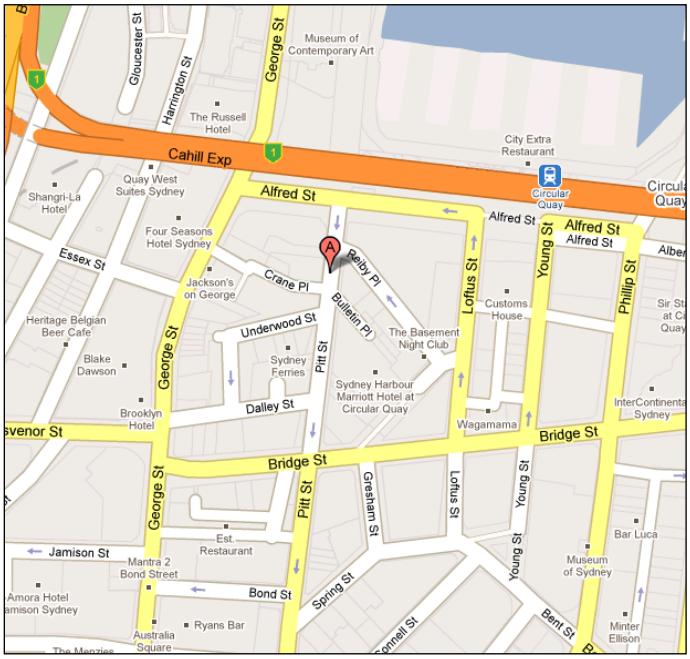
NSW Division Newsletter

Contents: 1. Talk location details 2. Talk abstracts 3. AESC2010 Student scholarships

APRIL TALKS

Places limited, please RSVP: m.vanderley@unsw.edu.au



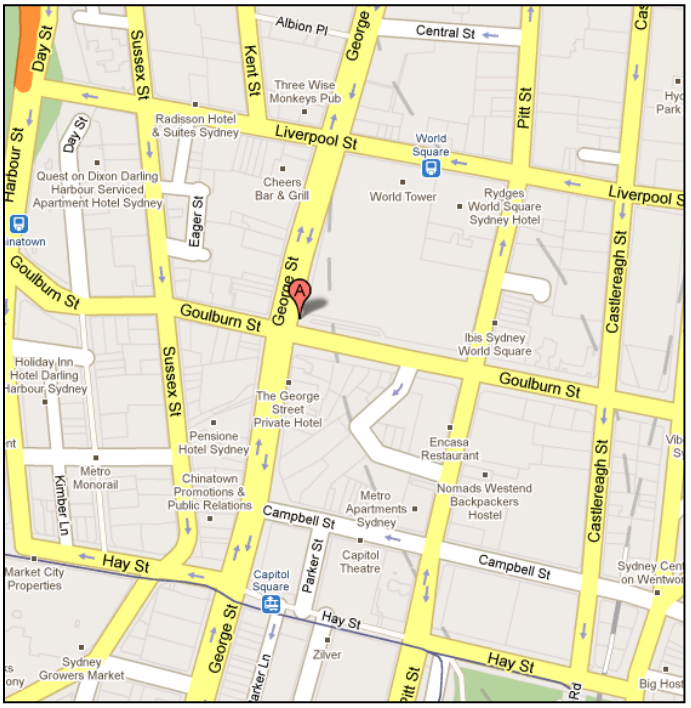
15th April – Joint SMEDG/GSA

Dr Panagiotis Voudouris

"Gold Deposits of Greece"

5.30pm

Sydney Rugby Club, Rugby Place (off 31 Pitt St), Sydney



22nd April – Joint GSA/SMEDG

Prof. Damien Gaboury

"Archean lode gold deposits: new insights from deposits in the Abitibi belt and implications for exploration"

6.30pm

Parsons Brinckerhoff, L27 680 George St, Sydney

Dr Panagiotis Voudouris

"Gold Deposits of Greece"

Dr Panos Voudouris is a Lecturer in Mineralogy in the Department of Mineralogy-Petrology, Faculty of Geology and the Geoenvironment, National and Kapodistrian University of Athens. He obtained his BSc in Geology from the University of Athens, and his PhD in Mineralogy from the University of Hamburg, Germany. He has published widely in the fields of mineralogy and ore deposits, including work on the Laurion deposits of Greece, mined since ancient times and vital for the development of the Athenian State and democracy itself. He has worked on a wide variety of gold deposit styles including epithermal, porphyry and skarn-related, and in recent years has been working on gem deposits of Greece.

Abstract

Gold mineralisation in Greece is primarily hosted within two ore provinces: the Servomacedonian/Rhodope province and the Attico-Cycladic province. Both provinces contain ores related to: 1. Mesozoic-Miocene shears that were controlled by compression or by exhumation of metamorphic domes. 2. Tertiary-Quaternary magmatic activity with skarn and carbonate replacement deposits (such as Lavrion/Attika), and many porphyry-Cu-Mo-Au deposits (such as the newly discovered rheniite-bearing porphyry-Mo prospect of Pagoni Rachi and Sapes). 3. Reduced intrusion related Au-Bi-Te deposits, such as the Kavala pluton. 4. Epithermal Au-Ag deposits, such as Sapes, Perma Hill, and Milos Island.

Emphasis will be given to the mineralogy of all these deposits, especially their abundance of Au-Ag-tellurides, Bi-sulfosalts and native elements.

Prof. Damien Gaboury

"Archean lode gold deposits: new insights from deposits in the Abitibi belt and implications for exploration."

Damien Gaboury is professor of Economic Geology at the University of Quebec at Chicoutimi. He is the director and founder of the LAMEQ, a research laboratory equipped with a flow thought autoclave system and a system for analysing fluid inclusion volatiles by mass spectrometry. His research interests include: 1) field-based gold and base metal metallogeny in the Archean Abitibi belt in Canada and in Birimian belts of West Africa, 2) trace elements in pyrite and 3) gas composition of fluid inclusions. He also acts as an internal consultant for SEMAFO, a Montreal-based exploration and mining company active in West Africa, where he was involved with recent exploration success in Niger.

Abstract

A large proportion of gold deposits in the Abitibi belt are described as "orogenic gold deposits". Such deposits formed in mid-crustal level by metamorphic fluids, focused regionally along major trans-crustal faults during late accretionary orogeny. Gold-bearing veins occur in second- to third-order faults and form commonly during a single late event with no genetic association with magmatism. These genetic parameters were recognized more than 20 years ago and have driven exploration in Archean belts worldwide. In this talk, I address numerous paradigms of the Archean lode gold deposits based on new data from ongoing MSc and PhD studies at operating mines (Casa-Berardi, Beaufor, Goldex, Lapa) and exploration project (Dubuisson). At Casa-Berardi, recent study of the fluid volatile composition reveled that, in addition to metamorphic, magmatic and meteoric fluids were involved in the mineralizing processes. Meteoric fluids were involved in area where barren VMS lenses are occurring. Gold grades up to 5 ppm in nodular pyrites from black shale in association with barren VMS deposits may represent the gold source for the later auriferous quartz veins. At Beaufor, typical moderately dipping shear veins were formed by extensional opening of pre-existing shear zones and subvertical, high-angle discrete and barren faults acted as gold-bearing fluid conduits for the veins. Goldex, a granitoid-hosted tourmaline-rich stockwork deposit with albite alteration, shares similarities with pneumatolitic mineralization and structural data suggest formation during extensional period. Lapa is an exception by being a major gold deposit occurring within highly strained sedimentary and ultramafic rocks located in the Cadillac major regional fault. Detailed mineralogical study established a protracted history of gold mobilization and remobilization associated with prograde and retrograde metamorphism. Finally, gold at the Dubuisson project in Val-d'Or is centered on a late, calc-alkaline to alkaline multiphase intrusive complex recording dextral movement during mineralization. All these characteristics have implications for gold exploration by providing renewed importance of: 1) on-site gold pre-enrichment; 2) various tectonic regimes and mineralization timings in the same district; 3) association with late intrusive complexes; and 4) gold potential within the first-order faults.

! SCHOLARSHIPS ! EARTH SCIENCE STUDENTS

NSW Division

Financial support for students to attend the Australian Earth Sciences Convention 2010

Scholarships: up to $500 for travel, accommodation or registration etc
Convention dates: 4-8 July
Where: Canberra
www.aesc2010.gsa.org.au

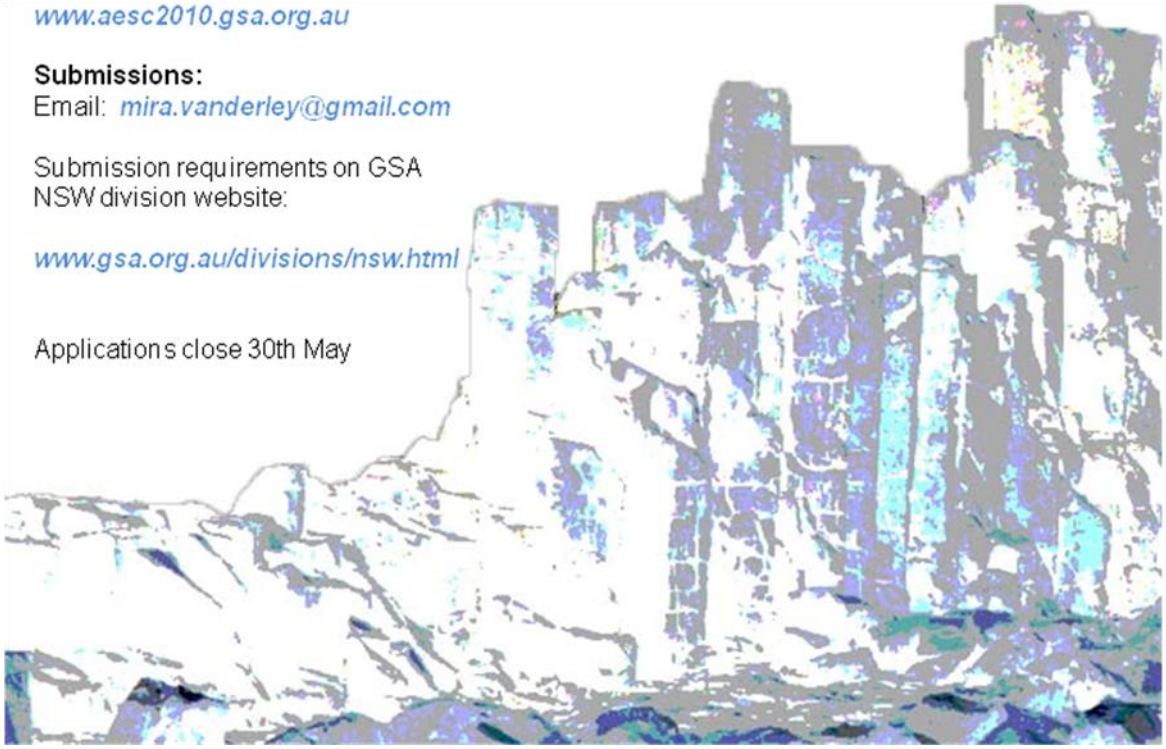
Submissions:
Email: *mira.vanderley@gmail.com*

Submission requirements on GSA NSW division website:

www.gsa.org.au/divisions/nsw.html

Applications close 30th May

Conditions: Preference is given to members of the Geological Society of Australia....
...Not a member? Go to *www.gsa.org.au* for an application form. ONLY $10 for students



More Information on Scholarship:

Benefits of attending the convention:

-Exposure to a range of earth science research

There are a range of topics for this years convention: from earth dynamics and resources, through to geosciences in the service of society. For students, this is an opportunity to get a feel for the different career opportunities available in the earth science field

-Networking

The convention is attended by researchers and professionals from across Australia. This provides students with an opportunity to interact and expand their network.

Submissions for Scholarships:

In your application, please include the following:

- Name
- Student number and university
- Year of study
- GSA membership details
- Contact details
- Abstract (if presenting)
- Research interests
- Short explanation as to why you wish attend
- Academic referee details

Submit applications to mira.vanderley@gmail.com

Preference is given to students presenting and/or members of the Geological Society of Australia, however anyone interested is encouraged to apply!

Registering for the convention:

Registration details for the convention can be found at www.aesc2010.gsa.org.au/registration.html

Scholarship applicants will be contacted by the second week of June regarding the status of their application. This will allow time for students to register after the scholarship application process is complete.