes defining a vast palaeodrainage system, transported material, extensive laterite hosting huge nickel resources, and deeply weathered in-situ rock
- Points of interest: Kalgoorlie, Super Pit, Western Australia outback and wildlife
WA-2 - A Billion Years of Earth History: a Geological Transect through the Pilbara Craton and the Mount Bruce Supergroup

- This is a pre-IGC tour that starts and finishes in Perth
- Tour is limited to 17 participants
- Tour leader/s: Arthur Hickman and Martin Van Kranendonk
- Duration: 6-7 days
- The world’s best preserved early Archean rocks and the oldest fossils occur east Pilbara granite-greenstones which contain significant mineral deposits that include iron ore, gold, base metals, tin, tantalum, and barite. Sections illustrate the development of Earth’s crust between 3520 and 3420 Ma. The North Pole 3500-3420 Ma stromatolites provide our best evidence for Earth’s earliest life and the ancient environments. Examine late Archean to early Proterozoic Fortescue and Hamersley Basins which host the huge Pilbara iron ore mines
- Points of interest: Pilbara Craton, Marble Bar, Fortescue and Hamersley Basins, Meteorite impact crater

WA-3 - Geology of the Kimberley. Paleoproterozoic Tectonics and Mineralization, Neoproterozoic Glaciations, Devonian Barrier Reef

- This is a pre-IGC tour that starts and finishes in Broome
- Tour is limited to 24 participants (including trip leaders). Not suitable for children
- Tour leader/s: Ian Tyler, Roger Hocking and Peter Haines
- Duration: 8 days
- Cross the Kimberley Plateau to Kununurra and to Halls Creek, the scene of Western Australia’s first gold rush. See the Palaeoproterozoic granites, gabbros and metamorphic rocks, and overlying sandstones. Visit Neoproterozoic glacial deposits, the Devonian barrier reef complex at Windjana Gorge and the sandstone karst landscapes of the Bungle Bungle Range. Mineralization includes diamonds, Argyle, iron ore, Ni-Cr-PGE, Cu-Zn VHMS deposits and gold, Zn-Pb MVT deposits, and hydrocarbons in the Canning Basin
- Points of interest: Unique plants and wildlife, aboriginal history and culture, spectacular scenery

NZ-1 - North Island: Active Volcanism, Neotectonics, Geothermal Activity

- This is a post-IGC tour that starts and finishes in Auckland
- Tour is limited to 20 participants
- Tour leader/s: Hamish Campbell, Tony Christie and Alex Malahoff
- Duration: 6 days
- Examine the Taupo Volcanic Zone (TVZ) of the central North Island. Visit White Island, New Zealand’s most active volcano. Other highlights will be the Newmont Martha epithermal gold mine in Waihi, the Wairakei Geothermal Field near Taupo, Lake Taupo occupying the Taupo Caldera, New Zealand’s “super volcano”; geothermal hotsprings at Waimangu and Wai-O-Tapu near Rotorua; Ruapehu, Ngauruhoe and Tongariro volcanoes; tectonic deformation and basement geology and geological history of New Zealand
- Points of interest: Whakatane, White Island, Taupo, Wellington, Te Papa (National Museum), GNS Science
NZ-2 - North Island - Auckland Volcanic Field

- This is a pre-IGC tour that starts and finishes in Auckland
- Tour is limited to 20 participants
- Tour leader/s: Jan Lindsay
- Duration: 1 day
- Auckland is built on an active volcanic field comprising about 50 basaltic cones and maars, the youngest of which is only 600 years old. Visit the Auckland War Memorial Museum’s newly built volcano exhibit for an overview of the geological, economic, and social situation. Tour some of the most prominent cones. The tour would end with a visit to the city’s and region’s Civil Defence and Emergency Management services
- Points of interest: Auckland Museum, Auckland City of Volcanoes

NZ-3 - Pliocene to Miocene Shelf to Basin Floor Sequences of Wanganui and Taranaki Basins, New Zealand

- This is a post-IGC tour that starts and finishes in Auckland
- Tour is limited to 30 participants
- Tour leader/s: Greg Browne, Peter King, Malcolm Arnot and Kyle Bland
- Duration: 4 Days
- Examine all aspects of Taranaki oil and gas exploration and production: Cretaceous-Cenozoic stratigraphy, sedimentology, structure, source rocks, reservoir rocks, cap rocks. The major source of hydrocarbons (oil and gas) is coal of Late Cretaceous to Eocene age. The Wanganui Basin demonstrates Plio-Pleistocene integrated stratigraphy, and a superb marine Pleistocene record
- Points of interest: Waitomo Caves, New Plymouth, Mount Taranaki, Wanganui, Wellington, Te Papa (National Museum), GNS Science

NZ-4 - South Island: Plate Boundary Structure, Alpine Fault, Glaciation

- This is a post-IGC tour that starts and finishes in Auckland
- Tour is limited to 20 participants
- Tour leader/s: Rupert Sutherland and Virginia Toy
- Duration: 5 Days
- The Alpine Fault moves approximately 8 m in magnitude 8 earthquakes every 200-400 years and accommodates nearly three quarters of the 39 mm/yr plate motion through South Island. Oblique strike-slip deformation has uplifted the Southern Alps, offset glacial and fluvial landforms, and exhumed a classic section of fault rocks (cataclasites and mylonites) from up to 35 km depth. See the geomorphic expression of the Alpine Fault, the geological setting and fault rocks, and visit proposed sites for scientific drilling
- Points of interest: Southern Alps, Mt Cook, West Coast, Hokitika, Fox Glacier, Franz Josef Glacier
NZ-5 - South Island: Cretaceous-Cenozoic Climates and Biota

- This is a post-IGC tour that starts and finishes in Auckland
- Tour is limited to 30 participants
- Tour leader/s: Chris Hollis, James Crampton and Ian Raine
- Duration: 6 Days
- This excursion will explore Late Cretaceous – Paleogene sedimentary sequences of Zealandia. Visit localities in the picturesque northern South Island within the West Coast, Canterbury and East Coast Basins. These sequences represent a unique non-marine to deep-marine transect across a mid-latitude Southwest Pacific continental margin. They are an exceptional record of the regional response to global biotic and climatic events, including the Cretaceous-Paleogene boundary mass extinction, the Paleocene-Eocene thermal maximum, and other Paleogene climatic and oceanographic events
- Points of interest: Fantastic alpine and west coast scenery and forests

MY-1 - Lankawi Geopark, Malaysia

- This is a pre-, post- or during IGC tour that starts and finishes at Langkawi Airport or Hotel housing participants
- Tour is limited to 38 participants
- Tour leader/s: Lee Chai Peng
- Duration: 4 days
- This field trip is designed to appeal to delegates passing through southeast Asia. Langkawi that has been declared a member of the UNESCO global Network of National Geoparks in June 2007. There are over 90 interesting geosites in the 99 islands within the geopark. The Palaeozoic sequence includes the Cambro-ordovician shallow marine clastic Machinchang Formation accessible by cable car, fossiliferous limestones of the Ordovician-Silurian Gondwana-derived glacial-marine pebbly mudstones of the Carboniferous-Permian and Permian Limestone with some intruded by Triassic and Cretaceous granites
- Points of interest: Spectacular island karst, beautiful beaches with interesting geomorphological features, tropical jungle and friendly villagers with lots of interesting local legends

- This is a pre-IGC tour that starts and finishes in Brisbane
- Tour is limited to 15 participants
- Tour leader/s: Dominique Cluzel and Pierre Maurizot
- Duration: 6 days (8 days including air travel)
- See an integrated view of the subduction/obduction system and subsequent supergene evolution that led to the formation of the nickel ores of New Caledonia. Visit the blueschist-eclogite belt of northern New Caledonia to see the tectonic relationships between subducted and exhumed mélangé with foreland basins and ophiolite. Visit an operating nickel mine with ultramafic protoliths and tropical oxidised soils which host the nickel ore and the famous garnierite crack seals
- Points of interest: Amedee lighthouse, Isle of Pines, World Heritage Lagoon, coral reefs, nickel mine

PNG-1 - Rabaul Caldera - Historical and Prehistorical Volcanism

- This is a post-IGC tour that starts and finishes in Rabaul, Papua New Guinea
- Tour is limited to 14 participants
- Tour leader/s: Herman Patia, Steve Saunders and Ima Itikarai
- Duration: 2 days
- Rabaul Caldera is one of 15 active volcanoes in Papua New Guinea. Rabaul Town is located within this active caldera complex, which measures 14km N-S and about 9km S-W. During the latest caldera-forming eruption about 1,400 years ago much of the southeastern part of the volcano was removed, forming the deepwater Simpson Harbour. In Rabaul Town there is ongoing vulcanian-type activity
- Points of interest: Rabaul volcano, harbour, township

PNG-2 - Port Moresby - Popondetta - Kokoda - Madang - Accretionary Prism Subduction Complex and Ophiolites

- This is a post-IGC tour that starts and finishes in Port Moresby, Papua New Guinea
- Tour is limited to 12 participants
- Tour leader/s: Hugh Davies, Russell Perembo and Leo Jonda
- Duration: 6 days
- Visit a road exposure of a thrust-faulted sequence of Paleocene and Eocene deep marine fine siliciclastic sediments, interpreted as a Late Eocene or Early Oligocene accretionary complex. Further west the complex is juxtaposed with accreted Oligo-Miocene slope sediments. Examine exposures of PUB ophiolite and Owen Stanley Metamorphics along the Popondetta-Kokoda road. These rocks record a Paleocene (58 Ma) arc-continent collision. Visit the Ramu NiCo Mine
- Points of interest: Great mountain scenery, colourful cultural events and opportunities to visit some of the historic sites of the World War 2 Kokoda campaign
Exhibition and Sponsorship Opportunities

The 34th IGC provides an ideal opportunity for industry, corporations, research organisations, geosurveys, professional societies, scientific publishers, government agencies and others to engage with the global geoscience community. A range of sponsorship and exhibition opportunities, to suit varying needs and budgets, have been designed to facilitate access to this major event.

The GeoExpo will be held during the 34th IGC and will be a focal point of interest for all delegates. GeoExpo will be conveniently located in Exhibition Halls 1 and 2 at the Brisbane Convention and Exhibition Centre, immediately adjacent to the auditoria and meeting rooms that will house all 34th IGC sessions.

**GeoExpo space is now available – book early**

A detailed Exhibition Opportunities proposal is now available and can be downloaded at [www.34igc.org](http://www.34igc.org) – select the “GeoExpo” option.

GeoExpo and Sponsorship enquires:

Kristie Zoller  
GeoExpo and Sponsorship Coordinator  
Email: Kristie@ccm.com.au  
Tel: +61 7 3368 2644  
Fax: +61 7 3369 3731

**Sponsor Opportunities**

A variety of excellent sponsorship opportunities are available at the 34th IGC. These are detailed in the Sponsorship Prospectus which is available by contacting Kristie@ccm.com.au
General Information

34th IGC Contact Details

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Please visit the site and join the mailing list to ensure you receive notice of updates to the site.

The 34th IGC office is available to assist you with all congress enquiries:
General enquiries...........................................info@34igc.org
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AUSTRALIA

Visas to enter Australia

International delegates please note - You will need a visa to enter Australia and it must be obtained before you travel. We recommend that you apply not less than six (6) weeks prior to your departure date.

Delegates from all countries will need to apply for and obtain a visa to enter Australia. The only exceptions are citizens of Australia and New Zealand travelling on passports issued by these countries.

Delegates from some countries will need an official letter of invitation and/or confirmation of congress registration to be provided with their visa application. These letters can only be provided after clearance of registration fee payment.

The visa application process differs depending on your country of residence and the location of the nearest Australian embassy, consulate or high commission. For citizens of some countries, applying for an Australian visa is a simple and quick on-line process. In other cases, application forms and an interview may be involved. Please visit the Australian Government’s Department of Immigration website at the address shown below – there you will find detailed information on the visa application process applicable to you.

Travelling to Australia

Travelling to Brisbane, Australia, is easy with regular direct air services from many international locations. Once you are in Australia, an efficient network of air services can take you to any one of Australia’s many fascinating visitor destinations. The Great Barrier Reef, the fabled outback and the cosmopolitan cities of Sydney and Melbourne are all within two hours or less flying time from Brisbane. The famous Gold Coast and Sunshine Coast resort areas, which feature some of the world’s finest surf beaches, are just one hour by road from the centre of Brisbane.

Take advantage of your participation at the 34th IGC to see and experience Australia.

For further information can be found at www.34igc.org – select the “Travelling to Australia” option.

We also suggest that you visit the vast www.australia.com website, Australia’s official tourism website.
Brisbane – Host City for the 34th IGC

As Australia’s new world city, Brisbane is rapidly emerging as a diverse, sustainable global city, a leading destination for business and investment, conventions, tourism, shopping, art and culture, major events and international education.

A vibrant centre of innovation and enterprise, Brisbane is renowned for its relaxed lifestyle and subtropical climate so it’s no wonder it is home to the busiest airport in Queensland and has the second highest number of international arrivals in Australia.

As both a popular tourist destination and gateway, Brisbane offers a wide range of holiday attractions, events and cultural activities, world-class exhibitions and an emerging live music scene with the natural splendour of Moreton Bay and Islands and the beautiful Scenic Rim and Country Valley on its doorstep.

The capital city and economic engine room of Queensland, Brisbane’s $104 billion economy is driven by a strong service industry sector and the nation’s largest infrastructure program.

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For further information on Brisbane, please visit www.visitbrisbane.com
The 34th IGC is supported by the member societies of the Australian Geoscience Council.