

Curriculum Vitae: Dr Ian Moffat

Personal Details

Address: 4/25 Moorhouse Avenue, Myrtle Bank, SA,
Email: moffat@ims.forth.gr
Telephone: 61 403 050 935
Websites: www.precipicetraining.com/ian.html
http://www.flinders.edu.au/people/ian.moffat
http://archaeometry.com.au
Twitter: @archaeometry

Qualifications

2013: Doctor of Philosophy, Research School of Earth Sciences, The Australian National University. Thesis Title: *Spatially Resolved Strontium Isotope Micro-Analysis of Lower and Middle Palaeolithic Fauna from Archaeological Sites in Israel and Southern France*, supervised by Professor Rainer Grün and Professor Matthew Spriggs

Complete thesis available for download at:

<https://drive.google.com/folderview?id=0BwzoiYcmFShvVUVmcG53Z3RpY0E&usp=sharing>

2003: Bachelor of Arts majoring in English and History, University of Queensland.

2003: Bachelor of Science with Honours majoring in Earth Sciences, University of Queensland. Thesis Title: *Holocene Evolution of the Offshore Burdekin Delta Region* supervised by Professor Chris Fielding (now Coffman Chair of Sedimentary Geology, Department of Geosciences, University of Nebraska-Lincoln).

Employment History

September 2014-September 2015: Postdoctoral Researcher, Laboratory of Geophysical-Remote Sensing and Archaeoenvironment, Institute for Mediterranean Studies, Foundation for Research and Technology, Hellas

Postdoctoral researcher on the "Application of Novel Geo-Information Technologies in Ancient Greek Urban Studies" project investigating archaeological sites using geophysical techniques. Sites investigated include Mantinea and Elis. Also provided geophysical and field support to projects trialling underwater resistivity imaging, investigation of Neolithic mounds and the mapping of olive oil waste.

July 2013-present: Consultant, Archaeometry Pty Ltd

Consultant archaeological scientist undertaking projects in the fields of archaeological geophysics, geoarchaeology, sedimentology, geomatics and isotope geochemistry.

March 2011-present: Principal Instructor: Geophysics, Geochemistry and Quaternary Geology, Precipice Training Pty Ltd

Principal instructor of field courses in sedimentology and stratigraphy for petroleum geologists. Clients include Exxon-Mobil, Chevron, Woodside, Santos, Beach Energy, ConocoPhillips, Hess, Murphy, OMV, Origin Energy, Saka Energi Indonesia, Salamander Energy, Shell and Talisman Energy.

January 2007-present: Adjunct Associate Lecturer, Department of Archaeology, Flinders University

In this role, I teach graduate and undergraduate classes, supervise research students and maintain a vigorous research program. As part of this appointment, I teach Australia's only dedicated topic in archaeological geophysics (Introductory Archaeological Geophysics) and have contributed to the teaching of topics including Laboratory Archaeology, Archaeological Field Methods, Forensic Archaeology, Underwater and Coastal Archaeology, Archaeological Science/Quaternary Ecology, Maritime Archaeology Field School and Indigenous Archaeology Field School

November 2002–January 2007: Communications and Business Manager, Ecophyte Technologies Pty Ltd

This role involved overall control of all aspects of business management, accounting, human resources, marketing and public relations for a small geophysical consulting firm. The position also involved a strong technical component including geological and geophysical data collection.

Key Tasks and Initiatives:

- Conducted field acquisition, processing and interpretation of geophysical data including ground penetrating radar, direct current resistivity, electromagnetic induction, marine and terrestrial magnetometer, marine sub-bottom profiler and downhole geophysical tools.
- Supervised and interpreted reverse circulation drilling, diamond drilling and sediment sampling programs.
- Prepared reports, quotes and presentations for many major consulting firms, academic institutions and government agencies.
- Instigated work experience program for university students and graduates.
- Designed marketing strategy and promotional material.
- Stringently managed cash-flow to assist in drawing the company into profit and liaising with clients to facilitate this process.

January–May 2000: Research Assistant, Pennsylvania State University Geodynamics Research Centre

In this role I assisted graduate students and faculty with gathering data, summarising papers and preparing illustrations.

January-March 1999: Research Assistant, Department of Earth Sciences, University of Queensland

This role involved undertaking sample preparation and a literature review concerning the geomorphology of Raine Island and Herald Key, Great Barrier Reef.

Publications

Sarris, A., Kalayci, T., **Moffat, I.** and Manataki, M., Submitted, *An Introduction to Geophysical Methods within Digital Geoarchaeology*, Siart, C., Forbriger, M and Bubenzer, O. (eds.) Digital Geoarchaeology, Springer

Duke, B.J., Chang, N.J. and **Moffat, I.**, Submitted, *The Invisible Moats of the Mun River valley, NE Thailand: The examination of water management devices at mounded sites through Ground Penetrating Radar (GPR)*, Journal of Indo-Pacific Archaeology

Simyrdanis, K., Papadopoulos, N., Kim, J-H., Tsourlos, P. and **Moffat, I.**, Submitted, *Archaeological Investigations in Shallow Seawater Environment with Electrical Resistivity Tomography*, Near Surface Geophysics

Willmes, M., James, H., Boel, C.A., Chancerel, A., Courtaud, P., Wood, R., Fallon, S., McMorrow, L., Armstrong, R.A., Williams, I.S., Kinsley, L., Aubert, M., Eiggins, S., **Moffat, I.** and Grün, R., Submitted, *Radiocarbon dating*

and isotopic tracing of human diet and mobility at the early Neolithic to Iron Age collective burial site, *Le Tumulus des Sables, France*, Journal of Archaeological Science

Willmes, M., **Moffat, I.**, McMorrow, L., Kinsley, L., Armstrong, R., Eggins, S., Grün, R., Submitted, *Spatial variability of $^{87}\text{Sr}/^{86}\text{Sr}$ isotope ratios in France as a framework for archaeological provenance studies*, Chemical Geology

James, D., David, B., Delannoy, J.-J., Gunn, R.G., Hunt, A., **Moffat, I.**, Stephens, S-P., Iacono, N. and Katherine, M., In Press, *Archaeology of rock art at Dalakngalarr 1, central-west Arnhem Land* in David, B., Tacon, P., Delannoy, J.-J. and Geneste, J.-M. (eds.) Archaeology of Rock Art in Western Arnhem Land, ANU Press, Canberra

David, B., Gunn, R., Delannoy, J.-J., Petchey, F., Calmin, E., Castets, G., **Moffat, I.**, Manataki, M., O'Farrell, M., Milanes, J., Aplin, K., Geneste, J.-M., Barker, B., Katherine, M and Pietrzak, U., In Press, *Dating painted Panel E1 at Nawarla Gabarnmang, southern Arnhem Land plateau*, in David, B., Tacon, P., Delannoy, J.-J. and Geneste, J.-M. (eds.) Archaeology of Rock Art in Western Arnhem Land, ANU Press, Canberra.

Barker, B., Lamb, L. David, B. Gunn, R.G., Chalmin, E., Delannoy, J.-J., Aplin, K., **Moffat, I.**, Castets, G., Petchey, F., Katherine, M and Geneste, J.-M., In Press, *Archaeology of the 'Genyornis' painting site, western Arnhem Land: Determining the age of the 'Genyornis' painting* in David, B., Tacon, P., Delannoy, J.-J. and Geneste, J.-M. (eds.) Archaeology of Rock Art in Western Arnhem Land, ANU Press, Canberra.

David, B., Delannoy, J.-J., Gunn, R.G., Brady, L.M., Petchey, F., Geneste, J.-M., Mialanes, J., **Moffat, I.**, Chalmin, E., Aplin, K. and Katherine, M., In Press, *Determining the age of a painted panel at EXF3, Jawoyn country, western Arnhem Land*, in David, B., Tacon, P., Delannoy, J.-J. and Geneste, J.-M. (eds.) Archaeology of Rock Art in Western Arnhem Land, ANU Press, Canberra.

Moffat, I. In Press, *Locating Graves with Geophysics*, In Press, in Sarris, A., (ed) Best Practices of Geoinformatic Technologies for the Mapping of Archaeolandscapes, Archaeopress, Oxford.

François-Xavier, S. and **Moffat, I.**, In Press, Identification of shapes and uses of the past landscape through EMI survey, in Sarris, A., (ed) Best Practices of Geoinformatic Technologies for the Mapping of Archaeolandscapes, Archaeopress, Oxford.

Moffat, I., Joannes-Boyau, R., Kinsley, L., Willmes, M. and Grün, R., In Press, *Strontium Isotope Investigations of Human Mobility based on Teeth from the Iron Age Burial Cave T1 at Tes es-Safi/Gath, Israel*, in Maeir, A.M. and Uziel, J. (eds.), Tell es-Safi/Gath, Volume 2: Excavations and Studies, Aegypten and Altes Testament, Munster: Ugarit-verlag.

Dosseto, A., Vigner, N., Joannes-Boyau, R., **Moffat, I.**, Singh, T. and Srivastava, S., 2015, *Rapid response of silicate weathering rates to climate change in the Himalaya*, Geochemical Perspectives Letters, 1 :10-19.

Joannes-Boyau, R., Scheffers, A., Chapoulie, R., Lahaye, C., Parr, J., Orange, M., **Moffat, I.** and Guibert, P., 2014, *Thermal behaviour of organic radicals and paramagnetic centres in chert; a case study of Bergeracois brown chert, Dordogne, France*, Quaternary Geochronology, 23: 26-34.

Moffat, I., 2014, *Isotope Geochemistry in Archaeology*, in Smith, C. (ed.), Encyclopaedia of Global Archaeology, Springer, New York, 4106-4111.

Willmes, M., McMorrow, L., Kinsley, L., Armstrong, R., Aubert, M., Eggins, S., Falguères, C., Maureille, B., **Moffat, I.** and Grün, R., 2014, *The IRHUM (Isotopic Reconstruction of Human Migration) database - bioavailable strontium isotopes of France for geochemical fingerprinting*, Earth System Science Databases, 6: 761-777.

Long, K., Stern, N., Williams, I., Kinsley, L., Wood, R., Boljkovac, K., Kelly, T., Fallon, S., Kokkonen, H., **Moffat, I.** and Grün, R., 2014, *Fish otolith geochemistry, environmental conditions and human occupation at Lake Mungo*, Quaternary Science Reviews, 88: 82-95.

McKinnon, J.F., Wesley, D., Raupp, J.T. and **Moffat, I.**, 2013, *Geophysical Investigations at the Anuru Bay Trepanng Site: A New Approach to Locating Macassan Archaeological Sites in Northern Australia*, Bulletin of the Australasian Institute of Maritime Archaeology, 37: 106-112.

Moffat, I., Stringer, C. and Grün, R., 2012, *Spatially Resolved LA-MC-ICPMS Strontium Isotope Micro-Analysis of Archaeological Fauna*, Palaios, 27 (9): 667-670.

Marshallsay, J., **Moffat, I.** and Beale, A., 2012, *Geophysical Investigations of the Tabernacle (Yilke) Cemetery, Encounter Bay, South Australia*, Journal of the Anthropological Society of South Australia, 35: 91-103.

Aubert, M., Williams, I.S., Boljkovac, K., **Moffat, I.**, Moncel, M-H., Dufour, E. and Grün, R., 2012, *In situ oxygen isotope micro-analysis of faunal material and human teeth using a SHRIMP II: a new tool for palaeo-ecology and archaeology*, Journal of Archaeological Science, 39 (10): 3184-3194.

Bladon, P., **Moffat, I.**, Guilfoyle, D., Beale, A. and Milani, J., 2011, *Mapping Anthropogenic Fill with GPR for Unmarked Grave Detection: A Case Study from an Alleged Location of Mokare's Grave, Albany, Western Australia*, Exploration Geophysics, 42(4): 249-257.

Moffat, I., David, B., Barker, B., Kuaso, A., Skelly, R. and Araho, N., 2011, *Magnetometer Surveys as an Aid to Archaeological Research in Papua New Guinea: a Case Study from Keveoki I, Gulf Province*, Archaeology in Oceania, 46(1): 17-22.

Moffat, I., Wallis, L.A., Hounslow, M., Niland, K., Domett, K. and Trevorrow, G., 2010, *Geophysical prospection for Late Holocene burials in coastal environments: Possibilities and problems from a pilot study in South Australia*, Geoarchaeology: An International Journal, 25:(5): 645-665.

Wallis, L.A., Keys, B., **Moffat, I.** and Fallon, S., 2009, *Gledswood 1 Shelter: Initial radiocarbon dates from a Pleistocene aged rockshelter site in north Queensland*, Australian Archaeology, 69: 71-74.

David, B., Araho, N., Barker, B., Kuaso, A. and **Moffat, I.**, 2009, *Keveoki I: Exploring the Hiri Ceramics Trade at a Short-Lived Village Site near the Vailala River, Papua New Guinea*, Australian Archaeology, 68: 11-22.

Wallis, L.A., **Moffat, I.**, Trevorrow, G. and Massey, T., 2008, *Locating places for repatriated burial: A case study from Ngarrindjeri ruwe, South Australia*, Antiquity, 82: 750-760.

Moffat, I. and Raupp, J., 2008, *A New Approach to Investigating Shipwreck Sites in Littoral Environments: Multi-Technique Geophysical Investigations of Port Elliot, South Australia*, Technical Briefs in Historical Archaeology, 3: 1-7.

Moffat, I., Wallis, L.A., Beale, A. and Kynuna, D., 2008, *Applications of geophysical techniques for the detection and identification of open Indigenous sites in Australia: A case study from inland northwest Queensland*, Australian Archaeology, 66:60-64.

David, B., Araho, N., Kuaso, A., **Moffat, I.** and Tapper, N., 2008, *The Upihoi find: Wrecked wooden lagatoi hulls of Epemeavo village, Gulf Province, Papua New Guinea*, Australian Archaeology, 66: 1-14.

McKinnon, J.F., Smith, A. and **Moffat, I.**, 2007, *Kangaroo Island Shipwreck Shelter Huts*, Bulletin of the Australasian Institute of Maritime Archaeology, 31: 63-72.

McKinnon, J., **Moffat, I.** and Smith, A., 2007, *A Needle in a Haystack: Archaeological and Geophysical Investigations of Historic Shipwreck Shelter Huts on Kangaroo Island*, in McKinnon, J. and Raupp, J. (Eds.) A Year in Review: 2006 Program in Maritime Archaeology, Flinders University Maritime Archaeology Monographs Series, Shannon Research Press, Adelaide, 13: 4-16.

Dappert, C. and **Moffat, I.**, 2007, *Search for the Independence Construction Site, American River, Kangaroo Island*, in McKinnon, J. and Raupp, J. (Eds.) A Year in Review: 2006 Program in Maritime Archaeology, Flinders University Maritime Archaeology Monographs Series, Shannon Research Press, Adelaide, 13: 27-45.

Moffat, I., Raupp, J. and Van Zandt, D., 2007, *Attention to Detail: Geophysical and Historical Investigations around Port Elliot, South Australia*, in McKinnon, J. and Raupp, J. (Eds.) A Year in Review: 2006 Program in Maritime Archaeology, Flinders University Maritime Archaeology Monographs Series, Shannon Research Press, Adelaide, 13: 4-16.

Non-Peer Reviewed Publications

Moffat, I., Papadopoulos, N., Donati, J., Sarris, A., Kalayci, T., Cuenca-García, C., Cantoro, G., Argyriou, N., Armstrong, K., Kalogiropoulou, E., Manataki, M., Simon, F-X., Karapanagiotou, A-V. and Hadji-Spiliopoulou, G., 2015, *Multi-Component Geophysical Survey at the Classical Greek Cities of Mantinea and Elis*, Antiquity (Project Gallery), 89(345).

Cantoro, G., Papadopoulos, N., Argyriou, N., Armstrong, K., Cuenca-García, C., Donati, J., Kalayci, T., **Moffat, I.**, Sarris, A. and Simon, F-X., 2015, *A Satellite, Aerial and Low-Altitude Approach for Ancient Greek Cities*, ISAP News, 42: 3-6

Moffat, I. and Wallis, L.A., 2009, *Archaeological Geophysics at Flinders University*, Preview 143: 29-32.

Grants

2015

- ARIADNE Transnational Access Grant to attend the *2D/3D documentation for archaeology* summer school (€1000)
- Archaeological Service of Cyprus grant with Dr Nikos Papadopoulos and Dr Kleantis Simyrdanis for the project *Geophysical Exploration in the Harbour of Kato Pafos (Cyprus)* (€9000)
- Australian Institute of Nuclear Science and Engineering grant with Dr Amy Roberts, Dr Geraldine Jacobson, Professor Donald Pate, Professor Calogero Santoro and Patricio Galarce for the project *Radiocarbon Dating of Human Skeletal Samples to Improve the Chronological Resolution of the Fenix-3 Site, Central Chile* (\$8125 AUD)

2014

- 2014/2015 George Chaloupka Fellowship for the project *Seeing Beneath the Surface: Applying Geophysical Techniques to Rock Art Research* (\$28000 AUD)

- Australian Institute of Maritime Archaeology Scholarship with Celeste Jordan and Dr Renaud Joannes-Boyou for the project *Laser Ablation Analysis of Mother of Pearl Shell and Buttons: A New Approach to the Trace Element and Isotopic Provenance of Maritime Material Culture*, (\$1000 AUD)
- Visiting Research Fellowship for the project *Magnetic Investigation of Sediments from Little Barra and Nawarla Gabarnmang*, Institute of Rock Magnetism, University of Minnesota (\$4000 USD)

2011:

- Vice Chancellors Travel Grant, ANU to attend the International Quaternary Association Conference in Bern, Switzerland (\$1500)
- Earth Environment Group Grant, RSES, ANU to attend the International Quaternary Association in Bern, Switzerland (\$3000)

2010:

- Earth Environment Group Grant, RSES, ANU to attend the Australian Archaeology Conference (\$450)

2009:

- *Towards better management of our unique Indigenous cultural heritage: developing geophysical methods for the identification of fireplaces in Australia*, Australian Geographic Grant, joint chief investigator with Dr Lynley Wallis (\$3000)
- *Geophysical and geochemical investigations of Indigenous fireplaces in Australian archaeology* Flinders Research Grant Scheme, joint chief investigator with Dr Lynley Wallis (\$14585)
- Earth Environment Group Grant, RSES, ANU to attend the Australian Archaeology Conference (\$850)

2008:

- AINSE Postgraduate Student Grant: Quaternary Dating Workshop (return airfare and accommodation, value: \$600)

2007:

- *The Geophysical Response of Historic Burials in Varying Geological Environments, South Australia*, Sir Mark Mitchell Foundation Research Grant, chief investigator (\$8500)
- Environmental Futures Network Early Career Researcher Grant (\$750)
- AINSE Postgraduate Student Travel Grant: INQUA Conference (return airfare, value: \$400)
- Centre for Archaeological Research Analysis Grant (\$1504)

Editing and Peer Review

Editorial Board Member

- *Science and Technology of Archaeological Research*, 2014-present
- *Geoarchaeology*, 2014-present
- *Exploration Geophysics*, 2007-2011

Referee for the following academic publications:

- *American Antiquity*
- *Australian Archaeology*
- *Archaeological Prospection*
- *Exploration Geophysics*
- *Geoarchaeology: An International Journal*
- *Handbook of Landscape Archaeology*
- *Nature Scientific Reports*
- *Remote Sensing*

- *Quaternary Australasia*

Masters Thesis Examiner:

- Department of Archaeology, Flinders University

Academic Teaching

Academic Topics (Designed and Presented):

- *ARCH8307 Introductory Archaeological Geophysics*, Ten Day Course for Graduate Students and Industry Professionals, Department of Archaeology, Flinders University, 2009, 2010, 2013.
- *ARCH8307 Introductory Archaeological Geophysics*, Eight Day Course for Graduate Students and Industry Professionals, Department of Archaeology, Flinders University, 2008.
- *ARCH8307 Introductory Archaeological Geophysics*, Five Day Course for Graduate Students and Industry Professionals, Department of Archaeology, Flinders University, 2007.

Short Courses (Designed and Presented):

- *Ground Penetrating Radar Workshop*, Half Day Course for Graduate Students, Program in Maritime Studies, East Carolina University, 2014
- *Geophysics for Archaeologists*, One Day Course for Students, Department of Land Information Management Systems, TAFESA, 2009, 2010.
- *Geophysics for Archaeologists*, One Day Course for Industry Professionals, Australian Archaeology Conference, 2009.
- *Geophysics for Archaeologists*, Two Day Course for Industry Professionals, Department of Archaeology, Flinders University, 2007.
- *Introduction to Archaeological Geophysics*, Department of Anthropology, Archaeology and Social Work, James Cook University, 2006.
- *Archaeological Geophysics*, Gifted and Talented Students Association of South Australia, 2013

Principal Instructor:

- *Sedimentology and Stratigraphy of Modern Depositional Systems and Fluvial and Deltaic Reservoirs*, Precipice Training Field Course for Woodside Petroleum, 2011, 2013 and 2014, Chevron Corporation, 2011, 2012, 2013 and 2014, Santos Ltd 2012 and Nautilus 2014 and 2015.
- *Modern Tidal Environments*, Origin 2013.

Guest Lecturer:

- *Geophysics in Prehistoric Archaeology*, Department of History and Archaeology, University of Crete, 2014.
- *Archaeological Geophysics Down Under*, Department of Anthropology, University of Denver, 2014.
- *Archaeological Field and Laboratory Methods A*, School of Archaeology and Anthropology, The Australian National University, 2009.
- *Sedimentology and Stratigraphy of Modern Depositional Systems and Fluvial and Deltaic Reservoirs*, Whistler Research Field Course for Woodside Petroleum, 2006, 2010, Chevron Corporation 2010 and Santos, 2010.
- *Ancient Fluvial and Shallow Marine Sedimentary Systems*, Whistler Research Field Course for Esso Australia, 2009.
- *Laboratory Archaeology*, Department of Archaeology, Flinders University, 2006.

- *Maritime Archaeology Field School*, Department of Archaeology, Flinders University, 2005, 2006, 2007.
- *Archaeological Field Methods*, Department of Archaeology, Flinders University, 2005, 2006, 2007, 2008, 2009.
- *Forensic Archaeology*, Department of Archaeology, Flinders University, 2006.
- *Underwater and Coastal Archaeology*, Department of Archaeology, Flinders University, 2006, 2010.
- *Maritime Archaeology Masterclass*, Department of Archaeology, Flinders University, 2006.
- *Indigenous Archaeology Field School*, Department of Archaeology, Flinders University, 2006, 2008.
- *Archaeological Science/Quaternary Ecology*, Department of Archaeology, Flinders University, 2007.

Casual Tutor:

- High School tutor in English, Mathematics, Chemistry, History and Physics, 2002-2003.
- Introduction to Geological Mapping, Department of Earth Sciences, University of Queensland, 1998
- Palaeontology, Department of Earth Sciences, University of Queensland, 1999

Student Supervision

- Bianca Petruzzelli, co-supervising PhD research "*Stable Carbon, Nitrogen and Strontium Isotopes as Indicators of Mid-Late Holocene Subsistence Patterns at the Site of Fénix-3, Valparaíso Region of Northern Chile: An Investigation of Hunter-Gatherer and Agricultural Economies*" with Dr Amy Roberts, Professor Donald Pate and Professor Calogero Santoro
- Amanda Greaves, co-supervised SOSC3900 "Research Experience" project "The Geophysical Detection of Heat Retainer Hearths" with Dr Lynley Wallis.
- Paul Bladon, supervised ARCH8511 "Directed Studies in Cultural Heritage Management" project "Mapping Anthropogenic Fill with GPR: A New Approach to Unmarked Grave Detection".
- Ceridwen Boel, co-supervised ARCH2055 "Supervised Research in Archaeology" project with Professor Rainer Grün on strontium isotope tracing of human migration in southern France.
- Jennifer Milani, principal supervisor for masters project "Unveiling Rock Art Images: A Pilot Project Employing A Geophysical Technique to Detect Magnetic Signatures" with Dr Amy Roberts and Dr Max Aubert. Submitted June 2010.
- Jessica Hutchinson, co-supervised summer scholarship project "Applications of Sedimentology, Geochronology and Isotope Geochemistry to Archaeology" with Professor Rainer Grün.
- Ben Keys, co-supervised honours project "Engrained in the Past: Using Geoarchaeology to Understand Site Formation Processes at the Gledswood Shelter I Site, Northwest Queensland" with Dr Lynley Wallis.
- Rebecca McMillan, co-supervised Summer Scholarship project "Analysis of Aerial Imagery from the Lake Mungo Lunette" with Professor Rainer Grün.

Professional and Academic Society Memberships

Australian Institute of Aboriginal and Torres Strait Islander Studies
 Australian Society of Exploration Geophysics
 Australian Archaeological Association
 Australian Quaternary Association
 Society for Archaeological Sciences
 International Society for Archaeological Prospection

Awards

2009: Winner, Australian Archaeological Association, Archaeological Site Images Photography Competition

2009: Best Presentation Award, Research School of Earth Sciences Student Conference, Australian National University

2000: Best Presentation Award, Texaco Petroleum Exploration Competition, Pennsylvania State University

1998: M.M. Wilson Prize for Geological Field Mapping, University of Queensland

Other Contributions:

- 48 x Co or Sole Authored Academic Presentations
- 10 x Co or Sole Authored Academic Posters
- 21 Media Appearances

Professional Skills

Geophysical:

Experienced in data acquisition, processing and interpretation of:

- Ground Penetrating Radar (Mala X3M, Nogginplus, PulseEkko, Sir-3000, MIRA)
- Electromagnetic Induction (GEM-2, EM31, EM38, CMD-4, CMD MiniExplorer)
- Marine and Land Magnetometer (G-856, G-858, G-866, FM256, Sensys)
- Magnetic Susceptibility (MS2, MS3)
- Direct Current Resistivity/Induced Polarisation (Sting/Swift, Supersting, FlashRES-UNIVERSAL, Pro Switch)
- Gamma Spectroscopy
- Sub-Bottom Profiler (Benthos Chirp)
- Down-hole Geophysical Equipment

Geochemical:

Experienced in preparation of samples for and analysis of material with:

- Inductively Coupled Plasma Atomic Emission Spectroscopy (Varian Vista Pro Axial)
- Inductively Coupled Plasma Mass Spectroscopy (Varian)
- Laser Ablation Inductively Coupled Plasma Mass Spectroscopy (Varian with HELEX ArF laser system)
- Multi Collector Inductively Coupled Plasma Mass Spectroscopy (Finnigan Neptune)
- Laser Ablation Multi Collector Inductively Coupled Plasma Mass Spectroscopy (Finnigan Neptune with HELEX ArF laser system)

Sedimentology/Geoarchaeology:

Experienced in use of the following methods:

- Field mapping
- Outcrop logging
- Core Logging
- Drill Chip Logging
- Auger Sampling
- Coring of Unconsolidated and Consolidated Sediments
- Down-hole Geophysical Techniques
- Ground Penetrating Radar
- Direct Current Resistivity
- Magnetic Susceptibility
- Granulometry

- Trace Element and Isotopic Composition
- Soil Micromorphology
- Hylogging using reflectance spectroscopy
- Digital Core Logging using WellCAD

Geomatics:

Experienced in the operation, processing, presentation and interpretation of the following techniques:

- GPS (Garmin)
- Differential GPS (Sokkia, Trimble)
- Real Time Kinematic GPS (Topcon, Trimble, Micronics, Javad)
- Static GPS (CHC X90+)
- Total Station (Leica)
- Robotic Total Station (Topcon, Leica)
- Automatic Level
- Kite Aerial Photography (IntoTheWind UltraFoil 15)
- UAV Operation (Event384)

Software:

Familiar with the use of the following programs:

- ArcGIS
- Mapinfo
- ReflexW
- The Spectral Geologist
- Magpick
- Magmap 2000
- WinGemv3
- GPSU
- Adope Photoshop
- GIMP
- Inkscape
- Groundvision
- AGI Administrator
- Geoplot
- RES2DINV
- Surfer
- Multisus
- Photoscan Professional
- WellCAD
- Res2D and 3D INV
- Oasis Montaj
- GPR Slice
- WuMap
- MonMX
- QGIS
- E38 Mission Planner

Professional Technical Training

Parasol EMT Cardiopulmonary Resuscitation #448791
St John Apply First Aid #0000892902
Parasol EMT Advanced First Aid #377116
Parasol EMT Remote Area First Aid #277921
DAN Oxygen Administrator
NAUI Rescue Diver #MOFF061679IANSRD08
PADI Advanced Open Water Scuba Diver
CDAA Deep Cavern Diver #4110
Quarantine Approved Premises (Classes 2 to 9) for Accredited Persons Certification #13071
Quarantine Approved Premises (Classes 2 to 9) Re-accreditation #13071
South Australian Recreational Boat Licence #195874
South Australian Class C Motor Vehicle Licence #BF7091
4WD Training Services Pty Ltd Four Wheel Drive Operation Course Certificate
ANU Graduate Course in Science Communication
ESRI Introduction to ArcGIS 1
Surf Lifesaving Bronze Medallion/Certificate II in Public Safety (Aquatic Rescue) #SA9063135
Surf Lifesaving All Terrain Vehicle Operator Certificate #SA9080799
Surf Lifesaving Spinal Management Certificate #SA9108244

Community and professional service

- Patrolling member of Goolwa Surf Life Saving Club.
- Co-convenor of "Seeing Beneath the Soil: The Possibilities of Archaeological Geophysics in Australia" session, Australian Archaeology Association Conference, Flinders University, Adelaide, 2009.
- Co-convenor of the Quaternary Forum Seminar Series, ANU, 2009 and 2010.
- Social Convenor of the University of Queensland Geosciences Society 1999 and 2000.
- Student Representative for the Queensland branch of the Petroleum Exploration Society of Australia 2001.
- Founded Network Plus in 2003, an organization dedicated to facilitating networking amongst young professionals.