

ASEG Gold Medal Award citation

The ASEG Gold Medal is awarded from time to time for exceptional and highly distinguished contributions to the science and practice of geophysics by a Member, resulting in wide recognition within the geoscientific community. The ASEG President and Federal Executive are pleased to announce that the ASEG Gold Medal will be awarded in 2017 to Richard Lane.

Specifically, this award recognises Richard's significant and distinguished contributions to the profession of geophysics in Australia and overseas through his widely recognised practical research and contributions to the understanding and application of geophysical methods in both mining and petroleum, for his frequent contributions at conferences both in Australia and overseas, and through his outstanding professional work in applied geophysics for over 30 years.

Richard Lane obtained a B.Sc. (Honours) in Geology and Geophysics from the University of Melbourne in 1983. He joined CRA Exploration (subsequently Rio Tinto Exploration) as a graduate geophysicist in 1984. Over the following 12 years, he worked for CRAE on Australian and overseas projects, based in Adelaide, Perth, Canberra, Thailand/Laos, Alice Springs, Melbourne, Brisbane and Mount Isa. Richard had several different roles in CRAE and its petroleum exploration subsidiary Pacific Oil and Gas, before deciding to pursue other opportunities in 1996. During his time in CRAE Richard contributed to a variety of exploration activities, including both hard rock minerals and petroleum. He attended and presented at several overseas meetings, including Moscow and Toronto, and gained a broad understanding of geophysical applications for various commodities and in a wide range of field conditions. His keen analytical mind and deep practical understanding of the geophysical profession and exploration industry impressed all those who worked with him, and he built a wide circle of contacts in both industry and academia.

From 1996 To 2001 Richard worked with World Geoscience Corporation/Fugro Airborne Surveys, based in Perth as Chief Geophysicist Product Development. His primary responsibility was to oversee the development of the TEMPEST Airborne EM system, a role which required him to integrate engineering, geophysical and software development. He was Program Leader of the Airborne EM Systems Program of the Cooperative Research Centre for Australian Mineral Exploration Technologies (CRCAMET) from 1997 to 2000, during which time the TEMPEST AEM system was successfully developed and commercialised. TEMPEST became operational in 1999 as a state of the art AEM system with innovative technology which is still evolving in 2017.

In 2001, Richard joined the Australian Government geoscientific agency, Geoscience Australia (GA), based in Canberra. In the role of Senior Geophysicist in the Onshore Energy & Minerals Division (OEMD), he has made an outstanding contribution to national geophysics. His principal achievements at GA have been establishing 3D potential field inversion methodologies, which now underpin all regional geophysical interpretation projects. He also demonstrated the application of AEM methods to groundwater projects and instigated large regional AEM surveys as part of the Onshore Energy Security Program.

Richard was instrumental in the development of the Geomodeller 3D geological modelling package since 2005, and has been intimately involved in the work to restructure and expand the GeoModeller geophysical modelling capabilities. Richard's other ongoing activities at GA include leadership of the OEMD efforts to develop a national rock property database, input into the development of the GeoSciML information model and data interchange format (with the goal of facilitating the exchange of geoscience information and processing services), and championing the use of the high performance computing (HPC) facilities (multicore computers, internal distributed and parallel computer networks within GA, external GRID, and Cloud facilities, etc.) for geophysical processing and modelling. He received a Geoscience Australia Individual Award for Achieving

Results in Geoscience in 2004, and was the recipient of the Sir Harold Raggatt Award for Distinguished Geoscience Australia Lecturer in 2004.

In conjunction with his role at GA, Richard has organised numerous pertinent and timely industry seminars for industry geoscientists, as well as mentoring many younger scientists and graduates in the application of numerical methods for geoscientific problems. Richard has played a major role in the conduct of three airborne gravity workshops at ASEG conferences in Sydney (2004), Sydney (2010) and Adelaide (2016). In each case Richard undertook the role of technical editor, resulting in a comprehensive proceedings volume which was, or is being, published by Geoscience Australia. These have become significant international records of the 'state of the art' in airborne gravity, and they are widely recognised around the world. He also undertook a similar role for a 'Natural Fields EM' workshop/forum, held at the ASEG conference in Brisbane in 2012.

He is a member of the Society of Exploration Geophysicists (SEG), Australian Society of Exploration Geophysicists (ASEG), Environmental and Engineering Geophysical Society (EEGS), American Geophysical Union (AGU), and International Association for Mathematical Geology (IAMG). He was recognised by SEG as an 'outstanding reviewer' in 2007 and was nominated as an SEG Honorary Lecturer in 2011. He toured extensively in this role, throughout Australia and the South Pacific. Richard is an inspiring scientific leader, widely recognised throughout the global geophysical community for his keen intellect and insight into geophysical methods in both mining and petroleum, and for his frequent contributions at conferences both in Australia and overseas. Throughout his career Richard has set a benchmark in terms of technical excellence. His service to the industry has been truly significant and he is widely regarded as a substantial pillar of our discipline. It is fitting that Richard's distinguished career encompassing a broad range of technical achievements, combined with his positive influence on other members of the profession, should now be recognised with the award of the ASEG Gold Medal.

