

Wednesday Poster Session

P052 Mr Andrew Kelman

MIDDLE ORDOVICIAN CONODONTS AND FISH FROM THE STAIRWAY SANDSTONE, AMADEUS BASIN

Andrew Kelman has been working as a biostratigrapher at Geoscience Australia for twenty or so years. He also has an interest in Ordovician conodonts and has recently had the opportunity to apply to this knowledge to biostratigraphy of the inland basins of the Larapintine Seaway.

P053 Dr Alison Kirkby

THE CONDUCTIVITY STRUCTURE OF THE GEORGINA-ARUNTA REGION FROM MAGNETOTELLURIC

Alison completed her MSc in Geology in 2008 and joined Geoscience Australia in the same year. She worked in the Geothermal Section for several years before commencing her PhD, which she completed in 2016. She now works in the Magnetotelluric and Seismic Data Acquisition and Processing Section at Geoscience Australia where she is involved in magnetotelluric data collection, interpretation, and software development.

P054 Dr Julie Pearce

METAL MOBILISATION DURING WATER REACTION OF THE ROSENEATH AND MURTEREE SHALES OF THE COOPER BASIN

Julie Pearce is working on integrating high resolution core characterization, experiments at reservoir conditions, and geochemical modelling to understand reactions of shale and sandstone. She has most notably studied the impacts of reactions occurring during geological carbon storage with impurities including SO_x, O₂, and NO_x in the CO₂ stream which may be present from coal combustion sources. Prior to this, Julie studied chemical reaction dynamics by spectroscopic methods in the UK, and subsequently was awarded a JSPS fellowship for field measurement of stable isotopes of CO₂ in the atmosphere in Japan.

P055 Dr Shakil Ahmed

DRAINED PORE MODULUS DETERMINATION USING DIGITAL ROCK TECHNOLOGY

Dr Shakil Ahmed is a research scientist specialising in the modelling of digital rock physics, numerical reservoir simulation, flow through micro-pore structures, rock-fluid interaction, computational fluid dynamics and multi-phase flow. He has lead and been involved in a number of projects. He has been asked to review more than 40 papers over the last five years for many renowned journals. Dr Ahmed is involved with the ARC as an assessor. He is affiliated with the IEAust, SPE, EAGE, ARMA, the Institute of Engineers, Bangladesh (IEB) and the Bangladesh Society of Mechanical Engineers (BSME).

P056 Mr Zubair Ahmed

OPTIMUM IMAGE RESOLUTION OF A MICRO-CT IMAGE TO CHARACTERIZE SHAPE DESCRIPTORS AND MICROSTRUCTURE OF AN UNCONSOLIDATED SAND

Zubair Ahmed is a PhD candidate from Department of Exploration Geophysics, Curtin University of Technology, Western Australia. His research area includes rock physics characterization of unconsolidated sand using laboratory ultrasonic measurement and micro-CT image analysis. His study primarily focuses on effective elastic properties of granular medium using contact based models. Before commencing postgrad study, he worked on seismic data acquisition as a field QC for a national

petroleum exploration company. He was also involved with 3D seismic data interpretation team on different petroleum fields to characterize reservoir potentials and new locations for drill wells using inversion and attribute analysis.

P057 Mr. Roman Beloborodov

COUPLED MEASUREMENTS OF HYDRAULIC PERMEABILITY AND FULL STIFFNESS TENSOR COMPACTION TRENDS IN ARTIFICIAL SHALES

Roman Beloborodov is a Ph.D. candidate at Curtin University (Perth, WA). He is involved in experimental and theoretical rock physics and currently is working on artificial and natural shale rocks. Roman has a background in engineering geology, hydrogeology, artificial lithogenesis and soil mechanics. His main interest lays in seismic interpretation and inversion for rock properties.

P058 Ms Julia Correa

A COMPARISON OF CONVENTIONAL BOREHOLE TOOLS AND DISTRIBUTED ACOUSTIC SENSING AT A DEDICATED FIELD LABORATORY

Julia Correa holds a BSc in Geophysics from Fluminense Federal University, Brazil, and is currently a Ph.D. candidate in Exploration Geophysics at Curtin University. Before starting her doctorate studies in 2015, she worked as a Field Geophysicist on seismic acquisition and processing projects offshore Africa. Julia is currently working on the applications of fibre-optics sensing DAS.

P059 Dr Se Gong

CARON ISOTOPE FINGERPRINTING PALAEO FLUID INCLUSION GASES USING A CRUSHING-TRAPPING TECHNIQUE

Se Gong was awarded a BS degree in chemical engineering in Xi'an University of Mining & Technology in 1999 and then completed M.Sc in organic geochemistry in 2002 at China University of Mining & Technology and obtained Ph.D (2006) in geochemistry at Guangzhou Institute of geochemistry, Chinese Academy of Sciences. She commenced work with CSIRO Division of Petroleum Resources in Australia in 2007 as an organic geochemist. Main research interests are focused on molecular composition of fluid inclusion and genetic characterization of oils, gases and source rocks. Current research work is fingerprinting the fluid inclusion gases. Member: PESA

P060 Mr Lance Holmes

INTEGRATED EARTH DATA INTERPRETATION WORKFLOW - A RECIPE FOR SUCCESS IN ONSHORE FRONTIER HYDROCARBON EXPLORATION

Lance Holmes obtained his degree in geology from the University of Durban (South Africa) in 1981. He was initially employed by the state oil exploration company (Soekor) for 12 years, working on development of the first offshore oil and gas fields in the country's history. This was followed by several exploration and operational roles in the petroleum, marine placer diamond and geo-hazard survey industries, working up and down offshore West Africa. He moved to Australia in 2002, where he has been employed by Santos Ltd in a regional exploration and new ventures capacity ever since.

P061 Mr Mosayeb Khademi Zahedi**VOLCANICS: A COMMONLY UNDERESTIMATED PART OF PETROLEUM EXPLORATION**

Mosayeb has over 10 years experience in geophysical and geological data interpretation in the oil and gas industry. He graduated with a Masters from Petroleum University of Technology and IFP-School in 2006 and has since had various roles in Research Institute of Petroleum Industry, Beicip Franlab and Rocca Energy. Mosayeb has worked worldwide, but with a primary focus on the North West Shelf of Australia.

Mosayeb has extensive experience in seismic interpretation in exploration and field development projects. Furthermore, he has a broad background in geological data interpretation and integration into exploration and reservoir models.

P063 Wenhui Tan**ANALYSIS ON BRITTLENESS CHARACTERISTICS OF TIGHT OIL SILTSTONES**

I am a PhD currently studying in Geological Resources and Engineering at the Hohai University in Nanjing City, China.

My experience:

1. 2014-2015, Second-class scholarship, Hohai University
2. 2015-2016, Second-class scholarship, Hohai University
3. 2016-2017, A first-class scholarship, Hohai University

My skills:

1. Killed use of office software, MATLAB and some other software
2. Fast learner and hard working
3. Innovative thinking
4. Bilingual (Chinese/English)

Self-evaluation:

1. Good at communicating with other people
2. Positive thinking and attitude
3. Responsible for work and family
4. Daring to try new things

P064 Mr Chris Van Galder**FULL SPECTRUM GRAVITY – HIGH QUALITY GRAVITY DATA FOR ALL APPLICATIONS**

Chris van Galder is the manager of the Airborne Gravity Gradiometry Department at CGG Multi-Physics. His interests include gravity and gravity gradiometry and data processing.

P065 Mrs Chitra Viswanathan**A CLOUD-BASED WELL LOG DATABASE PROTOTYPE**

Mrs Chitra Viswanathan is from a mathematics and computer science background. She has 20 years of experience in software development of which the last 15 have been with Commonwealth Scientific and Industrial Research Organisation (CSIRO). She is affiliated with CSIRO Energy division and her developments have been in geomechanics, geoscience arena. She developed sand management

software tools that are being successfully used by an international oil and gas operator. She is currently part of the Data Analytics team and is responsible for formulating and implementing a data strategy for Petroleum Geoscience group, using the latest data management and analytics technologies.

P066 Mr. Alexey Yurikov

EXPERIMENTAL AND THEORETICAL STUDY OF WATER RETENTION EFFECT ON ELASTIC PROPERTIES OF OPALINUS SHALE

Alexey Yurikov is a PhD candidate at the Exploration Geophysics department at Curtin University, Perth, Australia. His research interests focus on rock physics of shales. Alexey has a BSc (2012) in applied physics and mathematics and MSc (2014) in applied geophysics from Moscow Institute of Physics and Technology (State University).

P067 Mr. Dmitry Popik

TIME-LAPSE SURFACE SEISMIC PROCESSING FOR STAGE 2C OF CO2CRC OTWAY PROJECT

Dmitry Popik received his master's degree in geophysics from Lomonosov Moscow State University in 2014. Since 2011 he has worked in a variety of positions available in seismic industry ranging from supervision of 3D land acquisition to onboard processing of marine seismic data to interpretation for hydrocarbons. Dmitry has started his PhD with the Department of Exploration Geophysics at Curtin University in 2015. At the moment he does research on processing of 4D seismic data for CO2CRC Otway Project. Besides, Dmitry does seismic acquisition and processing for hard rock seismic and assists with teaching for undergraduate and master's students.

P068 P069 Dr Tim Dean

THE SEISMIC SIGNATURE OF RAIN

NOISE IN URBAN LAND SEISMIC SURVEYS

Tim has an Honours degree in Geophysics from Curtin University and a PhD in Physics from the University of New South Wales. He spent more than twelve years working for WesternGeco and Schlumberger in a variety of roles related to surface and borehole seismic acquisition including field operations, software development and research located in Saudi Arabia, England, Norway and Australia. After leaving Schlumberger he worked as a sports technology Project Advisor at Hawk-eye innovations (a division of Sony). He joined Curtin Universities Department of Exploration Geophysics as a Research Fellow in August 2016.

P070 Professor Boris Gurevich

SEISMIC SIGNATURES OF FRACTURED RESERVOIRS: THEORY VERSUS NUMERICAL SIMULATIONS

Junxin Guo obtained Bachelor degree in Exploration Geophysics at China University of Petroleum in 2011. Then he continued to obtain first master degree in the same major at China University of Petroleum in 2013. After that, he obtained second master degree in Geophysics at University of Oklahoma in 2015. Currently, he is pursuing his doctor degree in Exploration Geophysics at Curtin University.

P071 Dr. Dave Marchant

3D INVERSION OF LARGE SCALE MARINE CONTROLLED-SOURCE ELECTROMAGNETICS

Eldad Haber is a professor in the Departments of Mathematics and Earth and Ocean Science, and the NSERC Industrial Research Chair in Computational Geoscience at the University of British Columbia. He is an associate editor of the SIAM Journal on Scientific Computing. His primary research interest is scientific computing and its application to geophysical and medical imaging.

P072 Prof Maxim Lebedev

THE IMPACT OF WATER SATURATION ON THE ELASTIC ANISOTROPY DISPERSION IN THE WELLINGTON SHALE AT SEISMIC FREQUENCIES

Dr Vassili Mikhaltsevitch holds a Master of Science degree and a PhD in Physics/Mathematics from Kaliningrad University, Russia. Vassili was working at Kaliningrad University from 1982 to 1998. From 1998 to 2008 he was a Senior Research Scientist with QRSciences, a research and development company located in Perth, Australia. Then for two years he was a Senior Core Analyst in Core Laboratory of Australia. In April 2010 Vassili joined Curtin University, he is a Senior Research Scientist at the Department of Exploration Geophysics. Vassili is the author and co-author of 40 journal papers, 22 patents and 45 conference proceedings.

P073 Ms Nazanin Nourifard

EFFECT OF AMPLITUDE ON WAVE PROPAGATION

Nazanin is PhD candidate in rock physics at department of exploration geophysics of Curtin University. She holds Master of Philosophy in mining engineering from University of Wollongong, Master of Science in Engineering geology and bachelor of science in Geology.

P074 Mr Michel Nzikou

FORWARD AND INVERSION MODELLING OF THE ULTRASONIC WAVE IN A HOMOGENEOUS MEDIUM USING P-WAVE TRANSDUCERS

My name is Michel Nzikou, I am currently in my second year PhD. I am work focus in building a robust forward and inversion model that estimates the elastic parameters using ultrasonic displacement waveforms. I completed my M.Sc in computational Geodynamics in Canada. I am from Physics background and enjoy programming. On my free time I do help with volunteering within the community.

P076 Mr Jacob Smith

INTERPRETATION USING EXPLICITLY ENCODED PHASE, AMPLITUDE AND FAULT DATA

Jacob Smith a member of the GeoTeric team in Perth, and is the Senior Geoscientist for the Asia Pacific region. He received his BSc. (Hons.) in Geophysics from Curtin University before starting his career in 2007. He has been with GeoTeric since 2014, where he has been involved in the development of Geological Expression, Frequency Decomposition and tuning workflows. Jacob's current focus is on developing workflows to take advantage of the new interpretation tools available within GeoTeric.

P077 Dr David Clark

BOREHOLE MEASUREMENTS WITHIN HIGHLY MAGNETIC BODIES –CORRECTIONS OF MEASURED MAGNETIC FIELDS AND GRADIENTS

David Clark has a B.Sc. (Hons I) in Physics and an M.Sc. in Geophysics from Sydney University, and a PhD in Geophysics from Macquarie University. He has worked for CSIRO since 1978, undertaking

research into applications of rock magnetism to exploration, magnetic petrology, potential field interpretation and tensor gradiometry. His current position is Principal Research Scientist, affiliated with the CSIRO Superconductive Devices and Systems Group in CSIRO Manufacturing and the CSIRO Magnetism and Gravity Team in CSIRO Minerals.

P078 Dr Clive Foss

MAGNETIC FIELD SURVEYS WITH A SOURCE OF KNOWN MAGNETIZATION

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.

P079 Mr Adouley Guirou

Petrophysical characterization of South East dome Copper-gold deposit, Northwestern Zambia

Adouley Guirou is an exploration geophysicist with a Msc degree from Curtin University where he worked on the possibilities to extract induced polarisation signature from low frequency magnetotelluric measurements. In the last 10 years, Adouley has worked as a field geophysicist in West Africa, site geophysicist at Syama Gold mines in Mali, Mauritanian copper and holds a position as regional geophysicist with First Quantum minerals.

P080 P081 Mr Matthew Hutchens

DEPTH ESTIMATE OF A REMNANTLY MAGNETISED SOURCE USING MULTI-LEVEL MAGNETIC DATA

DEPTH ESTIMATION OF SOURCE BODIES USING 2D MAGNETIC GRADIENT RATIOS

Matthew Hutchens graduated with 1st class honours in Geophysics from the University of Adelaide in 2000, winning the Normandy Mining Prize for Honours Geophysics in that year.

Since becoming a professional Matthew has worked extensively in the mineral exploration industry, initially with a junior explorer in Flinders Diamonds and subsequently servicing junior, medium and large explorers and miners with geophysical consulting through AsIs International (with Graham Bubner) from 2007-2012 and then starting Hutchens Geophysics in 2012.

Additionally Matthew established AMG Surveys in 2008 which acquires ground magnetic data for all purposes.

P082 Mr Harrison Jones

GEOPHYSICAL SIGNATURE OF THE SOUTHERN-GURUBANG BASE METAL OCCURRENCE IN SOUTHEASTERN NSW

Mark Lackie is a Senior Lecturer at Macquarie University in Sydney. His research interests cover the use of magnetic and gravity methods to delineate large structures, as well as the application of shallow geophysical methods to understand contamination and groundwater issues. Mark is the Editor-in-charge of the journal Exploration Geophysics.

P083 Mr Duy Thong Kieu

INTEGRATION OF BOREHOLE DATA IN GEOPHYSICAL INVERSION USING FUZZY CLUSTERING

I am PhD student in Curtin University. My research interests are inversion of multiple geophysical datasets, applications fuzzy clustering and fuzzy neural network to geophysical inversion and data analysis.

P084 Mr Tom Neville

CONTINUOUS HYDROGEOLOGICAL CHARACTERISATION IN IRON ORE DEPOSITS USING BOREHOLE MAGNETIC RESONANCE

Tom is currently Formation Evaluation Advisor to Qtech. After completing a BSc (Hons) in Geology at the University of Queensland in 1989, he spent six years working as a geologist for a number of Australian oil and gas companies before joining Schlumberger, where he spent the next twenty years in various technical and managerial roles in research, engineering, and operations, primarily in North America and Asia, focusing on all aspects of formation evaluation. After leaving Schlumberger in 2017, Tom joined Qtech where he works on interpretation algorithm and answer product development, as well as supporting ongoing operations.

P085 Dr Timothy Hopper

CONTINUOUS DRY BULK DENSITY EVALUATION USING BOREHOLE MAGNETIC RESONANCE AND DENSITY MEASUREMENTS

Tim completed his PhD at the Queensland University of Technology in 2005, during which he spent time at the University of Pennsylvania on a Fulbright Scholarship. Tim started his career as a wireline field engineer with Schlumberger after which he moved to Schlumberger-Doll Research in Boston, USA. He then transferred to the Schlumberger Houston Product Centre as project manager for a new LWD NMR tool. Following this he moved back to Perth where he worked as a petrophysicist for three years. Tim started Qtech in 2013 with the aim of introducing slimhole BMR tools into the mining and hydrogeology industries.

P086 Dr Shastri Nimmagadda

DIGITAL OPENCAST MINING ECOSYSTEM (DOME) FOR MANAGING THE AUSTRALIAN MINING INDUSTRY IN A BIG DATA SCALE

Shastri Nimmagadda worked for national and multinational oil & gas producing and service companies worldwide. He is currently an adjunct research fellow in the Big Data group, researching in the "Digital Ecosystems & Technologies and Knowledge Management" and now focused in "digital petroleum ecosystems (DPE) and Petroleum Management Information System (PMIS) at School of Information Systems, CBS, Curtin University, Australia. He presented and published more than 100 research papers in the international conferences and ranked journals. Shastri explores new opportunities of digital ecosystems and technologies in the sustainability research.

P087 Ms Anastasia Pirogova

EFFECT OF FINELY-LAYERED STIFF CARBONATES ON A SEISMIC RESPONSE. CARNARVON BASIN SYNTHETIC STUDY

Anastasia Pirogova is a 1st year PhD student at the Department of Exploration Geophysics in Curtin University.

She holds bachelor and master degree from Lomonosov Moscow State University.

Her main areas of interest are exploration seismology, quantitative interpretation of surface and borehole seismic data, seismic inversion.

P088 Miss Xiaodi Tan

APPLICATION OF IMAGE PROCESSING METHODS IN EDGE DETECTION OF POTENTIAL FIELD DATA

A master student majoring in Geophysics in College of Geo-exploration of science and technology of Jilin University. Her research interest is mainly about gravity data processing and interpretation. Currently, she is working with edge detection of potential field data and gravity and gravity gradient data imaging.

P089 Mr Dailei Zhang

FAST THREE DIMENSIONAL DENSITY INVERSION BASED ON MULTI-SCALE ANALYSIS OF WAVELET

A Ph.D student majoring in Geophysics in Jilin University. His research domain is mainly about gravity and magnetic data processing and interpretation. He was also involved in the project of UAV based geophysical exploration.

P091 Mr Alexander Costall

RAPID ESTIMATION OF VOLUMETRIC GROUNDWATER RECHARGE IN THE VADOSE ZONE VIA GROUND PENETRATING RADAR

Alex is a PhD student at Curtin University whose research focuses on groundwater and applied electrical and electromagnetic geophysics. The ultimate aim of the research is to resolve the hydrogeological properties of basin-scale fault structures through high-powered grounded-bipole electromagnetic surveys.

Alex is also interested in coastal hydrogeological systems and is an experienced practitioner of ground penetrating radar and electrical resistivity imaging, particularly in coastal environments."

P092 Dr Laura Gow

ASSESSING AQUIFER COMPARTMENTALISATION IN THE DALY RIVER BASIN, NORTHERN TERRITORY: A HYDROGEOLOGICAL APPROACH

Laura Gow completed a Bachelor of Science with a double major in Geology and Zoology at the University of Melbourne in 2006, first class honours in Earth Sciences at the University of Melbourne in 2006 and a PhD in characterising subsurface water-use dynamics of vegetation using a land surface temperature model-data differencing approach at the University of Queensland in 2017. Laura has worked at Geoscience Australia since 2007 on a range of projects across Australia, focusing on the application of remotely-sensed techniques including geophysics to characterise groundwater-surface water connectivity and elucidate the relationship between terrestrial vegetation and groundwater.

P093 Ms Tania Ibrahim

DEVELOPING REGIONAL-SCALE HYDROGEOLOGICAL FRAMEWORKS FOR REMOTE PARTS OF AUSTRALIA – THE ROLE OF DIGITAL TERRAIN DATA COUPLED WITH FINE-SCALE GEOPHYSICAL AND GEOLOGICAL DATA

Tania Ibrahimi is a Geospatial Analyst and Geological Modeller in the Mineral Resources flagship of the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Tania's work involves harnessing and developing methods of Geographic Information Systems (GIS), spatial processing and 3D modelling, across the fields of geoscience. Her cross-disciplinary team explores methods to discover and improve understanding of groundwater and mineral resources.

P095 Mrs Bibirabea Sedaghat

MAGNETOTELLURIC, BASIN STRUCTURE AND HYDRODYNAMIC; SOUTH WEST OF WESTERN AUSTRALIA

Rabea has Bachelor of Science in Physics from University of Tehran (Iran) and Master of Science in Geophysics, Geomagnetism. She worked in Institute of Geophysics, University of Tehran as an expert in geophysics, particularly Magnetotelluric. She is PhD candidate in Curtin University now.