

ENGINEERS
AUSTRALIA

Our Highest Achievers

Peter Nicol Russell Memorial Medal

The Peter Nicol Russell Memorial Medal – Career Achievement Award in Engineering is the highest award conferred by Engineers Australia. Engineers Australia's Council confers this award annually to an Honorary Fellow of Engineers Australia who has made a notable contribution to the science practice of engineering in Australia.

2014 Honorary Fellows

Eligible recipients are Fellows of Engineers Australia or distinguished non-members. They have rendered conspicuous service to the profession of engineering, are eminent in engineering or an allied science, or a distinguished person whom the Council desires to honour, either for having rendered conspicuous service to the Australian people or in recognition of outstanding achievement.

2014 Peter Nicol Russell Memorial Award Winner

Dr Maxwell Lay AM

HONFIEAust CPEng FTSE



Dr Maxwell Lay is recognised world-wide as an eminent expert in the fields of structural engineering, road and transport engineering, the history of engineering, and information technology.

Max is arguably Victoria's most eminent practising engineer. He gained his qualifications from Melbourne and Lehigh University, and his early career development included positions with BHP where he became an expert in the effects of welding on structural steel.

In 1975 Max was appointed the Executive Director of the Australian Road Research Board (ARRB), and over a thirteen-year period, provided the leadership to build the organisation into one of the world's leading road and traffic research organisations. In 1988 he moved to VicRoads as Director of Quality and Technical Services, where he was responsible for the introduction of quality management into the state's road authority as well as planning and design. In 1993 he was appointed Director Major Projects, a role with responsibility for major road developments in the state including the Eastern Freeway and the Western Ring Road.

Max joined consulting engineers SKM as the Independent Reviewer for the Melbourne City Link Project in 1996. This role had joint responsibilities to both the state and the City Link developer, Transurban, to provide advice and assurance on the design and construction of this massive privately financed and delivered public infrastructure project.

Max was Director of the RACV and became Chairman in 1999. He is a past President of the Australian Automobile Association, and Chairman of Intelematics Australia Pty Ltd. He also served as President of the Royal Society of Victoria in 1995. Max is a notable author and has been awarded many notable prizes, including the Engineers Australia's Transport Medal and Monash Prize, the Warren Medal and the Mossie Medal of ASCE.

Max has also made a significant contribution to Engineers Australia. He served on the Victoria Division Committee for several years including a term as Chairman, and was a National Councillor for some 15 years. Max is an outstanding member of the engineering profession and is recognised nationally and internationally for his endeavours and expertise.



Professor Edwin Brown

PhD FIEAust AC FEng FTSE CPEng RPEQ



Professor Edwin (Ted) Brown commenced his career in 1960 at the State Electricity Commission of Victoria's large scale open cut brown coal mines at Yallourn and Morwell, engaged in geological investigations, slope stability studies and extensive laboratory studies of the physical properties of brown coal.

Following completion of his PhD at Queensland University in 1969, he was appointed as Senior Lecturer in Engineering at James Cook University of North Queensland (JCU) and subsequently appointed Associate Professor of Civil Engineering in 1973.

In 1975 he was appointed Reader in Rock Mechanics and Head, Rock Mechanics Section, Department of Mineral Resources Engineering, Imperial College, London; then Professor of Rock Mechanics in 1979; and Dean of the Royal School of Mines, Imperial College in 1983.

On his return to Australia in 1987, he was appointed Professor and Dean of Engineering at Queensland University; Deputy Vice Chancellor (UQ) in 1990; and, Senior Deputy Vice Chancellor (UQ) from 1996 to 2001. He has been a teacher and mentor to engineers around the world, very active in professional societies, and through directorships on a number of government and non-government boards, and has made significant contributions to the governance of those organisations.

Mr Peter Bruechle

FIEAust CPEng



Mr Peter Bruechle, now retired, was a founding partner and principal in Bruechle Gilchrist and Evans (now BG&E).

Peter is a renowned West Australian (WA) design engineer who has left his mark all over WA. He and his firm of engineers were responsible for the structural engineering behind such WA landmarks as Central Park, Exchange Plaza, the Forest Place redevelopment, the grandstand and lights at the WACA cricket ground, and many buildings on the University of WA campus.

After his retirement Peter was still considered sufficiently iconic as a local engineer that the Division covered his story in 2010.

Emeritus Professor Mark Bush

PhD FIEAust CPEng FTSE



Emeritus Professor Mark Bush from the Mechanical Engineering Department of University of Western Australia is no longer a full time faculty member, however he remains active in research. Mark Bush graduated from the University of Queensland with a Bachelor of Engineering (Mechanical) with Honours and the University Medal in 1979 and achieved a PhD from the University of Sydney in 1983. His PhD project focused on the development of computational methods for modeling the flow of polymer solutions and melts (rheology) in industrial molding processes.

In 1984 he became Lecturer in Mechanical Engineering at the University of Western Australia and lectured in thermodynamics, fluid mechanics, computational mechanics and materials engineering. Mark received awards for teaching and research supervision. He was promoted to Winthrop Professor in 1998, served as Head of the Department of Mechanical and Materials Engineering from 1998 to 2001 and Dean of the Faculty of Engineering Computing and Mathematics from 2003 to 2007.

Mark was included in Engineers Australia's "Engineering Elite" survey, 2003, and in Engineers Australia's list of "Top 100 most influential Engineers", 2004.

Professor Hugh Durrant-Whyte

FIEAust FAA FRS



Professor Hugh Durrant-Whyte is a leading national and international figure in the research, development and commercial exploitation of robotics systems in applications including cargo handling, mining and defence. He has made substantial contributions in both research and commercial applications of robotics technologies, especially in large – scale field applications of key importance to the Australian economy. His vision of robotics science and application, and the passion with which he articulates this vision, have played a critical role in raising the visibility of Australian robotics in government, industry, academia and the community.

His research contributions have focused on two main areas – autonomous vehicle navigation and multisensor data fusion. He pioneered the field of autonomous navigation and particularly the development and application of probabilistic methods, critical for robust commercial application of large outdoor robots. He was also the originator of Simultaneous Location and Mapping (SLAM) method – perhaps the single most important step in achieving robot autonomy. It was this research which led to his appointment as one of the few Australian Fellows of the Royal Society. As the CEO he has revitalised NICTA and re-established its leading role in ICT commercialisation.

Mr Peter Godfrey

FIEAust CPEng EngExec



Mr Peter Godfrey is a civil engineer with extensive management experience. He commenced his professional career over thirty years and has progressed through engineering roles to senior management positions. His career encompasses both operational management and business support roles across diverse industries throughout Australia.

When Peter was the Chair of the Civil College of Engineers Australia he was an instrumental member of the Safer Construction Taskforce that produced the Guide to Best Practice for Safer Construction in Australia. His influence in the Sustainable Built Environment Steering Committee showed on Safety Impacts of Alcohol and Other Drugs in Construction and he is a member of the Metro Trains Melbourne Board's Safety Committee. Other roles of influence include the

Australian Council for Built Environment Design Professions, the National Engineering Registration Board, the National Board of the Centre for Engineering Leadership and Management, the Engineers Australia Engineering Practice Taskforce for the Future, the Engineering Team Task Force, the International Committee, the By-laws Committee and Engineers Australia's 2010 Year of Engineering Leadership Steering Committee. Peter was National President in 2009 and was included in the 100 most influential Engineers list in Engineers Australia's listings for 2009.

Mr Alan Grummitt

FIEAust, FICE, FASCE, JP, CPEng



Mr Alan Grummitt graduated from the University of Queensland in 1961. After working for the Queensland Department of Harbours and Marine for five years, he joined the small local firm of Cullen and Roe which later that year became Cullen, Grummitt and Roe. Alan and his company are now recognised worldwide as experts in Harbour Engineering including container terminal planning, design, project management and commissioning.

Under his leadership the company has become a worldwide group with offices in Australia, United Kingdom, India, Malaysia, Turkey and Argentina. He has been a very active supporter of education through his work and leadership on a number of school councils, and through his company's support of engineering students by providing work experience placements for over

45 years. Alan has been Honorary Consul General for the Philippines in Queensland for the past 18 years. In that role, he has supported Philippine visitors including leading politicians, Presidents and VIP's, and has provided consular services and support for all Filipinos, both visiting and resident. As well as being a Fellow of the Institution of Engineers Australia, Alan is also a Fellow of the Institution of Civil Engineers London and a Fellow of the American Society of Civil Engineers.

Mr Rolfe Hartley

FIEAust, CPEng, EngExec, FIPENZ, FEIANZ, Aff.M.ASCE



Mr Rolfe Hartley has nearly forty years' experience in civil and environmental engineering and project management, since graduating in civil engineering from the University of NSW in 1974. He also holds postgraduate degrees in transport engineering from UNSW and in infrastructure planning and management from Stanford University, USA.

He has had a distinguished career in Government including as the Director of Environment and Heritage in the Department of Defence, and in the consulting engineering industry in Australia, including senior management in KBR and Aurecon.

During his career Rolfe has been very active in Engineers Australia. He was the 1998 President of Canberra Division and served as the Division's representative on the National Congress. He was elected National Vice President in 2003, National Deputy President in 2006 and the National President in 2007. He is the Commissioner for Ethics and Discipline for Engineers Australia, is Past Chair of the National Engineering Registration Board, a member of the Management Committee of the Professional Standards Society and on the Anti-Corruption Technical Standing Committee of the World Federation of Engineering Organisations. He is also the Jury Chair for the annual ACT Sustainable Cities Awards and the Freefall Experience design competition at the National Arboretum.

Ms Kathy Hirschfeld

FIEAust FTSE IChemE



Ms Kathy is a non-executive director of Transfield Services, ASC Pty Ltd, and Toxfree Solutions. She is a Senator of the University of Queensland, an advisory board member of the Australian Institute of Bioengineering and Nanotechnology and a board member of UN Women Australian National Committee. Her previous directorships include Snowy Hydro Limited, Queensland Reconstruction Authority and New Zealand Refining Company. She was President of the Queensland Regional council of children's cancer charity Redkite for 3 years and is a member of the Foundation Committee for QAGOMA.

In her executive career with BP, Kathy led businesses in oil refining, logistics, and exploration & production in Australia, United Kingdom and Turkey. She was Managing Director of the BP Bulwer Island Refinery in Brisbane, and of BP's joint venture refinery in Turkey where she managed the closure of the process plant. Under her leadership Bulwer Island Refinery delivered outstanding performance with record financial, HSE and Availability results. During the shutdown of the Turkish refinery, Kathy was Incident Manager for a full surface tank fire which burned for 3 days with no injuries and no collateral damage.

Kathy served for 20 years as a Logistics Officer in the Australian Army Reserve. She is a Fellow of the Australian Academy of Technological Sciences and Engineering and the Institution of Chemical Engineers and a Graduate of the Australian Institute of Company Directors. Engineers Australia recognised Kathy as one of Australia's most influential female engineers in 2007. She is a member of Chief Executive Women.

Dr Marlene Kanga AM

FIEAust CPEng FIPENZ RPEQ



Dr Kanga is one of Australia's leading engineers. She is the Acting Chair of the Board of Innovation Australia and chair of the R&D Incentives Committee, Department of Industry, the largest support program for innovation in industry in Australia. She is also a member of the Board of Sydney Water Corporation, the largest water utility in Australia and Director of iOmniscient Pty Ltd which has developed patented software technology for intelligent video analytics systems. Marlene was National President of Engineers Australia in 2013.

Internationally, Marlene is a board member of the International Network for Women Engineers and Scientists (INWES) and a member of the Executive Council of the World Federation of Engineering Organisations (WFEO) which represents 20 million engineers in almost 100 countries. Dr Kanga is a chemical engineer with extensive experience in the oil, gas, chemical and related industries with respect to risk and safety engineering. She has a keen interest in safety in engineering and its influence on successful project outcomes.

Marlene is an Honorary Fellow of the Institution of Chemical Engineers and a Fellow of Engineers Australia and Engineers New Zealand as well as a Fellow of the Australian Institute of Company Directors. She has been elected to be a Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE), to be conferred in November 2014.

Marlene was listed among the Top 100 Engineers in Australia in 2013 and 2014 and the Top 100 Women of Influence in 2013. She is the 2014 FEIAP (Federation of Engineering Institutions in Asia and the Pacific) Engineer of the Year.

Dr John Macintosh

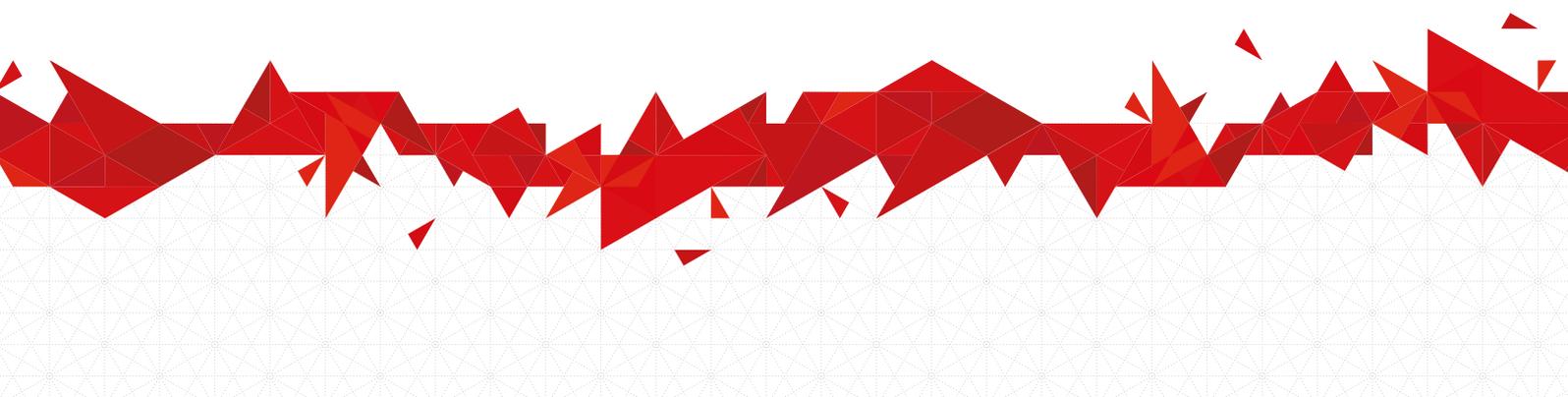
FIEAust, CPEng, BE(Hon), RPEQ



Dr John Macintosh is an eminent engineer in the field of water engineering covering specialist investigation, design, and computer modelling within the hydraulic, hydrological and hydrogeological fields. He has worked across Australia, South East Asia and the South Pacific.

He worked for a number of established engineering consultants before founding the firm, Water Solutions in 1995 with the key objective of providing specialist services within the water resources and engineering fields. He leads an extensive research and development program within Water Resources and received an Engineers Australia Queensland Division Engineering Excellence Award in the category of Research and Development in 2003. He is a past Adjunct Professor at the University of Queensland and has contributed a significant number of technical papers and presentations to the engineering profession.

John has made a major contribution to the engineering profession through his service to Engineers Australia for over twenty years. During this time he has served on a number of groups and committees and contributed his expertise to a number of Engineers Australia reviews and reports. He is a past chair and deputy chair of the EA National Committee on Water Engineering.



Professor Robert Melchers

FIEAust CPEng FTSE



Professor Robert Melchers has contributed to the profession through many avenues, and it is this breadth of contributions to academe, government, and EA that makes him a stand out member of the structural engineering profession and the Institution of Engineers Australia.

Rob's academic record is simply outstanding. He has received two five-year Australian Professorial Fellowships from the Australian Research Council (only 30 are awarded nationally in all academic disciplines except medicine), has published 4 books, over 200 refereed journal papers and many conference papers and reports. He has also recently been awarded an Australian Research Council DORA (Discovery Outstanding Researcher Award) out of the 17 awarded nationally against strong competition from all research areas except medicine. His

research into structural reliability and corrosion modelling of steel and concrete structures has won him many international awards and invitations to contribute to international research projects.

Dr Christopher Roberts

FIEAust FTSE FAICD



Dr Chris Roberts is President and Chief Executive Officer of Cochlear Limited, the global leader in providing hearing solutions for the hearing impaired. Since assuming the role in 2004 when he assumed this role, more than 170,000 people, young and old, have been given the gift of hearing. Chris holds a Bachelor of Engineering with Honours in Chemical Engineering from UNSW Australia, an MBA from Macquarie University and a PhD from UNSW. He has been awarded Honorary Doctor of Science degrees from both Macquarie University and UNSW. He is a Fellow of the Academy of Technological Sciences and Engineering (FTSE), a Fellow of the Australian Institute of Company Directors (FAICD) and a Fellow of The Institution of Engineers Australia (FIEAust).

Ahead of taking his current role, Chris made significant contributions to the technical world in the development of Orthopaedics (electrical bone growth stimulation,) pacemaker development respiratory and sleep medicine (he was executive VP RESMED and remains on its Board.) He was Chairman of Research Australia from 2004 until 2010. Under his leadership, Research Australia was instrumental in increasing Government funding for medical research. His achievement was recognised by the 2009 UNSW Alumni Award.



Mr Robert Rollinson

FIEAust CPEng



Robert (Bob) Rollinson is a leading Australian Engineer who has moved easily from the Electricity Industry to Merchant Banking and back enhancing his reputation all the way. He is a Change Agent and his career shows how he has set new directions in all the organisations for which he has worked.

At Pacific Power he took a state owned electricity company into a successful International Consultancy business and then sold it. As Country Manager for the UK National Power he built a major player in the Energy Industry by a combination of asset acquisition and infrastructure development including the first gas fired Merchant Combined Cycle power plant.

He then took leadership roles in the energy activities of Chase Manhattan and Macquarie Banks successfully negotiating significant transactions in Australia and North America. As Chairman of the Sydney Catchment Authority he took steps to ensure that Sydney was guaranteed safe, clean and adequate water at all times. He is now part of the leadership team reshaping the Warren Centre for Advanced Engineering as it moves into its next 30 years. He has made major contributions to the community in many ways.

Professor Moses Tadé

PhD FIEAust CPEng CEng FICHEM

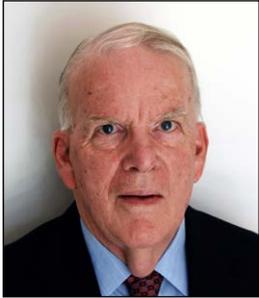


Professor Tadé has carried out extensive applied research for oil and gas and mineral processing companies and championed engineering education at various levels. Professor Tadé is a leading researcher in Process Systems Engineering (PSE) in Australia and is well known and respected worldwide for his contributions to process modeling, optimisation and control and especially at closing the gap between theory and industrial practice in PSE. His work in both industry and academia has had significant impact.

As an educator, he has provided significant leadership for training the next generation of engineers and in STEM education in schools. He has also contributed to the national engineering agenda through his extensive participation and leadership of IChemE activities both nationally and internationally as well as his role in the Australian Council of Engineering Deans (ACED). Professor Tadé is a fellow of Engineers Australia and the Institution of Chemical Engineers.

Mr Andrew Yuncken

FIEAust CPEng(Ret)



Mr Andrew Yuncken is a consulting electrical engineer in his own practice. A graduate of the University of Melbourne, has nearly 45 years professional experience in manufacturing and consulting. His career has included senior positions with major consultants Scott & Furphy, Sinclair Knight Merz and Kellogg Brown and Root, prior to establishing his own consultancy. He has worked in several industries including water, power, mining, minerals, oil and gas, specialising in electrical power distribution and electrical control.

Andrew has been a loyal and active member of Engineers Australia for many years and was President of the WA Division in 1995. He has been a member of the Electrical Panel Committee since 1985, Chair of the Education and Assessment Subcommittee from 2006 to 2012 and a member of the University of Western Australia's Faculty and Advisory Board since 2001. Andrew has also volunteered his services for the role of a Chartered Engineer Professional Interview Panel Member on a consistent basis for over 10 years.

As Director of his consulting company, Andrew has been continuously engaged as a high level technical reviewer and in this capacity has a widely recognised reputation for his technical advice and associated feedback to younger engineers.

