

Garry Davidson Symposium – Program

Day 1 – Monday October 22nd

IOCG and related deposits

- 08:30 Introduction to the shortcourse (Rob Scott)
- 08:35 Welcome to the symposium (David Cooke)
- 08:45 IOCG deposits of the Eastern Succession (Nick Oliver)
- 09:45 Merlin Mo deposit (Subira Sharma Steadman)

10:00 Morning tea

- 10:30 Olympic Dam (Kathy Ehrig)
- 11:30 Geophysical signatures of IOCG deposits (Terry Hoschke)
- 12:00 Panel discussion

12:30 Lunch

Uranium deposits

- 13:30 Overview of uranium deposits (Roger Skirrow)
- 14:30 Uranium and polyphase, polymetallic mineralisation in and around the Fennoscandian Shield (Peter Sorjonen-Ward)

15:00 Afternoon tea

- 15:30 Proterozoic granites and uranium deposits (Lesley Wyborn)
- 15:50 Angularli (Penny Sinclair)
- 16:10 Coronation Hill (Karin Orth)
- 16:30 Yeelirrie (Penny Sinclair)
- 17:00 Panel discussion

17:30 End of Day 1

Day 2 – Tuesday October 23rd

Sediment-hosted base metal deposits

- 08:30 The sediment-hosted ore system (David Selley)
- 09:00 Overview of Paleoproterozoic sediment-hosted Pb-Zn deposits of Northern Australia (Peter McGoldrick)

10:00 Morning tea

- 10:30 Sediment-hosted copper deposits (Stuart Bull)
- 11:30 Kamao case study (David Selley)
- 12:00 Exploration for sediment-hosted copper deposits (Scott Halley)
- 12:30 Panel discussion

13:00 Lunch

- 14:00 Introduction to BHT deposits and the Broken Hill deposit (Tony Webster)
- 14:45 Geology and genesis of the Cannington Ag-Pb-Zn deposit (Steve Bodon)
- 15:15 Mining and exploration at Cannington (Danny Huisman)

15:45 Afternoon tea

- 16:15 Paleoproterozoic sediment-hosted Pb-Zn deposits of Sweden (Rod Allen)
- 17:15 Panel discussion

17:45 End of Day 2 – Conference dinner

Day 3 – Wednesday October 24th

VHMS deposits

- 08:30 VHMS deposits (Ross Large)
- 09:30 Modern seafloor hydrothermal systems (Bruce Gemmell)

10:00 Morning tea

- 10:30 VHMS deposits through time (Dave Huston)
- 10:50 VHMS deposits of the Palaeoproterozoic Capricorn Orogen, Western Australia (Margy Hawke)
- 11:10 Tasmanian VHMS deposits (Andrew McNeill)
- 11:30 Myra Falls (Sarah Jones)
- 11:50 VHMS exploration in the Canadian Arctic (Neil Martin)
- 12:10 Panel discussion

12:30 Lunch

Orogenic and intrusion-related Au

- 13:30 Characteristics and genesis of orogenic and intrusion-related Au deposits (Rob Scott)
- 14:30 Key elements in the formation of orogenic gold deposits: Lessons from the Yilgarn (John Walshe)

15:00 Afternoon tea

- 15:30 Sunrise Dam (Michael Nugus)
- 15:50 West African Au (Paul Kitto)
- 16:10 Tasmanian orogenic and intrusion-related Au-deposits: Relationships to Paleozoic granites (Michael Roach)
- 16:30 Exploration for orogenic gold deposits (Scott Halley)
- 17:10 Panel discussion

17:30 Close - Dave Green

Garry Davidson Symposium – Invited speakers

Dr Rodney Allen

Consultant and CEO, Volcanic Resources, Sweden

Dr Allen is a geologist with 40 years experience in mineral exploration and research applied to mineral exploration. He is best known for his skills in interpreting volcanic successions, hydrothermal alteration, and the ore deposits that occur in them.

Dr Steve Bodon

Principal Consultant, CSA Global

Dr Bodon graduated with a doctorate from CODES in 2002 on the Cannington Ag-Pb-Zn deposit. For the past 15 years he has worked in the oil and gas sector managing exploration and production assets in Africa, including major offshore JV developments in West Africa.

Dr Stuart Bull

Consultant, Basin Solutions, Hobart

Dr Bull is a basin analyst with over 20 years experience leading collaborative research programs investigating sediment- and volcanic-hosted ore systems at CODES at the University of Tasmania. He has successfully applied the outcomes of this research to mineral exploration programs.

Dr Kathy Ehrig

Principal geometallurgist, BHP Billiton

In 2017, Dr Kathy Ehrig was awarded the degree of Doctor of Science *honoris causa* from Flinders University recognising her 25+ year quest to unravel the complex mineralogy and geology of South Australia's vast Olympic Dam mineral deposit – the largest uranium, fifth largest copper and third largest gold resource on the planet.

Prof. Bruce Gemmell

Adjunct Professor, CODES, UTAS and Consultant, Gemmell Geoscience

Professor Gemmell is the former director of CODES, and the 2018 SEG president. He is currently an Adjunct Professor at CODES and also a minerals geoscience consultant who specialises in training and short courses in volcanic-hosted massive sulfide deposits, low-intermediate and high sulfidation epithermal deposits, hydrothermal alteration, field methods and core logging.

Dr Dave Green

Senior geologist, Mineral Resources Tasmania (MRT)

Dr Green is a senior geologist at MRT with over 20 years experience. He is an expert in the collection and analysis of hyperspectral mineralogy datasets produced by the HyLogger™ to characterise ore-related hydrothermal alteration. Dr Green also has expertise in geoinformatics (GIS), geochemistry and structural geology.

Dr Scott Halley

Consulting geochemist, Mineral Mapping Pty Ltd

For the past 10 years, Dr Halley has worked as an independent consultant, specialising in exploration geochemistry, and the application of multi-element ICP geochemistry and SWIR analysis mapping far-field expressions and alteration mineral zonation patterns around hydrothermal systems. He has consulted to more than 130 mining and exploration companies in more than 25 countries.

Dr Margaret Hawke

Exploration manager, Tanga Resources Ltd

Dr Hawke graduated with a MEconGeol in 2013, and a PhD from CODES in 2017. She was a key member of the discovery team for Sandfire's DeGrussa Cu-Au deposit in W.A. Dr Hawke is currently exploration manager at Tanga Resources and works on several exploration projects in Africa.

Mr Terry Hoschke

Geophysical consultant, Alterrex Pty Ltd, Adjunct, CODES, UTAS

Mr Hoschke is a geophysicist with extensive global experience in gold and base metal exploration. He is the author of "Geophysical signatures of copper-gold porphyry and epithermal gold deposits, and implications for exploration."

Mr Danny Huisman *Senior exploration geologist, South 32*

Mr Huisman completed a MEconGeol at CODES in 2016. Formerly, he worked for BHP Billiton where he was responsible for evaluating, planning, and executing brownfields exploration projects. He currently works as an exploration geologist at Cannington.

Dr Dave L. Huston *Principal research scientist, Geoscience Australia*

Dr Huston's current interests include the spatial and secular distribution of ore deposits, particularly Zn-Pb deposits, and the implications of tectonics to deposit distribution and vice versa.

Dr Sarah Jones *Chief structural geologist, Gold Fields Ltd*

Dr Jones applies structural geology and the regional deformation history to understand orebody formation in the Eastern Goldfields, W.A.

Dr Paul Kitto *Manager of Africa exploration, Newcrest Mining Ltd*

Dr Kitto has had a successful international exploration career making numerous gold discoveries over 20+ years with major mining companies, including Gold Fields Ltd., Renison Goldfields Consolidated, Aurion Gold, Ampella Mining, and now Newcrest.

Prof. Ross Large *Distinguished Professor, CODES, UTAS*

Professor Large's distinguished research career has focused on understanding how a diverse array of mineral deposits form and on using this knowledge to help industry find new deposits. But he has now turned his geological skills to answering the most fundamental question of all – what controlled the evolution of life?

Dr Neil Martin *Executive director, BMC (UK) Ltd*

Dr Martin is a geologist with more than 30 years of experience in mineral exploration and mining across a range of commodities including gold and base metals. His experience ranges from project generation through to mining, and he is currently engaged with development of the Kudz Ze Kayah Project in Yukon, Canada.

Dr Peter McGoldrick *Adjunct senior researcher, CODES, UTAS*

Dr McGoldrick is a former CODES and Earth Sciences staff member. He spent much of the past four decades studying sediment-hosted base metal deposits and has worked extensively in the Northern Australian basin systems, and Central African Copper Belt (DRC and Zambia).

Dr Andrew McNeill *Manager, Geological Survey, Mineral Resources Tasmania*

Following completion of a PhD at CODES, Dr McNeill spent many years working as an exploration geologist both throughout Tasmania and across mainland Australia, and spent six years at CODES as a post-doc working on VHMS and magmatic Ni mineralisation. For the last five years he has been Geological Survey Manager at Mineral Resources Tasmania.

Mr Michael Nugus *Principal economic geologist, AngloGold Ashanti*

Mr Nugus is a geoscientist with 23 years practical and strategic experience in gold mining and exploration. His career has taken him to Australia, Ghana, South Africa, Tanzania and Colombia. His current focus is characterising mineral systems to spatially predict models for resource estimation, mineral processing and economic evaluations.

Dr Nick Oliver *Consultant, HCOV Global Consultants and Adjunct Professor at JCU*

Dr Oliver is a consultant to the minerals exploration and mining sectors. Formerly he was a professor of Economic Geology, and EGRU Director at James Cook University.

Dr Karin Orth *Lecturer and research fellow, CODES, UTAS*

Dr Orth is a lecturer and researcher in the Discipline of Earth Sciences and CODES at the University of Tasmania. Her research interests encompass volcanoes, the rocks they form and the riches they host.

Dr Michael Roach	Senior lecturer, CODES, UTAS
	Dr Roach is a geophysicist whose most recent research has focused on using unmanned aerial vehicles (UAVs) to collect high resolution digital outcrop images that can be used for geological mapping and structural analysis.
Dr Rob Scott	Senior lecturer, CODES, UTAS
	Dr Scott's research focuses include the application of structural geology and geochemistry to understanding and exploring for ore deposits. Dr Scott also directs the Masters of Economic Geology program at UTAS.
Dr David Selley	Honourary research fellow, CODES, UTAS, and Director, Base Instinct Consultancy
	Dr Selley is a structural geologist, with a research history of ore formation and location in sedimentary basin settings. He has led major multi-disciplinary research projects on the Central African Copperbelt, held senior technical roles in the minerals industry, and presently works as a consultant.
Mrs Subira Sharma Steadman	PhD student, CODES, UTAS
	Subira's research has focused on evaluating links between Merlin-style Mo-Re mineralisation and magmatism in the Cloncurry fold belt, Queensland.
Ms Penny Sinclair	Principal geologist, Vimy Resources
	Ms Sinclair completed an honours in Economic Geology at CODES in 1995. Since then, she has accrued over 20 years' experience in the resources sector, working for Acacia Resources, AngloGold Ashanti, Placer Dome, A-Cap Resources and Cameco Australia. She has recently joined Vimy Resources.
Dr Roger Skirrow	Principal research scientist, Resources division, Geoscience Australia
	Dr Skirrow has been with Geoscience Australia for over 23 years, researching a range of ore-forming systems and their geological settings, including uranium, iron oxide Cu-Au, and magmatic Ni-Cu-PGE deposits.
Dr Peter Sorjonen-Ward	Senior Research Scientist, Geological Survey of Finland
	Peter studied at ANU at the same time as Garry, but has subsequently worked principally in Finland on Proterozoic and Archean basin systems and orogenic gold mineralisation, interspersed with rewarding years at CSIRO attempting to study structural controls on mineralisation through numerical and mineral potential modeling.
Dr John Walshe	Chief research scientist, CSIRO Mineral Resources
	Dr Walshe has studied mineral systems and geochemistry for over 40 years. He is currently working with CSIRO in Perth, Australia where his work focuses on the role of chemical processes in controlling ore deposition, particularly boundaries/switches in redox and pH in the orogenic gold environment. Previously, John was a lecturer in Economic Geology at the Australian National University.
Dr Tony Webster	Principal geologist, Mining Geoscience and Hon. Senior lecturer, CODES, UTAS
	Dr Webster is a specialist mining structural geologist with high-level skills in the interpretation of the litho-structural architecture of complexly deformed ore deposits.
Dr Lesley Wyborn	Adjunct fellow, Australian National University
	Dr Wyborn is a highly respected geoscientist and geoinformatics specialist. She currently focuses on high performance computing for geology and online analytics, but has a long history of researching Australian granitoids and their relationships to mineral systems.

REGISTRATION FORM

Garry Davidson Symposium

22nd - 24th October, 2018

Please return completed form to:

Dr Robert Scott
CODES
Centre for Ore Deposit and Earth Sciences
University of Tasmania
Private Bag 79
Hobart Tasmania, Australia 7001

Email: Robert.Scott@utas.edu.au

Phone: +61 3 6226 2786

PERSONAL DETAILS

Title: Please circle (Prof / Dr / Mr / Mrs / Ms / Miss)

First Name: Last Name: (surname / family name):

Preferred Name (for name tag):

Position:

Company / affiliation:

Address:

City: State: Postcode / ZIP: Country:

Email: Mobile / cell phone:

Phone (home): Phone (work): Fax:

Dietary requirements / allergies:

REGISTRATION FEES

Fees are in Australian dollars (AUD) and include 10% GST. Please tick box.

Industry Participant

- Symposium full rate (\$660)
- __ days at \$220/day (maximum charge 3 days)
- Conference dinner - Tuesday 23rd October (\$110)

CODES Staff/Students

- Symposium (\$110)
- Conference dinner - Tuesday 23rd October (\$110)

Other Students

- Symposium (\$110)
- Conference dinner - Tuesday 23rd October (\$110)

PLEASE NOTE: Participants *NOT* attending entire symposium, please circle selected days

October 22 **23** 24

PAYMENT

Registrations (with full payment) must be received before October 14, 2018..

TOTAL AMOUNT DUE: \$.....

Payment options (please tick box)

- Credit Card (VISA/Mastercard only)
Payment reference number and web address for online payments will be issued upon receipt of your registration form.
- Cheque or Bank Draft
Please make payable to "The University of Tasmania". Bank drafts must be made out in Australian currency (AUD).
- UTAS Purchase (for internal accounts only)
UTAS account number.....
- Invoice

Please provide name and address of person/company to whom invoice should be sent. If same as above writ "as above".

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