Chair (SA Division)
Prof Alan Collins
Email: alan.collins@adelaide.edu.au

SOUTH AUSTRALIAN GEOLOGIST

Newsletter of the
Geological Society of Australia
(South Australia Division)

July 2023

http://bit.ly/GSA_SA_Division

GSA SA Division Annual Dinner

Thursday, 27th July 2023, 6:30 pm

The Elephant British Pub

1 Cinema Place, Adelaide

Please register here via Eventbrite

News & Announcements

GSA SA Division Annual Dinner at the Elephant British Pub

Thursday 27th July 2023, 6:30 pm, 1 Cinema Place, Adelaide

Please join us this July for our Annual Dinner and the presentations of the Bruce Webb and Walter Howchin medals at the Elephant British Pub in the Adelaide CBD.

We will have this year something a little different. Instead of a formal technical talk we will be given some anecdotal 'Fieldwork Tales' from our members Graziela Miot da Silva, Diego Garcia-Bellido and Laura Morrissey. See some of the amazing places we get to work as a geologist. It will be a fantastic night and great way to catch up with other like-minded people.

For any enquires please email Adrienne Brotodewo (Adrienne.brotodewo@unisa.edu.au)

We also plan to have field photos to be shown as a continuous slide presentation during the evening. So please send Adrienne some of your amazing and funny field photos.

Ticket prices:

Retired/Students: AU$ 45

Members: AU$ 50

Non-Members: AU$ 55

Ticket sales end on 25th July 2023

Please order your tickets here via Eventbrite

Impressions from our Winter GeoFamily Picnic in Bonython Park

On Saturday morning the 17th of June several couples met with their kids and furry family members at the Nature Playspace in Bonython Park for the Winter GeoFamily Picnic of the GSA SA Division. Although the weather forecast wasn't really favourable, we got very lucky as the weather stayed dry apart from a few raindrops now and then. It was lovely to catch up with friends and colleagues and their partners. We shared some nice food and the hot coffee from the kiosk kept us comfortably warm.

GSA Specialist Group in Economic Geology 'Facets of Exploration' Webinar

Specialist Group in Economic Geology
Geological Society of Australia

The GSA Specialist Group in Economic Geology invites you to attend the next Facets of Exploration Webinar on **Wednesday, 12th July 2023**. Time: 1.30 pm - 2.30 pm (ACST: SA)

Speaker is **Carl Spandler** (University of Adelaide), who will be presenting the talk '**Rare Earth Element potential of phosphorites of the Georgina Basin**'.

Carl Spandler is an Associate Professor and Director of the Australian Critical Minerals Research Centre at the University of Adelaide. He uses petrology and geochemistry to research the evolution of the Earth's crust and mantle, and the formation of metalliferous ore deposits. His areas of expertise include microanalysis of trace elements and isotopes in minerals within their context in rock formations. His current research focuses on understanding how and where ore deposits of critical metals, such as the rare earth elements, are formed in the Australian continent to better assist exploration efforts to discover new orebodies.

Abstract: Rare Earth elements (REE) are key ingredients for a range of technologies that are needed for the global renewable energy transition. Rapidly increasing demand is driving efforts to find alternative sources of these critical metals, including in non-traditional sources, such as surficial clay deposits, deep sea sediments and mine wastes. In this talk I will present phosphate-rich sedimentary rocks as another potential source of REE. The presentation will focus on recent characterisation work on phosphorites of the Georgina Basin of northern Australia; rocks that were initially regarded to be unprospective for REE but turn out to have among the highest REE contents of any phosphorites globally.

Please register here via Eventbrite.

Following registration, you will be sent a link to attend Facets of Exploration on Zoom. GSA Members attend for free and non-members can register for just $10.00.

Recordings of past Facets of Exploration webinars can be found here.

Playford Trust Resources Sector University Scholarships awarded

Playford Trust

Providing Prestigious Scholarships for High-Achieving South Australians

The Playford Trust Annual Resources Sector Scholarship Awards Night was recently held on June the 22nd. Among the award recipients were also our GSA SA Division student members **Bronwen Lee** and **Jake Jolly**. The Playford Trust scholarships and awards helps students make the most of their studies to achieve their potential and contribute to South Australia's knowledge, skills and research base. These students are some of the people who will help South Australia develop its resources and lead the energy transition! Thirteen students studying a range of STEM courses at the University of Adelaide and Flinders University received financial support provided by the SA Government, Cooper Energy, Iluka Resources, Oz Minerals, Rex Minerals and Santos. As the Trust's Chair, the Hon Dr Diana Laidlaw AM, said in her opening remarks at the event: "This is an exciting time to be involved in resources and energy in Australia, and the Playford Trust, together with our partners, are pleased to have the opportunity to help advance your studies in this sector, and kickstart your careers."

From left to right: Jake Jolly, Katherina Mazai-Ward, Bronwen Lee, Holly Cooke, Kate Wilson (Photo courtesy of Prof Allan Collins).

Geoscience Pathways Project Update June 2023

Geoscience Pathways Project

Payment of $50 000 sponsorship from BHP has finally been received, and as a result, at the committee meeting on May 30th it was agreed that the paid time of our Geoscience Outreach Officer Kelly Sharrad will be increased from (0.2) one day per week to (0.4) two days per week, to take effect from the week beginning on 5th June. Otherwise, work has continued as described in previous education reports. For detail see the recent Newsletter linked from front page of the GPP Website: www.geosciencepathways.org.au

GSA SA Division Sponsorship

The GPP will shortly be issuing invoices for sponsorship in 2023-2024. The SA Division of the GSA has been a major sponsor of the GPP over many years. At the recent meeting the GPP committee asked that the GSA consider and advise which of the following alternatives would be preferred:

(1) $5000 (or $10 000) per year over the next two-three years

(2) $1500 prize money for a 2023 GPP Student Video competition

(3) A GSA prize (trophy) for the top year 12 EES student (SACE result) each year

(4) All three of the above

Kelly's Update (Geoscience Outreach Officer)

My work during the recent period has included:

- Contacting target schools and low priority schools to support EES for 2024 and 2025
- Supporting current EES teachers
- Networking opportunities within industry
- Further development of career pathways poster and other resources

Plans for the next month include:

- Continue to contact low priority schools so all schools have been contacted this year
- Working with schools who are offering 11EES ad 12EES for the first time in 2024
- Preparing for CONASTA

Amanda's Update (Secretary/Treasurer/Webmaster)

The GPP ABN has been created and awaiting final account details, starting a not-for-profit account has lots of extra steps due to recent banking legislation changes. From mid-June, hoping to be fully up and running with invoices to sponsors ready to go out and the ability to pay invoices that are due. It has been a mammoth effort to get this all worked out but this will help shape and improve the future of the GPP.

Website/Marketing - Has all been updated with sponsors for the year and also updated some industry and tertiary study information.

Newsletter - will be going out in week 8 to our approximately 200 contacts.

Important Upcoming Events

CONASTA 70: The premium national conference of Australian Science Teachers 9-12th July at University of Adelaide. Kelly will be presenting a workshop and also a GPP booth.

SCIENCE ALIVE: The GPP will share a booth with DEM at this popular annual event for Science teachers and science students, to be held at the Adelaide Show Grounds on 5th and 6th August.

Len Altman, Chairperson, Geoscience Pathways Project

Geotourism – Geoheritage – Geotrails Update

Old and new members of the 3Gs group gathered for a first post-AGM meeting on the 22nd June 2023. Present were Margaret Beal, Colin Conor, Patrick James, Ian Lewis, Jarred Lloyd, Alex Ross, Mario Werner and SA Division chair Alan Collins. We had apologies from Carmen Krapf and David Grybowski. The meeting started with a personal introduction of each member and their main field of interest and current activities followed by discussions about potential future projects and visions how to best promote geoscience.

Marg, whose main interest lies in the Flinders Ranges but also worked on trails in the Barossa Valley, is currently working with Colin on transferring some of the geological information contained in the Magpie Creek Geological Trail to the mobile app of the Walking Trail Support Group. Colin is also collaborating with Pat on a geotrail for the Yorke Peninsula.

Pat's main activity is geotourism, presenting his work at many conferences around the world. On his recent travels he studied a variety of geotourism projects, including geoparks in Europe, Africa and SE Asia. He has close links with the National Geotourism Strategy (NGS) Working Groups of the Australian Geoscience Council (AGC). The NGS Newsletters can be found on the AGC webpage. Pat and Ian are also founding board members of the Australian Geoparks Network (AGN) and some useful background can be found via these links:

https://australiangeoparksnetwork.org/ & https://www.facebook.com/geoparkswa/

Pat has offered to convene and coordinate a GSA SA Division Geotourism Working Group (GWG). Please let Pat know if you are interested to be involved in this activity and he will be happy to contact you with further details. He also suggested to seek interest from possible organisations, such as other local/SA AGC member groups (AIG, PESA, AUSIMM etc), regional councils and landscape boards, the tourism and education sectors, museum(s), RGGSA etc. Alex, who is the current field trip coordinator of PESA's SA Branch, has already expressed his eagerness to collaborate with Pat on geotourism and the promotion of geoscience.

Carmen, Jarred, Ian and Mario will continue to take care of geoheritage enquiries from industry, academia and government organisations. Ian is continuing to be the contact person for State Heritage within DEW and Mario will continue to maintain DEM's geoheritage database. Information about SA's geoheritage can be found on the GSA website and on SARIG (under Geology – Geological Monuments). Jarred will take on the role of communication manager for the 3Gs group and will organise and coordinate future meetings. Alan mentioned the ability and willingness of the GSA SA Division to financially support geotourism and geoheritage activities.

Monthly Geoscience Adventure: Kiekebusch Road Reserve Gulfview Heights

With me living in Semaphore, the Golden Grove area is a bit of a favorite of mine if I'm in the mood for a walk in some hilly terrain. Instead of following the well-trodden paths within Cobbler Creek Recreation Park, the little know close by **Kiekebusch Road Reserve** caught my eye for some time. So a couple of weeks ago I did a dash over there for a quick late afternoon reconnaissance tour with my furry mate Louis. Resting on a broad escarpment and right by Gulfview Heights Primary School, Kiekebusch Road Reserve boasts expansive areas of lovingly restored recreational parkland with varied hiking trails, many suitable for dog walkers, challenging mountain biking routes and iconic views of Adelaide. Behind the school, you can take a gentle walk around the boardwalk trail that connects to the northern part of the park through dappled sunlit native gum, wattle trees and other native plants. Along the trails and looking to the north, you will come across the sharply cut sides of the old neighbouring quarry that creates a long wall of rock along the eastern trail. At the top of the reserve, you'll have views of Adelaide City to the south and Parafield Airport to the west where you'll be able to see planes take off and land. This can be a particularly relaxing experience in the darker hours where the twinkling night lights give the views a magical quality.

Within the reserve you will find old quarry walls that expose sections of the Neoproterozoic **Stonyfell Quartzite** of the Adelaidean Burra Group. This rock is still actively mined in the large Boral quarry just to the north. The Stonyfell Quartzite consists here of massive quartzite intervals that alternate with more fissile and schistose silty sandstone sections. One exposure shows a gentle anticlinal fold. Spectacular is also one exposure where the Stonyfell Quartzite is unconformably overlain by very coarse-grained Cenozoic sediments characterised by very large well-rounded quartzite boulders at the base of a paleochannel followed upwards by angular quartzite clasts.

GSA SA Division Scholarships

The Geological Society of Australia's South Australian Division Scholarship offers bursaries for students and GSA members (including retired and full members) to assist in funding their attendance at conferences and independent research projects (analytical work, field guides, etc). A bursary of up to $500 for conferences and up to $2,500 for specialised projects will be available annually (multiple scholarships may be available subject to finances).

Consideration for the scholarship will be given based on the following responses:

- Provide an outline on what the scholarship will be used for (max 500 words).
- Provide a detailed budget (max 300 words).
- Be willing to acknowledge the GSA in any publications/presentations funded by this scholarship and be willing to present at a GSA event or produce a TAG article.

Applications will be assessed by the awards committee four times a year.

Upcoming dates are: 1st September 2023 and 1st December 2023. Please return your application to Adrienne Brotodewo (Secretary).

South Australian Geoscience Student Group Sponsorship

South Australian University Earth and Environmental Science-focused student groups can apply for GSA SA Division support for activities, excursions and events (up to $500). All that is required is filling out an application form, provide a budget and commit to writing a short article for GSA's quarterly magazine, The Australian Geologist (TAG). Please contact **Morgan Blades** for more information and an application form.

Please renew your GSA Membership

It is time to renew your GSA membership for 2023. We hope you enjoy the Division and Specialist group events in the year ahead, plus new research published in AJES and Alcheringa, and news features in TAG.

To renew your membership via the GSA website - please go to: www.gsa.org.au

- Click 'Sign In' at the top of the homepage;
- Enter your username and password;
- Click on your name at the top of the homepage;
- Click the orange 'Renew Now' button.

You can also renew over the **phone** by calling 02 9290 2194 (Monday-Thursday) or via **Electronic Funds Transfers** (make sure to quote your name and/or member no.).
Account Name: Geological Society of Australia Inc.
(BSB: 082067 Account Number: 52-507-4491)

After renewing your GSA membership, you'll continue to stay connected with our geoscience community and receive your member benefits, including TAG, AJES/Alcheringa, geoscience emails, and more.

If you haven't received your renewal notice or wish to change an aspect of your membership, please email membership@gsa.org.au or phone 02 9290 2194.
Lapsed members can also reactivate their membership for 2023.

We thank you for your ongoing support of the GSA, and hope you gain new skills, knowledge and fulfilment with your membership.

New Members

Brian Choo (Flinders University)

Call for News Items

The next issue of The South Australian Geologist will be published in early August 2023. If you have any news items that you would like to contribute to the next newsletter, please send them to Mario Werner by Friday 28th July 2023.

Cover to Core: Newsletter of the Geological Survey of South Australia

Recently, the Geological Survey of South Australia (GSSA) started to distribute an online newsletter. It contains project updates, introduces individual teams, lists new publications and data releases, contains a link to the latest MESA Journal volume, and promotes varies events and presentations in which GSSA staff is involved.

Have a look at the recent edition here. **Use this link to subscribe to the GSSA Newsletter.**

There have been a few leaps forward for the Critical Minerals South Australia project over the last two months, with reports being finalised, new research beginning and the inaugural CRITCON conference taking place in Adelaide.

Secondary prospectivity
Last month we published the Secondary prospectivity of South Australia's mine waste: review. This publication, which was undertaken in conjunction with the MIWATCH team from the University of Queensland's Sustainable Mineral Institute, ranked 1,000 historical South Australian mine sites for their tailing and mine waste potential for critical minerals. The review provides an opportunity to see where we can reduce our environmental impact as we try to find the critical minerals we need to achieve our decarbonised future. The review is only the first stage. As this was a desktop study, the team has now started sampling some of the areas identified as having the best future potential, with the first sampling undertaken at the Brukunga mine. Read more about this from Lexi King (MIWATCH team) in her blog.

CRITCON 2023
The inaugural CRITCON 2023 was a great success, bringing together government, academics, industry and thought leaders to look at critical mineral research, projects and developments throughout Australia. The conference featured a three-day technical program full of amazing speakers and poster presentations, preceded by a drill core workshop at the South Australia Drill Core Reference Library, organised by GSSA's Critical Minerals SA project team, and followed by a field trip to Kapunda.
For those unable to attend CRITCON we are happy to offer A/Director Dr Bronwyn Camac's presentation on *Unravelling South Australia's critical mineral potential* to download.

You can also download copies of the two posters that were presented by our team.

- Where are South Australia's carbonatites? - Dr Mitchell Bockmann
- Unravelling South Australia's critical mineral pegmatites - Georgina Gordon

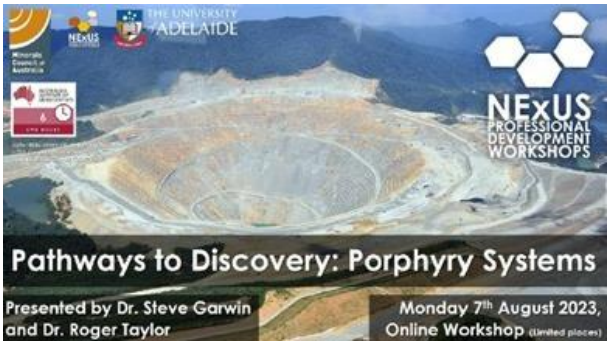
NEW research projects
With three new geologists recently joining the team several new research projects have started, including:

- Stocktaking of mineralisation styles that produce economic grades of key critical minerals (Mirella Terrones)
- Evaluation of South Australia's REE mineral potential (Dr Diana Zivak)
- Evaluation of South Australia's lithium mineral potential (Dr Jarred Lloyd in partnership with Assoc. Prof. Carl Spandler, University of Adelaide)

Keep up to date with the Critical Minerals SA webpage for all the project details.

NExUS Professional Development Workshops 2023

NExUS offered a range of online workshops highly relevant to geoscientists in the exploration and mining industry. The first three online workshops for 2023 are presented by the legendary Roger Taylor, who has been studying mineralised rocks and ore systems for over 60 years. It is a rare opportunity to be able to learn from such an experienced geological mentor, and I am proud to co-present with Roger to share some of my own experience. I highly recommend the workshops, which have had a huge positive impact on my own understanding of mineral systems. The last workshop in this series "Pathways to discovery – porphyry systems" will be held on Monday 7th August 2023.



More information and registration details here: https://lnkd.in/d9rCAfCD

NExUS WA Roadshow and SA Summer School 2023

The National Exploration Undercover School (NExUS) is a collaboration of universities, government, and industry partners to deliver a world-class program of training to the next generation of geoscientists. Our intention is to bring together a diverse group of enthusiastic and engaged participants who'll make a difference into the future! This year we plan to run two events. The NExUS-Roadshow will take place in Fremantle between the 13th-17th Nov and the flagship SA Summer School will take place in Adelaide between the 26th Nov - 10th Dec. More details about the programs and how to apply here: https://lnkd.in/g-EQEq_p. We encourage you to apply if you are in the final year of your BSc, in your honours or masters year, or at any time during your PhD study. Applications from early career professionals in industry (typically less than two years), or with government geological surveys and organisations are also welcome. International students enrolled at Australian Universities are eligible to apply, but unfortunately we cannot accept applications from geoscientists outside of Australia. **Applications close on the 31st July**, and successful applicants will be notified in early August.

Upcoming Meetings of the GSA-SA Division

Program draft for 2023:

July Thursday 20th: GSA-SA Annual Dinner. Field work tales & short stories, awards

August Thursday 17th: Careers in Geoscience

September Thursday 7th: Ralph Tate Memorial Lecture. Invited speaker Marissa Betts

October Thursday 19th: TBA (Science talk with Tom Raimondo?)

November: TBA

December: SAEMC & GESS SA

Other Meetings & Events

Field Geology Club of South Australia inc.

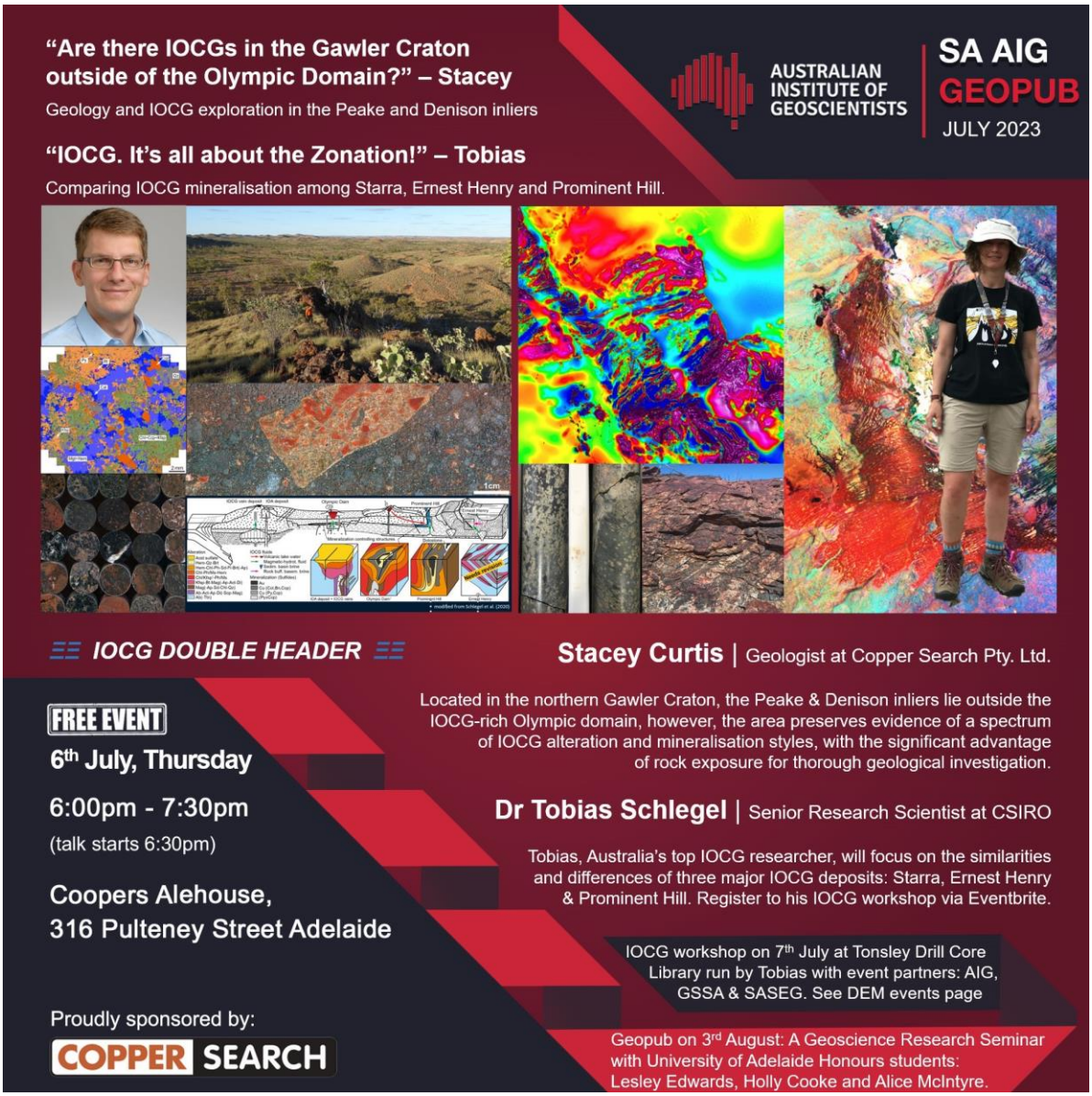
Thu 6th July: Lecture: Flinders Ranges - World Importance by Jason Irving

Thu 3rd August: Lecture: Carbon Capture – The Big Issues by Prof. John Kaldi

Sun 27th August: Excursion: Victor Harbor: Hot Granite & Cold Ice by Mark Dale

For more details visit the FGC webpage or contact Frances Williams.

SA AIG Geopub, Thursday 6th July 2023, Coopers Alehouse



Two talks AND a follow up workshop at the core library the next morning. So get into the Zone - that's what it's all about!

Stacey Curtis from Copper Search is going to give us the low-down on their exploration models for the Peak and Denison inliers.

Tobias Schlegel, Australia's best IOCG researcher, all the way from CSIRO Perth just for us, is going to point out the most important features you need to recognise when exploring IOCG's....anywhere.

And at the core library on Friday (7th July) morning will go in deeper, with some core and assays from Prominent Hill, Carrapateena, Olympic Dam and Manxman (for magnetite IOCG freaks out there).

Please register (it's free) so the core library knows who is in the building (a safety thing).

Register with Eventbrite here

There is no catering (you can get coffee and food in the Uni) but there might be a bake sale courtesy of Shannyn Pope for the South Australian Society of Economic Geologists.

University of Adelaide Earth Sciences Seminar, Friday 11th August 2023

Speaker: Mathieu Schuster: Institut Terre et Environnement de Strasbourg, Centre National de la recherche Scientifique & Université de Strasbourg, France, mathieu.schuster@cnrs.fr

Topic: Clastics in Lacustrine Sedimentary Systems: the pivotal role of wind-driven hydrodynamics evidenced from littoral landforms and numerical modelling

Friday 11th August 2023, 3-4 pm, Mawson Lecture Theatre and Zoom

Zoom link: https://adelaide.zoom.us/j/87147875323?pwd=TTBGUExUZ00vVXB0UVlqTHdVeWRTQT09

Passcode: 2023

Abstract:

The importance of wave related processes in large lakes has been recognized as early as the end of the 19th century in the pioneering study of the paleo-shorelines of Lake Bonneville (Gilbert, 1890). Since then, however, lacustrine depositional systems remained mostly considered as simple bathtubs in which the distribution of clastics is almost exclusively explained by downslope transport and deposition from fluvial-driven or gravity-driven processes. As a result, many conceptual perspectives on pathways of clastic sediment transport (or source-to-sink) in lakes may appear quite simplistic and monotonous.

Over the past 20 years, the pivotal role of wind in generating complex hydrodynamics able to dynamically redistribute clastics in lakes on a large scale has been highlighted in the integrated study of three large lake basins: Megalake Chad (Sahara-Sahel), Lake Saint- Jean (eastern Canada), and Lake Turkana (East African Rift System). Consequently, depositional models for lakes were updated by introducing a classification of “wind-driven waterbodies” (Nutz et al. 2018), foreshadowing a more precise source-to-sink vision for clastics in lakes. In this methodology, a multidisciplinary approach. In parallel, a series of innovative numerical simulations was initiated and developed over the years, with two models coming from marine coastal engineering sciences (Symphonie and Delft3D).

These models reproduce the hydrodynamics and sediment transport of lakes virtually, with the prime objective to investigate the wind-induced hydrodynamics themselves. Symphonie was first used to understand how paleo-winds have forced the large-scale hydrodynamics in the Holocene Megalake Chad resulting in thousands of kilometers long clastic shorelines (Schuster et al. 2005; Bouchette et al. 2010). Symphonie was again used to reveal wind-generated deep currents able to generate erosion, transport and deposition at the lake floor in Lake St-Jean (Nutz et al. 2015). More recently the modeling work moved forward with a more detailed modeling tool, Delft3D, to conduct an investigation into sediment transport and wind-waves for a full hydroclimatic year in Lake Turkana (Zainescu et al. 2023).

Numerical simulations of hydro-sedimentary processes in lakes confirm and specify the important role of wind. These simulations are pivotal to determine hydrodynamics and their main controlling parameters, to trace the trajectory of river-derived terrigenous sediments, and to locate internal sources and sinks of clastics. As such, numerical simulations represent a significant contribution to improve the source-to-sink vision of lakes. Moreover, with a limited number of parameters our lake models reproduce the hydrodynamics of the studied lakes well. This opens up the opportunity to study a much wider range of lakes across the globe and through geological times, especially data-sparse lakes. The major outcome of the initial efforts of Lake4D-team to develop numerical simulations in order to better understand lakes from the past, is that we now have a lake model with which we can test the impact of various parameters on the functioning of lakes.

One of our next targets will most probably be Kati Thanda – Lake Eyre where remarkable littoral landforms are preserved (May et al., 2022). In a world facing the challenges of ongoing global changes, virtual lakes represent an essential asset to forecast the near future evolution of modern lakes and assess their vulnerability to climate change related to water resources, water quality, coastal erosion and ecosystem services.

References

Bouchette F., Schuster M., Ghienne J.-F., Denamiel C., Roquin C., Moussa A., Duringer P. 2010. Hydrodynamics in the Holocene Lake Mega-Chad. Quaternary Research

May JH, May SM, Marx SK, Cohen TJ, Schuster M, Sims A. 2022. Towards understanding desert shorelines - coastal landforms and dynamics around ephemeral Lake Eyre North, South Australia. Transactions of the Royal Society of South Australia

Nutz A., Schuster M., Ghienne J.-F., Roquin C., Bouchette F. 2018. Wind-driven waterbodies: a new category of lake within an alternative sedimentologically-based lake classification. Journal of Paleolimnology

Nutz A., Schuster M., Ghienne J.-F., Roquin C., Hay M., Rétif, F., Certain, R., Robin N., Cousineau P.A., Bouchette F. 2015. Wind-driven bottom currents and related sedimentary bodies in the Lake Saint-Jean (Québec, Canada). Bulletin of the Geological Society of America

Schuster M., Roquin C., Duringer Ph., Brunet M., Fontugne M., Mackaye H.T., Vignaud P., Ghienne J.-F. 2005. Highlighting Holocene Lake Mega-Chad paleoshorelines from space. Quaternary Science Reviews

Zăinescu F, van der Vegt H, Storms JAE, Nutz A, Bozetti G, May JH, Cohen S, Bouchette F, May SM, Schuster M. 2023. The role of wind-wave related processes in redistributing river-derived terrigenous sediments in Lake Turkana: A modelling study. Journal of Great Lakes Research

Bio

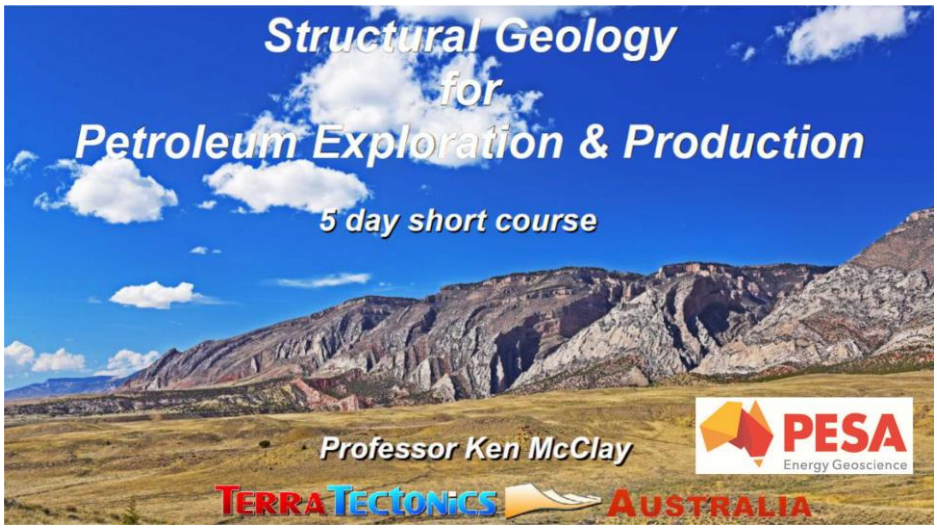
Dr Mathieu Schuster is a sedimentologist, with expertise in Lacustrine Sedimentary Systems. He is senior researcher at the National Center for Scientific Research (CNRS), and he works at the Earth and Environment Institute of Strasbourg, a joint research unit from the University of Strasbourg and the CNRS.

He received his Ph.D. in Sedimentary Geology from the University of Strasbourg in 2002. He pursued his research on the past environments of both the Sahara Desert and the East African Rift as a post-doc researcher first at the University of Cologne (Germany) and the at University of Western Brittany (France), before he joined the French Geological Survey in Orleans. He then was recruited as a junior researcher (CNRS) and worked at the Institute of Human Paleontology of the University of Poitiers (France). He later moved to Strasbourg to develop his own research on lacustrine basins, where he also served as vice-director of the Institute of Geophysics.

He was awarded the Bronze Medal of CNRS (2008), and the Scientific Prize of Cercle Gutenberg & Fondation Université de Strasbourg (2011). He was an Erskine Visiting Fellow at the University of Canterbury (Christchurch, New Zealand; 2016).

His research concerns continental sedimentary processes and environments in order to reconstruct the time & space evolution of earth surface. His favorite large lake basins were first in Africa (Lake Chad and Lake Turkana) where he particularly studies the development of clastic littoral deposits and landforms. As a geologist, his first interest was in ancient lakes, first as archives of past environments and climate, and later as an archive of hydro-sedimentary processes. To better understand these ancient lakes, he became more and more interested in modern lakes. More recently he became convinced that understanding past and present lakes can help forecasting the future of lakes, especially lakes in drylands which are highly sensitive to global changes. Therefore he now navigates ancient, recent, present and future lakes.

PESA Structural Geology for Petroleum Exploration & Production short course



The PESA SA-NT Branch will be hosting a 5-day structural geology training course by Professor **Ken McClay** on Monday 21st to Friday 25th August. Bookings for the course will open in a couple of weeks. This five-day classroom course consists of lectures, seismic interpretation exercises and case histories. The course presents modern concepts of structural geology focused on fault and fold systems that form hydrocarbon traps in sedimentary basins. Emphasis is placed on the integration of data in order to determine the 4D evolution of structures, their seismic expressions as well as utilising case histories and natural examples that can be analogues for sub-surface hydrocarbon traps. The lectures are extensively illustrated with field examples, remote sensing examples, seismic sections, conceptual models and in particular analogue models of fault systems – many models are shown as movies that demonstrate the progressive evolution of fault and fold systems. Practical exercises and examples are excellent seismic examples of structural styles in a large format A3 workbook.

Key Themes of the training are given below, and more details are in the attached Programme:

1. Fault systems in sedimentary basins - Tectonic regimes; fault mechanics; fault geometries; fault growth & segmentation patterns
2. Extensional fault systems - Planar extensional faults - 2D & 3D geometries; rift systems & passive margins; folding associated with extension. Listric & ramp-flat listric extensional faults; delta tectonics - hydrocarbon systems
3. Inversion tectonics - Positive inversion systems; inverted rift basins & thick-skinned fault systems, hydrocarbon systems in inverted terranes
4. Strike-slip terranes - Tectonic settings of strike-slip systems; oblique convergence; transform faults; characteristic styles of strike-slip structures
5. Thrust fault systems - Thrust fault & fold geometries; key structural styles; 2D & 3D modelling of thrust fault systems; thrust-fault-related fold systems; foreland fold & thrust belts; deepwater fold & thrust faults - delta systems and accretionary prisms

Please download the course description attachment here

For registration and more info about this course please click here

Early bird prices of:

- PESA Member: $5000
- Non-Member: $5350
- Student: $75

Early bird window to close at 5 pm on Monday 17th July

Regular prices of:

- PESA Member: $5500
- Non-Member: $6000
- Student: $75

Upcoming Conferences

Palaeo Down Under 3 2023 – Perth

Australasian Palaeontologists (AAP) cordially invites all palaeontologists from Australia, New Zealand and around the world to participate in Palaeo Down Under 3 (PDU3) in Perth, Australia in July 2023. A full conference programme is proposed, covering all aspects of palaeontology and associated disciplines. PDU3 will include guest keynote lectures, general & thematic sessions, symposia, and posters. Due to the global pandemic, AAP looks forward to broadcasting the conference and allowing virtual attendance to provide an opportunity for members to participate from all over the world.

Second circular: Click here
Registration: Click here
Website: Click here

6ias International Archean Symposium & Target 2023 – Perth

Kaya from Noongar Whadjuk boodja! The 6th **International Archean Symposium (6IAS)** represents the premier international scientific gathering for geoscientists interested in the Early Earth. The program will reflect a decade's worth of advances in our understanding of how the Early Earth evolved and aims to develop future directions for Precambrian geoscience for the decade to come. We invite academic, government and industry geoscientists involved in Precambrian geoscience to attend the 6th International Archean Symposium, which will be held **25-27th July 2023** at The Esplanade Hotel in Fremantle (Walyalup), Perth, Australia.

Website: Click here
Register: Click here

The **Target 2023 Conference** will now be held on **28 July 2023** in Perth, Western Australia following the 6ias. Geoconferences is organising Target 2023 to showcase innovations developed to aid the discovery of new tier-one deposits and broaden the exploration search space under cover. It will focus on all aspects of mineral exploration and provide a unique opportunity to workshop solutions to the mineral industry challenges that lie ahead. We look forward to welcoming you to Target 2023 and together shaping tomorrow's exploration strategies for the future sustainability of our industry.

Register: Click here
Website: Click here

AusIMM New Leaders Summit 2023 – Adelaide

AusIMM's New Leaders Summit is a signature event designed specifically for students and young mining professionals. The summit provides an exclusive opportunity to learn from and engage with renowned mining leaders, hear enlightening presentations and discuss topics impacting young professionals' careers in the resource industry. From **26 – 27 September 2023**, the New Leaders Summit will be hosted in Adelaide, South Australia for the first time. Over a jam-packed two-day conference program, over 200 attendees will explore topics including career pathways, career growth strategies, future of mining, diversity and inclusion and much more. Key highlights of the 2023 program include: high profile keynote speakers, industry panel sessions, case studies presented by industry experts, abstracts delivered by the students and new professionals and an exciting industry mixer event.

Please click here for website

GSA Earth Sciences Student Symposium – South Australia (GESSS SA)

GESSS-SA is a student-run, annual conference designed to promote the scientific research of South Australian honours and postgraduate students. The symposium will be held on **Thursday, November 23rd at the Bedford Park Campus of Flinders University**. Presentations from all fields of Earth, Atmospheric and Environmental Sciences as well as branches of engineering disciplines related to these sciences are welcome. The organising committee invites you to submit an abstract for the event (gesss.southaustralia@gmail.com). Click here for conference website. (Link to https://gessssa.wordpress.com/).

Geological Survey of South Australia Discovery Day 2023 – Adelaide

Discovery Day is your chance to talk all things South Australian geoscience with the Geological Survey of South Australia and our project partners. **Thursday 30th November 2023** at the Adelaide Convention Centre. This is a day you won't want to miss!

Tickets will be on sale soon with a fee of $100 this year.

Stay tuned for information.

SAEMC 2023 – South Australian Exploration & Mining Conference – Adelaide

SAEMC is an annual collaborative event that brings together both the exploration and mining industries in South Australia. Now in its 20th year, it is an opportunity for active mineral explorers and miners to present succinct technical updates of their activities on their flagship South Australian mines and exploration projects. **Click here for conference webpage.**


Do you want
recognition and accreditation
for your area of expertise?
GEOLOGICAL SOCIETY OF AUSTRALIA Incorporated
GSA COVERS ALL GEOSCIENCE FIELDS OF EXPERTISE
Coal
Environmental Geoscience
Geochemistry
Geohazards
Geophysics
Geotechnical and Engineering
Hydrogeology
Industrial Minerals
Information Geoscience
Isotope Geochemistry and Geochronology
Mineral Exploration
Mineralogy
Mining
Palaeontology
Palaeoclimate Geoscience
Petrology
Petroleum and Gas
Planetary Geoscience
Regional Geoscience
Sedimentology
Structural Geoscience
Volcanology
GSA Members that want to have an additional level of recognition of their expertise can do so with the GSA Accredited Geoscientist program.
THIS EVENT MAY EARN 20 UNITS IN GEOLOGICAL SOCIETY OF AUSTRALIA'S CONTINUING PROFESSIONAL DEVELOPMENT PROGRAM
IF YOU SEE THIS SYMBOL YOU KNOW IT ATTRACTS POINTS THAT GO TO YOUR GSA ACCREDITATION.
FOR MORE INFORMATION:
PH: 02 9290 2194 | info@gsa.org.au
www.gsa.org.au


Do you want
recognition and accreditation
for your area of expertise?
GEOLOGICAL SOCIETY OF AUSTRALIA Incorporated
GSA Members that want to have an additional level of recognition of their expertise can do so with the GSA Accredited Geoscientist program.
To recognise acquired expertise, 2 tiers of accreditation have been established. Accredited Geoscientist 5 (Ac.Geo.5) demonstrating five to ten years of expert geoscience practice and Accredited Geoscientist 10 (Ac.Geo.10) demonstrating 10 or more years of expert geoscience practice.
Accreditation with another professional institute?
The GSA recognises that members may have accreditation with other organisations and we have catered for you.
Cost
Ac.Geo.5 application fee is $100.00
Ac.Geo.10 application fee is $100.00
THIS EVENT MAY EARN 20 UNITS IN GEOLOGICAL SOCIETY OF AUSTRALIA'S CONTINUING PROFESSIONAL DEVELOPMENT PROGRAM
IF YOU SEE THIS SYMBOL YOU KNOW IT ATTRACTS POINTS THAT GO TO YOUR GSA ACCREDITATION.
FOR MORE INFORMATION:
PH: 02 9290 2194 | info@gsa.org.au
www.gsa.org.au

Geological Society of Australia - South Australian Division

OFFICE BEARERS 2023/2024

CHAIR
Prof Alan Collins
alan.collins@adelaide.edu.au

VICE CHAIR
Dr Laura Morrissey
laura.morrissey@unisa.edu.au

SECRETARY
Dr Adrienne Brotodewo
adrienne.brotodewo@unisa.edu.au

TREASURER
Dr Jarred Lloyd
jarredclloyd@gmail.com

PROGRAMME SECRETARY
vacant

NEWSLETTER EDITOR
Dr Mario Werner
mario.werner@sa.gov.au

GSA SA DIVISION COUNCILLOR
Prof John Foden
john.foden@adelaide.edu.au

COMMITTEE
Len Altman, lenaltman9@gmail.com
Dr Morgan Blades, morgan.blades@adelaide.edu.au
Prof John Foden, john.foden@adelaide.edu.au
Associate Prof Diego Garcia-Bellido, diego.garcia-bellido@adelaide.edu.au
Dr Rachelle Kernen, rachelle.kernen@adelaide.edu.au
Dr Anna Petts, annaepetts@gmail.com
Dr Wolfgang Preiss, wolfgang.preiss@sa.gov.au

GEOTOURISM – GEOHERITAGE – FIELD BROCHURES SUBCOMMITTEES
Margaret Beal, Colin Conor, David Grybowski, Carmen Krapf, Ian Lewis, Jarred Lloyd, Alex Ross, Mario Werner

SA GEOLOGICAL EDUCATION SUBCOMMITTEE
Len Altman (convenor)

SA STRATIGRAPHY SUBCOMMISSION
Jarred Lloyd (convenor), Rachelle Kernen, Mario Werner

SAEMC REPRESENTATIVES
Adrienne Brotodewo, Rachelle Kernen, Anna Petts

GESSS-SA COMMITTEE 2023
Ivan Gutierrez Agramont & Travis Batch (Co-presidents), Corinne Mensforth (Treasurer), Justine Flahaut (Program and Abstract Coordinator), Andres Sifuentes Chamochumbi (Advertising and Website Design)

For GSA Subscriptions or address and email changes please contact the GSA central office in Sydney by phone (02) 9290 2194 or email info@gsa.org.au.