

2014 AusIMM NZ Branch – Visiting Lecturer Programme – May 2014

The first of two 2014 AusIMM New Zealand Branch Visiting Lecturers is Professor Ross Large from University of Tasmania, Hobart, Tasmania, Australia (www.utas.edu.au/codes/people/academic/ross-large). Ross will present a short course and lectures at several centres during May.

Ross Large Biography

Ross Large is a Distinguished Professor of Geology at the University of Tasmania, and the recent past Director of CODES, the ARC Centre of Excellence in Ore Deposits. Ross gained his BSc(Hons) from the University of Tasmania in 1969, PhD from University of New England in 1973. For ten years Ross worked in mineral exploration in Northern Territory, Queensland and Tasmania. In 1984 he joined the University of Tasmania, and five years later established CODES as a National Key Centre jointly funded by the Australian Research Council, University of Tasmania, the Mining Industry and the State Government. Under his leadership CODES has grown to become recognized as one of the top ore deposit research centres in the world. Ross has gained a number of awards for his research, including the 1983 SEG Lindgren Award, 1989 AusIMM Presidents Award, 2005 Haddon King Medal, 2010 SEG Silver Medal and the 2011 BJ Skinner Award. His current research interests are sediment-hosted gold deposits and evolution of the chemistry of the oceans.

Programme

The following programme for May 2014 is tentative and may change. For specific dates, times and venues for events, please refer to notices that will be circulated locally or contact the relevant person listed in the Contacts and further information section at the end of this notice.

Date	Time	Presentation	Location	
Monday 19 May	09:00-16:30	Short course (day 1 of 2)	Auckland	University of Auckland
Monday 19 May	17:30-19:00	Lecture 1	Auckland	AECOM House, 8 Mahuhu Cres, Downtown Auckland
Tuesday 20 May	09:00-13:00	Short course (day 2 - half day)	Auckland	University of Auckland
Thursday 22 May	09:00-16:30	Short course (1-day)	Lower Hutt	GNS Science
Thursday 22 May	17:30-19:00	Lecture 2	Wellington	Venue to be notified
Friday 23 May	17:30-19:00	Lecture 1	Nelson	Golders, Level 3, 295 Trafalgar Street
Monday 26 May	12:00-13:00	Lecture 3	Reefton	Globe mine
Monday 26 May	18:00-17:00	Lecture 2	Westport	Venue to be notified
Wednesday 28 May	09:00-16:00	Short course (1-day)	Christchurch	Venue to be notified
Thursday 29 May	09:00-17:00	Short course (1-day)	Dunedin	GNS Science
Friday 30 May	12:00-13:00	Lecture 3	Macraes	Macraes mine

Short course: Sediment Hosted Gold Deposits

This one-day (Wellington, Christchurch and Dunedin) and one and one half day (Auckland) short course will address the following topics:

- Introduction to sediment-hosted gold
- Sukhoi Log; the Giant Siberian sediment-hosted Au deposit
- Carlin Deposits in Nevada; the North American Giants
- The Revolution of LA-ICPMS Mapping of Pyrite – putting gold into the paragenesis
- Case study of Macraes, NZ
- Witwatersrand Gold Reefs; the ultimate Giant deposit

- Gold content of seawater and relevance to gold ore cycles
And other selected topics as time permits.

Short course attendance is by registration. Click [HERE](#).

Lecture 1: A new theory to explain the Big 5 mass extinction events

Five mass extinctions have occurred over the last 500 million years when over 50% of life became extinct. The cause of each extinction is highly debated. Based on an exciting technological development we have produced a new theory that relates atmosphere oxygenation, ocean chemistry, bio-productivity and evolution of life.

Lecture 2: Tracking metals in the oceans through time: Relationship to ore deposit cycles and marine evolution

Sedimentary pyrite which forms on the seafloor attracts metals from seawater as it grows thus recording the trace metal chemistry of the ocean at that time. We have analysed over 5000 pyrites in marine black shales covering ocean history from 3.5 billion years ago to the present. This has enabled us to track variations in 25 trace elements in the ocean through time. In this talk the importance of trace element variations to marine evolution and cycles of seafloor ore deposits are discussed.

Lecture 3: Pyrite chemistry, lead isotopes and timing of orogenic gold deposits

Technological advances in laser ablation analysis of sulfides has enabled the timing of gold to be placed into the ore paragenesis. This was previously not possible. This development has demonstrated that for many of the giant gold deposits, there have been multiple episodes of gold introduction.

Attendance at the lectures is free of charge, but please email your intention to attend to the relevant contact person listed below for planning of refreshments.

Contacts for further information

Auckland short course (Monday 19 May and Tuesday 20 May): University of Auckland, contact Julie Rowland, j.rowland@auckland.ac.nz, phone: 09 3737599 ext 87412, or 021 747709

Auckland lecture (Monday 19 May); AECOM House, 8 Mahuhu Cres, Downtown Auckland (near old Railway Station), contact Roger Gregg, roger.gregg@ihug.co.nz, phone 09 634-8066 , or 021 181-4843

Lower Hutt short course (Thursday 22 May); GNS Science, contact Tony Christie at GNS Science, t.christie@gns.cri.nz, phone (04) 570-4682

Wellington lecture (Thursday 22 May): venue to be advised, contact Tony Christie at GNS Science, t.christie@gns.cri.nz, phone 04 570-4682

Nelson lecture (Friday 23 May): Nelson Discussion Group, Nelson offices of Golder Associates, Level 3, 295 Trafalgar Street (above Café Affair), contact Peter Hancock, peter.hancock@anu.edu.au, Phone: 03 541 0458

Christchurch short course (Wednesday 28 May): venue to be advised, contact Dean Fergusson, Resource and Reserve Ltd, dean@rarl.co.nz, phone 0274 454928

Dunedin short course (Thursday 29 May): GNS Science, contact Adam Martin at GNS Science, a.martin@gns.cri.nz, phone (03) 479-9683