

Excellence Awards

# Excellence Awards 2023

Showcase Booklet

#### About the Engineers Australia Excellence Awards

Engineers Australia's excellence awards program promotes the prestige of the practice of engineering while recognising the outstanding achievements of individual engineering professionals.

The awards program has a long history. First established more than 100 years ago, the program and its recipients form an important part of our organisation's story.

Today, the excellence awards continue to honour the outstanding achievements of the country's engineers across the broad categories of people and projects.

#### **Project Awards**

The project awards recognise Australia's top engineering projects and the teams behind them. It inspires and encourages engineering distinction through teamwork, innovation and technical excellence.

Engineering project teams submit their entries locally through an Engineers Australia division. Each division chooses a finalist project team who goes on to compete with other local finalists. A national winner is then chosen from the finalists and is awarded Project of the Year.

#### **People Awards**

People awards acknowledge individual engineers for outstanding innovation and resourcefulness in their work. The <u>engineer of the year awards</u> recognise engineering professionals at all stages of their career. Six awards are available based on the three occupational categories.

<u>Career achievement awards</u> apply to individual engineering professionals at all career levels and across the occupational categories. There are 11 individual awards in this category mostly aligned to each of the engineering colleges.

Also in the people category are the <u>distinguished</u> <u>career awards</u>. This category contains three separate awards which recognise the conspicuous service of individuals who have given longstanding and prominent service to the profession.

#### **Event supporters**



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#### President's message

The journey towards excellence means being outstanding, not just mediocre. Through the Engineers Australia Excellence Awards, our nation celebrates the best of engineering talent and endeavour.

The Engineers Australia Excellence Awards program seeks to reward outstanding achievement and eminence in the practice of engineering and exemplary service to the profession. The program plays an important role in promoting engineering excellence and the significant contribution engineers make to the community. These awards are an opportunity to celebrate the innovators and thank the problem solvers.

Reading these pages makes me proud to be an engineer. This booklet features so many impactful innovations and inspiring people and projects. Engineers Australia takes every opportunity to celebrate and promote engineers and engineering through awards like these, whether that be in the media, in government and in our boardrooms, schools or universities.

The finalists in the Engineers Australia Excellence Awards 2023 represent just a small fraction of the engineering endeavours and achievements in this country. As engineers, we should all aspire to excellence. We should continue to learn and grow throughout our careers, helping others on their journeys.

I hope you will be inspired by our featured projects and the engineering teams and individuals behind them. As engineers, we can be very much focused on the projects we're working on right now, but these awards provide a valuable opportunity to reflect on work already successfully completed. With such a quality field of entrants, determining the finalists and eventual winners must have been a very difficult task. I'd like to thank the judges for volunteering their time and effort. These awards provide an opportunity for engineers to be bold and share their achievements. They enable engineers to act as role models. They highlight the importance of engineers working in Australia.

I'd like to thank everyone who has joined us today. I hope that you enjoy learning more about our finalists and winners and draw some inspiration for your work. And to our finalists, congratulations and good luck!

Dr Nick Fleming BE(Hons) PhD FIEAust CPEng EngExec NER GAICD

National President and Board Chair



#### Honours and Awards Committee

Recognition of the great work of Engineers Australia members, and celebration of outstanding engineering achievements is an important part of Engineers Australia's role as a professional membership association. The primary mechanism for overseeing higher level recognitions is the Board established Honours and Awards Committee who judge and select the national winners for Engineer of the Year, endorse the winners for the Associate and Technologist of the Year and recommend the Honorary Fellow and PNR memorial medal recipient to the Board.

The Honours and Awards Committee for 2023 is:



#### John McIntosh Chair HonFIEAust CPEng EngExec NER

John is a loud and proud Chartered Professional Engineer. He has degrees in engineering, majoring in civil engineering and business studies, majoring in accounting.

His early career was in water supply before moving to the petroleum industry. He has gained experience in design engineering, construction, supply chain management and optimisation, marketing, industrial relations, government relations, quality and general management.

John has held a number of leadership roles within Engineers Australia, culminating in his election as National President and Chair of the Board in 2016 and 2017.



Dr Marlene Kanga AO Deputy Chair HonFIEAust CPEng EngExec NER

Dr Marlene Kanga is an outstanding leader, making transformative, impactful contributions to engineering in Australia and internationally. Among Australia's top 10 women engineers, she is an Officer of the Order of Australia "for distinguished service to engineering, as a global leader and role model to women."

A non-executive director of large Australian organisations in utilities, transport and innovation, she was National President of Engineers Australia in 2013 and from 2017– 2019, President of the World Federation of Engineering Organizations (WFEO).

Championing diversity in STEM in Australia and internationally, she Co-Chairs the ATSE Elevate program and is Chair of IChemE's international Safety Centre.



Dr David Cruickshanks-Boyd Second Deputy Chair HonFIEAust CPEng EngExec NER

David's expertise is the development and leadership of professional teams and organisations. He has held numerous senior management roles within WSP and its predecessor companies since 1992. David's primary role has been to create high performance teams to deliver outstanding infrastructure projects, which in turn create lasting legacies for the community.

David currently holds the position of National Director, in a part-time 50per cent capacity. He was the 2015 National President of Engineers Australia, the professional body for engineers in Australia, and chair of the Engineers Australia board of directors.

In his 25 years with WSP David has led its national environmental business, had overall responsibility for its South Australian operations, and overseen significant transformation in its business both in South Australia and nationally. Under David's leadership, WSP in South Australia has twice been awarded the company's Global Project of the Year Award.



Hon William Marmion Committee member HonFIEAust CPEng EngExec

The Honourable Bill Marmion was WA Divisional President in 1999 and Chairman of the WA Engineering Excellence Awards between 2005 and 2008.

He served as a WA State Minister for six years in the Barnett Government between 2010 and 2016. His portfolios during this time included State Development, Mines and Petroleum, Transport, Housing, Water, Environment, Science and Innovation, Commerce and Finance. He was Deputy Leader of the Opposition in 2020.

A civil engineer with Main Roads from 1977, Bill was appointed by the Governor General in 2001 as Deputy Chairman of the WA Australian Honours Committee, responsible for nominating and vetting candidates for Australian Honours Awards.



Em.Prof John Wilson Committee member HonFIEAust CPEng EngExec NER

Professor Wilson is a distinguished and renowned academic in the structural and earthquake engineering profession. His professional engineering career spans some 40 years, in which time he has been at the forefront of academic research and a leader in tertiary education institutions.

Professor Wilson started his career in the early 1980s as a consulting engineer in both the public and private sectors, and then moved into academia, serving at the University of Melbourne (1992–2005) and Swinburne University of Technology (2005–2021), included Deputy Vice Chancellor and CEO of the Swinburne Sarawak private university campus in Malaysia (2017–2021). He was the inaugural Professor of Civil Engineering at Swinburne and helped grow the discipline in terms of education, research and industry engagement to be now ranked in the top 100 Civil Engineering schools in the world according to the ARWU rankings.

#### **Chief Judges**

The Chief Judge is appointed by the Honours and Awards Committee. The Chief Judge/s in each of the nine EA divisions along with their judging panels select the local winners for people and project award.

The nine project chief judges select the national winner for Project of the year.



George Tomlins PSM Canberra – People & Project FIEAust CPEng EngExec NER

George Tomlins is a civil engineer and urban planner with more than four decades of experience in engineering and related urban activities. He has worked for Commonwealth, state, territory and local governments, with experience in Australia and the UK. Before leaving the public service, he was responsible for billions of dollars of procurement and project delivery. The construction side of the organisation had an annual capital works budget of half a billion dollars for several years. He has been a member of the Australian Procurement and Construction Council. George was the ACT Chief Planner and played key roles in the ACT Economic Stimulus Taskforce responding to the global financial crisis, the bushfire recovery, the High Speed Rail Study and the privatisation of Canberra Airport. He headed the implementation group which managed the design and delivery of Stromlo Forest Park, the Arboretum, villages and community facilities. In 2001 George was awarded a Public Service Medal.



Paul Reynolds Newcastle – People & Project FIEAust CPEng EngExec NER

Paul has more than 20 years of experience in the engineering and manufacturing sector including design, project management, business management and strategic leadership. Paul currently works with Ampcontrol as the General Manager – Technology, Paul is an active member of Engineers Australia having held a number of positions including Division President, National Congress representative, Mechanical College Board representative and Division Committee member. Paul is the current Chair of the Education Committee and sits on the Accreditation Board. Paul is the current Chair of the University of Newcastle's Industry Advisory committee for Mechanical Engineering and a current Board Member of Regional Development Australia (RDA) Hunter.



Simon Flowers Northern – People & Project MIEAust CPEng NER

Simon Flowers is the Project Director for the Middle Arm Sustainable Development Precinct and accountable for the strategic direction and delivery of the Middle Arm Infrastructure and project objectives. Simon is a Chartered Engineer and project delivery professional having spent six years in the UK on infrastructure development and subsequently the past 12 years with a global energy company. Most recently Simon led an international team of engineers responsible for the delivery of projects of onshore LNG plant and offshore hydrocarbon production platforms. Simon also has a background in enterprise asset management and a passion for business strategy and energy development and is currently studving a masters in sustainable development.



Mark Lendich Queensland – People FIEAust CPEng EngExec NER

Mark is an Engineers Australia Fellow. Engineering Executive, and is Chartered in Electrical Engineering, Information, Telecommunications and Electronics Engineering, and Leadership and Management. He is also a Registered Professional Engineer in Queensland and a Graduate of The Australian Institute of Company Directors. He has a passion and commitment to the engineering profession, proven through long-standing mentoring undertaken at OUT and as an Assessor for Engineers Australia members who are seeking Chartered status. A member for more than 40 years, he has held senior office bearer roles for Engineers Australia, including Electrical College Board Chair, Queensland President, and National Congress Delegate. He has been an awards judge for the past eight vears at both Divisional and national levels.



Peter Ho AM Queensland – Project FIEAust CPEng

Dr Peter Ho AM has more than 40 years' professional experience in the field of forensic. civil, structural and geotechnical engineering in Australia and throughout the Asia Pacific region. After retiring from his role Manager of Forensic and Integrity. Peter remained as a Consultant to LogiCamms until late 2018. Peter has served as Engineers Australia Queensland Division President 2015 and member of the National Structural College Board for several vears in the past and maintains his involvement with Institution of Structural Engineers in various panels including the Examinations Panel as one of the Chief Examiners. In 2015. Peter was appointed a Member of the Order of Australia in the General Division for his significant service to civil and structural engineering and professional organisations. He is currently Secretary and Director of CROSS-AUS Ltd, a non-profit organisation promoting safety in the construction sectors and lectures at OUT as a sessional staff member.



Derek Abbott South Australia – People HonFIEAust

Professor Derek Abbott has made significant contributions to biomedical engineering and photonics. He has published more than 350 journal articles, has 50 PhD completions and was a 2012 ARC Future Fellow (Level 3). He has held appointments on the editorial boards of Proceedings of the IEEE, Nature's Scientific Reports, IEEE Photonics Journal, Royal Society OS and PNAS Nexus. He is currently on the board of IEEE Access and the IEEE Publications Services and Products Board. He is an Honorary Fellow of Engineers Australia. Fellow of the Australian Institute of Physics, Fellow of the Institute of Physics (UK), and Fellow of the IEEE (US). Professor Abbott has won several awards including the Stephen Cole the Elder Prize (1999). Tall Poppy Award (2004). David Dewhurst Medal (2015) for biomedical engineering, the Barry Inglis Medal (2018) for measurement science and the MA Sargent Medal (2019) for eminence in engineering.



Sharon Billinger South Australia – Project MIEAust

Sharon is a Strategic Transport Planning Associate at Aurecon, with more than 25 years' experience in providing strategic transport and broader infrastructure solutions across both the public and private sector. Her true passion lies in bringing diverse groups together to achieve valuable infrastructure outcomes for both social and economic benefit, and in identifying and evaluating policy and infrastructure priorities for both metropolitan and regional areas to accelerate and sustain economic growth. Sharon's experience in stakeholder engagement and communication further underpins her approach in driving forward-thinking and well-balanced solutions to audiences at all levels and across a range of market sectors. She is the current South Australian Chair of Engineers Australia's Transport Australia society and a Planning Committee member for the Property Council. Sharon is also a former winner of the South Australian Young Engineer of the Year Award.



Jessica Qiu Sydney – People FIEAust CPEng NER

Jessica Qiu is a project executive with international charterships. She is a highly experienced engineering and management professional with extensive experience in conceptualising, planning, designing, and managing large infrastructure projects. Jessica brings knowledge to the projects and organisations and has worked extensively in Australia and overseas in different roles in both the public and private sectors. Jessica was awarded the status of Fellowship by Engineers Australia in 2018 as one of the voungest engineers to obtain such recognition. She was the President of Engineers Australia - Sydney Division during 2020-2021. She led and developed various industry initiatives that have brought great engagement and benefits to facilitate industry connections. She currently works as a Major Project Executive with WSP overseeing the engagement, delivery, contracts and management of mega infrastructure projects. Outside work, she advises on the Industry Advisory Board for the University of NSW and Western Sydney University, linking higher education institutions with the engineering industry.



Bruce Howard Sydney – Project HonFIEAust CPEng NER

Bruce has made significant contributions to Engineers Australia and the engineering profession. He has qualifications in Electrical Engineering, Biomedical Engineering and a Masters in Business Administration. His many volunteer roles with Engineers Australia include Sydney Division President on three separate occasions and National Vice President for more than a decade. He also continues to be a mentor for postgraduate engineering students in the ATSE Industry Mentoring Network in STEM program. He is currently the General Manager of a company developing major solar energy projects across NSW and the Managing Director of a renewable energy and electric power consultancy that has worked extensively in the renewable energy sector. Bruce's extensive 40-year career within the energy sector started with the Electricity Commission of NSW with numerous roles at Pacific Power and Transgrid.



Justin O'Connor Tasmania – People & Project FIEAust CPEng EngExec NER

Justin is an accomplished executive, engineering manager and chief risk officer for an ASX200 listed aguaculture company and has more than 30 years' experience in executive and general management, team and business development functions, financial control and delivery of complex multidisciplinary projects. Justin is responsible for strategic projects, major procurements, asset management and corporate risk at Tassal. A career highlight has been developing Tassal's capacity in salmon production, and more recently in prawn production, to achieve a circa fourfold increase in production, employee numbers, sales and profitability during his tenure. As Chief Risk Officer he has developed and managed a comprehensive corporate risk management program compliant with ISO standards and ASX guidance delivering significant stakeholder, financial, WH&S, operational and human capital certainty to the business since 2010.



Benita Husband Victoria – People FIEAust CPEng EngExec NER

Benita Husband is Engineering Director at CPB Contractors. CPB design and build infrastructure across roads, rail, tunnelling, defence, building and resources infrastructure. CPB's operations span Australia, New Zealand, Asia and Papua New Guinea, including some of the region's most iconic projects. Benita has more than 20 years' experience in the construction and engineering sector as an electrical engineer, project director and technical advisor. She is a registered building practitioner, EngExec and Fellow of Engineers Australia. She's also a graduate of the Australian Institute of Company Directors and an alumnus of Melbourne Business School Executive MBA.



Ross Kristinof Victoria – Project FIEAust CPEng NER

Ross is a Chartered. Principal Geotechnical Engineer and Fellow of Engineers Australia who has completed and led geotechnical design, interpretative studies, proof engineering and site investigations for infrastructure clients across Australia and New Zealand. Ross has worked as a site engineer, project manager, designer, discipline lead and proof engineer. His experience spans several challenging and complex projects and he enjoys adding value in integrated project teams by solving complex engineering problems with smart, pragmatic design solutions. Ross is currently the President of the Victorian Division and has previously served on Division and Technical Society committees. He has been a judge for various people and project awards at Engineers Australia for the past three years. Outside of Engineers Australia. Ross is a Director of not-for-profit Victorian Animal Aid and a lav-member of the Victorian Department of Justice Human Research Ethics Committee.



Nee Nee Ong Western Australia – People FIEAust CPEng EngExec NER

Nee Nee Ong has more than 25 years of electrical engineering experience and is a Fellow and Chartered Engineer of Engineers Australia. Currently, Nee Nee is working as an Electrical Engineer and Project Manager for GHD Pty Ltd, designing and managing projects ranging from providing electrical power supply solutions to designing communication and control systems. She is very actively involved with professional organisations, as the CoChair of the Engineers Australia Electrical College Board, Chair of WA branch College of Leadership and Management, member of the Accreditation Board and Congress.



Kassia Ralston Western Australia – Project MIEAust CPEng NER

Kassia Ralston is a Chartered Engineer, community board director and highly accomplished leader in infrastructure and construction. She is a passionate sportsperson and has represented Australia in water polo at the various international tournaments and world championships. Kassia is the Deputy Business Director of the Australian Naval Construction Branch. She spent her early career working for global engineering design firms Arup and AECOM in project management and leadership roles on major public infrastructure projects. Kassia is the current Deputy President of the Engineers Australia WA Divisional Committee. She is also a Board Director of Cura In-Home Aged Care and the Artists' Foundation of Western Australia.

#### Judging criteria

#### Engineer of the year

## Contribution to Engineers Australia's strategic priorities and purpose to advance society through great engineering

Describe how the nominee's engineering contribution and leadership has delivered benefits for individuals, groups, communities and the environment in which they reside, work, learn or enjoy recreation. Specifically address how the nominee has supported and contributed to Engineers Australias's purpose and strategic priorities.

## Formulation of resourceful, innovative and elegant engineering solutions or pioneering use of materials or methods

Describe how the nominee has:

- been resourceful, innovative or entrepreneurial in solving engineering problems
- developed elegant design solutions
- pursued engineering research in an academic or similar setting
- pioneered the use of materials or employed practices or methods which are novel, inventive and creative.

#### Contribution to sustainable and inclusive ethical practices

Elaborate on how the nominee has demonstrated consideration of sustainability (social, environmental and economic) in undertaking their engineering work. Provide details of the nominee's contribution to supporting and recognising equity, diversity and inclusion in the engineering profession. Describe the nominee's ethical approach to their engineering work and in general.

#### Contribution to and promotion of the engineering profession.

Give details of the nominee's achievements or service activities, especially voluntary engineering-related pursuits which have furthered the engineering profession.

#### Project of the year

#### Contribution to Engineers Australia's purpose of "advancing society through great engineering"

Actual or potential contribution to social or economic outcomes improving quality of life. Contributes to the local, regional or national economy or improves quality of life by using scientific and technological advances to solve problems in a more efficient and effective manner relevant to the scale of the project.

## Formulation of resourceful, innovative, and elegant engineering solutions or pioneering use of materials or methods

Significance of the work as a benchmark of Australian engineering by demonstrating innovation and sets new benchmarks, or continues current high standards, thereby raising the standard and standing of Australian engineering relevant to the industry or field of technology.

#### Contribution to sustainable, inclusive and ethical practices

Elaborate how the project has incorporated contemporary ethical, environmental, health, safety and security principles including Engineers Australia's purpose and strategic vision in undertaking their engineering work. Provide details of the contribution to supporting and recognising equity, diversity and inclusion in engineering practice.

#### Extent to which the work has delivered excellence

Opportunity for applicants to highlight or showcase key successes of their project and how their project has delivered engineering excellence for the scope of their submission.

#### **President's Prize**

The President's Prize is an award determined at the discretion of the National President on an annual basis. The award is intended for individuals or groups who have provided conspicuous service to either the profession or the community, in such a way that a significant contribution was made to the realisation of Engineers Australia and its strategic goals.

#### **Honorary Fellows**

This honour elevates the recipient to the level of Fellow of Engineers Australia, the highest credential available to members.

The Honorary Fellows Award is conferred by the Board of Engineers Australia on a recipient who has demonstrated:

- Notable contributions or achievements in the engineering profession or to an allied science.
- The highest technical, professional and community service standards of engineering
- Service to the Australian people or in recognition of outstanding achievement.

#### Peter Nicol Russell Career Achievement Memorial Medal

The Peter Nicol Russell Career Achievement Memorial Medal is the most prestigious award conferred by Engineers Australia. It is presented annually to an Honorary Fellow of Engineers Australia who has made a notable contribution to the science or practice of engineering in Australia.

The award honours Sir Peter Nicol Russell, a Sydney industrialist of the 19th century who made major donations toward engineering in Australia.

The PNR Medal is awarded to individuals who represent:

- the highest technical, professional and community service standards of the profession of engineering
- outstanding examples of leadership and management within the engineering industry
- the broad nature and impacts of the engineering profession through their significant contributions.

#### World Federation of Engineering Organisation Medal of Excellence in Engineering Education

WFEO Medal of Excellence in Engineering Education honours outstanding individuals who have made a significant contribution to engineering education, helping direct world attention to the importance of continuing improvement in the quality, delivery and relevance of engineering education and training. The recipient will be chosen based on his or her noteworthy contributions to the improvement of engineering education with special consideration to outstanding services rendered by educators to engineering educational institutions, and to those involved in the education of engineers.

#### Achievement awards

Engineers Australia's achievement awards recognise the important engineering achievements of individuals at all career stages and across Engineers Australia's colleges and engineering communities.

#### Order of Australia

Engineers Australia members are among the profession's achievers recognised in the 2023 Australia Day Honours and King's Birthday Honours list.

#### Member of the Order of Australia (AM)

- Dr Stuart McGill for significant service to the mining and resources sector, and business.
- Warrant Officer Brett Hooper for exceptional service throughout the introduction of Poseidon Maritime Patrol aircraft and the EA-18G Growler Airborne Electronic Attack capability for the Australian Defence Force
- Emeritus Professor Raphael Hilary Grzebieta for significant service to the transport industry through road safety research and promotion.
- Dr Peter Rogers for significant service to engineering, to education, and to the community.
- Mr Christopher Charles Vonwiller for significant service to science and technology development.

#### Medal of the Order of Australia (OAM)

- Dr Ernest Evans for service to engineering.
- Graeme Haussmann for service to engineering, and to the community.
- John Woodside for service to the construction industry.
- Wing Commander Rachael Quirk for meritorious performance of duty in engineering, airworthiness and culture to enhance air power for the Australian Defence Force.
- Dr David Smyth for service to the community through social welfare organisations.
- Lieutenant Commander Anthony Ian McCann Royal Australian Navy for meritorious service in the field of Navy Aviation Engineering.

#### Conspicuous Service Cross (CSC)

 Captain Lachlan William Attard for outstanding achievement in the performance of duty as the Project Engineer and Site Lead for the Cook and Tiroas Barracks infrastructure project in Vanuatu from August 2021 to May 2022.

# Award winners 2023

## Emerging Professional Engineer of the Year



Hooman Mehdizadeh Rad Northern MIEAust CPEng NER

Dr Hooman Mehdizadeh Rad is a full-time Mechanical Engineering Lecturer and Course Coordinator of Master of Engineering at the Faculty of Science and Technology of Charles Darwin University, and his career goal is to contribute to the development of Northern Territory (NT). Hooman is Chartered in Mechanical Engineering and Project Management, and his research focuses on solar energy, zero energy buildings and heat mitigation in tropical cities. Hooman's main research goal is to make Darwin and other parts of the NT a cooler and greener place to live, particularly for vulnerable people.

#### Professional Engineer of the Year



Mark Skanes South Australia FIEAust CPEng

Dr Skanes has more than 40 years of experience in leading project and engineering teams, in nonexecutive director positions, and in delivering business consultancy services within defence, utilities, mining, manufacturing, rail, construction, sport, public service and the academic sectors. He is a 20-year veteran of both the Royal Canadian Air Force and the Royal Australian Air Force and is also a proud mentor in the award-winning Industry Mentoring Network in STEM program. In 2019 Mark was the winner of the 2019 SA Premier's Science Excellence Award and is the 2019 recipient of the AGM Michell Medal from Engineers Australia.

#### Emerging Engineering Technologist of the Year



Jodie Kilpatrick TMIEAust CEngT NER

Jodie is an honest and sincere professional who has an Advanced Science Degree in Hydrology and Water Resources (Honours), postgraduate qualifications in metallurgy and engineering and is currently continuing her studies with a Masters of Civil Engineering. Jodie has leadership experience managing a team of professionals and applies a multi-disciplinary approach to her work. Jodie has experience ranging from direct operation of tailings facilities, to development of remedial designs and technical analysis. Jodie prides herself on creating sincere and valuable relationships within the workplace and is a champion for inclusion and diversity within her field, supporting up and coming engineers.

## Emerging Engineering Associate of the Year



**Laura Miranda** AMIEAust

Laura's interest in STEM careers was heavily influenced by her dad, a process engineer. Laura started working in the engineering industry in 2017 as a Cad Technician and completed her Associate Degree in Civil Engineering one year later in 2018. Since moving from Colombia, Laura has transitioned to an Infrastructure Designer role in which she is responsible for undertaking the detailed design and documentation of civil infrastructure following relevant design standards.

## Engineering Technologist of the Year



Daniel Bonatti TFIEAust CEngT NER

Daniel Bonatti is a Fellow of Engineers Australia, Fellow of the Australian Institute of Building and a Chartered Building Professional. He graduated from Western Sydney University with Bachelor of Construction Management Honours, with a University Medal. He is currently studying a Bachelor of Applied Leadership and Critical Thinking and a Master of Building Surveying to upgrade from a building inspector. This application is supported by Daniel's engagement in not-for-profit organisations in engineering and building field, volunteering his expertise and time over more than twenty years.

## Engineering Associate of the Year



**Robert Ladd** AFIEAust CEngA NER

With a remarkable 25-year career in infrastructure delivery encompassing both the public and private sectors across Australia's east coast, Robert brings a wealth of experience and a profound understanding of managing public infrastructure. His expertise lies in overseeing complex projects within the built environment, providing expert guidance on statutory obligations and driving successful outcomes. Currently serving as a Victorian Public Sector General Manager, Robert has consistently demonstrated his ability to lead and deliver results. As a leader, his approach is anchored in a core belief that success should be shared and that true leadership involves ensuring that everyone has access to opportunities. He firmly believes in the power of collaboration and fostering a supportive work environment that encourages the growth and development of individuals within the team.

#### **Project of the Year**



#### Boola Katitjin | Murdoch University Western Australia

#### Aurecon, Murdoch University

Murdoch University Boola Katitjin is the largest massengineered timber building in Western Australia. Boola Katitiin is the beacon of sustainability, and a showcase of what is possible when engineering assumptions are tested and boundaries are pushed. The project dramatically transforms the campus by redefining the new heart of the campus. This building accommodates large scale collaborative teaching learning spaces that support the University's educational longterm needs. This building boasts an extraordinary 180m long low-rise building constructed out of mass timber, creating a unique 'warehouse for learning'. The building also acted as a testbed for a world-first robotics trial, aimed at disrupting the construction industry. Before Boola Katitjin, we needed to look to the world for case studies and benchmarking. Now, the world will look towards our own backyard, 10 minutes drive from the city, where we have a world class MET building that has set a new benchmark for MET design and construction. This is a significant achievement for the engineering eminence for the engineering industry in Australia.

#### **Honorary Fellow**



Dr Geoff Boughton AM HonFIEAust CPEng NER

A nationally and internationally respected wind and timber engineer, Geoff has dedicated much of his career to improving the resilience of buildings to severe wind events both in Australia and the Pacific, including working to develop improved building methods and codes in countries such as Tonga and Fiji. Amongst many volunteer roles, his service to several Australian Standards committees has helped ensure building standards in Australia provide the community with appropriate levels of safety. A long-standing member of the WA Engineers Australia community, Geoff is one of the 100 engineers featured in the Engineers Australia Centenary Book – Anything is Possible.

#### **Honorary Fellow**



**Professor Qing-Long Han** HonFIEAust

Distinguished Professor Han has more than three decades of extensive research experience across academia and industry. He has made exceptional and innovative technologies contributions to networked control and multiagent systems and applications to smart grids demonstrated by the worldwide academic impact (627 high quality papers with more than 46,350 citations and an h-index of 118), and the significant lasting industry impact.

These contributions have benefitted the community in Australia and internationally. As Pro Vice-Chancellor (Research Quality) at Swinburne University of Technology, he has shown his exceptional leadership in strategic organisational developments and as a champion of research excellence.

## Peter Nicol Russell memorial medal



Dianne Boddy (Victoria) HonFIEAust CPEng(Ret)

Dianne Boddy's remarkable 60-year career in engineering is marked by over 2000 designs and 40 international patents in areas like sheep shearing, food canning, and geotechnical testing. Starting her journey as a draftsperson in the late 1950s, she has not only been a trailblazer for women in engineering but also a dedicated community servant, holding multiple board positions. Born in 1933 and overcoming early personal challenges, including the loss of her father and being raised by a single mother, Dianne attended Geelong Grammar. A true engineer, she created and produced her designs in her workshop. Her inventions, including mechanisms and machinery for processing plants, are still used globally. Dianne's distinguished engineering career and her extensive community service reflect her significant societal contributions.

#### **President's Prize**



Paul Collier FIEAust CPEng EngExec NER

Paul's engineering career spans more than 40 years and covers a diverse background in the civil and infrastructure space. During that time, he has delivered projects in the aviation sector, sports and aquatic facilities, water, wastewater, recycled water and desalination schemes, and capital works programs delivered under conventional, ECI, and alliance contracts.

He has specialised in providing strategic planning, business and operational performance reviews and business process change to industrial and infrastructure clients.

Paul has also been extensively involved in the volunteer sector including sports coaching, school councils, and Engineers Australia where he is a past president of Victoria Division, delegate to National Congress, Chair of the Civil College Board and currently serves on the Engineers Australia Board Governance Committee.

#### WFEO Medal of Excellence in Engineering Education



**Professor Sally Male** FIEAust

Sally Male FIEAust BE(Hons) PhD is Professor of Engineering and Technology Education, and Director of the Teaching and Learning Laboratory in the Faculty of Engineering and IT at the University of Melbourne. The Lab, established by Sally, is the first of its kind in Australia, guiding research-informed enhancements to teaching and learning.

Sally has led competitively funded projects on engineering education focusing on industry engagement, inclusion, and curriculum development. She collaborates closely with Engineers Australia, engineers, employers, the Australian Council of Engineering Deans, students, and universities, to achieve widespread, evidence-based advancements in engineering education and practice.

# Engineering Associate and Technologist

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#### **Emerging Engineering Associate of the Year**



**Ali Alghoul** GradAlEAust

In 2015 Ali started studying Engineering in Telecommunications System and Electronics Design at Antonin University in Lebanon and moved to Australia in 2016 to continue his education, graduating with an Advanced Diploma of Telecommunications and Electronics Engineering from RMIT University. Ali continues expanding his knowledge in the engineering filed by studying Electrical Engineering at the Engineering Institute of Technology and has worked for VicWide civil construction and is currently working as field service engineer at Smiths Detection.



Lachlan Martin AMIEAust CEngA NER

Lachlan served 15 years in the Royal Australian Navy and is an extremely talented and selfmotivated individual who possesses excellent leadership and communication abilities. He achieved his Technical Charge Qualification and achieved the rank of Chief Petty Officer. These accomplishments are evidence of his dedication and hard work in the professional world. He never put himself ahead of other people and instead concentrated his efforts on being an excellent teacher and a champion in his field. Work to a standard, not a schedule, is one of Lachlan's favourite phrases to quote.



Winner Laura Miranda AMIEAust

Laura's interest in STEM careers was heavily influenced by her dad, a process engineer. Laura started working in the engineering industry in 2017 as a Cad Technician and completed her Associate Degree in Civil Engineering one year later in 2018. Since moving from Colombia, Laura has transitioned to an Infrastructure Designer role in which she is responsible for undertaking the detailed design and documentation of civil infrastructure following relevant design standards.

#### Engineering Associate of the Year



Aleksandar Seizovic AFIEAust EngExec CEngA

Aleksandar served in Australian Defence Force (Navy) submarine service. He is knowledgeable and experienced in complex military projects highlighted by his many years' experience in the operations and maintenance of military assets. Aleksandar's skills are at the 'front end ILS' management. Aleksander is completing his Doctor of Professional Engineering (DPEN) in 2023, and his thesis by publications title is 'Development of system to deliver large and complex engineering projects safely and securely'. This thesis by publication reviews existing 'Battle Management System (BMS)' and highlights the need to develop complex structure thinking, cybernetics, depraved problem solving, and emerging behaviour analysis considering the relationship between complex and multi-structural systems.



**Alvan Nair** AMIEAust

Born in Suva, Fiji, Alvan was educated in Fiji until 1986 when his family migrated to Australia. He attended school in Sale, Victoria and then RMIT where he undertook an Aerospace Systems Engineering course. He joined Ansett Australia in 1995 as an apprentice Avionics Aircraft Maintenance Engineer. During his tenure at Ansett Australia, he received training and became gualified in three aircraft trades. After a short hiatus in the oilfield industry, Alvan returned to the aviation industry where he has attained more than 25 years of experience in various technical and management roles within the civil and defence aircraft industries. Alvan moved to the power industry in mid-2022 and has started to make an impact within AGL Loy Yang precinct. He is looking forward to the transition to renewables for the benefit of the community and the business.



#### Winner Robert Ladd AFIEAust CEngA NER

With a remarkable 25-year career in infrastructure delivery encompassing both the public and private sectors across Australia's east coast. Robert brings a wealth of experience and a profound understanding of managing public infrastructure. His expertise lies in overseeing complex projects within the built environment. providing expert guidance on statutory obligations and driving successful outcomes. Currently serving as a Victorian Public Sector General Manager, Robert has consistently demonstrated his ability to lead and deliver results. As a leader, his approach is anchored in a core belief that success should be shared and that true leadership involves ensuring that everyone has access to opportunities. He firmly believes in the power of collaboration and fostering a supportive work environment that encourages the growth and development of individuals within the team.

#### Emerging Engineering Technologist of the Year



Gene Donily TMIEAust

Gene is an accomplished Electrical Engineering Technologist with a passion for innovation, new technology and the environment. With an extensive background in engineering design, Gene has demonstrated expertise in substation high voltage and secondary systems design, as well as powerstation power system and control design. Gene's notable achievements include the Cannonvale 66kV sub-transmission reinforcement project and the Microgrid and Isolated Test (MIST) facility concept design. He is currently working on the decarbonisation program to achieve net zero emissions on power stations in Queensland's remote and isolated communities.



#### Winner Jodie Kilpatrick TMIEAust CEngT NER

Jodie is an honest and sincere professional who has an Advanced Science Degree in Hydrology and Water Resources (Honours), postgraduate qualifications in metallurgy and engineering and is currently continuing her studies with a Masters of Civil Engineering. Jodie has leadership experience managing a team of professionals and applies a multi-disciplinary approach to her work. Jodie has experience ranging from direct operation of tailings facilities, to development of remedial designs and technical analysis. Jodie prides herself on creating sincere and valuable relationships within the workplace and is a champion for inclusion and diversity within her field, supporting up and coming engineers.

#### Engineering Technologist of the Year



#### Winner Daniel Bonatti TFIEAust CEngT NER

Daniel Bonatti is a Fellow of Engineers Australia, Fellow of the Australian Institute of Building and a Chartered Building Professional. He graduated from Western Sydney University with Bachelor of Construction Management Honours, with a University Medal. He is currently studying a Bachelor of Applied Leadership and Critical Thinking and a Master of Building Surveying to upgrade from a building inspector. This application is supported by Daniel's engagement in not-for-profit organisations in engineering and building field, volunteering his expertise and time over more than twenty years.



**Drew Jardine** TFIEAust CEngT EngExec NER

Drew started his engineering journey as a Vehicle Mechanic Apprentice aged 16 in the British Army in 1986. Completing 34 years in the Army (30 in the British Army and four in the Australian Army) he followed a no traditional route to a senior engineering officer position, commanding several hundred engineering trades in several theatres of operations. Leaving the forces three years ago Drew joined BAE Systems Australia Maritime team as a Project Engineering Manager in Cairns, shaping and expanding the team to meet engineering demand and developing the local engineering profession through the local Engineers Australia regional group.



**Previn Pillay** TMIEAust CEngT NER

Previn Pillay is the Manager Process Operations at Kimberley Mineral Sands, where he is responsible for multiple functions including processing, maintenance, engineering, metallurgy, warehousing and port and logistics. Previn guides a multi-disciplinary team of senior professionals to ensure the operational readiness of the world-class Thunderbird Mineral Sands project in northern Western Australia. As a Chartered Engineering Technologist with an industry track record of more than 20 years, Previn provides high-level leadership that delivers exceptional operational and technical outcomes for organisations from Tier 1 miners through to junior start-ups.

# Professional Engineer of the Year finalists

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#### **Emerging Professional Engineer of the Year finalists**



Alastair Cossart Canberra MIEAust CPEng NER

Alastair is a Chartered structural engineer and design manager with Arup in Canberra, bringing 12 years of experience across Australia, New Zealand and the UK. He is an elected Division Committee member for Engineers Australia in Canberra.

Alastair has worked across all industries providing structural design, project management and leadership on projects of all scales. He is a passionate advocate for diversity and inclusion across the profession and committed towards improving gender diversity in engineering and associated industries.

Alastair finds joy in fostering his four-yearold daughter's growing interests in the built world, creative design and problem solving.



Joe Townsend Newcastle MIEAust

Joe's career over the last 15-years has transformed his technical skills in planning, engineering, project and financial management delivering nearly \$1Billion of Infrastructure. His career has traversed leadership roles with contractors, \$300M industry associations, and most recently being as Principal at Western Project Services (an RSK Company). The experience across industries has given Joe a distinctive insight into the aspirations, opportunities and challenges of the NSW economy, its composition and the critical role of the associated engineering industries employing 1-in-5 Australians.

As a young professional, Joe is committed to our profession becoming more influential, impactful, and valued by the community.



Winner Hooman Mehdizadeh Rad Northern MIEAust CPEng NER

Dr Hooman Mehdizadeh Rad is a full-time Mechanical Engineering Lecturer and Course Coordinator of Master of Engineering at the Faculty of Science and Technology of Charles Darwin University, and his career goal is to contribute to the development of Northern Territory (NT). Hooman is Chartered in Mechanical Engineering and Project Management, and his research focuses on solar energy, zero energy buildings and heat mitigation in tropical cities. Hooman's main research goal is to make Darwin and other parts of the NT a cooler and greener place to live, particularly for vulnerable people.

#### **Emerging Professional Engineer of the Year finalists**



Chloe Turrell Queensland MIEAust

Chloe is passionate about learning from the human body to develop novel medical technologies that will change the way we approach medicine to advance our healthcare abilities. Working as a Senior Biomedical Engineer at WearOptimo, Chloe is developing ways to integrate a wearable hydration sensor device with the skin for preventative measures in fields where dehydration can be a silent killer. Chloe believes in the power of diversity and is currently the National Operations Manager of not-for-profit, The Power of Engineering. She aims to remove stereotypes and empower young regional women with the knowledge to pursue a career in STEM.



**Tyler Hill** South Australia MIEAust

Tyler is a solution-driven engineer with a strong background in civil engineering and project management. His passion lies in developing innovative engineering solutions that drive efficiency, sustainability, and provide value for clients. With a drive to make a lasting impact, he strives to create opportunities for others through his work and volunteer initiatives. Tyler's career has spanned multiple sectors, focusing on civil engineering, asset management and sustainability. In his current role, Tyler and his team help communities enhance the value of their asset portfolios. Tyler also leads Tonkin's national sustainability efforts to create meaningful change both internally and across projects.



Anirban Ghose Sydney MIEAust

Combining mechatronics, nanoscience, and engineering backgrounds, Anirban has in-depth research and practical experience of recycling material opportunities, and development of technologies for incorporating recycled materials and goods into useable products. His work with the Microfactories at the Smart Centre at UNSW has been at the forefront of recycled material innovation that will have significant positive economic, environmental and social impacts. He is currently responsible for managing a team of engineers, taking a lead role in key stakeholder management, including industry partners, working closely with the SMaRT Centre Director to improve relevant IP, and taking a leading commercialising Microfactories.

#### **Emerging Professional Engineer of the Year finalists**



**Jarrod Thomas** Tasmania GradlEAust

Jarrod Thomas is a Project Engineer at BridgePro Engineering, where he has been employed since 2018 while studying a Bachelor's degree in Ocean Engineering at the Australian Maritime College in Launceston. Born and bred in Tasmania, he has a passion for implementing innovative yet sustainable designs in his home state that create impact and a legacy for future generations. Jarrod's approach to engineering and design has been influential to the industry and seen him recognised on a state and national level at just 25 years of age.



Adam Jones Victoria MIEAust

Adam Jones, the entrepreneurial engineer behind CLT Toolbox, is steadfast in his mission to democratise sustainable design for engineers in Australia. Adam's work is about creating meaningful impact. Through CLT Toolbox, he delivers powerful software solutions that promote the use of low embodied carbon materials making mass timber design accessible through innovative structural design software. A best-selling author and podcast host, Adam's commitment to education complements his technological initiatives, fostering a more sustainable and informed future for the construction industry.



Nicole Locke Western Australia MIEAust CPEng

Nicole in an environmental engineer with almost 10 years' experience in the water utility and not-for-profit sectors. She is currently a WASH Capacity Mentor with Engineers Without Borders Australia, based in Cambodia. Nicole takes a people-first approach to engineering, by bringing socio-technical principles into all the work she does, believing that it's only by putting people at the front of decision making and design that we can ensure the best outcome for the world. In her spare time, she takes a special interest in creating art and storytelling and receives most of her inspiration for the remarkable world around us.

# Engineers Australia Excellence Awards 2023 | Awards Showcase

#### Professional Engineer of the Year finalists



**Lee Walsh** Canberra CPEng FIEAust NER

Dr Lee Walsh trained as an electrical and computer systems engineer and physiologist and has more than a decade of experience designing software and equipment for human research and clinical practice. After his research career Lee worked for the Therapeutic Goods Administration where he led medical device assessments and investigations, legislative reform for digital health and the establishment of cybersecurity policy.

Lee has since founded Platypus MedTech Consulting to support small business with their product evaluation, quality management and regulatory compliance for medical devices. He also works in motorsport applying engineering to improve human performance and race outcomes.



Tanja Rosenqvist Newcastle MIEAust

Dr Tanja Rosenqvist leads Arup's research programme in Australasia, including more than 70 projects engaging more than 250 researchers each year. Tanja has worked in 16 countries across four continents and designed everything from healing hospital environments to water and sanitation systems, governance systems, and taxation. Prior to joining Arup, Tanja worked in international development for 10 years, as a lead designer for a large international NGO and as an academic. Tanja was named Young Water Professional of the Year in NSW in 2019 and holds a BSc and MSc in Design and Innovation Engineering and a PhD in Sustainable Futures.



Krishnan Kannoorpatti Northern MIEAust CPEng

Krishnan is the Research Professor of Advanced Manufacturing at Charles Darwin University (CDU) and the Director of Advanced Manufacturing Alliance in partnership with SPEE3D. He is an expert on manufacturing, materials engineering and corrosion. He conducts research in developing new alloys using cold spray technologies, microbiologically influenced corrosion, corrosion of hardfacing alloys and friction stir welding. He assists local industry in solving some of their engineering problems. He is an executive member of the NT Manufacturers Council. He has raised the knowledge of materials engineering and manufacturing among the students at CDU and the importance of failure prevention in machine components.

#### Professional Engineer of the Year finalists



Emma Charlton Queensland MIEAust CPEng NER

Emma is a Technical Director at AECOM and the Defence Environmental Services Lead for ANZ. She has worked in consulting engineering for more than 20 years across various industries and market sectors. Her work has spanned roles in engineering, team leadership, strategy, business development, project management and commercial management. Emma is passionate about equity, diversity and inclusion (ED&I) and helps to deliver AECOM's ED&I strategy. She is also on the Board of Australian Spatial Analytics, a data solutions social enterprise employing young autistic and neurodiverse adults. She has a degree in Mechanical Engineering and an MBA from University of Queensland.



Winner Mark Skanes South Australia FIEAust CPEng

Dr Skanes has more than 40 years of experience in leading project and engineering teams, in nonexecutive director positions, and in delivering business consultancy services within defence, utilities, mining, manufacturing, rail, construction, sport, public service and the academic sectors. He is a 20-year veteran of both the Royal Canadian Air Force and the Royal Australian Air Force and is also a proud mentor in the award-winning Industry Mentoring Network in STEM program. In 2019 Mark was the winner of the 2019 SA Premier's Science Excellence Award and is the 2019 recipient of the AGM Michell Medal from Engineers Australia.



Paul Rogers Sydney MIEAust CPEng NER

For almost 20 years Paul has followed his passion as a civil engineer in delivering major infrastructure projects in Ireland and across Australia. From early in his career Paul's aptitude for resolving complex challenges shone through. Combining his technical skills with his transparent and collaborative style, Paul has transformed the field of utilities management by developing, optimising and sharing his innovative approach that has saved the Sydney Metro and Canberra Light Rail programs billions of dollars. By founding PRO Consultants, Paul has trained more engineers to effectively mitigate utilities risks, raising the performance of the industry by showcasing best practice.

#### Professional Engineer of the Year finalists



David Gerke Tasmania MIEAust

David Gerke is a Principal Engineer Civil with more than three decades of experience with Entura and Hvdro Tasmania. David's varied technical experience across hydropower, dams, water management and renewables has provided numerous opportunities to lead teams on large multidisciplinary projects. He has worked in partnership with other large design and construction companies, dealing with government and industry clients in Australia and internationally. David has fulfilled technical and leadership roles, now regularly undertaking project manager and project director roles on large, high-profile national and international projects. He is also a highly-regarded trainer with the Entura clean energy and water institute.



Daniel Prohasky Victoria MIEAust

Daniel is an inventor of robotic technologies, has successfully achieved applied research outcomes for global multi-disciplinary engineering firms such as Arup and Aurecon, and works across academic institutions and innovation precincts bringing teams together to solve some of the most pressing challenges in the building and construction industry. As the founding architectural engineering lecturer at Swinburne University, he mentors the next generation of architectural engineering integrators to progress the construction industry towards a truly collaborative one, solving sustainability challenges together. As the champion of Curvecrete, he is introducing lower carbon integrated construction solutions across Australia.



Kala Senathirajah Western Australia MIEAust CPEng NER

Kala Senathiraiah is a water industry engineer with extensive experience throughout the water supply cycle, spanning all stages of the asset life cycle. Her areas of expertise encompasses strategy development, asset and risk management, environmental and catchment management, hydrology, water quality and emerging contaminants. Kala also has keen interest in working towards Sustainable Development Goals, mitigation of plastic pollution and climate change. Committed to addressing the global plastic pollution crisis. Kala is an esteemed researcher whose dedication, expertise and innovative approaches has been instrumental to advancing our understanding of plastic pollution and inspiring meaningful action.

# Project of the Year finalists



Australian National University Research School of Physics

Canberra TTW (ACT) Pty Ltd

The ANU Research School of Physics portfolio covers the entire spectrum of research from fundamental to applied research and through to pre-commercial development. This project transformed an elite physics research facility into a collaborative workplace that allows human creativity to flourish while contributing to a sustainable future and positively impacting the world. It promotes human excellence and dignity in a safe and celebratory environment. As structural, civil and facade engineers for the project, TTW delivered engineering excellence to achieve the client's advanced technical and design outcomes including a high-performance custom facade, innovative structural solutions to vibration and EMF requirements, and civil engineering to facilitate the precinct bike path, loading dock access and landscaped social courtyards. The completed facility underpins a substantial pipeline of commercial research for the ANU in a high-quality working environment that supports staff well-being within flexible spaces that are designed to be continuously repurposed.



#### **Biological Leachate Remediation** (BLR) **Newcastle**

ENV Solutions (ENV) T/A ENV Remediation Services Pty Ltd and ENV Services Pty Ltd, NSW Public Works - Department of Regional NSW

In February and March 2022, heavy rainfall and flooding caused severe damage to the municipal landfill cell and sewerage treatment plant in Lismore, NSW. As the floodwater subsided, a large volume of landfill leachate contaminated with PFAS, heavy metals, hydrocarbon, nutrients and other potentially harmful substances was left behind. ENV was contracted to design, construct and operate a comprehensive landfill leachate treatment process to aid in the flood recovery efforts. To address the complex design challenges, ENV integrated physical, chemical, high-rate algal processes and disinfection to create a robust and cost-effective solution known as Biological Leachate Remediation (BLR). Through continuous monitoring and optimisation in collaboration with key stakeholders. ENV successfully demonstrated the effectiveness and cost-efficiency of BLR by obtaining regulatory proof-of-performance over several months. The treated landfill leachate was discharged directly into the environment, and the operational costs of this approach were approximately 10 times lower than traditional disposal options.



#### Jabiru Hybrid Renewable Project Northern EDL

EDL's 11.4MW Jabiru Hybrid Renewable Power Station in the Northern Territory acts as a blueprint for the provision of reliable, clean energy for isolated off-grid communities. The project exemplifies how engineering excellence can create a better world. Through bold innovations, the project has made advancements in hybrid renewable energy engineering, resulting in an average of >50 per cent renewable energy fraction, with 100 per cent solar energy supplying Jabiru power most days. The 3MW/5MWh battery stores excess solar energy produced during the day to delay the start of diesel generation, shifting renewable energy to support the town beyond daylight hours. This enables the power station to deliver more than 50 per cent renewable energy on a per annum basis. The Jabiru project has vastly improved quality of life and business viability for Jabiru's residents, who previously experienced multiple blackouts per week, as well as reducing diesel consumption by approximately 1.7 million litres per year, meaning lower greenhouse gas emissions, fewer trucks on Northern Territory roads and less exposure to volatile fuel prices.



Heritage Lanes at 80 Ann Street Queensland AECOM

Heritage Lanes at 80 Ann Street is one of Australia's most sustainable commercial buildings in Brisbane's CBD, featuring a 35-storey premium office tower spread across 74,000 square metres. The building was designed to be a microcosm of the city, where the entire precinct comprises an array of diverse places – each generous, open, and inviting. Conceptualised and crafted with a people-first approach, Heritage Lanes provides a range of environments and proximity to green and open space for work, play and leisure. Purposely designed to evolve with the changing needs of the tenants and community, local groups are engaged to contribute to the precinct and program of arts. events and leisure activities, ultimately improving the experience in and around the building.



Adelaide Festival Plaza Redevelopment South Australia Mott MacDonald

Mott MacDonald were the civil/structural engineers for this transformational project between Parliament House, Adelaide Festival Centre and Adelaide Train Station. The project represents a seamless public realm spanning 19,000m2 and connecting six major buildings. The plaza is supported on a five-storey basement structure which is one of the largest in Australia and interfaces with heritage infrastructure on all sides. With the plaza slab propping the retaining walls, it was critical for wall movements to be tightly controlled, to prevent damage to the surrounding heritage buildings. An innovative joint system dissipated slab shrinkage prior to load being switched from temporary anchors onto the plaza slab. Due to the need to accommodate large soil volumes for trees, the slab system was designed with tree pits as an integral part of the structure. These elegant engineering solutions are invisible to the public. while underpinning the safety and functionality of this revitalised landmark precinct.



#### Central Station Metro Works Sydney

Aurecon Sydney Metro, Laing O'Rourke, GHD, John McAslan + Partners and Woods Bagot, Atkin

The Central Station Metro Works will deliver the most significant upgrades to Central Railway Station in decades, comprising an integral part of the NSW Government's Sydney Metro City and Southwest project. As the only underground station to be erected integrally within a live station environment, minimisation of disruption to 270,000 daily commuters was the fundamental design driver. The scope of works includes the excavation and construction of the new metro station box beneath existing platforms 13–15, the new 19-metre-wide Central Walk, which features the new Chalmers Street entrance, and a refurbished Grand and Northern Concourse entrance on Eddy Avenue. A DfMA and usercentric approach to structural design and construction made viable 'open-heart surgery' within Australia's busiest railway interchange.



#### Bruny Island Submarine Cable Replacement

Tasmania Shaw Contracting

Shaw Contracting, commissioned by TasNetworks, successfully undertook the challenging task of replacing a damaged cable that provided essential electricity and fibre optic connectivity to the residents of Bruny Island. In the face of numerous obstacles, they carefully devised and implemented an innovative solution-an 85-metre cable spanning a delicate marine environment across a distance of approximately 1.7 kilometres. Working from a daunting 50-metre cliff, the team demonstrated their precision in excavation, in-situ concrete work and trenching, all while adhering to strict constraints. They navigated the presence of critically endangered wildlife. Aboriginal and heritage land and a fragile marine reserve, ensuring minimal impact at both cable connection points. The project also involved the installation of a groundbreaking overland cable structure that seamlessly blended with the surrounding environment. Utilising a specialised vessel. skilled divers and operators. Shaw accomplished the task safely and efficiently. The project was completed to the highest standards, within the allocated timeframe and under budget, showcasing Shaw's unwavering expertise and dedication.



#### Development of Apple Harvesting Robot

#### Victoria

Monash University

The Apple Harvesting Robot project stands as a significant milestone in addressing the global labour shortage challenge. Over its five-vear span, it has led to the creation of the Monash Apple Retrieving System (MARS), a world-class harvesting robot that has garnered widespread acclaim. With highly recognised innovative solutions in machine vision, robotic grasping, and manipulation, this project has resulted in technological breakthroughs with 18 high-quality research papers, one PCT patent filed and more than 50 influential media coverages worldwide. The project has elevated Australian engineering, positioning the country as a global leader in the field of harvesting robotics. Through its transformative potential, this project is showcasing how engineering can address critical challenges and shape the future of sustainable farming practices. This project aligns seamlessly with Engineers Australia's core values of excellence. innovative engineering, and sustainability, setting new industry benchmarks and demonstrating the team's ingenuity and dedication.



Winner Boola Katitjin | Murdoch University Western Australia Aurecon, Murdoch University

Murdoch University Boola Katitjin is the largest massengineered timber building in Western Australia. Boola Katitiin is the beacon of sustainability, and a showcase of what is possible when engineering assumptions are tested and boundaries are pushed. The project dramatically transforms the campus by redefining the new heart of the campus. This building accommodates large scale collaborative teaching learning spaces that support the University's educational longterm needs. This building boasts an extraordinary 180m long low-rise building constructed out of mass timber, creating a unique 'warehouse for learning'. The building also acted as a testbed for a world-first robotics trial, aimed at disrupting the construction industry. Before Boola Katitjin, we needed to look to the world for case studies and benchmarking. Now, the world will look towards our own backyard, 10 minutes drive from the city, where we have a world class MET building that has set a new benchmark for MET design and construction. This is a significant achievement for the engineering eminence for the engineering industry in Australia.

# Achievement awards

#### Engineering Heritage Australia John Monash Medal



**Bill Jordan** FIEAust CPEng NER APEC

Bill currently leads an engineering practice specialising in the conservation of heritage buildings and structures.

He had a leadership role with Engineering Heritage Australia between 1991 and 2013, and has authored over 30 papers on building conservation and restoration. His conservation work includes the stabilisation of "Elizabeth Farm", the oldest European building in Australia. He has pioneered methods and materials for historical masonry, induced building vibration monitoring, and earthquake damage assessment and repair.

His pioneering work on the Budj Bim aquaculture systems has been pivotal in demonstrated the engineering abilities of Aboriginal Australians, contributing to its World Heritage listing.

#### Civil College Sir John Holland Civil Engineer of the Year



## J<u>o</u>hn Holl∧nd

Wesley Johnston FIEAust CPEng EngExec

Wes is an accomplished Project Manager with 35 years of extensive experience across multiple industry sectors. He uses proven strategic insight in producing management and engineering design solutions, successfully overcoming varied challenges. He drives works with a professional and motivational leadership style, centred on building high-performance teams.

Wes demonstrates a clear and proactive focus on delivering projects on-time, on budget and incident free, and is conscientious in working with clients to deliver a win-win outcome. He is an Industry leader and recipient of multiple awards including the Engineers Australia Bradfield Award and voted one of Engineers Australia's Most Innovative Engineers.

#### Environmental College Environmental Engineer Achievement Award



Lara Harland FIEAust CPEng NER

Lara has over 25 years experience in the water supply, sewerage and environmental industry. She has undertaken considerable work relating to Environmental Management Systems developed to ISO14001, including numerous internal, and second party audits and construction management plans. Other environmental and civil work includes detailed design, strategy/feasibility studies and environmental assessments. As project manager she has coordinated and managed technical specialists on a large number of projects, along with successful experience in community/stakeholder consultation and environmental impact studies.

In addition Lara has experience in using software and modelling packages like ArcGIS, MapInfo, Mikenet, MikeUrban, H2OMap, Infowater, WaterCAD, WATSYS and QPulse. Transport Australia Society Transport Medal



**Dennis Walsh** FIEAust CPEng

Dennis is the Chief Engineer of Transport and Main Roads. He oversees a range of technologies including Geospatial Technologies, Road Design and Hydraulics; Pavement, Materials and Geotechnical Engineering; Traffic Engineering; Structures; and Safer Roads Infrastructure.

He has an involvement in a wide area of transport related matters at a national level.

Dennis is committed to bringing together skills and knowledge across industry, academia, and government to embrace new technologies, engage with customers and drive new ideas into action for the benefit of the community.

#### Chemical College Chemical Engineer Achievement Award



Veena Sahajwalla HonFIEAust CPEng

Australian Research Council (ARC) Laureate Professor Veena Sahajwalla is an internationally recognised materials scientist, engineer and inventor revolutionising recycling science. She is renowned for pioneering the high temperature transformation of waste in the production of a new generation of 'green materials.' In 2018 Veena launched the world's first e-waste microfactory and in 2019 she launched her plastics microfactory, a recycling technology breakthrough. As the founding Director of the Centre for Sustainable Materials Research and Technology (SMaRT) at the UNSW Sydney, she is engineering a new generation of green materials and products made entirely, or primarily, from waste.

#### RISK Society Risk Engineer Achievement Award



Dale Cooper

Dale Cooper has over 40 years' experience as a senior line manager and an international consultant in enterprise, strategic and project risk management.

He is a co-author of Project Risk Management Guidelines: Managing Risk with ISO 31000 and IEC 62198, and convenor of the international team preparing the third edition of IEC 62198, Managing risk in projects – Application guide.

He has been an independent Chairman and member of several Audit and Risk Committees.

He received his PhD in operational research from the University of Adelaide. He is a Fellow of the Australian Institute of Company Directors and the Financial Services Institute of Australasia.

#### Structural College John Connell Gold Medal



Dr Joseph Correnza FIEAust CPEng EngExec NER

Joseph is a Principal and Australasian Regional Board Member at Arup. He leads Arup's Excellence, Design and Innovation Executive and chairs Arup's Australasia Ethics Committee.

As a building engineer and design director with more than 25 years' experience, Joseph has delivered a portfolio of significant cityshaping projects. Joseph has held numerous leadership roles managing the firm's Victoria and SouthAustralia offices and teams in London.

The industry recognises him as a collaborative and innovative designer and exemplar leader, acting ethically and with integrity. He understands and advocates across industry for quality projects that will elevate city's the sustainability, resilience, and liveability.

## Mechanical College AGM Michell Medal



Michael von Bertouch FIEAust CPEng EngExec NER

Mike von Bertouch is a multi-facetted technologist and entrepreneur with a strong focus on creating enterprises and projects with genuinely meaningful outcomes for all stakeholders. Mike's diverse career is characterised by constant learning, teaching and pragmatic engagement with opportunity. Early career episodes with large companies gave way to Mike finding his sweet spot in the SME world. Mike has been a founding shareholder in many successful private and public companies, including By Design Group, Nearmap Ltd, Spookfish Ltd and the privately owned Innovaero Technologies group of companies. Mike recently completed a circumnavigation of Australia in a WW2 vintage aircraft

Information, Telecommunications and Electronics Engineering (ITEE) College IREE Neville Thiele Eminence Award



Walter Green FIEAust CPEng

Walter is a Director at Communications Experts Group, undertaking research projects and developing leading edge solutions for clients. He has made submissions to the Australian Federal Government, Senate and two other countries on Telecommunications Legislation.

He managed the Zimbabwe Post and Telecom Corporation integration of the new digital telephone exchanges with the analogue network.

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July	Nominations close	
September	Local winner announcement events	
November	Gala dinner event	



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