

Wednesday Session 9

9A: New Technology Seismic

Konstantin Galybin

FIBRE-OPTIC VSPs: BOREHOLE SEISMIC REVOLUTION IN AUSTRALIA

Dr. Galybin has eleven years of experience in the oil and gas industry. He is a borehole seismic team leader for Schlumberger Software Integrated Solutions (SIS) Australia. He began his career in 2006 with Schlumberger Wireline in Australia and participated in numerous logging jobs in the Perth Basin. In 2007 he moved to SIS and focused on VSP survey design, processing and interpretation. His main interests are: seismic anisotropy, imaging, interbed multiple analysis, VSP inversion, and fibre-optic data acquisition and processing. Konstantin has earned Bachelor's (with Honours) degree and a PhD in Mathematical Geophysics from the University of Western Australia

Andrew Long

MARINE VIBRATOR CONCEPTS FOR MODERN SEISMIC CHALLENGES

After starting his career with a few years in land seismic acquisition and processing, Andrew Long completed a Ph.D. at UWA in Australia and worked as a Post-Doctoral Research Affiliate at Stanford University before joining PGS in 1997. He is now is Chief Scientist for Geoscience & Engineering, with interests in most areas of seismic technology and the interpretation of geophysical data.

9B: New Technology CO2

Dane Burkett

PORTABLE XRD FOR UNCONVENTIONAL AND CONVENTIONAL PETROLEUM EXPLORATION

Dane Burkett is the Olympus XRD Product Specialist working within the Scientific Solutions Business Unit. Dane has recently submitted his PhD at UNSW in the field of geology and geochemistry. He received the university medal for his undergraduate studies and first class honours. Danes role at Olympus is to develop XRD applications for the Olympus innovative XRD product line, especially within the natural resources sector from oil/gas exploration through to mineral exploration, material handling and mineral processing. He is also working on a range of applications from explosives and forensics, to corrosion analysis and medical applications.

Mengqiu Guo

A double double-porosity model for wave propagation in patchy-saturated tight sandstone with fabric heterogeneity

Jing Ba received his doctoral degree from one of Chinese top universities, Tsinghua University in 2008. From 2008 to 2012, He worked as a geophysicist in the Research Institute of Petroleum Exploration & Development (RIPED), CNPC. Presently he is employed as a Professor of Exploration Geophysics at School of Earth Sciences and Engineering at Hohai University, China.

Jing Ba published 2 books and more than 40 articles on geophysical journals and key conferences. He leads several key research projects of wave propagation theories and industrial applications. He won several prizes for exploration research and presented 11 China patents.

Stanislav Glubokovskikh

Feasibility of Seismic monitoring of CCS in Perth Basin

Stanislav Glubokovskikh got his PhD in mathematical geophysics at Lomonosov Moscow State University in 2012. Starting from the PhD thesis, his research involves theoretical and practical aspects of several diverse themes: physics of rocks, inverse problems, seismic modelling and digital rock. Stanislav joined Curtin University in 2015 and since then have been working on variety of projects related to wave-induced fluid flow effects, time-lapse monitoring for CCS projects and advanced seismic inversion algorithms. As a result, Stanislav has published 10 peer-reviewed papers in 2 years (4 of which as the lead author).

9C: Central Australian Basins Symposium

Carl Altmann

COULD THE MESOPROTEROZOIC KYALLA FORMATION EMERGE AS A VIABLE GAS CONDENSATE SOURCE ROCK RESERVOIR PLAY IN THE BEETALOO SUB-BASIN?

Carl Altmann is currently an Exploration Geologist for Origin Energy in Brisbane, Australia. He received his B.Sc. degree in Geology, Geophysics and Environmental Geoscience from Adelaide University and his Honours degree in Petroleum Geoscience from the Australian School of Petroleum. Carl is a member of AAPG and SPE

Juraj Farkas

ISOTOPE CONSTRAINTS ON INTRA-BASIN CORRELATION AND DEPOSITIONAL SETTINGS OF THE MID-PROTEROZOIC CARBONATES AND ORGANIC-RICH SHALES IN THE GREATER MCARTHUR BASIN, NORTHERN TERRITORY, AUSTRALIA

Graduated in 2007 at University of Ottawa (Canada) with PhD in Carbonate sedimentology and geochemistry; followed by Postdoctoral research at Harvard University, USA (2007-2010) in the field of isotope geochemistry and carbonates. From 2010-2014, Researcher at Czech Geological Survey (Prague), and setting up isotope laboratories for exploration of sedimentary rocks and paleo-environmental studies. Since 2015, Lecturer at University of Adelaide in Earth System Science and Geochemistry; and research in the field of application of isotope tracers for paleo-environmental studies and basin exploration.

Laurent Langhi

REGIONAL MIGRATION AND TRAPPING FRAMEWORKS IN THE FRONTIER CEDUNA SUB-BASIN: NEW INSIGHTS FROM STRATIGRAPHIC FORWARD MODELLING AND 'TRIANGLE JUXTAPOSITION' DIAGRAMS.

Laurent is Principal Researcher with CSIRO Energy. His work mostly focuses on structural geology, geological modelling, trap integrity, fluids migration, seismic interpretation, QI and geomechanics. He has been working on conventional and unconventional plays, CCS and water management.

Sebastian Nixon

Ranking DHI attributes for effective prospect risk assessment applied to the Otway Basin, Australia

Sebastian Nixon is a Geophysicist in the Conventional Exploration team with Origin Energy based in Brisbane. Sebastian joined Origin in 2010 following nine memorable years with various New Ventures,

Exploration and QI teams at Santos Ltd and AWE. Sebastian is currently focussed on conventional exploration/appraisal opportunities across the southern margin of Australia.

9D: Exploration Strategy

Tim Craske

HOW A SYSTEMS THINKING APPROACH TO MINERALISING GEOSYSTEMS IS OPENING NEW SEARCH SPACES FOR ORE DISCOVERY

Tim Craske is a geoscientist with thirty-five years' experience in exploration in Australia, the Americas and East Africa. He spent 20 years with WMC Resources during which he discovered the Ernest Henry and E1 iron oxide copper-gold deposits in the Cloncurry district, northwest Queensland. He was also involved in the targeting the West Musgraves province for copper and nickel, leading ultimately to the discovery of Nebo-Babel nickel sulphide deposit. Since leaving WMC Tim has worked for junior and major companies, is a Federal Councillor of AIG, and director of Geowisdom and Thinkercafé that develops innovative thinkers, organisations, and disruptive technology.

Andy Green

BUDGET ALLOCATION AND THE STOPPING PROBLEM IN MINERAL EXPLORATION

Andy Green has been involved with airborne and space-borne geophysics and remote sensing for longer than he cares to remember. He started remote sensing and image processing research with CSIRO at high frequency and gradually migrated fourteen orders of magnitude down-frequency to work on airborne EM systems. Now his research has reverted almost to childhood as he is back working in the area of his PhD in infra-red spectroscopy. He says he is excited and privileged to be able to be a small part of the development of HyLogging technology

9E: Geophysical Case History

Clive Foss

COMBINED GRAVITY AND MAGNETIC STUDIES OF SATELLITE BODIES ASSOCIATED WITH THE GIANT COOMPANA REVERSE MAGNETIC ANOMALY IN SOUTH AUSTRALIA

Clive Foss has a PhD from Leeds University for palaeozoic studies of archaen rocks from Southern Africa. Clive lectured in applied geophysics at the University of Malay before joining the Indonesia Australian Geological Mapping Project in Bandung, conducting regional gravity surveys in Kalimantan. In 1995 Clive joined Encom Technology, where he was principal consultant, and worked in the ModelVision software development team. In 2009 Clive joined CSIRO, where he undertakes research in magnetic and gravity methods.

Kate Hine

Woodlawn Revitalised by DHEM

Kate is a well-regarded consultant geophysicist with over 15 years' experience in a wide range of commodities, including base metals, coal and precious metal exploration. Kate is currently based in Queensland specialising in high quality EM/MMR/potential fields modelling and interpretation.

Adam Smiarowski

APPLICATION OF GEOPHYSICS FOR MINERAL EXPLORATION IN THE MOUNT LYELL REGION OF TASMANIA

Adam completed his MSc at RMIT University, modelling radio-frequency MT and EM for salinity mapping in agricultural applications. Adam completed a PhD at the University of Toronto studying airborne EM and has since been performing AEM research as part of CGG.

9F: Petrophysics

Cameron Adams

Defining Petrophysical Properties of Ultramafic and Mafic Rocks in Terms of Alteration

Cam is a PhD Student at the Centre for Exploration Targeting (CET), School of Earth Sciences, University of Western Australia. Cam has been awarded a MRIWA postgraduate research scholarship and an ASEG research foundation grant for his PhD project titled "Understanding of the Petrophysical Properties of Altered Rocks: Implications for Geophysical Exploration.

Cameron Adams

Development of a Practical Workflow for the Collection and Interpretation of Physical Property Data of Ultramafic and Mafic Rocks

Cam is a PhD Student at the Centre for Exploration Targeting (CET), School of Earth Sciences, University of Western Australia. Cam has been awarded a MRIWA postgraduate research scholarship and an ASEG research foundation grant for his PhD project titled "Understanding of the Petrophysical Properties of Altered Rocks: Implications for Geophysical Exploration."

Barry Bourne

PETROPHYSICS AND EXPLORATION TARGETING: THE VALUE PROPOSITION

Barry Bourne graduated in geology and geophysics from the University of Western Australia. He is a Fellow of the AIG, on the committee of the ASEG Research Foundation and an active member of the ASEG/ SEG. He is also on the external advisory committee for the UWA Centre for Exploration Targeting. Mr Bourne has extensive domestic and international mineral exploration experience. Up until 2013 he was Chief Geophysicist for Barrick Gold and is now a mineral exploration consultant to private and public international exploration groups. Mr Bourne began his career as a geophysicist with the CRA/ Rio Tinto Exploration group.

Michael Dentith

THE USE OF PETROPHYSICAL DATA IN MINERAL EXPLORATION: A PERSPECTIVE

Mike Dentith is Professor of Geophysics at The University of Western Australia. His research interests are the geophysical signatures of mineral deposits, hard rock petrophysics and application of deep-penetrating methods to exploration.

9G: Groundwater

Niels Christensen

FOCUSED ATTRIBUTES DERIVED FROM AEM SURVEYS USING THE CONTINUOUS WAVELET TRANSFORM

Niels Christensen is professor emeritus in geophysics at the Department of Geosciences, University of Aarhus. He works mainly with electrical and electromagnetic methods, especially their application to hydrogeophysics and other environmental problems.

Karen Gilgallon

THE USE OF AIRBORNE EM TO INVESTIGATE A COASTAL CARBONATE AQUIFER, SEAWATER INTRUSION, AND SUSTAINABLE BOREFIELD YIELDS AT EXMOUTH, WA

Karen graduated from Curtin University of Technology in 2002 with a BSc in Geophysics achieving First Class Honours. After graduating, Karen worked for the Waters and Rivers Commission (now the Department of Environment and Conservation) in the hydrogeology section to help explore for and monitor groundwater resources. Karen commenced at SGC in 2003 and has worked with numerous geophysical methods.

As a Principal Geophysicist, she is responsible for the design, management, and interpretation of all types of geophysical surveys. Karen has particular experience in the QC, interpretation and modelling of electrical and electromagnetic methods."

Kevin Morgan

Developing Water Supplies from Saprolite Regolith

Since graduation in geology from University of Western Australia in 1956, Kevin Morgan has been continuously engaged in earth sciences. Initially employed in the petroleum industry, then eight years with the Hydrogeological Branch of the Geological Survey of Western Australia and since 1969 as a consultant.

He established KH Morgan Geological Consultants Pty Ltd in 1972 with subsequent uninterrupted commitments providing a diverse range of earth science expertise for individuals, companies, government agencies and governments nationally and overseas.

Kevin Morgan

STRUCTURAL ANALYSES AIDING IDENTIFICATION OF WATER CONDUCTIVE FRACTURE ZONES IN CRYSTALLINE ROCKS

Since graduation in geology from University of Western Australia in 1956, Kevin Morgan has been continuously engaged in earth sciences. Initially employed in the petroleum industry, then eight years with the Hydrogeological Branch of the Geological Survey of Western Australia and since 1969 as a consultant.

He established KH Morgan Geological Consultants Pty Ltd in 1972 with subsequent uninterrupted commitments providing a diverse range of earth science expertise for individuals, companies, government agencies and governments nationally and overseas.

9H: Groundwater

Jean Legault

VTEM ET: An improved helicopter time-domain EM system for near surface applications

Jean is a 30 year professional mineral exploration geophysicist who has worked in the airborne and ground geophysics contracting and consulting sectors since 1985. He obtained his BASc in geological engineering (geophysics) in 1982 from Queen's University and later his MScA in mineral engineering

(geophysics) at Ecole Polytechnique in 2005. After 5 years with Sagax Geophysics (Montreal CAN) and 18 years with Quantech Geoscience (Toronto, CAN), he joined Geotech (Aurora, CAN) in 2008 where is chief geophysicist. He provides technical support to sales & marketing and his primary areas of interest are airborne EM methods applied to geologic problems."

Ken Lawrie

COMPARATIVE EVALUATION OF 1D, 2.5D AND 3D INVERSIONS FOR RESOLVING TECTONIC ELEMENTS IN FLOODPLAINS AND NEAR-SURFACE INVERTED SEDIMENTARY BASINS

Dr Ken Lawrie is Director, Groundwater Science Innovation, in Geoscience Australia's Environmental Geoscience Division. Ken has a PhD in structural and economic geology from Glasgow University, and over 35 years' experience internationally in geoscience research for the minerals, petroleum and environmental sectors. Ken joined Geoscience Australia in 1995, applying innovative geoscience methods and technologies for improved land and water management strategies.

Ken Lawrie

RAPID ASSESSMENT OF GROUNDWATER SALINITY AND SEAWATER INTRUSION HAZARD IN THE KEEP RIVER FLOODPLAIN, NORTHERN TERRITORY, AUSTRALIA

Des YinFoo is Senior Manager, Water Assessments for the Northern Territory Department of Environment and Natural Resources, based in Darwin. Des has over 25 years' experience as a hydrogeologist and has extensive knowledge of Northern Territory's groundwater systems.