



# Geo-soundings

NEWSLETTER – MARCH 2005

Editors: Deirdre and Nicole  
Curtin University of Technology  
GPO Box U1987, Perth WA 6845

Dr Anton Kepic, Head  
Department of Exploration Geophysics

Enquiries: Tel (08) 9266 3408/3565  
Fax (08) 9266 3407

Email [enq@geophy.curtin.edu.au](mailto:enq@geophy.curtin.edu.au)  
[www.geophysics.curtin.edu.au](http://www.geophysics.curtin.edu.au)

## WELCOME

Welcome to the first edition of Geosoundings for 2005. A new academic year has commenced with undergraduate enrolment numbers dropping a little from those of last year. Enrolments at the PhD level are being maintained with new arrivals replacing those who have graduated. Several visitors to the Department will soon be leaving us in April, to return to their respective bases overseas. **Tobias Müller**, **Florian Kapfinger** and **Igor Goldberg** have significantly contributed to the research activities during their appointments and I'm sure will all be greatly missed. It is also with sadness that we note the passing of **Will Verhoeff** earlier this year and a brief vale is included.

## ENROLMENTS 2005

### TOTAL ENROLMENTS FOR 2005 ARE:

BSc (Geophysics) Undergraduate and Honours	62 + 4
BSc (Geophysics)/BSc (Computer Science)	2
BSc (Geology/Geophysics)	4
Graduate Diploma	3
Postgraduate Diploma	1
MSc (Geophysics) – Coursework	1
MSc (Geophysics) – Research	0
MSc (Geoscience Exploration) – Coursework	2
PHD	23

### 2004 GRADUATES WERE:

#### Doctor of Philosophy

Miroslav Brajanovski            Jason McKenna  
Fatkhan                                Fanmin Zhang

#### Master of Science (Geophysics) by Research

Alexander Shepherd

#### Master of Science (Geoscience Exploration) by Coursework

Ralf Kriege

#### Graduate Diploma in Geophysics

Heika Bredhauer                Thomas Lee

#### BSc (Geophysics) Honours

Joshua Newman                Michael Whitford  
Jill Slater

#### BSc (Geophysics)

Cameron Jones                Jacob Paggi  
Alan Nanini                        Fumihito Watanabe

## JOURNAL PUBLICATIONS

**French, W.S.**, 2005, *Distinguished achievement award for Curtin Reservoir Geophysics Consortium: The Leading Edge*, 24, 2, p198-199.

**French, W.S.**, 2005, *Curtin Reservoir Geophysics Consortium receives SEG's Distinguished Achievement Award at Denver 2004 Meeting: Preview*, February, No 114, p9.

**Gurevich, B.**, 2005, *Amplitude of Biot's slow wave scattered by a spherical inclusion in a fluid-saturated poroelastic medium: Geophysics*, 160, p991-1005.

**Meyers, J.**, and **Hashemi, A.**, 2004, *HoistEM data processing for discovery of high-grade manganese ore under regolith cover: Exploration Geophysics*, 35, p272-276.

**Suto, K.**, and **McDonald, J.A.**, 2005, *Society of Exploration Geophysicists of Japan 7th International Symposium on Imaging Technology: Preview*, February, No 114, p8.

**Wilkes, P.**, 2005, *Radiometrics – a tool for soil mapping: Salt Magazine*, p21.

## CONFERENCES PRESENTATIONS

**Beckett, K.**, and **Meyers, J.**, 2005, *Multi-spectral analysis of airborne 256 channel NaI gamma-ray spectrometry for improved soil and regolith mapping: 4th Asia-Pacific symposium on environmental geochemistry*, 18-20 January 2004, Perth, Australia

## PUBLIC PRESENTATIONS

**Abbott, S.**, 2005, *Use of airborne electromagnetic data to interpret depth and thickness of aquifers beneath the Lake Warden Wetlands: Presented at the Centre for Water Research, UWA, 22 March, Perth*

**Beckett, K.**, 2005, *New Processing techniques for 256 Channel NaI radiometrics: Presented at the GRDC Strategic Initiative Priority – SIPO9 Precision Agriculture – Managing Variability, Annual Co-Ordination Meeting 2005, 21- 23 March 2005, Perth*

**Gurevich, B.**, 2005, *Seismic wave attenuation and dispersion in heterogeneous porous rocks*: Presented at the 16th National Congress 2005 at Australian Institute of Physics, January 31 - February 4 2005, Canberra.

**Meyers, J.**, 2005, *Sub-audio magnetic (SAM) geophysical technology for mineral exploration and subsurface regolith mapping*: Presented at the CRC LEME-GSWA Mineral Exploration Seminar, 14-16 February, Kalgoorlie.

**Wilkes, P.**, 2005, *WA Paleochannels project – Optimising locations for groundwater pumping in salinised agricultural land*: Presented at Salinity Engineering – A better way to manage Salinity Forum, 8 February, Dumbleyung.

**Wilkes, P.**, 2005, *WA Paleochannels project – Optimising locations for groundwater pumping in salinised agricultural land*: Presented at Salinity Engineering – A better way to manage Salinity Forum, 16 February, Dumbleyung.

#### AWARDS/PRIZES/SCHOLARSHIPS/GRANTS

Exploration Geophysics undergraduate student, **Owen Davis** has recently completed a **Summer Studentship** with GeoAg Pty Ltd **funded by the Office of Science and Innovation**. Owen worked on a project with GeoAg Principal, Greg Street looking at the mechanisms of salt concentration under main roads. The project was multidisciplinary using geophysics but also, chemistry, geology and engineering. Owen had his library card fully utilised over the summer, reading up on other disciplines. Samples of road base were subjected to various tests with various salinities of water; field surveys were conducted on main roads to examine salt distribution; and conductivity data was related to road condition.

Owen's results throw some doubt on the current theories about road damage from salinity and Main Roads WA is keen to see the results exploited and expanded in the future. For further details, contact Greg Street -

[Gstreet@geoag.com.au](mailto:Gstreet@geoag.com.au).

#### GOLD SCHOLARSHIP BOOTS EXPLORATION TECHNOLOGY

Belmont resident **Christopher Harrison** will “go out in search of gold” after being awarded the inaugural Yilgarn Gold Postgraduate Research Scholarship this week. His research will focus on the development of seismic imaging techniques suitable for 2D and/or 3D surveys in hard rock environment.

The Curtin University of Technology scholarship is sponsored by Gold Fields Australia and Placer Dome Asia Pacific. Program supervisor **Dr Milovan Urosevic** congratulated Mr Harrison on being awarded the scholarship, which was developed following the success of an earlier project using 2D seismic methods for gold exploration.

“The results of the earlier MERIWA project were highly successful and have shown great promise for gold exploration,” he said.

“This scholarship will enable further development of the technology to provide accurate 3D structural images in complex Yilgarn environments.

Mr Harrison has comprehensive experience in the development of seismic programs with the University of Calgary, where he worked on the CREWES Project.

“Chris will look at ways to construct 3D images from irregular-geometry seismic surveys” he said.

Dr Urosevic said the research would be highly relevant to local industry, with the program specifically designed in advance gold exploration in the Yilgarn.

“It's expected this research will help provide better images and more effective results than methods currently used by industry, making a significant impact on future gold exploration efforts,” he said.

#### 2005 KEGS OFFICE BEARERS (MEMBER OF THE SEG STUDENT SECTION)

Following a meeting of the Geophysics student body, elections were held in March to elect the 2005 KEGS Committee. The results are as follows:

**PRESIDENT:** Mr Owen Davis

**VICE-PRESIDENT:** Mr Matthew Dielesen

**SECRETARY:** Mr Stephen Irvine

**TREASURER:** Mr Russell Eade

**GENERAL COMMITTEE MEMBERS:**

Mr Jacob Paggi Mr Alan Nanini Ms Jennie Powell

**FACULTY ADVISOR:**

Prof Brian Evans Phone: +618 9266 7092

Email: [Brian.Evans@geophy.curtin.edu.au](mailto:Brian.Evans@geophy.curtin.edu.au)

#### VALE WILLEM (BILL) VERHOEFF

It is with great sadness that we mark the passing of Bill Verhoeff. Bill passed away on Sunday 20th February 2005 aged 75 years. A service was held at the Fremantle Crematorium on Thursday 24th February, with many of his 'old' mates in attendance. Bill first commenced working on the technical staff at the Perth Technical College prior to the creation of WAIT. He transferred to WAIT in the late 1960s and worked in the Department of Applied Physics as a Senior Technician and later as a Senior Technical Officer. His focus later changed to Geophysics where he remained until he retired in 1995. Bill will be sadly missed and fondly remembered for his generous heart and his good sense of humour.



Willem Frederik Verhoeff

1930 ~ 2005