ENGINEERS AUSTRALIA

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 location 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 nominee.

People Awards

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

Achievement awards 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 distinguished career awards. This category contains three separate awards which recognise the conspicuous service of individuals who have given longstanding and prominent service to the profession.

ENGINEERS AUSTRALIA

Excellence Awards

Canberra →

Queensland →

Tasmania →

Newcastle →

South Australia →

Victoria →

Northern →

Sydney →

Western Australia →

Achievement awards →

ENGINEERS AUSTRALIA

Excellence Awards

Canberra

Chief Judge

George Tomlins PSM

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.

Canberra Judging Panel

Tarek El-Ansary

MIEAust

Dr Khandker Nadya Haq

MIEAust

Vijayananda Mohire

MIEAust

Ryan Orders

MIEAust CPEng NER

Belinda Smith

FIEAust CPEng EngExec NER

Emerging Professional Engineer of the Year nominees

Matthew Lyon

MIEAust CPEng NER

Matt is an innovative and trusted Chartered senior mechanical engineer. He has more than 10 years of experience gained in the water, manufacturing and mining industries where he has developed safe and practical solutions for communities across regional and metropolitan Australia. Matt's expansive career has seen him successfully develop solutions across the entire asset lifecycle, including detailed design, site project engineering and consulting roles.

Mark Papinczak

GradIEAust

Blending demonstrable experience in digital transformation and change management with contemporary model-based systems engineering practice, Mark is responsible for developing scalable model-based engineering capabilities at BAE Systems Australia. Specific interests include model-based approaches and the application of systems thinking in public policy and the third sector. In addition to his role at BAE Systems, Mark is the Chief Digital Officer at 180 Degrees Consulting, the world's largest consultancy for non-profits and social impact organisations, where he leads a global team leveraging technology for social impact.

Emerging Professional Engineer of the Year nominees

Winner

Alastair Cossart

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.

Arlene Mendoza

MIEAust

Arlene is a highly experienced systems and project engineer. In 2018, she graduated with a Bachelor of Engineering in Electronics and Communications, and she recently completed a Master of Engineering. Starting her career in Defence as a graduate, Arlene quickly developed a portfolio of successful project experience in mine countermeasures, communication networks and RADAR.

Arlene also mentors and teaches at Australian National University, supporting the next generation of engineers and providing a role model for women from diverse backgrounds. Arlene's versatility, complex problem solving and proven ability to apply her engineering skillsets, demonstrates her distinction as an emerging Professional Engineer.

Professional Engineer of the Year nominees

Winner

Dr Lee Walsh

FIEAust CPEng NER

Lee 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.

Aaron Hazelton

FIEAust CPEng NER

Aaron Hazelton is a highly accomplished Managing Director at Indesco, Australia. With more than 15 years of experience, he is widely recognised for his expertise in structural analysis and design. As a Chartered Professional Engineer and Fellow of Engineers Australia, Aaron's professionalism and dedication have propelled his career. He excels in delivering innovative and efficient solutions, evident in his leadership on his diverse project portfolio. Aaron's commitment to environmental sustainability and his ability to provide constructible designs have solidified his reputation as a respected figure in the field, contributing to the advancement of structural engineering in Australia.

LTCOL Alexander Palmer

MIEAust CPEng NER

LTCOL Palmer is a distinguished graduate of the Malaysian Armed Forces Staff College and completed multiple tours of Afghanistan, his last in 2015/16 as the Military Assistant to Deputy Chief of Staff Operations / Deputy Commander United States Forces. After leaving the Regiment, LTCOL Palmer gained a mechanical engineering degree and has subsequently completed a variety of engineering, logistics, command and staff appointments.

LTCOL Palmer completed three years as the Principle Maintenance Engineer - Headquarters Forces Command. He currently leads Army's power and energy exploration, and the implementation of a robust innovation culture across Army.

Professional Engineer of the Year nominees

Mark Fullick

FIEAust CPEng

Mark is a highly experienced Professional Engineer and Fellow of Engineers Australia. His qualifications include a Bachelor of Engineering (Electrical) and a Graduate Diploma in Electronic Engineering Management. Following a distinguished ADF career in the Army's Royal Australian Electrical and Mechanical Engineers Corps, and later as a Weapons Electrical Engineer in Navy, Mark moved into engineering consulting. Mark possesses a wealth of engineering sustainment and acquisition knowledge and is an expert in Guided Weapons Explosive Ordnance stewardship and employment. Today Mark focuses on asset management, integrated logistics support, combat systems and communications systems engineering.

Dr Usman Khalil

MIEAus

Dr Usman Khalil is a highly accomplished engineer and researcher specialising in water resources and infrastructure. With a PhD from the University of Wollongong, he has made significant contributions to the field through his innovative work on flood control and water resource development. Dr Khalil's research on coastal reservoirs and sustainable water management has gained recognition globally. He is a dedicated mentor and educator, actively promoting diversity and inclusion in engineering. Through his involvement in international conferences and professional organizations, Dr Khalil continues to advance the engineering profession. His commitment to sustainable practices and his expertise makes him a respected figure in the field.

Project of the Year nominee

Winner

Australian National University Research School of Physics

TTW (ACT)

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 façade engineers for the project, TTW delivered engineering excellence to achieve the client's advanced technical and design outcomes including a high-performance custom façade, 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.

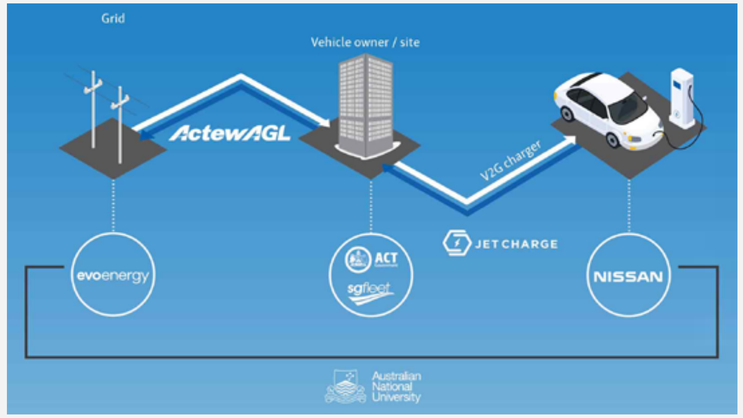
Project of the Year nominee

Realising Electric Vehicle-to-Grid Services (REVS)

ActewAGL Retail
Australian National University, ACT Government, SG Fleet Australia, JET Charge, Nissan Motor Co. (Australia), Evoenergy, Accenture

The Realising Electric Vehicle-to-Grid Services (REVS) project was an Australian-first project that brought together the best engineering minds to collaborate and pave the way for vehicle-to-grid technology. The project successfully demonstrated that EVs can feed energy back to the grid to support grid stability, and speed up the development of Vehicle-to-Grid (v2G) capable EVs, chargers and services throughout Australia.

The REVS program involved a consortium of stakeholders from federal and territory governments along with representatives across the transport and energy industries delivering a true multi-disciplinary innovation project. REVS has demonstrated that V2G technology can provide frequency services to the national energy market and has resulted in a roadmap for a large-scale implementation of V2G services. The leadership of the REVS consortium highlights the commitment of the organisations for climate action through early adoption and advocacy of V2G innovation in Australia. The project and its outcomes of global significance is a prime example of decarbonising transport and support to the broader energy ecosystem.



ENGINEERS AUSTRALIA

Excellence Awards

Newcastle

Chief Judge

Paul Reynolds

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.

Newcastle Judging Panel

Karlie Collis
FIEAust CPEng NER

Pierre Gouhier
FIEAust CPEng NER

Uzair Khan
MIEAust CPEng NER

Nial O'Brien
TFIEAust CEngT EngExec

Peter Skeen
AMIEAust

Michael van Koeverden
FIEAust CPEng NER

Erica Matthews
MIEAust CPEng NER

Emerging Professional Engineer of the Year nominees

Cameron Denecker

MIEAust

Cameron is a Certified Practicing Project Manager (CPPM) with a Bachelor of Engineering (Civil, Honors Class 1). With a client-focused, commercially orientated approach, Cameron has successfully delivered complex programs of multi-disciplinary projects across NSW while managing and growing a team. Specialising in program management, Cameron not only excels in managing all aspects of program design, procurement and construction delivery but distinguishes himself from other young project managers by nurturing his team through engagement. He has managed a $70 million construction program for the Department.

Winner

Joe Townsend

MIEAust

Joe's career over the last 15 years has transformed his technical skills in planning, engineering and project management delivering nearly $1 billion of infrastructure, to a senior leadership role an industry association and commercial organisation turning over $300 million. This experience has given Joe a distinctive perspective and insight into the aspirations, opportunities and challenges of the NSW economy, its composition and the critical role of the associated engineering industries which presently employ approximately 1-in-5 Australians.

As a young professional in his early thirties, Joe is committed to our profession becoming more influential, impactful and valued by the community in the long term.

Rhett Watters

MIEAust CPEng NER

Rhett is the Principal of Watt Asset Advisory, a specialist asset advisory firm in Newcastle, and a Chartered Structural Engineer with more than 12 years' experience, primarily working in professional services. He specialises in providing structures management services to clients in the transport, water and energy and resources sectors. Rhett's practical experience includes condition assessment, diagnosis investigation, deterioration modelling, residual life assessment, life cycle costing, durability design, detailed design of remedial engineering and construction phase surveillance for civil structures.

Professional Engineer of the Year nominees

Durga Sompalle

MIEAust CPEng NER

Durga is a Senior Technical Officer with Biomedical Engineering degree and has 13 years' experience within the healthcare industry. She leads multidisciplinary teams of medical engineers, associates and technicians to ensure medical equipment is safe and reliable. Durga is originally from India where she spent most of her school and college life. She is appreciative of her teachers and professors who helped her to generate interest in mathematics and science. She chose biomedical engineering as she was intrigued to learn how engineering can be applied to anatomy and physiology. Besides medical equipment maintenance and management, Durga is also an expert on risk management and mitigation, cyber security and incident investigations.

Amanda Kerr

FIEAust CPEng EngExec NER

Amanda Kerr leads AECOM's Hunter region and provides opportunity for the community through the infrastructure she delivers alongside her team. She is dedicated to promoting diversity and empowering women in the workplace. As the Equity Diversity and Inclusion leader, Amanda directs business strategy to foster an equitable culture. She firmly believes in the potential of people to bring new ideas and creativity to the workplace. Amanda's leadership has resulted in an empowered team that prioritises building strong relationships, promoting sustainability and delivering projects with innovation, creativity and sustainable legacies.

Annie Lacombe

MIEAust

Annie is originally from Canada where she worked in an oil refinery before joining an engineering firm where she worked on a FIFO contract in New Caledonia and then moved to Australia in 2008. She has been working in diverse engineering roles and sectors for the past 19 years including chemical engineering, oil refinery, mineral processing, explosive manufacturing where she got leadership experiences early on. In Australia, she joined Orica in 2013 and then Boeing, as the engineering manager, in 2022.

She loves cultural differences and working with diverse teams, and strongly believes it makes it more interesting. She is passionate about inclusion and diversity in the workforce and is a strong advocate of women in non-traditional roles.

Professional Engineer of the Year

Winner

Dr Tanja Rosenqvist

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.

Engineering Technologist of the Year nominee

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.

Project of the Year nominee

Lake Liddell Intake Tower Stop Logs Repair Work

AGL Macquarie
Port & Hunter Commercial Diving

The “new design” stop logs were installed onto the original concrete intake tower in 2006 at a depth of 21m below water level to provide a means to close the stop logs and stop any flow through the intake towers on short notice or in the event of an emergency without the use of divers. This was required after the 9/11 event in the US.

The stop logs act as part of a dam’s safety device and are required to be in good working order and to provide a seal so downstream maintenance and work can be conducted safely.

What made this such a unique and complex project was that this type of repair had never been done before on this asset so there were no learnings or set steps to follow. Information on hand was very limited so scopes and repair methodologies were created with the limited information we had. This project required a high level of teamwork from different teams and disciplines including engineering, maintenance, fabrication, operations, planning, chemists, procurement, environmental and contractors.

This project was completed successfully and according to the commercial divers was one of the largest and most complex underwater repair work conducted in Australian waters in at least the last 12 months, if not the largest.

Project of the Year nominee

The Rehabilitation of Rawdon Island Bridge

Port Macquarie-Hastings Council
Duratec Australia and Focus Bridge Engineering

The rehabilitation of Rawdon Island Bridge was one of Port Macquarie-Hastings Council's (PMHC) most challenging feats. This project combined the complexities of potential catastrophic bridge failure, an isolated community and unique logistical challenges combined with innovative research and design, an endangered species and a time-critical program.

During underwater dive inspections PMHC discovered major degradation of the foundations, with up to 90 per cent section loss across multiple piles. It triggered an immediate emergency response to close the bridge. What followed was a complex project to manage community needs and public safety, prevent bridge collapse and work to solve the engineering challenge.

While completing innovating modelling and monitoring of the bridge capacity, PMHC investigated and designed several alternative access options. Within weeks, measures were in place to restore resident access for light vehicles. The ultimate design solution was to save the existing bridge, with all approvals and designs fast-tracked and critical underwater repairs completed within six months from initial discovery.

Project of the Year nominee

Northern Rivers Rail Trail Murwillumbah to Crabbes Creek

Hazell Bros (QLD)
Tweed Shire Council, NSW Public Works

The Northern Rivers Rail Trail – Murwillumbah to Crabbes Creek showcases the legacy of the disused Murwillumbah Branch of the old North Coast line in its repurposing as a shared user path. The project utilises the existing railway alignment and involves rebuilding and restoration of numerous existing bridges along the 24km route.

The pathway alignment traverses two tunnels including the 550m long Burringbar Range Tunnel and includes 7km of asphalt sealed pathway in local town areas.

There are 26 bridge/culvert treatments including:

- timber / steel bridge rebuilds
- 5 modular bridges on existing abutments
- 4 existing rail bridges with the addition of balustrading
- 10 bridge bypasses, which involve:
  - 4 culverts
  - 6 modular bridges

Sustainable engineering practices with a nod to the environmental, cultural and heritage values of the site have been incorporated into the design and delivery of the project to deliver a world class eco-tourism facility for the Northern Rivers region.

Project of the Year nominee

Battery Electric Protected Mobility Vehicle (Army e-PMV)

3ME Technology

The Stealthmaster demonstrates the benefits of electric vehicles in operational environments, being quieter than its combustion counterparts and capable of accelerating up to four times faster than a conventionally powered Bushmaster. Recent testing demonstrated the benefits of low heat and noise signature while enabling power export, faster acceleration, better handling and digitalisation. The two main battery packs increase “serviceability and survivability”. The vehicle houses two electric motors which provide 133kw @ 2500rpm per electric motor providing approximately 20 per cent more power than the diesel variant. The ePMV contains an onboard telemetry unit and applies regenerative braking to allow the battery to recharge while moving. The prototype can reach 80km/h.

The ePMV batteries uses proprietary techniques to prevent potential fires from thermal runaway. It can be charged with a Type 2 Mennekes to Type 2 Mennekes cable. The vehicle can also be charged from the standard 240VAC 10A, 240VAC 15A and 415VAC 32A outlets. The ePMV is fitted with numerous safety systems such as front /rear camera, reverse alarm, roll over sensor, inertia switch, ground fault monitoring, intelligent BMS and safety interlocks on operating stations.

Project of the Year nominee

Itech Scope Electrical and Systems Engineering

Itech Corporation

Itech's scope was to deliver the following systems from concept design through manufacturing, software engineering, electrical engineering, installation and commissioning:

- Depot Personnel Protection System, DPPS, (maintenance building electrical safety system)
- Ground Based Warning System, GBWS, (yard personnel safety warning system)
- Central Control and Monitoring System, CCMS, (site data management and integration system)
- Air Line Control and Monitoring, ALCM, System (compressed air control system)
- Semi-automatic Derailers (train derailers to protect the maintenance building and personnel from a runaway)
- Overhead 1,500VDC Power Switching Panels

The work was executed primarily by in-house Itech personnel, electrical engineers, systems engineers and tradespeople, with consultants used for specialised and independent SIL (Safety Integrity Level) determination.

Itech achieved a Type Approval resulting from our work on this project, for our innovative DPPS design, plus our creative design of the lighting annunciation system for the GBWS and our highly functional CCMS design.

Project of the Year nominee

Winner

Biological Leachate Remediation (BLR)

ENV Solutions (ENV) T/A ENV Remediation Services
ENV Services
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.

Project of the Year nominee

Balickera Tunnel Restoration

Abergeldie Complex Infrastructure
Hunter Water

Abergeldie Complex Infrastructure was engaged by Hunter Water to restore the Balickera Tunnel, a key piece of the Lower Hunter's water supply infrastructure. Constructed in 1962, the condition of the tunnel had deteriorated and remediation was essential. While completing the works there were several conflicting safety, environmental and operational challenges that were successfully mitigated and managed to isolate and restore the tunnel. Some of the challenges included management of several threatened bat species roosting in the tunnel, flooding and working in a confined space structure with worse than expected dilapidation issues. An innovative rock bolting and shotcrete redesign from the project team helped to achieve safer working conditions and double production rates to ensure timely project completion. In total, 5800 rock bolts were installed within the 1.2km tunnel and 62,000 hours invested, while tackling La Niña conditions. Since completing the project, the several threatened microbat species have returned, which is a pleasing result for everyone involved.

ENGINEERS AUSTRALIA

Excellence Awards

Northern

Chief Judge

Simon Flowers

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 studying a masters in sustainable development.

Northern Judging Panel

Kevan Blake

FIEAust CPEng EngExec NER

Naveen Kumar Elumalai

MIEAust

Rana Everett

MIEAust

Stefanija Klaric

FIEAust CPEng NER

Paul Wong

AffilIEAust

Emerging Professional Engineer of the Year nominees

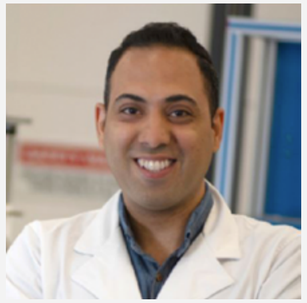
Blade King

MIEAust

Blade King is an accomplished engineer and dedicated Regional Director. From very early in his career, Blade successfully delivered some of Pritchard Francis' most strategic and technically complex projects – a testament to his rapid career progression.

A champion for regional development, Blade is passionate about community engagement and is an advocate for indigenous representation, consistently driving a collaborative and inclusive approach to engineering.

Blade's natural leadership abilities and commitment to industry development has contributed to the growth and success of his team in Darwin as well as future and emerging engineers within the community.



Winner

Dr Hooman Mehdizadeh Rad

MIEAust CPEng NER

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.

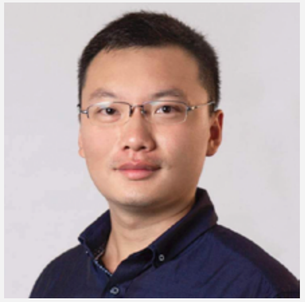
Hooman's main research goal is to make Darwin and other parts of the NT a cooler and greener place to live, particularly for vulnerable people.

Dr Milad Bazli

MIEAust

Dr Bazli is a lecturer at the Faculty of Science and Technology at Charles Darwin University (CDU) and an Honorary Fellow at The University of Queensland. His research centres around sustainable construction materials and advanced composite manufacturing. Dr Bazli completed his PhD at Monash University in 2.4 years and was honoured with the prestigious Mollie Holman Medal Nominee award (Best PhD Thesis). Prior to his position at CDU, Dr Bazli held posts as a Postdoctoral Research Fellow at The University of Queensland and a Postdoctoral Research Assistant at Monash University and visiting research scholar at Tsinghua and Tongji Universities.

Emerging Professional Engineer of the Year nominees



Yueming Ma

GradIEAust

Yueming holds a Master's in Civil and Structural Engineering from Charles Darwin University alongside a Master's in Project Management from the University of Sydney. Yueming was the graduate civil (water) engineer at SMEC from August 2021 to May 2023 with extensive experience and expertise covering the fields of project management, opportunity management, project bidding, client management, site management, hydraulic modelling, hydrology modelling, hydraulic design, drainage design, flood mapping, dam safety inspection and groundwater monitoring. Yueming is currently working for McMahon Services as a graduate project engineer in the NT.

Kiran Sreedhar Ram

GradIEAust

Kiran Sreedhar Ram is a resourceful PhD STEM researcher and lecturer. From a young age, he developed a deep interest in science, fuelling his remarkable career. With a passion for advancing human knowledge and exploration, his biggest dream is to contribute to humanity's development into a multi-planetary civilisation. Kiran's educational background includes nearing completion of his PhD in Organic

Photovoltaics from Charles Darwin University, where he also obtained a Master of Engineering in Electrical and Electronics. He excels in various roles, demonstrating excellent people management and communication skills. Kiran actively contributes to academia, conducts impactful research and promotes STEM education.

Obaidullah Zafar

MIEAust

Obaidullah Zafar is an accomplished engineer with expertise in project management, structural engineering, and civil engineering. After graduating from a renowned university in Pakistan, he started his career as a site engineer and cost planning engineer before moving to Australia. As a project manager, he successfully completed challenging projects, including a six-storey high-rise building in Alice Springs. Obaid's attention to detail, leadership abilities and technical expertise enabled him to excel in his role. Transitioning to design and consultancy, he became a Graduate Structural Engineer with WGA, where he applies his knowledge and experience to ensure structurally sound and client-focused designs.

Professional Engineer of the Year nominees

Winner

Krishnan Kannoorpatti

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.

Kevin Edwin

MIEAust CPEng NER

Kevin Edwin is a Principal Mechanical Engineer with Territory Generation, who has extensive experience in various engineering, commercial and operational roles through his 32-year career, including 17 years with Power and Water and then Territory Generation.

Project of the Year nominee

Cahills Crossing Viewing Area

Pritchard Francis

Cahills Crossing Viewing Area was a significant infrastructure upgrade within Kakadu National Park. The popular tourist attraction provides an unrivalled view of the East Alligator River crossing, known for its strong currents and large saltwater crocodile population. The project incorporated new viewing platforms, a picnic area and a rainforest walk, all focused on improving both the safety and experience of visitors.

As Lead Designer, Pritchard Francis has elevated Cahills Crossing Viewing Area to a showpiece attraction within the park. The team implemented innovative design solutions to suit the unique riverbank environment including highly durable, flood resistant structures and an alternative revetment design, while also respecting the natural and cultural significance of the area.

The team fostered a collaborative design approach with both traditional landowners and Parks Australia to push the project beyond its functional requirements, integrating the design seamlessly into the natural environment.

The project demonstrates engineering excellence in its ability to enhance safety and visitor experience while protecting the natural and cultural values of the local environment and communities.

Project of the Year nominee

Remote Housing Program - Headworks

Power and Water Corporation
Department of Territory Families, Housing and Communities (TFHC)
Department of Infrastructure Planning and Logistics (DIPL)

The Power Water Corporation (PowerWater) has been working in partnership with Northern Territory Government (NTG) to deliver essential power, water and sewer infrastructure in remote Aboriginal communities across the Northern Territory.

This has been a significant undertaking to ensure the right projects are delivered and to deal with the unique challenges of delivering a large number of high-value projects in remote communities.

Close collaboration between PowerWater and NTG is critical to ensure alignment between local decision making and the management of complex remote infrastructure issues to support long term housing construction delivery.

To date, the Headworks program has enabled an additional 1000 bedrooms (approx. 333 additional lots). This equates to approximately $200 million worth of land being released.

There are a range of projects including water storage tanks, sewage pumps stations, sewage treatment ponds, smart water meters, water transmission pipes, water supply networks and bore drilling and equipping.

Completed water tank projects to date have provided approximately 8 million litres of additional water storage to support housing developments and community growth.

Project of the Year nominee

Litchfield National Park
Central Valley - Stages 3 & 4

WGA

WGA was engaged by the NT Department of Infrastructure Planning and Logistics to undertake the design of new camping and recreation areas within Litchfield National Park. WGA's scope of work included the detailed design and documentation of:

- 4 new campgrounds
- 8 km of access tracks
- a new staging area including carpark and ablution block.

The design team faced significant challenges due to the remote and isolated nature of the site. The initial stages of the project involved multi-day site inspections with park rangers to plan out the proposed route of the access tracks and the layout of the campgrounds. The team hiked with the park rangers and camped self-sufficiently on site during these inspections. Helicopter access was also required when the wet season limited access via 4WD, and delays to the project programme were not an option.

The design team was conscious of the sensitive nature of the surrounding natural environment. WGA developed sustainable engineering solutions which minimised our impact on the surrounding area, and which maintained a natural aesthetic – particularly within the campgrounds.

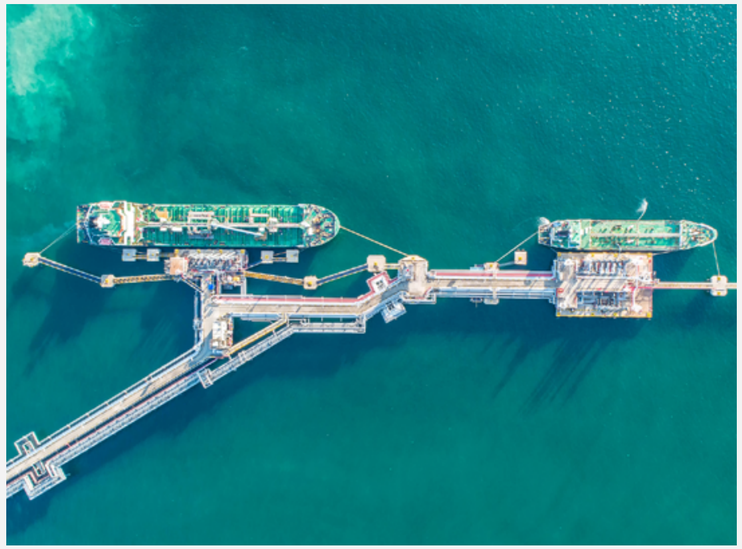
Project of the Year nominee

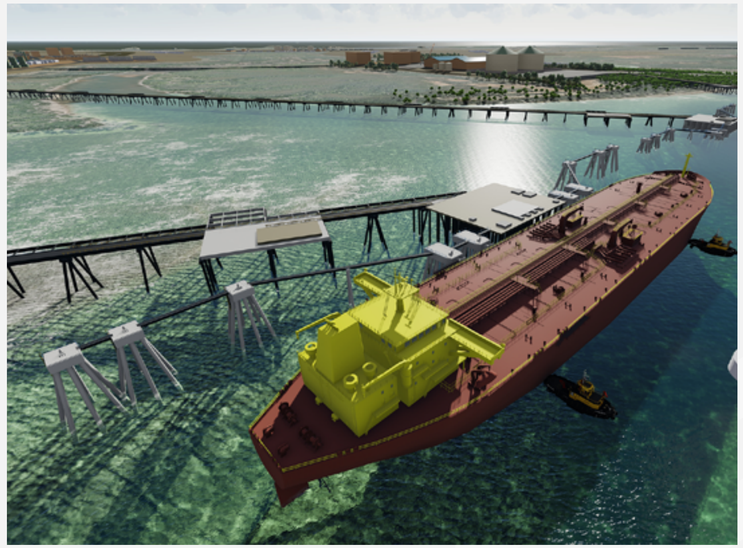
Middle Arm Sustainable Development Precinct MasterPlan

Department of Infrastructure, Planning and Logistics

The Middle Arm Sustainable Development Precinct Masterplan is an impressive undertaking aimed at transforming 1500 hectares of industrial area in Darwin into a thriving and sustainable hub for various industries. Developed over a two-year period from 2020 to 2022, the Masterplan was led by the Department of Infrastructure, Planning and Logistics, with a team of technical specialists and engineers working to create an integrated conceptual design. This comprehensive approach resulted in an investor-ready Masterplan, securing $1.5 billion equity funding from the Commonwealth for future construction.

What sets this Masterplan apart is its commitment to environmental stewardship, establishing a new benchmark for Australian infrastructure development. It incorporates sustainable engineering principles to promote a circular economy, featuring one of the world's largest carbon capture and storage facilities, a majority renewable energy supply (a first for an industrial precinct), water management strategies and shared infrastructure to minimise environmental impact and ensure long-term sustainability. Through prioritising renewable energy and shared infrastructure, the project showcases its dedication to reducing ecological footprint and creating a resilient and environmentally responsible precinct.





Project of the Year nominee

Delamere Air Weapons Range Stimulus Works

Wallbridge Gilbert Aztec
Tiwi Partners (Aust)

Tiwi Partners and WGA delivered more than 8km of sealed road, 30km of unsealed road, 18km of four-wheel-drive tracks and nine vehicle turning pads, three equipment mobile emitter system mound hardstands, stormwater drainage improvements that included 17 flood ways, fencing and firebreaks, on a fast-tracked schedule during the height of the COVID-19 pandemic.

The project's key objective was to improve the Australian Defence Force's electronic warfare capabilities, with particular emphasis of on the EA-18G Growler airborne electronic attack aircraft. To accomplish this, the range required upgrades for the allowance of setting up Mobile Threat Training Emitter Systems (MTTES) that simulates enemy military electronic radar and communications systems that can be deployed at multiple locations, providing Growler pilots with near-realistic simulations of electronic warfare.

The project significantly contributed to Australia's status as a middle power with secure trade route capacity and ensures technological advances in sovereign defence capabilities are improved.

Project of the Year nominee

Winner

Jabiru Hybrid Renewable Project

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.

Project of the Year nominee

Cyclotron Facilities

Acer Forester
Ashburner Francis

The Cyclotron facility includes laboratories, clean rooms, administrative offices, and mechanical spaces to house one of the most powerful cyclotrons of its kind in Australia for the local production of radioisotopes for PET scanner services. Local production has enabled faster diagnosis and treatment, improving patient outcomes, and fewer Territorians have to travel interstate for scans.

The carefully developed and integrated design ensures the facility is future-proofed to meet increased service demand, including additional radiopharmaceuticals, which may create access to new scans and treatments not currently available in the NT.

ENGINEERS AUSTRALIA

Excellence Awards

Queensland

Chief Judge - People

Mark Lendich

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 QUT 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 years at both Divisional and national levels.

Queensland Judging Panel - People

Alan Ainsworth

FIEAust CPEng EngExec

Jane Copperthwaite

FIEAust CPEng NER

Kelly Coverdale

FIEAust CPEng NER

Hassan Karampour

FIEAust CPEng NER

Senthilnath G T

FIEAust CPEng NER

Chief Judge - Project

Dr Peter Ho AM

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 years 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 QUT as a sessional staff member.

Queensland Judging Panel - Project

Hooman Meshkat Sadat

FIEAust CPEng NER

Mohamed Mustafa

MIEAust CPEng NER

Zoee Shelley

MIEAust

Emma-Lee Thomas

MIEAust CPEng NER

Zhenya Pavlinva

MIEAust CPEng NER

David Thorpe

FIEAust CPEng EngExec NER

Emerging Professional Engineer of the Year nominees

Cassandra Mai

MIEAust

Cassandra is a senior chemical engineer working in the water industry for more than seven years and has been identified as ‘100 Engineers Making a Difference’ by Engineers Australia. She has worked with private and public sectors on projects across Australia to deliver sustainable water and wastewater engineering solutions to promote livable communities and protect national waterways. Her outstanding passion for volunteering includes five years in the Young Engineers Australia QLD committee and a current position in the Australian Water Association young professionals committee. She is the Co-Lead for Inclusion & Diversity at WSP and mentors females studying STEM degrees.

Sujitha Sankar

MIEAust CPEng NER

Sujitha Gopal is a highly motivated and result-oriented engineer with a strong commitment to public service. She is a Chartered Professional Civil Engineer with around 10 years of experience in design management, project delivery and multi-stakeholder management in multiple countries (India, Singapore and Australia), focusing on urban infrastructure projects and the transportation sector.

Carina Nixon

GradIEAust

A mechanical engineer by training, Carina recently graduated and completed her final year honours thesis titled “Determining the cost of decarbonising the ACT gas distribution network”. Carina primarily supports a portfolio of hydrogen and renewable energy projects and is well versed on all elements of the hydrogen supply chain and decarbonisation strategies. She recently supported a Japanese EPC on their first hydrogen project in Australia, this support extended from design review, development approvals through to on site construction and commissioning engineering support.

Emerging Professional Engineer of the Year nominees

Steven Voss

MIEAust CPEng NER

Steven is a senior engineer in the Surface Water team at Arup. He is passionate about the application of complex analytical methods to aid developing regions in managing flood risk and better prepare future infrastructure and communities for a changing climate.

He has delivered complicated hydraulic modelling projects across Australia and internationally, utilising and developing tools along the way to enable efficient project delivery. Steven has developed a passion for helping to build awareness and understanding of natural hazards in developing countries which are at greatest risk of climate change.

Winner

Chloe Turrell

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.

Emily Jukes

MIEAust

Emily works as a geotechnical engineer within Arup to deliver projects of regional significance, with a current focus on landslide remediation and flood resilience. She works closely with a multi-disciplinary team to deliver projects efficiently. Emily's responsibilities also extend to the planning and coordination of geotechnical site investigations, which often involves attending site to supervise works and coordinate with subcontractors and clients.

Emily has a deep passion for supporting women in the engineering field and is a leader of the Connect Gender Equity network within Arup, which is responsible for overseeing the delivery of the Gender Equity Strategy within Arup.

Emerging Professional Engineer of the Year nominees

Makenzie Moor

GradIEAust

Makenzie is a passionate engineer with a dedicated focus on technical excellence and helping clients navigate the fast-paced transition to clean energy. She has a unique breadth of technical capability, innovation and leadership experience, delivering projects with hybrid renewable systems, utility scale wind and battery energy storage and hydrogen technologies. Makenzie brings visibility to the engineering profession and its critical role in co-creating a better future for people and the planet. She is always sharing her knowledge with others, is a passionate STEM communicator, promotes diversity within the profession and volunteers to advocate for engineering as a career path.

Callum Lillywhite

MIEAust CPEng NER

Callum is an Associate Engineer in the Aurecon Building Structures Team and has more than 13 years of experience in the design of building structures and leading multi-discipline teams on projects in Australia and New Zealand. Callum has worked across a diverse range of projects across multiple sectors on award winning projects. He is an industry leader in mass engineered timber building design having now played fundamental design roles in six Queensland based timber buildings and involvement in two others outside Queensland. He volunteers as a Structural Engineering Advisor to the Queensland Fire and Emergency Services Disaster Assistance Response Team.

Professional Engineer of the Year nominees

Dwayne Smith

MIEAust CPEng NER

Dwayne has 15 years' experience in fire safety and specialist fire services with a particular focus on complex high hazard industrial facilities and occupancies with high population densities such as sports stadiums. Dwayne has also had significant experience in mining and heavy industry, as well as a number of aircraft hangars both in commercial aviation and on the Defence Estate.

Mohamed Mustafa

MIEAust CPEng NER

Mohamed Mustafa, a Chartered Fire Protection Registered Engineer in the states and Australia, migrated to Australia in 2019 to pursue the Australian dream. He has made significant contributions to the Australian fire industry by volunteering on technical committees and boards, developing standards and regulations. He plays a crucial role in developing fire industry standards through TAC 4/8/9 and contributes to regulation and enforcement as a board member in the Queensland Legislation FPAA board. His free mobile apps help engineers in their daily tasks, making engineering more accessible. Mohamed's dedication to making a positive impact in the industry through volunteering is inspiring.

Shalendra Ram

FIEAust CPEng EngExec NER

Shalendra is a professional engineer with Bachelor and Master of Engineering (Civil) from Queensland University of Technology. Shalendra is an Engineering Executive in the Transportation sector with private and public sector experiences spread across all phases of transport infrastructure projects. Shalendra is a Registered Professional Engineer of Queensland (RPEQ) and a Fellow and Executive Engineer of Engineers Australia. Shalendra is the Chair of Engineers Australia's Transport Australia society National Executive and a member of the Civil College Board. Shalendra has driven leadership and management among engineering professionals in Australia and is a sponsor for equity, diversity and inclusion.

Professional Engineer of the Year nominees

Keith Sharp

FIEAust CPEng EngExec NER

Keith is a Chartered chemical engineer, Engineering Executive and Fellow of Engineers Australia with 36 years' experience. He began his career with Mobil Oil and joined TfA Project Group in 1997. He has worked on numerous conventional fuels, biofuels and biorefinery projects including the Dalby ethanol biorefinery. He has led international biorefinery process engineering teams, visiting international biorefineries and biofuels conferences. Keith is a regular speaker at biofuels conferences. He is currently Deputy Chair of the Engineers Australia Chemical College Board, a board member of the Australasian Institute of Dangerous Goods Consultants, a member of Bioenergy Australia and Australian Hydrogen Council.

Ramy Hanafy

MIEAust CPEng NER

A professional team player, Ramy's primary objectives are aim to achieve adding value through proper understanding of business nature and management vision, mission and strategy based on win-win situation. Keeping eye on the KPIs, targets and goals of the company based on a clear road map for the business that is the primary instrument for deducing the vision and targets. The objectives could be achieved through a recipe from techno-commercial experience and know how plus the management and leadership skills which he gained through his career path.

Winner

Emma Charlton

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.

Professional Engineer of the Year nominees

Jaewon Lee

MIEAust NER

Jaewon Lee is a senior materials engineer at ATIM with more than six years of experience in research and development for the construction industry. He holds a Bachelor of Engineering in Materials Science and Engineering from Kumoh National Institute of Technology in South Korea. He also holds the RPEQ (Registered Professional Engineer of Queensland) and NER (National Engineering Register) credentials.

He is the head of the Research and Development department in ATIM, working on various projects with his team. At work, he developed various guides, such as an operation manual, to help employees operate the machine effectively.

Keith Shephard

FIEAust CPEng NER

Keith Shephard has extensive experience in leading the design and construction of a wide range of water infrastructure including water supply systems, treatment plants, pump stations, pipelines and site services. His career has taken him from a broad range of projects for the Cairns water and wastewater systems to the international context, including leadership roles in large water supply projects for global megacities including Manila, Jakarta and Karachi.

As a person living with disability, he has a keen interest in social equality and contributes to several GHD working groups addressing social and attitudinal barriers to effective inclusion.

Jenny Han

MIEAust CPEng NER

Jenny is a Chartered professional fire engineer nationally and interstate, who brings more than a decade of experience in Australia. Her work has a strong focus on developing innovative performance-based solutions for a broad range of sectors.

Jenny's experience and strengths lie in promoting the benefits of fire engineering that add value to projects by promoting sustainability, innovation and bespoke solutions meeting the building functionality and operations. Her strong technical skills on various engineering analysis techniques enable her to tackle the traditional fire safety designs while developing innovative and sustainable building solutions from the first engineering principles.

Emerging Engineering Associate of the Year nominees

Lachlan Martin

AMIEAust CEngA NER

Lachlan served 15 years in the Royal Australian Navy and is an extremely talented and self-motivated 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.

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.

Emerging Engineering Technologist of the Year nominees

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.

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.

Engineering Associate of the Year nominee

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.

Engineering Technologist of the Year nominee

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.

Project of the Year nominee

Winner

Heritage Lanes at 80 Ann Street

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.

Project of the Year nominee

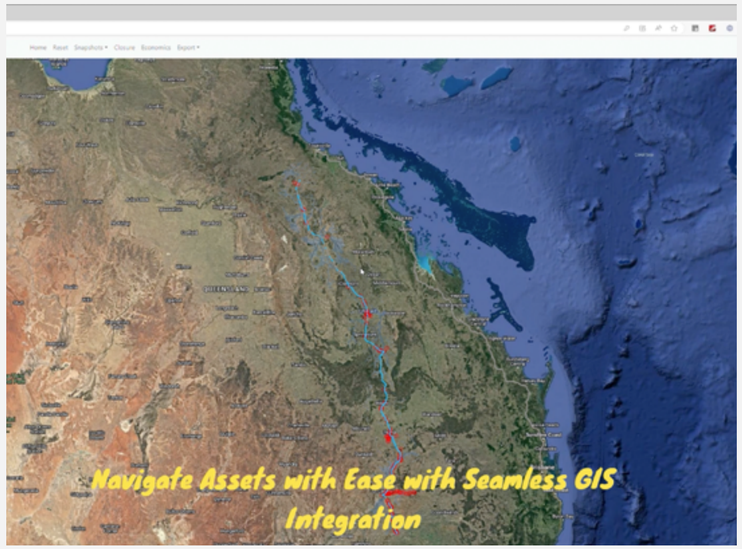
Inland Freight Route Link Flood Study

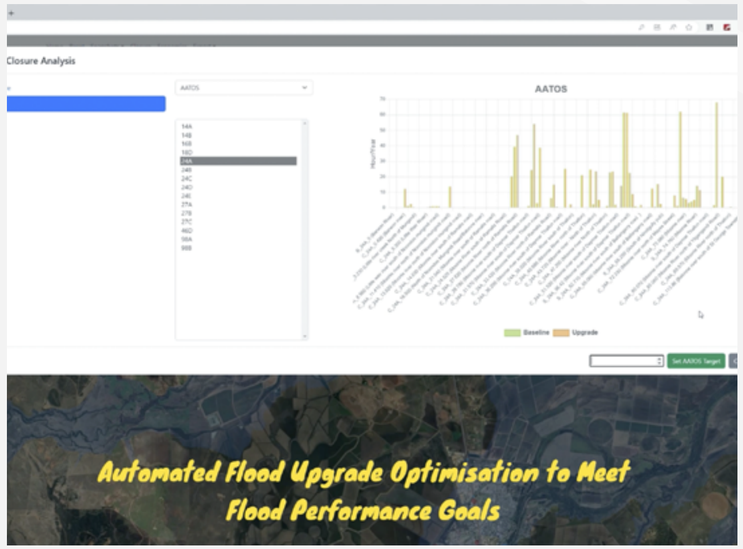
AECOM
Department of Transport and Main Roads, HARC and NineSquared

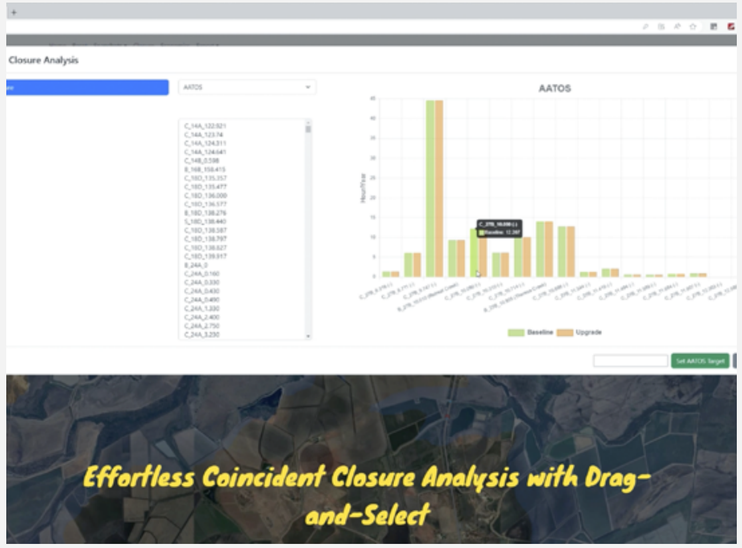
The Inland Freight Route Link Flood Study (IFRLFS) used continuous simulation hydrology to analyse the frequency and duration of multiple, simultaneous road closures along the Inland Freight Route (IFR). It developed a prioritised program of flood upgrades to cost-effectively improve the reliability of the Inland Freight Route and the strategic road network.

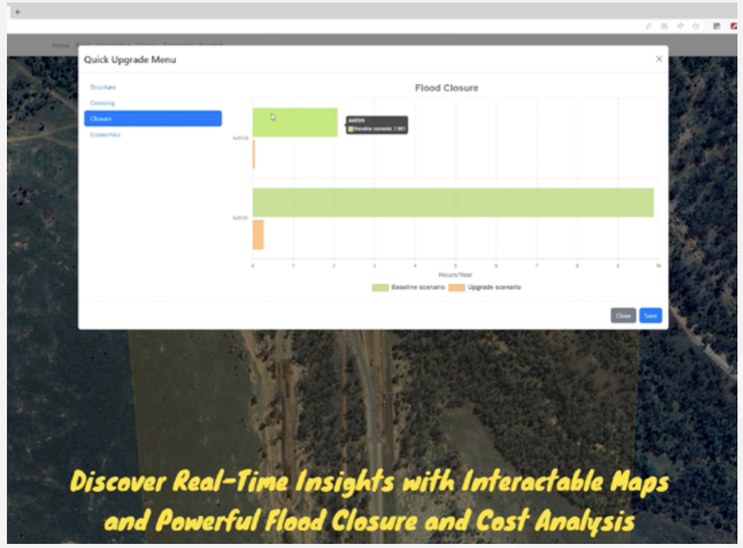
The study developed a revolutionary Hydraulically Equivalent Hydrology (HEH) approach with the potential to revolutionise large-scale flood modelling. The bespoke model is a world-first in demonstrating unparalleled efficiency in routing hydrographs through large floodplains with complex storage and backwater influence at comparable accuracy to traditional 2D hydraulic modelling. The application of this approach enables streamlined hydraulic assessment, potentially reducing hydraulic model runtime by up to 99 per cent.

It also developed a web-based and portable decision support tool (DST) that combines approximately 105 years of continuously simulated flow data with hydraulic rating curves for 1503 crossings. The DST offers a significant advantage over previous tools by including economic functionality.









Project of the Year nominee

Queen Street, Caloundra – Shared Pathway

Sunshine Coast Council

This project was also delivered in coordination of the new traffic signals at Queen Street / Bower Street intersection to improve safety of the students and traffic flow in the area.

This project has also been in conjunction with the ThinkChange travel behaviour program with modal shift of transport to the school with the provision of safe facilities to attract new active transport users and reduce car usage to achieve a healthier, more connected and sustainable Sunshine Coast. The project was developed and completed in partnership with TMR's cycle grants programs.

Some key features:

- Installation of traffic signals for new signalised pedestrian crossings.
- Line markings which formalised traffic lanes on Queen and Bower streets.
- An additional west bound traffic lane.
- Providing a right turn traffic lane from Queen Street to Bower Street.
- Resurfacing Queen Street, between Bower Street and Allen Street.
- Addition of a new three-metre-wide shared pathway including two raised priority crossings for pedestrians and cyclists
- Street lighting, landscaping and drainage improvements.
- Relocation of bus stop with improved accessibility provisions for students.

Project of the Year nominee

Rocklea Hydraulics Laboratory - Flume

Sunwater

The flume includes 3m high, 80 mm thick, acrylic viewing panels for 18m of its length to allow two-dimensional flow patterns to be observed. It will be used initially to model proposed spillway upgrades for both Burdekin Falls and Paradise Dams. It will be available for testing for external companies when it is not fully utilised.

It will allow large scale hydraulic models to be tested, resulting in greater accuracy in terms of results. Larger models are able to give qualitative input regarding turbulence and scour.

A simple, yet innovative, propped-cantilever support system was designed to support the panels. Special brackets developed by AAT were incorporated to allow fine tuning of the panels to achieve maximum planarity prior to grouting and sealing being undertaken.

The flume will provide a sustainable and future-proof operating model that is fit for purpose and allow upgrades to be developed and implemented to ensure alignment with modern engineering design standards and practice with the capacity to meet future demand.

Project of the Year nominee

Hanlon Park Bur-uda Rejuvenation

Bligh Tanner
Brisbane City Council and Epoca Constructions

The restored waterway at Hanlon Park/Bur-uda has returned nature to inner-city Brisbane. Previously a deserted space with a concrete-lined channel, the multilayered engagement process has resulted in a design that responds to Country, community and ecology. The project reassessed historic flood mitigation practices through an ecological and community lens.

The newly naturalised creek has turned the area into a thriving community hub, with Brisbane's Lord Mayor Adrian Schrinner noting the importance of the project in rewilding our cities and giving kids a local creek to connect with.

Project of the Year nominee

Kaban Green Power Hub

Kaban Wind Farm / Neoen Australia / Vestas Australian Wind Technology
MPC Kinetic, RJE Global, Rex J Andrews Engineered Transport, REMO, Mammoet and Powerlink Queensland

Kaban Wind Farm Pty Ltd appointed Vestas Australian Wind Technology Pty Ltd (Vestas) as the Contractor for the wind farm Works. Vestas was responsible for the engineering, procurement and construction (EPC) of the Kaban Wind Farm.

There were several significant challenges for the engineering works associated with the Balance of Plant (BOP – both Civil and Electrical) and TCI (Transport, Cranage and Installation). The BOP and TCI packages of the project are to be judged on engineering excellence.

The BOP and TCI engineering works, to enable the construction of the largest Vestas turbines in the southern hemisphere, is industry-leading and paradigmatic of engineering excellence.

The engineering excellence of this project is driven by two main factors:

- the location of the wind farm
- the size and scale of the new EnVentus turbines with a tip height of 230m (from the base of the tower to the highest tip of the blade reaches 230 metres into the air).

Project of the Year nominee

ENEOS Direct® MCH Demonstration Facility

GPA Engineering
ENEOS and Chiyoda

An Australian first project, the ENEOS Direct MCH® Demonstration Facility produces low-cost and sustainable green methylcyclohexane enabling effective storage and transportation of green hydrogen for export.

The facility applies ENEOS's Direct MCH® technology to streamline the MCH production process allowing efficient and low-cost transportation of hydrogen as a stable liquid, utilising existing hydrocarbon transportation infrastructure.

Developed via the collaboration of ENEOS Green Hydrogen, Chiyoda Corporation and GPA Engineering, the facility demonstrates the viability of using this technology for hydrogen production and export from Australia.

Excellence for this project lies in the integration of a novel technology developed overseas, made compliant to Australian standards, and integrated into a completed balance of plant design.

This facility, and the technology pioneered within, paves the way for the decarbonisation of the energy industry, and opens doors for an Australian export market of green hydrogen, building the nation's hydrogen industry alongside international partners.

Project of the Year nominee

Kidston Pumped Storage Hydro Project, 250MW

GHD
Mott MacDonald

Kidston Pumped Hydro Energy Storage project is part of the Genex Power Energy Hub and provides 250MW of rapid and flexible power generation over an eight-hour period to the Australian electricity grid. A world-first transformation of an abandoned gold mine in remote north-west Queensland, the Kidston Pumped Hydro Energy Storage project is Australia's first pumped hydro facility in 40 years and is contributing to the creation of 900 direct jobs, and Queensland's renewable energy targets of 70 per cent by 2032 and 80 per cent by 2035.

Combining solar, wind and pumped storage hydropower and repurposing two former mine pits as reservoirs, the project involves the design and construction of the upper and lower reservoirs, 6km long embankment dam, 2.5km long access and waterway tunnels, powerhouse and transformer caverns, as well as intake, ventilation and deep cable shafts (approximately 260m deep). Integrating and extending digital tools beyond their typical applications set a new benchmark for this project and future use across the highly complex multidisciplinary nature of pumped hydro projects.

This project received funding from ARENA as part of ARENA's Advancing Renewables Program.

Project of the Year nominee

Brisbane International Cruise Terminal

Arup
Port of Brisbane

The Brisbane International Cruise Terminal is Australia's first and only purpose-built Mega Cruise Ship Terminal. This fantastic piece of tourism infrastructure opened in June 2022 and final delivery is a testament to the technical excellence and ingenuity of the Arup design team and the strong collaborative relationship fostered with our client, Port of Brisbane. A key objective for the project was developing a functional layout that would deliver a world-class facility focused on the passenger experience while offering value for money within the project budget and programme constraints. Arup's ability to leverage our array of technical expertise to address challenges helped realise our client's ambitions while achieving positive outcomes for the community.

Project of the Year nominee

Toowoomba Hospital Emergency Department Expansion Project

Specialised Property Consulting
Darling Downs Health and Hospital Services

The Toowoomba Hospital Emergency Department Expansion project showcases remarkable engineering achievements in healthcare infrastructure. With project approval and funding obtained in February 2022, Darling Downs Health and Hospital Services embarked on a mission to address the growing demand for healthcare services by designing, constructing, and commissioning a modular 21-space expansion to the Toowoomba Hospital Emergency Department.

The project team's exceptional expertise and leadership in engineering and project management played a pivotal role in the successful completion of the project within a tight timeframe of just 10 months. The innovative "Early Contractor Involvement" model facilitated rapid mobilisation of the design and delivery team, allowing for concurrent analysis of constructability and fostering innovative solutions. Despite challenges posed by spatial limitations, accessibility constraints, and latent conditions, the team's meticulous planning led to the adoption of offsite fabricated modular buildings mounted over screw poles, ensuring rapid project delivery and effective mitigation of risks.

The project's outstanding achievements in meeting objectives, adhering to budget constraints, and maintaining exemplary safety records make it deserving of recognition for its significant contribution to healthcare infrastructure and the community.

Project of the Year nominee

Hay Point Terminal - Disassembly & Disposal of Shiploader and Berth 2 Replacement Project

Liberty Industrial

Liberty Industrial collaborated with McConnell Dowell to replace the aging coal handling infrastructure at the Hay Point Coal Terminal in Queensland. The terminal, a prominent coal export facility, needed its outdated infrastructure replaced for long-term sustainability and improved cyclone immunity.

The project involved decommissioning, disassembling, and demolishing the redundant infrastructure, with the majority being transported interstate via a Heavy Lift Vessel. Despite challenges posed by the exposed open water location, the project was completed within the 14-month timeline, with over 26,000 incident-free man-hours logged. Safety was paramount throughout the project, with rigorous measures implemented to ensure worker well-being. Sustainability was also prioritised, with 98 per cent of materials recycled, demonstrating Liberty Industrial's commitment to environmental responsibility.

Project of the Year nominee

Ashgrove Sanctuary

BB Civil
SKF Development and Wilkinson Shaw & Associates (WSA)

This Brisbane inner North subdivision was an action-packed and challenging project to construct. During early stages of tender, an ECI (early contractor involvement) type model was adopted, to better address the challenges the site faced. With current earthworks standard, it was not possible to reuse existing material due to its heavy contamination with debris. Therefore an option facing the developer was to remove 10,000m3 of contaminated soil, and replace it with alternative 10,000m3 of imported clean soil.

This is where the solution of sifting material to create clean fill was derived. Some harmful contamination was discovered and removed off site (<1 per cent including asbestos and lead). The majority of contaminated material was not harmful, but it did not meet the Australian Standards for soil quality to be used as earthworks fill. This contamination included demolition rubble, mainly concrete, steel, timber and glass.

The project's circular economy was paramount as it drove environmental, sustainability and financials principals, with local community benefiting the most by the way of eliminating 2700 truck trips off the local road networks. The project is well underway with sales with almost all lots already sold to future homeowners who will greatly benefit from living in this amazing pocket of Ashgrove.

Project of the Year nominee

Red Valley Mushrooms

SEQUAL Mechanical
Scantec Refrigeration

Red Valley Mushrooms is an 8500m2 facility located in a remote region of Far North Queensland, three hours north of Cairns. From the outside, the Red Valley Mushrooms facility appears to be a large cold store facility but looks can be deceiving. The interior of the facility, which been specifically designed for large scale production of a variety of gourmet mushrooms, has much in common with a PC laboratory. The facility includes clean rooms, physical containment chambers, directional air movement and pressure differentials, as necessary for all stages of mushroom production.

The highly sophisticated, low-charge ammonia (NH3) central energy plant and associated HVAC systems, designed in collaboration with SEQUAL and Scantec, maintains individual, close-controlled environmental conditions within individual production and maturing rooms, with year-round challenging ambient conditions, at benchmark system Seasonal Energy Efficiency Ratio.

While the creation of this facility is impressive and worthy of high praise, it is the journey and hurdles that this project overcame in pursuit of the farmer's 'Green Dream', which makes this project an outstanding candidate for this award.

Project of the Year nominee

Coolmunda Dam Variable Counterweight Project

Sunwater
Abergeldie Construction, Bonacci Infrastructure & Munster Services Group

The Coolmunda Dam Variable Counterweight Project aims to ensure the ongoing reliability of the South East Queensland dam's seven radial spillway gates.

Sunwater and its project contractors have designed and fabricated a custom lifting frame for access, removal and investigation of the counterweights located within the gate chambers, using innovative mechanical elements to solve an otherwise complex structural problem and challenge of working on a dam at near-full capacity.

Project of the Year nominee

Sewage Pump Station CN1 Design and Construction

GHD

CN1 is a significant pump station in the Cairns sewage network, servicing the CBD and northern suburbs, and was implemented to replace the original which was constructed more than 60 years ago. The scale and complexity of CN1 presented a unique layering of engineering challenges from high flow and storage requirements, constrained space, inlet energy release and turbulence, complex hydraulics and control of the nearly 2 MW of installed pump motor power, a major caisson structure, etc.

Accordingly CN1 represents an innovative integrated solution to address these challenges, that make this project standout form traditional mainstream pump stations solutions. The most innovative element is the unique end of dropper vortex tee, the concept developed and verified through CFD modelling, implemented to prevent erosion of the concrete structure from the high energy inlet flow jet resulting from the significant inflow falling more than six metres into the wet well.

Project of the Year nominee

Springfield Central Train Station Park ‘n’ Ride

Department of Transport and Main Roads
GHD

Springfield Central train station park ‘n’ ride is a new five level multi-storey carparking facility that is one of the largest park ‘n’ ride facilities in Queensland providing commuters with an incentive to take public transport, taking more cars off the roads and getting people to and from work quicker and safer.

Located on a constrained triangular site, the facility responds to the site conditions with a triangular form and innovative double-helix ramp design, maximising the circulation efficiency of vehicles and number of parking bays.

The parking structure itself is based on circular economy design principles, with increased floor-to-floor heights, structural load allowances, and ability to add an additional level, which combine to allow the building to be adaptively reused in the future and ensuring the embodied carbon is held over a longer building lifespan.

Project of the Year nominee

Callide Dam Radial gates investigation Project - Phase 1

Sunwater
Bonacci Infrastructure and Stantec

The Callide Dam Gates Project aimed to investigate and remediate the dam's spillway gates to address intermittent occurrences of vibration during their operation.

While the original scope involved removing the gates for further investigation, an alternative option was discovered which offered efficient and effective repair to the gates without the need for removal from the spillway.

Works were completed to strengthen and rebalance the gates and upgrade the manual control system to significantly reduced potential gate vibrations and without impacting upon customer's water supply.

ENGINEERS AUSTRALIA

Excellence Awards

South Australia

Chief Judge - People

Prof Derek Abbott

HonFIEAust

Professor Derek Abbott has made significant contributions to biomedical engineering and photonics. He has published more than350 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.

South Australia Judging Panel - People

Enyo Agbodo

FIEAust

Alana Duncker

FIEAust CPEng

Helen Edmonds

FIEAust CPEng EngExec NER

Derek Rogers

FIEAust CPEng EngExec NER

Masoud Moghaddas

FIEAust CPEng NER

Chief Judge - Project

Sharon Billinger

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.

South Australia Judging Panel - Project

Scott Curtis

MIEAust

Adham Fathy

MIEAust NER

Michael Iona

MIEAust CPEng NER

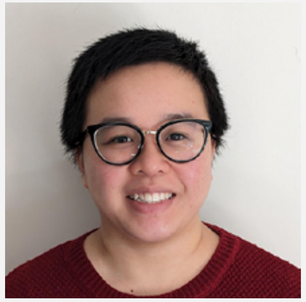
Daisy Jiang

MIEAust CPEng NER

John Woodside

FIEAust CPEng NER

Emerging Professional Engineer of the Year nominees



Sherry Tang

MIEAust

Sherry is a systems engineer at Nova Systems. After completing the Graduate Program with Nova Systems, she has remained with the company and worked in the SATCOM, maritime, land and air domains within the defence industry for the past six years. She has been an active member of the Young Engineers Australia Committee for the past four years. Passionate about helping others, she recently shaved her hair for the World's Greatest Shave and raised over $4.8K.

Winner

Tyler Hill

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.

Nahid Alemi Kermani

MIEAust

Nahid is a dedicated Space Systems Engineer at Deloitte Space with a distinguished career trajectory marked by innovation, inclusivity, and a deep-seated passion for aerospace technology. A graduate of UNSW, she pursued her Bachelor's in Aerospace Engineering and is currently advancing her studies in Space Operations.

Her hands-on engineering experience ranges from aircraft structural integrity to space systems capabilities. Committed to enhancing diversity in her field, she leads the 'Space Education' initiative in her current role to proactively integrate underrepresented groups into the space industry. As an active Division committee member of Engineers Australia, Nahid persistently advocates for equity, diversity, and inclusion in engineering, serving as a role model for emerging professionals.

Emerging Professional Engineer of the Year nominees

Dr Oladimeji Benedict Olalusi

MIEAust CPEng NER

Dr Benedict Olalusi is an exceptional Professional Engineer with a remarkable career spanning industry and academia. With more than a decade of experience in structural engineering, he has made significant contributions to the field. Benedict's expertise extends to structural safety and reliability, structural remediation and concrete research. Leveraging his expertise, Benedict played a role in restoring and enhancing the resilience of flood and disaster-damaged structures in Australia. He has held esteemed positions, including a Guest Professorship in Germany, and is recognised as a leading young researcher. As a Chartered Professional Engineer with Engineer Australia and a Registered Professional Engineer in Queensland and Victoria, Benedict has led influential projects worldwide.

Erica Webb

MIEAust

Erica is an accomplished Senior Civil Engineer, working across major transport infrastructure in South Australia. Together with technical excellence, Erica understands the importance of innovation and sustainability when designing solutions to complex problems. She is committed to furthering the engineering profession through both her role at Arup and her work with volunteer organisations. She is passionate about advocating for positive change – from increasing participation in STEM for females and those in early careers, to her work with First Nations groups. Her stakeholder engagement and strong communication endear her to clients and colleagues.

Emerging Professional Engineer of the Year nominees

Emily Breakwell

MIEAust

Emily Breakwell is an electrical engineer who has found the niche of safety engineering within the defence industry. Emily prides herself on her curiosity, creativity, collaboration and ability to explain difficult concepts to non-technical people. Throughout her career, Emily has always promoted STEM to the younger generation and is a shining example that those who come from rural areas, who love/enjoy maths but are not the top of the class can still be a good engineer.

Ahmad El Sayah

MIEAust

Ahmad is a senior structural engineer with nine years of experience working within the Bridges Team in Jacobs. He is a member of Engineers Australia, certified project manager (PMP) and working towards his Chartership in Australia. Ahmad is dedicated and self-motivated engineer that loves working on challenging tasks and ensure fulfilling client requirements to deliver projects on time efficiently. He has worked in number of significant projects across Australia and has a global experience in the gulf region including UAE, KSA, Qatar, Kuwait and Bahrain. After work, Ahmad enjoys playing and watching soccer games, reading books and spending time with his family and friends.

Professional Engineer of the Year nominees

Winner

Dr Mark Skanes

FIEAust CPEng

Dr Skanes has more than 40 years of experience in leading project and engineering teams, in non-executive 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.

Vernon Collins

MIEAust CPEng

Vernon Collins has nearly 40 years' experience working in Air Force and defence industry. He has spent the last 19 of those working as a systems engineer in Air Force, Chief Information Operations Group and Joint Capabilities Group. He now works as the Chief Technology Officer at DEWC Services Pty Ltd. Vernon has a Bachelor of Computer and Information Science and a Bachelor of Computer System Engineering from the University of South Australia and a Master of Systems Engineering from the University of New South Wales. His experience includes time spent working in engineering management, capability development and operations support.

Alireza Vahidzadeh

FIEAust CPEng NER

Ali is a Technical Director and the Building Structures Leader (SA) at Mott MacDonald Adelaide office, and is a Fellow and the current Chair of Engineers Australia Structural Committee (SA branch). With 23 years in the industry, he has extensive experience in leadership, project management, structural analysis and design, and documentation of a broad range of structures including commercial/residential highrise, mixed-use developments, and complex geometry structures. Most recently Ali was Mott MacDonald's Project Manager and the lead structural engineer for the Adelaide Festival Square 29-storey office tower integrated into underground five-storey carpark ($700 precinct).

Professional Engineer of the Year nominees

Mansoor Janjua

FIEAust CPEng NER

Mansoor is a Fellow and Chartered Professional Engineer with more than 20 years of invaluable experience. A skilled migrant from a third-world country, Mansoor has exemplified paying back to the profession and broader society. Mansoor has demonstrated exceptional leadership and a track record of success on projects exceeding $1 billion. Mansoor has made significant contributions to Engineers Australia's strategic priorities and is a strong advocate for the integration of overseas trained engineers (OSTE) into the Australian workforce. Mansoor promotes the engineering profession through mentorship and community outreach. Mansoor is a keen learner and is respected for resourcefulness, innovation, and commitment to sustainability.

Alex Walsh

MIEAust CPEng

Alex has more than 40 years practicing as a nuclear and mechanical engineer in the civil nuclear and defence industries. He has held senior engineering and project management leadership roles in the UK, France and Australia in complex nuclear programs. Alex and his wife previously worked in Australia on the submarine programme in 2013 and 2014. In January 2022, Alex returned to Australia to take on the engineering challenge of extending the life of the Collins Submarines and preparing for the AUKUS nuclear powered submarines.

They have four adult children who live in the UK and US.

Professional Engineer of the Year nominees

Hayley Rohrlach

MIEAust CPEng NER

With a career spanning thirteen years, Hayley is a Chartered Professional Engineer leading major engineering projects for the defence industry, state and local governments agencies and private clients, delivering and contributing benefits to stakeholders, communities, businesses and groups that surround these projects. As a civil engineer and design manager, Hayley is well versed in the collaborative approach required to design and deliver projects, coordinating and balancing the needs of multiple stakeholders and clients.

In addition to her project leadership, Hayley also proudly leads one of the most diverse and inclusive civil teams in Adelaide at AECOM.

Jeevaratnam Jude Nirmalaraja

FIEAust CPEng NER

Jude Nirmalaraja is a Senior Stormwater Engineer with City of Onkaparinga. He is a Chartered and Fellow member of Engineers Australia. He has been working in the local government sector for 23 years in various roles, of which 16 years with the city of Onkaparinga and seven years working at city of Marion. While with the City of Onkaparinga, Jude has been responsible for stormwater management of the Council and several significant innovative stormwater infrastructure projects which have positive impact on the Council and the community. The engineering profession is one that he feels passionate about.

Project of the Year nominee

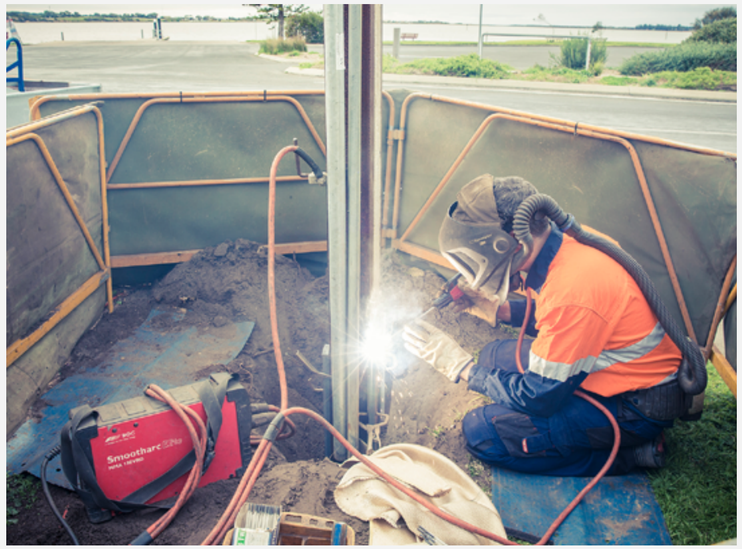
An Industry-first Innovative System for Electricity Distribution Network Asset Management

Frazer-Nash Consultancy
SA Power Networks

Effective asset management is fundamental to reliable and affordable operation of Australian electricity networks. However, network asset management is also a highly complex engineering problem. Asset degradation is dependent on many factors including physical attributes and the operational environment and history.

A new tool is making it easier to reliably predict when and how in-service distribution network assets will fail. Frazer-Nash Consultancy, a KBR company, partnered with SA Power Networks to develop APPRAISED - AI-Powered Predictive Reliability for Asset Integrity and Safety of Electricity Distribution. Combining fundamental engineering, artificial intelligence and data analytics, the highly adaptable condition-based algorithm reliably predicts asset life and identifies degradation drivers. This innovative and cost-effective capability is particularly pertinent in Australia's rapidly changing electricity generation and distribution landscape.

Developed over a year from concept to capability integration, the tool is being applied in South Australia to 173,000 km of overhead conductors, 450 km of CBD underground cables, 75,000 distribution transformers and 600,000 (Stobie) utility poles.



Project of the Year nominee

Snapper Point Power Station Project

RJE Global

RJE Global were awarded the Engineering, Procurement and Construction (EPC) contract for the Snapper Point Power Station project which is a 154 MW gas turbine peaking power plant located 20km northwest of Adelaide, SA. The SPPS comprises of five trailer mounted GE TM2500 aero-derivative gas turbines, each rated at 30.8 MW.

RJE designed and fabricated a GRC control room as the centre piece of the project, as well as designed and constructed the electrical substation which includes two 100 MVA and one 40 MVA, 66/11.5 kV transformers.

Additionally, RJE designed and engineered the fuel piping, pipe racking and instrumentation systems required for the safe delivery of fuel and balance of plant auxiliaries to the gas turbines. A developed control system provided the safe and efficient operation of the gas turbines. RJE provided detailed multi-discipline engineering design and construction expertise to design and execute the project safely and successfully.

Project of the Year nominee

Women's and Children's Hospital Sustainment Project

Women's and Children's Health Network

The WCH Sustainment project has been a targeted capital investment program to minimise clinical and infrastructure risks across the most critical clinical departments in the hospital. These areas include:

- Operating Theatres
- Neonatal units
- Child and Adolescent Mental Health Unit known as the Mallee Ward
- Paediatric Emergency Department (PED)
- Adolescent Ward,
- Paediatric Intensive Care Unit (PICU).

These clinical upgrades have been a combination of refurbishing existing spaces and expansion / relocation of clinical departments with the aim of:

- Modernising clinical models of care, providing contemporary care for our consumers.
- Meeting Australian Health Facility Guidelines.
- Modernising infrastructure systems and meeting current Australian Standards.
- Improving business continuity planning (resiliency and redundancy) for critical systems.

Project of the Year nominee

Winner

Adelaide Festival Plaza Redevelopment

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.

ENGINEERS AUSTRALIA

Excellence Awards

Sydney

Chief Judge - People

Jessica Qiu

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 youngest 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.

Sydney Judging Panel - People

Richard Barnes

FIEAust CPEng NER

Melanie Gostelow

MIEAust CPEng NER

Peter Goudie

FIEAust CPEng NER

Vai Rane

FIEAust CPEng NER

Elena Shulyak

FIEAust CPEng NER

Chief Judge - Project

Bruce Howard

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.

Sydney Judging Panel - Project

Yuna Chen

FIEAust CPEng NER

Neil Smith

FIEAust CPEng EngExec NER

Ping Tan

FIEAust CPEng

Matthew Harding

FIEAust CPEng NER

Norman Himsley

FIEAust CPEng

Archie Johnston

HonFIEAust EngExec

Emerging Professional Engineer of the Year nominees

Heimy Molina

GradIEAust

Heimy Molina is a Graduate Engineer at Gamuda Australia, working on the Sydney Metro West Western Tunnelling Package. She recently graduated from Western Sydney University, where she was awarded First Class Honours and the University Medal for her degree, Bachelor of Engineering (Honours) – major in Civil. A few of the many awards she has received are the 7News Young Achiever Award 2023 Finalist and People's Choice, Vice Chancellor's Excellence Award for Engagement and Sustainability, Women in STEM Education Champion, and Emerging Designer of the Year Award. Aside from this, Heimy has been featured in publications, events and podcasts, where she highlights her contributions to the field of STEM.

Ghizlane Chergaoui

MIEAust

Ghizlane is a Senior Transport Engineer in the Sydney Transport Advisory team at AECOM, with more than six years of experience. She takes on technical and project management roles on transport projects, with substantial experience in traffic engineering, transport planning and intersection modelling. Ghizlane specialises in active transport. She is passionate about developing project solutions that create better urban outcomes for communities.

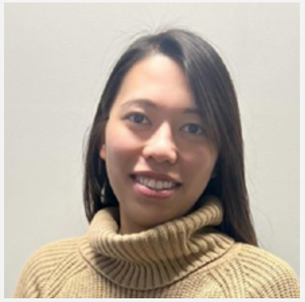
Ghizlane is committed to achieving equity, diversity, and inclusion through her involvement in the Women in Engineering committee. She is passionate about supporting women of all levels in the engineering workforce and delivering inclusive infrastructure that functions for everyone.

Nicholas Walker

MIEAust

Nicholas is a dedicated professional engineering consultant at JN Engineering, experienced in all aspects of structural design throughout a project lifecycle, from inception through to completion. Possessing a broad knowledge base that covers a wide range of project types and engineering disciplines. Nicholas is passionate about professional development and continuous learning. He is experienced in client liaison and project management. Nicholas understands the importance of excellent communication and has a proactive approach with his clients and colleagues, which are key factors to his success.

Emerging Professional Engineer of the Year nominees



Wing Wu

MIEAust

Wing graduated from UNSW in 2016 with a First-Class Honours degree and scholarship in Civil Engineering. Her work ethic and passion translate outside of her academic achievements as she has been actively involved in the industry for more than seven years and steadily progressed her engineering career with an ambition to make a difference in infrastructure and urban development, while inspiring younger professionals in the process. Wing's commitment to engineering extends past her growing technical capabilities and focuses on what she can innovate and contribute for the community that she designs built environments for.

Yue Wang

MIEAust

Yue Wang is a professional engineer with 10 years' experience in project management, process engineering, safety and quality assurance within the power, nuclear, defence, pharmaceutical, mining water and building industry.

She has extensive hands-on experience and knowledge of end-to-end project delivery ranging from condition assessment, design, procurement, construction, commissioning, operation and maintenance. These experiences lead to her pragmatic approach as a project manager in delivery.

Winner

Anirban Ghose

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 nominees

Chelsea Hayward

MIEAust

Chelsea is a Senior Process Engineer in Jacobs' water team with more than six years' experience addressing current and emerging water challenges. She has varied project experience, encompassing planning, design and project management on water and wastewater treatment projects for a range of clients. Many of her projects have helped plan for a resilient water future in the face of climate change.

Chelsea strives to use her technical capabilities for good. She is driven to give back to her community, inspiring the next generation of diverse STEM professionals and bettering the lives of all through access to clean water and sanitation.

Ruth Lin Hoog Antink

CPEng MIEAust NER

Ruth is a civil engineer who has had some amazing opportunities to work in construction as a site engineer as well as with consultancies designing, documenting and delivering major infrastructure projects. Some of the projects include Darling Square, Woolgoolga to Ballina Pac Highway upgrade, Macquarie Park Stage 2, Sydney International Speedway, Sydney Gateway, More Trains More Services, Papakura to Pukekohe in NZ and SEPA Level Crossings Removal Project. Ruth is a chartered engineer, a keen traveller (having visited over 30 countries) and a recovering marathon runner.

Jane Joubert

MIEAust

Jane Joubert is a leading female structural engineer based in Aurecon's Sydney office. Trained in South Africa, she has been applying her craft for Aurecon Australia as a complex structure and stadium structural engineer on the international stage for the past eight years. Her dedication to engineering and her team along with her positivity, motivation and empathy leaves no doubt that Jane has the qualities and the passion to shine as a future leader of Aurecon and become a beacon for success to young individuals that are considering a career in the construction industry.

Professional Engineer of the Year nominees

Prof Bing-Jie Ni

FIEAust

Professor Ni is an ARC Future Fellow and full professor at University of Technology Sydney. He has been working in the field of sustainable wastewater management to develop innovative and technological solutions to achieve high-levels of pollutant removal with minimised carbon emissions. He has published two research books, 30 book chapters and more than 450 papers in SCI journals. He has won six major ARC grants and many other government, university and industry research grants with a total research funding of AUD $12 million. He serves as Editor, Guest Editor or Editor Board for top journals such as *Water Research and Environmental Science and Technology*. He is a Clarivate Highly Cited Researcher.

Prof Qilin Wang

FIEAust

Professor Qilin Wang at University of Technology Sydney is a world leader in environmental engineering. He has developed a suite of patented technologies to revolutionise the practice and science of urban water management. He is a Fellow of the Royal Society of NSW, Royal Society of Chemistry, and Engineers Australia. He is a National Environmental College of Board and Sydney Water Engineering Panel in Engineers Australia. He has received more than 50 awards including Australian Research Field Leader in Water Supply and Treatment, Australia's Most Innovative Engineer, Prime Minister's Prize Finalist, and Australian Eureka Prize Winner — 'Oscars' of Australian Science. He has secured more than $10 million from government and industry. He has promoted engineering profession via various outreach activities and media engagement.

Firas Shawash

MIEAust CPEng NER

Firas is an accredited certifier, a Chartered Professional Engineer and a registered engineer (NER) in fire and mechanical engineering. Firas is the Technical Manager and the Team Leader of iFire Engineers (NSW) where he is leading multimillion-dollar projects. Firas holds a Master's in fire engineering.

In 2019 Firas was named the Fire Protection Industry leader by the Fire Protection Association of Australia. He was awarded the Fire Protection Project of the Year nominee two consecutive times in 2022 and 2023. Firas represents in Engineers Australia in two of the most important standards committees in the fire industry, viz. FP002-Fire Detection Systems, FP-003-Fire Extinguishers. Firas has a special interest in heritage and a serve as a board-member of Engineering Heritage Sydney.

Professional Engineer of the Year nominees

David Baker

MIEAust CPEng EngExec NER

David has more than 30 years' engineering experience delivering major complex multi-disciplinary rail, civil and building projects throughout Australia, Hong Kong and the UK. He collaboratively works with all project stakeholders to develop innovative and sustainable solutions that meet the needs of owners, operators, project teams, and the public. David also has extensive experience as a Technically Assured Organisation representative on the Sydney Rail Network.

David is committed to building a better future for all. He actively supports the development of emerging engineers, training and mentoring young professionals, and establishing standard engineering systems to ensure consistency and certainty of outcomes.

Winner

Paul Rogers

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.

Project of the Year nominee

AMSL Aero - Vertiia Flight Test Vehicle 1

AMSL Aero

The Vertiia prototype Flight Test Vehicle is the first R&D vehicle in a series of planned testbeds towards realising a sustainable, green and economic mode of transport. The Vertiia project aims to deliver an electric Vertical Take-Off and Landing (eVTOL) vehicle using hydrogen fuel cells for use in private, commercial, paramilitary and military applications. The unique box-wing format with eight tilting propellers is designed for efficient cruise performance after transitioning from vertical take-off to forward flight, whilst affording high levels of redundancy in all systems.

Last year saw AMSL Aero complete vehicle design and construction, subsystem rig testing, system level ground testing, gimbal stand testing and finally commence the first flight tests. On the 6 February 2023 the Vertiia prototype test vehicle completed its maiden flight; hovering under control of an offboard pilot for 88 seconds, an important milestone along the road to a certified eVTOL long-range vehicle.

Project of the Year nominee

Walsh Bay Arts Precinct

Arup

Located on Gadigal Country and the foreshore of Sydney Harbour, Walsh Bay Arts Precinct is now home to Australia's leading performing arts companies. Working with Infrastructure NSW, Arup co-created a vision for the new arts and culture precinct, defined by sustainability, inclusivity and culture. Arup's collaboration with TZG Architects and Create NSW fostered a holistic design approach and objective to create a contemporary, multi-purpose venue. The result has transformed the 100-year-old heritage Wharves 4/5 and Pier 2/3 into a world-class cultural facility. While the precinct's identity is linked to its heritage, its new form provides a hub for artists to collaborate and perform, supported by digital connectivity and creative working culture.

Project of the Year nominee

Capella Sydney

TTW (NSW)

Capella Sydney has transformed a listed former government building in the heart of Sydney into a world-class luxury hotel. The building is one of the earliest examples of reinforced concrete in Australia and its historic complexities necessitated critical input from TTW's heritage, structural and facade engineering specialists.

TTW overcame numerous engineering challenges on this sensitive project including a major geological fault, isolation of the 25-metre pool on level six, ensuring the historic structures and materials met current building codes, and underground metro tunnels running underneath the structure. We undertook a lateral analysis of the building incorporating the existing sandstone and masonry façade, and its interaction with the new structure.

Ensuring all areas of exceptional heritage significance were restored or retained, and any detrimental interventions were removed was fundamental to achieving a complementary refurbishment that respects architect, George McRae's original 1912 design, while reducing embodied carbon through extending the life of this landmark building.

Project of the Year nominee

Sydney Modern

Arup

A fusion of art, architecture, heritage and landscape. The Sydney Modern Project has transformed the 152-year-old Art Gallery of New South Wales into a two-building art museum campus. The project has doubled the gallery's exhibition space creating a new, collaborative and immersive landscape for the public to experience and enjoy art in all its forms. Innovative engineering-led solutions were at the heart of this project from its inception. Arup is delighted to have played a key role in the delivery of a beautiful and uplifting series of gallery spaces that incorporate the sustainable regeneration and repurposing of the heritage fuel bunker and existing land bridge. Arup worked on this project from concept to completion, providing more than 15 disciplines, including structural, civil, fire safety and acoustic consulting, lighting design, fire and hydraulic engineering and security advisory services.

Project of the Year nominee

Digital substations

Endeavour Energy

Endeavour Energy's three-year, $2.5 million engineering project positions the company as a leader in Australian innovation and a global leader in the field. By conducting the project entirely in-house, Endeavour Energy demonstrated its commitment to internal expertise and fostering a culture of innovation. The project brought together cross functional teams, working collaboratively to address the complex challenges and push the boundaries of traditional practices.

With the successful delivery and implementation of South Erskine Park Zone Substation, Endeavour Energy has established the groundwork for future growth and expansion. The scalable design of the digital substation enables Endeavour Energy to replicate this innovative solution in a large number of new zone substations needed to cater to the growth of Sydney's Greater West. By embracing digital transformation, Endeavour Energy aims to provide its customers with safe, affordable and reliable electricity while supporting the transition towards a greener and more resilient energy future.

Project of the Year nominee

Bondi Pavilion Conservation and Restoration Project

SDA Structures
Tonkin Zulaikha Greer and Buildcorp

The Bondi Pavilion Restoration and Conservation Project has rejuvenated the iconic community centre at Bondi Beach. The design process underwent numerous iterations as it was moulded by the voice of the local people, ensuring the finished building meets the needs of the community.

Positioned on a world-famous beach, the pavilion is the keeper of a rich history. Since its construction in 1928, the beachfront icon has been home to a Turkish bathhouse, a ballrooms and theatre, and even served as an officer's club for the American Red Cross during WWII. Through careful engineering application, this history was sought to be preserved.

The structural elements of the building married together the juxtaposition of modern architectural feature pieces against the heritage building elements. Care and respect for the existing structural elements was essential in achieving the retention of the historic building fabric. However, modern engineering had to be adopted to overcome the project's many challenges.

Project of the Year nominee

Albion Park Rail bypass

Fulton Hogan Construction

The Albion Park Rail bypass project extends the M1 Princes Motorway between Yallah and Oak Flats, bypassing the town of Albion Park Rail. The scope of works included construction of 9.8 km of dual carriageway motorway and several tie-ins. It included additional tie-ins, modifications to existing intersections, new interchanges and roadways. A total of 21 new bridges were constructed including one over the South Coast Railway.

The project has been a strong example of excellence in engineering. From project conception to completion, Fulton Hogan has looked to set standards of excellence within the industry. By working closely with the client, designers, other key stakeholders and the local community, the team significantly brought forward the date for opening to traffic (from Q2 2022 to Q4 2021). The project was delivered to TfNSW's budget and left a positive legacy of sustainable, inclusive and ethical engineering for generations to come.

Project of the Year nominee

Sydney Gateway project (Stages 1 and 3) - Ground Improvement – Controlled Modulus Columns (CMC)

Menard Oceania

The Sydney Gateway project is a remarkable example of innovation and expertise, showcasing Menard as Australia's leading Ground Improvement company. We successfully installed 10,000 Controlled Modulus Columns (CMCs) totalling 131,000 linear meters, with up to 5 CMC rigs in operation simultaneously. Here are a few key reasons why this project stands out:

- We faced the challenge of installing ground improvement within the airport flight path, requiring unconventional solutions. We engineered and built a unique system that met strict constraints, including a 7-meter overhead limit and the capability to reach depths of up to 25 meters.
- Over 7,000 columns were installed through the old Tempe Land, containing refuse material. Using the displacement CMC ground improvement technique, we significantly reduced waste generation and treatment.
- Despite extreme rainfall during the La Niña event in 2022 in Sydney, with over 2,000mm of rain on-site and 111 out of 203 rain shifts, we successfully managed to keep the project on track.

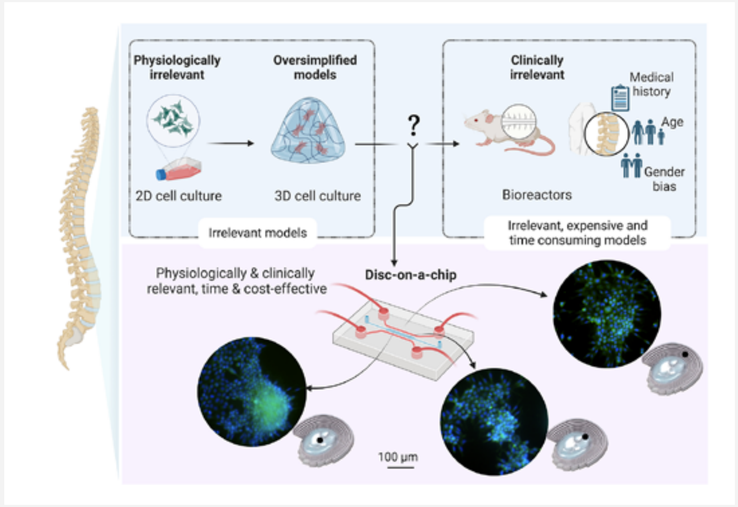
Project of the Year nominee

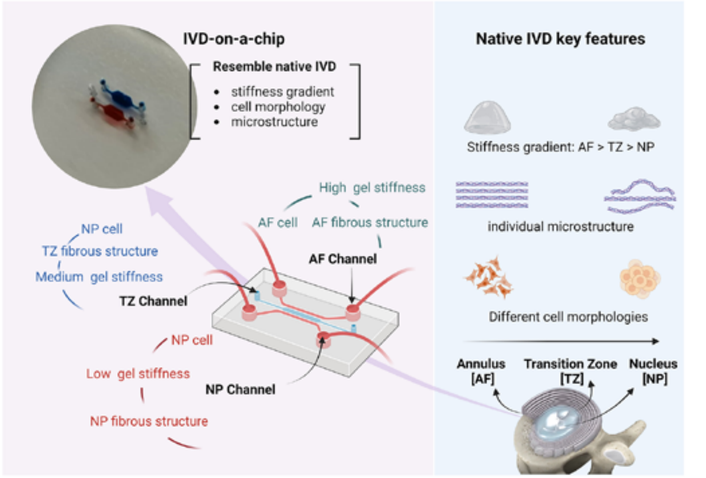
Intervertebral disc (IVD)-on-a-chip: next-generation engineering models for low back treatment

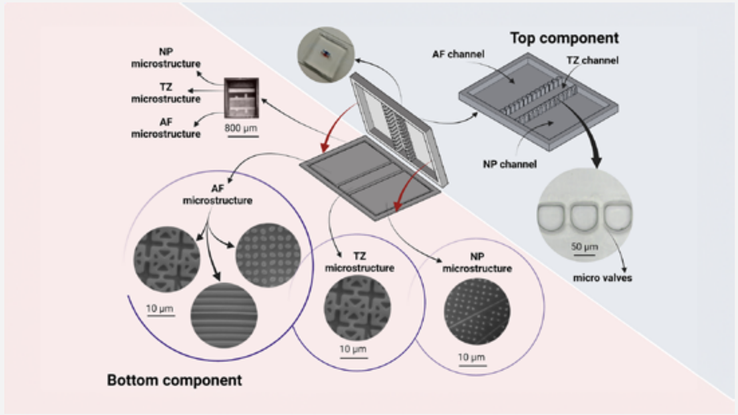
University of Technology Sydney

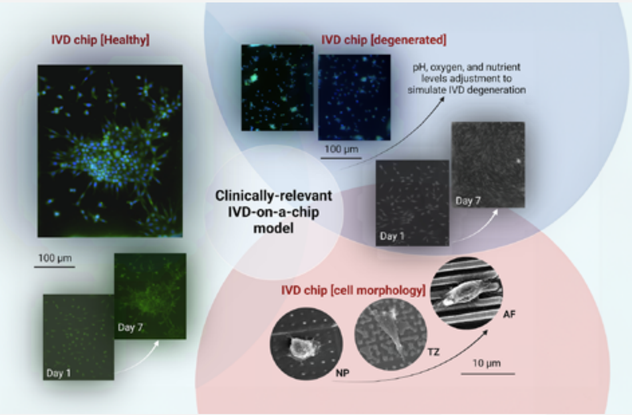
Low back pain is the leading cause of disability across the globe. Intervertebral disc (IVD) degeneration — a common consequence of ageing and injury — is strongly implicated as a cause of low back pain. Current strategies to treat back pain are partially effective in relieving symptoms but are incapable of regenerating IVDs. Tissue engineering research seeking to address this challenge has been hindered by the absence of a physiologically relevant IVD model.

We have used precision additive manufacturing [high-resolution 3D printing and two-photon polymerisation technology] to develop the world's first, innovative, reproducible and adaptable 3D IVD-on-a-chip organ model that closely recapitulates native IVD function, microstructure, cell morphology and tissue stiffness gradients. Using this technology, we are able to simulate healthy and diseased IVDs, undertake precise mechanobiological investigations to significantly improve the physiological and clinical relevance of experiments at low cost, which will lead to development of novel solutions for IVD regeneration.









Project of the Year nominee

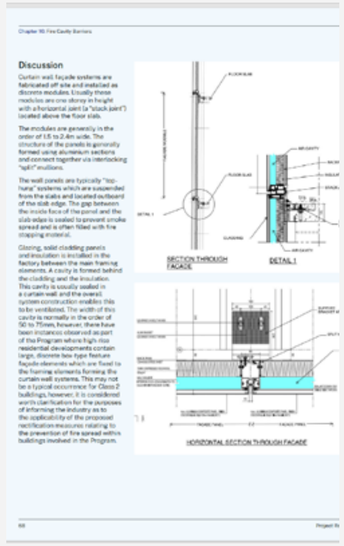
Project Remediate Pattern Book Version 2

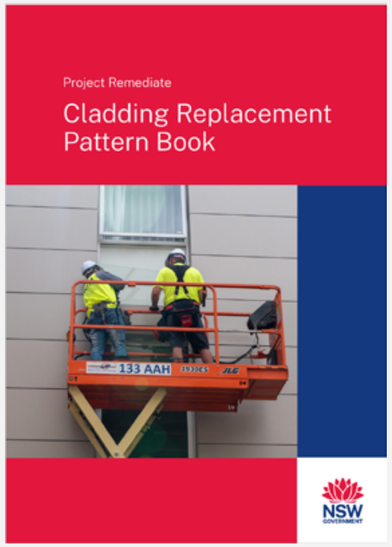
Project Remediate

The Project Remediate Cladding Replacement Pattern Book is an innovative digital blueprint that accelerates design maturity for cladding remediation projects. Designed to put the advancement of people, safety and great engineering first and developed by industry experts, it features recommended design solutions for the removal and replacement of combustible cladding from Class 2 buildings.

This comprehensive guide covers crucial design considerations, promotes the industry best practice, reinforces professional standards, significantly enhancing the safety, remediation design and delivery of remediation of high-risk combustible cladding homes.

The Pattern Book pushes beyond National Construction Code (NCC) requirements, advocating for the use of fire cavity barriers and rigorous material testing to ensure long-term safety and quality. It also champions environmental sustainability through the recycling of removed materials and the minimisation of construction waste. It has a profound impact on industry with its commitment to safety, sustainability, value for money and quality.





Project of the Year nominee

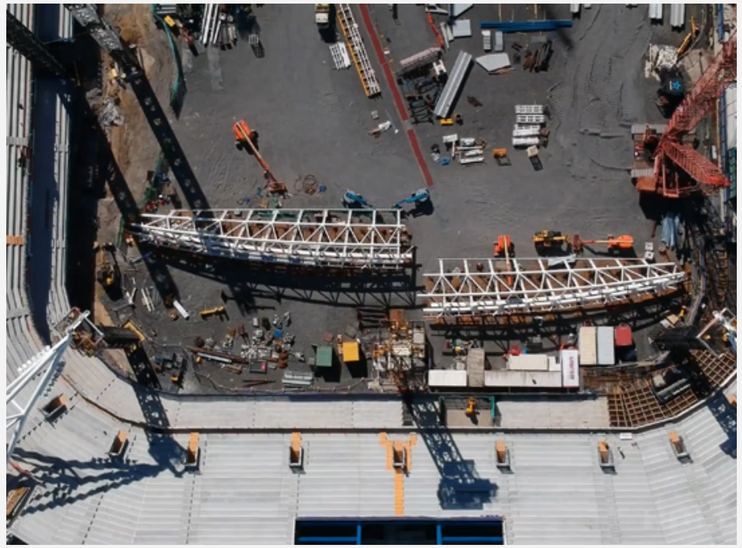
Allianz Stadium

Aurecon
John Holland Group, Cox Architecture, Schlaich Bergermann Partner, and Infrastructure NSW

Allianz Stadium is a state-of-the-art stadium near Sydney's CBD, designed to create a vibrant atmosphere by bringing 42,500 fans closer to the action with its steep seating arrangements. This iconic venue exemplifies structural engineering excellence, paving the way for future projects that prioritise environmental responsibility, community engagement, equity of accessibility and cutting-edge structural design.

The crowning jewel of the stadium is its innovative roof, which is one of one of the most technically complex stadium roofs in Australia. Combining the robustness of a mega-truss structure with the lightness of a doubly curved diagrid shell, the mixed structural system sets a new standard in efficient large-span structures.

Allianz Stadium embraces circular design principles and was designed for disassembly and reuse in the future. This world-class, multi-use venue can host football, rugby league and rugby union matches, as well as community and cultural events, with all fans under cover, and will host approximately 50 games and concerts, setting a global benchmark for multi-use facilities.



Project of the Year nominee

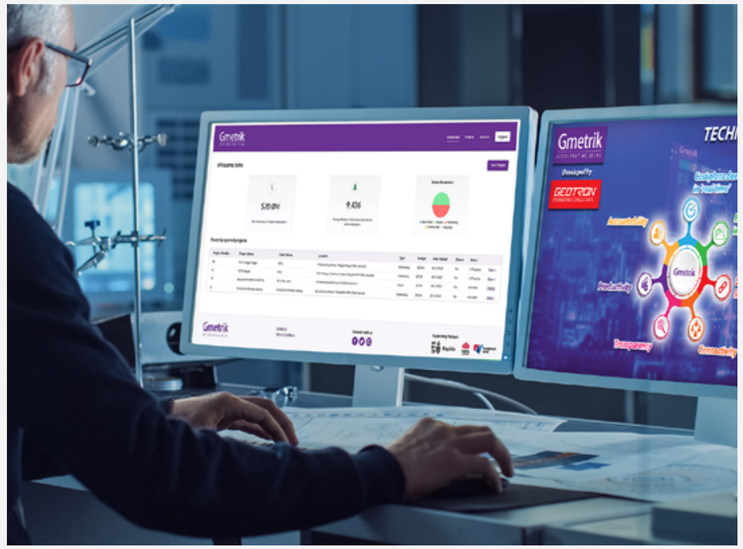
Gmetrik - Sustainability & Costing Platform for the Built Environment

Geotron Engineering Consultants and Rapido University of Technology, Sydney

Gmetrik is an intuitive digital platform connecting suppliers and contractors directly to a collaborative design team. It provides early stage ‘real time’ project costings and environmental metrics, creating sustainable and efficient designs.

Gmetrik increases productivity by:

- Using technology to increase productivity of professional services, contractors and suppliers by generating ‘live’ financial cost plans and environmental metrics so informed design decisions can be made during the design process.
- Removing the re-work that currently occurs when projects are designed / tendered and come in as ‘over budget’.
- ‘Live’ collaboration with multiple designers and clients allowing each designer to optimise their design.
- ‘Big’ data from multiple sources of designers, suppliers and contractors.
- Technology automatically matches the sources of data from every design element to the specific costs and data from suppliers and contractors.
- The platform is scalable and can assist in the economic and environmental benefit to all those in local, regional, national, and ultimately, international communities.



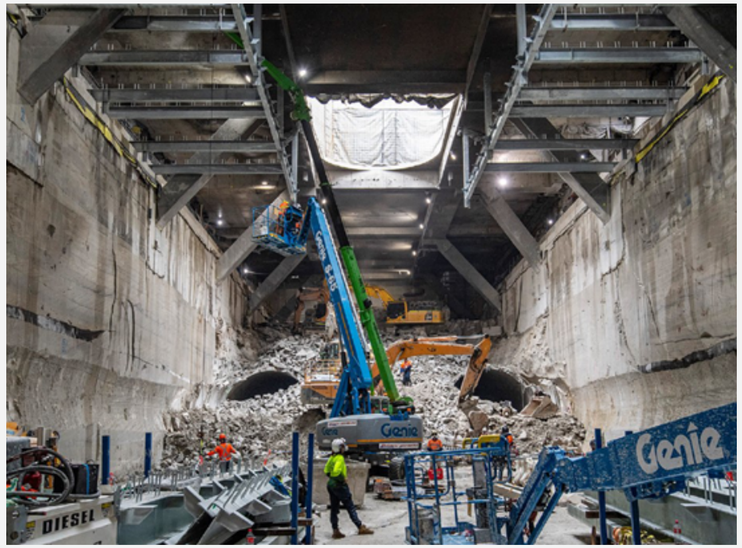
Project of the Year nominee

Winner

Central Station Metro Works

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

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 user-centric approach to structural design and construction made viable 'open-heart surgery' within Australia's busiest railway interchange.



Project of the Year nominee

WestConnex M4-M8 Link

Acciona Samsung Bouygues Joint Venture (ASBJV) and Jacobs Aurecon Joint Venture (JAJV)

The M4–M8 Link Tunnels are not just a tunnel, but part of a broader integrated motorway system, connecting all the major centres of Sydney in a continuous, traffic light free motorway network. The M4–M8 Link Tunnels are a key part of completing the vision for WestConnex. As the third stage of the mega WestConnex project, it will transform surrounding communities by removing up to 100,000 vehicles per day from surface road networks.

Key achievements of the project include:

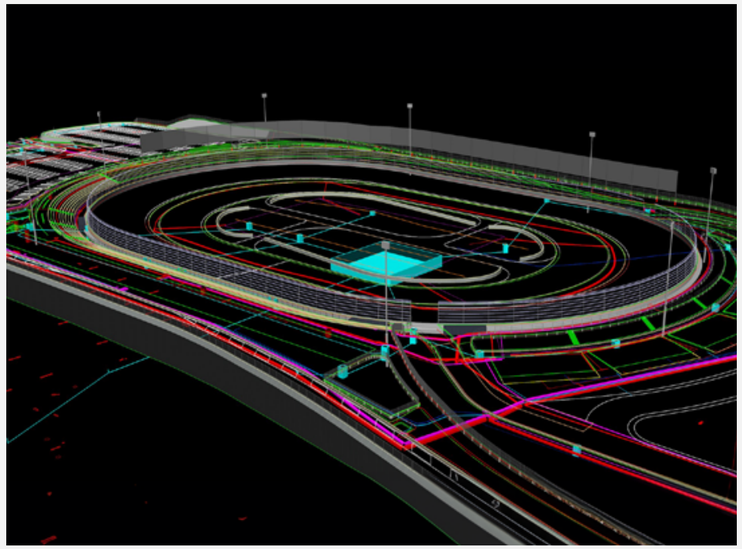
- First integration of two live motorways in Australia.
- Impeccable safety record – overall figures.
- Delivered 10 weeks ahead of schedule.
- Delivered within budget.
- Rigorous development of high performance shotcrete specification to meet durability expectations and address previous concerns with Permanent Sprayed Concrete Lining.
- Thoughtful integration of Aboriginal artwork into the Project: the iconic Aboriginal artwork ‘Movement of Shells, Movement of Time’, became the façade of the Campbell Road Ventilation Facility.
- Strong local and Aboriginal participation metrics.

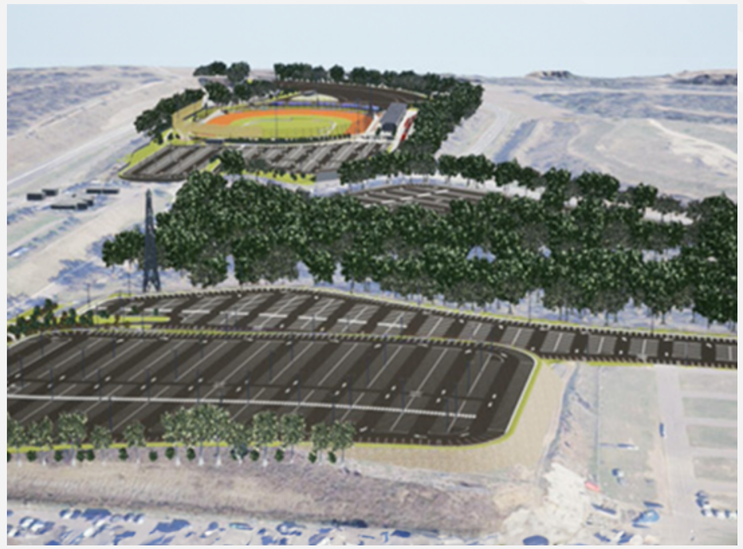
Project of the Year nominee

Sydney International Speedway

Turnbull Engineering

Turnbull Engineering is honoured to have designed the Sydney International Speedway, a state-of-the-art, world-class speedway nestled in Eastern Creek's motorsport precinct. This 10-hectare complex, completed in just 21 months, has capacity for 7000 spectators and 150 competitor teams. Conceived as a superior successor to the Valvoline Raceway at Granville, the facility now caters to international, national and local racing events, marking its stature as a premier global motorsport destination. Designed and constructed for the New South Wales Government, the Sydney International Speedway demonstrates Turnbull Engineering's dedication to leading the industry with its' innovative delivery of complex engineering.





Project of the Year nominee

Snowy 2.0 Ravine Road Upgrade

Snowy Hydro Limited

The Ravine Road Upgrade Project transformed a 15km-long, mountainous, narrow, winding dirt track into a sealed two-lane road, critically providing safe, all-weather heavy vehicle access to the main Snowy 2.0 construction site. With 850 metres difference in elevation from top to bottom, and with challenges to overcome including snow, ice and extreme weather, multiple daily traffic convoys limiting construction windows, an extremely tight construction corridor under the Snowy 2.0 Conditions of Approval, steep and rugged Snowy Mountains topography, and managing the conservation of threatened native species, the road upgrade was a significant achievement. It exemplifies engineering excellence as a complex build, achieved with a well-managed engineered solution for a sensitive alpine environment.

Project of the Year nominee

8 Phillip Street - St Andrew's Church Hall Underpinning Structure

Robert Bird Group

The St Andrew's Church hall has stood resolute for almost 100 years while holding cultural significance to the people of Parramatta. The development of 8 Phillip Street will tower over the existing church hall structure with a 55-storey tower (200m) and 9-storey basement (35m) below the existing hall structure.

The integration of the existing St Andrew's Church hall into the 8 Phillip Street development has required an innovative engineering solution that responds to the complex spatial constraints of the site that rises to meet the challenge of building both under and over a heritage-listed masonry building that cannot be removed.

RBG has achieved this by developing a construction methodology that transfers the existing church hall masonry structure onto the permanent post-tensioned suspended slab constructed top-down on plunge columns. Minimal temporary works have been employed in this construction methodology that allows excavation of the 9-storey basement to occur below.

Project of the Year nominee

Parramatta Light Rail Stage 1 Infrastructure Project

Aurecon Australasia
WSP, Parramatta Connect, CPB Contractors, Downer, Transport for NSW, Cox and Context

Stage 1 of the Parramatta Light Rail will connect communities, make travel easier for work and leisure, and ensure that commuters can move around and explore what the region has to offer.

The project integrated urban design elements leaving a lasting legacy for the community. The construction of a green track within three heritage-sensitive environments has merged the infrastructure with the surrounding landscape. The pedestrianisation of Parramatta's 'Eat Street' has created a car-free zone with the addition of outdoor structures and landscaping. The 5.7 kilometre Active Transport Link connects people to public transport networks with facilities such as bicycle parking close to stops and drinking fountains. Benefits include improved health and well-being through exercise, outdoor place-making and reduced vehicle use.

The light rail forms a vital artery connecting key areas of Greater Paramatta to the beating heart of Eat Street.

ENGINEERS AUSTRALIA

Excellence Awards

Tasmania

Chief Judge

Justin O'Connor

FIEAust CPEng EngExec NER

Justin is an accomplished executive, engineering manager and chief risk officer for an ASX200 listed aquaculture 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 four-fold 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.

Tasmania Judging Panel

Vicki Edwards

MIEAust CPEng EngExec NER

Andrew Chan

FIEAust CPEng EngExec NER

Stefano Conforti

MIEAust CPEng NER

Barry Neilsen

FIEAust CPEng(Ret)

Donald Vaughan

FIEAust CPEng NER

Emerging Professional Engineer of the Year nominees

Olivia Chambers

GradIEAust

Olivia is an electrical engineer and project management professional who is passionate about all things power and construction. With four years of experience in the energy sector, Olivia has worked predominantly as a consultant in a project engineering capacity. Prior to her relocation to Tasmania, Olivia was based in Melbourne, where she was seconded to AusNet Services as a Project Engineer. Upon her arrival in Tasmania in February 2021, Olivia commenced her secondment as Project Coordinator, and more recently Project Engineer at TasNetworks. Her role involves coordinating and driving the development and approvals phase of a large transmission line project in North West Tasmania.

Janitha Senavirathna

MIEAust CPEng NER

Janitha is a Chartered engineer who has been mainly involved with construction of infrastructure projects in Australia and Sri Lanka. He is currently working with CPB Contractors Pty Ltd for TasWater Capital Delivery Program. He started his career as a site engineer for a major road project and then he joined water supply projects in Sri Lanka, as he is more passionate about water and sewer industry. Janitha started his career in Australia with John Holland Pty Ltd for Goulburn Murray Water Connections Project as a Separable Portion Manger and he was responsible for tendering, managing and construction of separable portions to improve the irrigation system. He is passionate about construction, infrastructure and sustainability.

Winner

Jarrod Thomas

GradIEAust

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.

Professional Engineer of the Year nominees

Mary Haverland

FIEAust CPEng

Mary is a Senior Technical Director at Arcadis, with more than 25 years' experience in successfully delivering a wide range of transport engineering services in Australia, UK and internationally. With qualifications in both civil engineering and urban planning, she has specialist expertise in strategic transport planning and is an industry leader in the development and application of movement and place frameworks.

In addition to leading organisational teams and delivering impactful projects she has written policy, strategy, and research papers and presents widely at conferences and industry events throughout Australia and internationally on city shaping and future mobility themes.

Winner

David Gerke

MIEAust

David Gerke is a Principal Engineer Civil with more than three decades of experience with Entura and Hydro 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.

Project of the Year nominee

Mossy Marsh Dam Upgrade

Hazell Bros Group

The Mossy Marsh Dam Upgrade Project improved the safety and serviceability of the dam in line with ANCOLD dam safety standards, mitigating risk of dam failure. This was done by construction of:

- a precast concrete crest wall
- a new spillway
- a buttress filter on the downstream embankment face
- decommissioning of redundant infrastructure.

The dam remained in service during the construction resulting in the impoundment water level remaining high. This placed significant construction staging restrictions on the project. It was completed ahead of time to a high standard achieving 100 per cent compliance with the specification and client objectives ensuring that the dam remains serviceable in year to come.

Project of the Year nominee

Tasman Highway, Hobart Airport Interchange

Hazell Bros Group

The Hobart Airport Interchange was opened to traffic in 2022, providing a much-needed reconstruction of the main intersection providing access to the Hobart International Airport. The Department of State Growth engaged Hazell Bros to undertake the design and construction of the project after they provided an innovative and cost-effective design at tender that allowed works to be completed with minimal disruption to traffic throughout the construction period by using detailed traffic modelling of each temporary arrangement.

The works presented some key design and construction challenges requiring engineering solutions, including a very limited works footprint, poor subgrade conditions and management of works in the flight paths of two nearby airports. The project was completed within the contract dates and to a high standard of construction, with multiple environmental initiatives implemented to minimise the impacts. The interchange will provide an efficient interchange that will scale with expected growth for Tasmania for many years to come.

Project of the Year nominee

Tonga Renewable Energy Project (TREP)

Entura

Entura has been a key player in the Kingdom of Tonga's transition from fossil fuels to renewable energy since 2016. Our involvement in the Tonga Renewable Energy Project (TREP) aims to help Tonga achieve ambitious clean energy targets of 50 per cent renewables by 2023 and 70 per cent by 2025. The project targets eight islands, and focuses on addressing climate change challenges, ensuring energy security and increasing electricity access for Tongan communities.

Entura's expertise in 100 per cent renewable energy micro-grid systems has contributed to the success of TREP milestones so far, including the installation of the largest battery energy storage system in the Pacific. Our involvement spans from feasibility studies to construction supervision, establishing new electrification sub-projects and modernising the generation and distribution of renewable energy on Tongatapu. Entura is proud to support Tonga in developing a world-class sustainable energy system to reach its renewable energy targets.

Project of the Year nominee

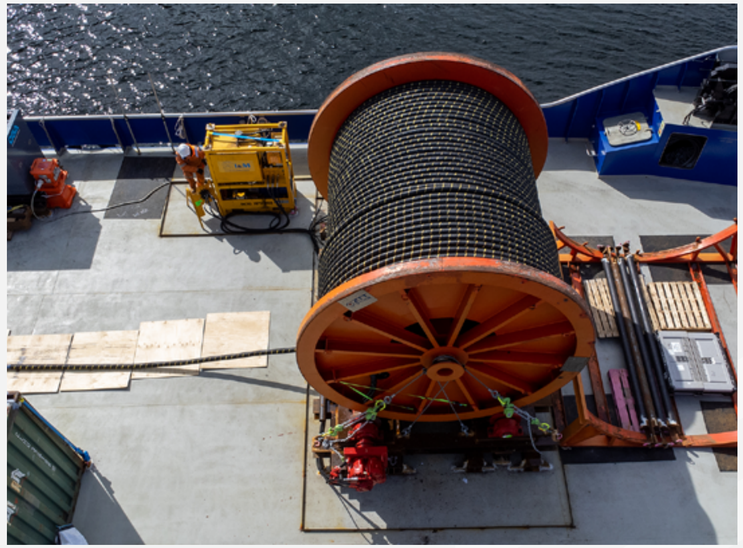
Winner

Bruny Island Submarine Cable Replacement

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. As a result, residents now enjoy a reliable power supply, bolstering their security and satisfaction.



Project of the Year nominee

Midway Point Intersection Upgrade Project

Fulton Hogan

Fulton Hogan has successfully delivered the $21m Midway Point Intersection Project as part of the South East Traffic Solution with the Department of State Growth. The scope of works included the duplication of the Tasman Highway from two lanes to four, road realignment including extensive service relocations and upgrade to underground services, a new signalised intersection at Penna Road and the construction of the 14m high shotcrete mock roll wall.

The Midway Point Intersection Project has reduced travel times and improved access and safety for pedestrians, commuters, and freight. The iconic hand carved mock rock wall, stretching more than a kilometre over the peninsula has now become a landmark for locals and tourists and features improved footpaths for pedestrians to safely travel around Midway Point.

ENGINEERS AUSTRALIA

Excellence Awards

Victoria

Chief Judge - People

Benita Husband

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.

Victoria Judging Panel - People

Luke Belfield

FIEAust CPEng NER

Kriston Symons

FIEAust CPEng EngExec NER

Scott Taylor

FIEAust CPEng NER

Justine Paragreen

FIEAust CPEng NER

Li Gao

FIEAust CPEng NER

Michelle Collett

FIEAust CPEng NER

Guoxing Lu

FIEAust

Chief Judge - Project

Ross Kristinof

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 lay-member of the Victorian Department of Justice Human Research Ethics Committee.

Victoria Judging Panel - Project

Guoxing Lu

FIEAust

Chris Farley

FIEAust

Julia Lamborn

FIEAust CPEng EngExec NER

Amelia Milne

MIEAust CPEng NER

Andrew Stevenson

MIEAust CPEng(Ret)

Amin Heidarpour

FIEAust CPEng NER

Emerging Professional Engineer of the Year nominees

Winner

Adam Jones

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.

Julian McNeil

MIEAust CPEng

Julian is a Chartered Structural Engineer and trusted industry advisor, specialising in designing sustainable high-rise towers in Melbourne. Known for his technical expertise, leadership and innovative structural solutions, he has contributed to redefining Melbourne's skyline and has led high-profile projects including Southbank by Beulah, Australia's tallest "Greenscaper," and West Side Place, the southern hemisphere's tallest hotel.

Julian's sustainability focused first-principles philosophy shapes his structural solutions, including Southbank's "green spine" vertical gardens and sky parks, harmonising aesthetic appeal and environmental harmony.

Dr Nameer Al Khafaf

MIEAust CPEng NER

Dr Nameer Al Khafaf is a researcher and project manager where he led an extraordinary resourceful contribution to the field of engineering demonstrated through excellence in research and professional practice. His research excellence is evidenced by developing a novel state-of-the-art technique to identify optimal clusters in energy consumers as a first step toward improving the security and reliability of the power grid toward net zero emission. The outcomes were translated into practical real-world applications which led to policy contribution, public recognition and successful nomination for RMIT research excellence award. His outstanding accomplishments and significant impact in advancing the standing of the engineering profession is evidenced by various leadership and volunteering roles and professional recognition.

Emerging Professional Engineer of the Year nominees

Thomas Barbour

MIEAust CPEng NER

Tom Barbour is a highly respected leader in land development engineering, known for his exceptional work in creating thriving communities and advancing housing affordability. As someone who has overcome personal challenges, Tom serves as an inspiration to other individuals with disabilities, proving that success knows no bounds. Through his influential speaking engagements, he shares his insights and motivates others to pursue their passions. Tom's remarkable contributions have left a lasting impact on the engineering profession, fostering innovation and promoting inclusivity. His unwavering dedication is paving the way for a brighter, more inclusive future in the industry.

Kinda Haroun

GradIEAust

Kinda is a dedicated structural engineer striving to contribute to Engineer's Australia work in shaping society with healthy, secure, prosperous and sustainable communities. Her journey into engineering was filled with unique challenges having to flee her home country in 2016, she persevered, not only earning her Bachelor of Civil Engineering degree but doing so with first class class honours award.

Kinda possesses a great understanding of structural design and project management principles with innovative problem-solving abilities and keen attention to detail make her an invaluable engineer. Her expertise spans a diverse range of projects, including infrastructure project management and building structures design.

Thomas Keating

MIEAust CPEng NER

Tom is a Chartered Professional Engineer, with experience across heavy rail, light rail and heavy and commercial road vehicles, in roles ranging from design, project engineering and management, through to governance and assurance processes.

As Chair of the recent RTSA Conference on Railway Excellence (CORE 2023), Tom led a talented team of volunteers to deliver a significant and highly acclaimed professional development event. Tom is an enthusiastic engineering industry advocate and can be regularly found at engineering events and programs of all flavours and disciplines, including mentoring, student engagement and helping to support emerging professionals in their careers.

Emerging Professional Engineer of the Year nominees

Ellen Worthington

MIEAust

Ellen is recognised throughout the transport industry in Australia and New Zealand as an advocate for encouraging all industry participants to consider what role they can play in the delivery of sustainable and resilient outcomes. The scale of the decarbonisation challenge demands a step change in both the breadth and scale of ambition, and the engineering profession has a duty to act quickly and decisively to progress to net zero emissions. Ellen actively engages with the industry to bring forward sector-wide collaboration and policies with a plan that anchors the role of infrastructure design in decarbonisation.

Luke Svarc

MIEAust CPEng NER

Luke Svarc is a highly skilled and accomplished professional in the field of engineering, with expertise in project management, construction management, stakeholder management and more. With a Bachelor's degree in Engineering (Civil and Infrastructure) (First Class Honours), a Bachelor's degree in Business (Management) and a Chartered status with Engineers Australia, Luke brings a well-rounded skill set to his work. Having joined BMD in 2012 on the inaugural RMIT scholarship, he has accumulated more than 11 years of experience in the industry, with the last two years spent as a Project Manager.

Emerging Professional Engineer of the Year nominees

Victoria Hann

MIEAust NER

Victoria is an enthusiastic and diligent engineer whose wide-ranging project experience, excellent communication and GIS skills make her invaluable on any project team. Victoria is a Senior Geotechnical Engineer in the Group 4 team. With more than eight years' experience with major transport infrastructure (rail and road) in NSW, WA and VIC, she can provide geotechnical engineering inputs to a range of business sectors including rail and road infrastructure, urban development and buildings, at various project stages from desk study through to construction. She is experienced in site investigations, design and reporting. She has a demonstrated capability in scoping, supervising and coordinating site investigation activities. Victoria also has experience with project management. Victoria is an excellent team player and has a strong ability to interact with other technical disciplines.

Richard Stokes

MIEAust

Richard is an accomplished sustainability consultant currently leading Arup's Victorian Sustainability team. He has local and international industry experience, working in the UK, UAE and Australia. An advocate for sustainable building design, policy, and the circular economy, he brings high level technical expertise and industry-leading sustainable design strategies to his project work. Richard looks for innovative solutions that go beyond standard sustainability requirements; his contributions have been recognised with awards from Living Futures Institute of Australia and Consult Australia. Richard is actively engaged with industry associations and committees, sharing his passion for sustainability with the engineering industry and wider community.

Professional Engineer of the Year nominees

Julia Gibney

MIEAust CPEng NER

Julia is a Chartered engineer with more than 29 years' experience in the defence, aviation and rail industries. She is an enthusiastic safety professional who is self- motivated, capable and diplomatic.

Julia is an astute and versatile leader with proven experience in safety assurance, human factors, regulatory compliance, quality and WHS, coupled with a strong academic background. She is extremely passionate about all developing the next generation of system safety engineers, and volunteers her time helping women and marginalised people with access to professional coaching and mentoring so they can realise their full potential.

Jennifer Del Mastro

FIEAust CPEng NER

Jennifer, a Leading Assurance Specialist and Co-Chair of the Risk Engineering Society (Victorian Division), has more than 25 years' in systems and safety engineering, on complex projects in rail, defence - maritime, land and aviation, including M1A1 Abrams, medium/ heavy recovery Vehicles, ANZAC Class Vessel, offshore patrol vessel (Aus and NZ), seaboats, Canterbury Multi-Role Vessel (NZ) and recently in air traffic management and airspace change.

Jennifer presents the engineering profession through volunteering on the CSIRO/STEM program, introducing the next generation to engineering and in the last 12 months has mentored four women in the industry, in various stages of their career.

Winner

Daniel Prohasky

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.

Professional Engineer of the Year nominees

Prof Xu Wang

FIEAust CPEng EngExec NER

Xu Wang, a distinguished Professor of Engineering at RMIT University, holds prestigious titles such as Fellow of the Society of Automotive Engineers, Fellow of Engineers Australia, Chartered Professional Engineer and Engineering Executive. With a PhD from Monash University, he has authored three books, published 120 journal papers and presented 36 conference papers. He secured notable grants and patents, including an ARC Discovery Project grant, two European patents, and three Australian Provisional Patents. Recognised with six RMIT teaching prizes, Professor Wang's contributions showcase exceptional expertise and leadership in engineering and academia.

Dr Nicholas Haritos

FIEAust CPEng NER

Nicholas Haritos has been a long serving staff member at The University of Melbourne in Civil and Structural Engineering, where he now is a Principal Fellow. He is an Adjunct Professor at Swinburne University of Technology and Managing Director of Strucomp Pty Ltd, Consulting Engineers. Nicholas is the developer of the TechnoLab™ experiential learning system for statics, mechanics of solids/materials/structures and dynamics, manufactured and marketed by Strucomp P/L right here in Melbourne. Nicholas has published more than 300 refereed papers in several fields, including wave and wind loading dynamic effects on structures, experimental modal analysis applications for condition monitoring.

Michael Dobbs

FIEAust CPEng EngExec NER

Michael Dobbs is a Co-Founder and Director of DDEG Pty Ltd, a leading specialised engineering group, delivering performance solutions to the construction industry.

Michael leads a team that has developed technical justification frameworks for performance solutions that have set new benchmarks for fire safety, acoustics, disability access consulting and building solutions engineering, and are now being adopted by other practitioners in these emerging sub-disciplines.

Professional Engineer of the Year nominees

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 city-shaping projects. Joseph has held numerous leadership roles managing the firm's Victoria and South Australia 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.

Sainath Tavate

MIEAust CPEng NER

Sainath Tavate is a qualified engineer who has worked in stormwater and construction industry for more than 13 years. Sai's professional career includes leading innovative programs, infrastructure delivery, strategic planning for council assets, construction leadership and program management in various Victorian Councils. Sai is a Chartered Professional Engineer and graduate of Local Government Professionals leadership program, currently leading team of high performing professionals at Yarra City Council.

Tim De La Zilwa

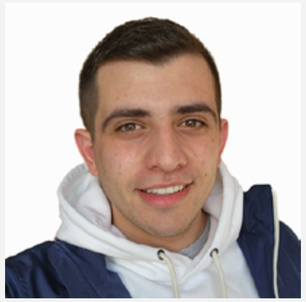
FIEAust CPEng NER

Tim De La Zilwa is a Chartered Professional Engineering Fellow with over 15 years' experience across the Defence & Automotive sectors. He is also the Founder, Director & Principal Consultant of Fusion Engineering Consulting Services.

Tim has extensive experience in technical, project and functional level leadership and has a proven track record across multiple major/complex Defence Acquisition and Sustainment Programs. He has a multi-disciplinary platform based development and integration background with a focus across various niche technical capability streams.

Tim is also a Reservist Senior Non-Commissioned Officer within the Australian Army with STEM experience across UAS, Artillery, Marksmanship and Communications.

Emerging Engineering Associate of the Year nominee



Ali Alghoul

GradAIEAust

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.

Engineering Associate of the Year nominees

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 qualified 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.

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 nominee

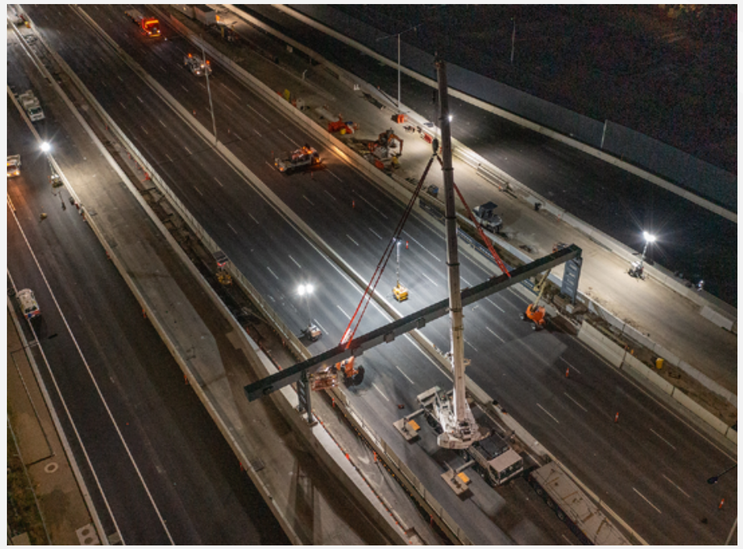
M80 Upgrade
Sydney Road to Edgars Road

AECOM

Melbourne's M80 Ring Road is one of Australia's busiest and largest freeways. One of the last sections to be upgraded was between Sydney Road and Edgar's Road. The project involved upgrading 5.7km of freeway, widening it to three lanes and interchange and system upgrades to connect to the M31 Hume Freeway.

AECOM was engaged for the detailed design and documentation of two new super T bridges, strengthening of two existing super T bridges, extension to the existing Blaxland cable-stay pedestrian bridge, retaining walls, noise walls and gantries, geometric road widening and associated road furniture, pier protection and barriers, and road drainage and pavement details.

AECOM's alternative, sophisticated design solution contributed to the project's completion six months ahead of schedule, improved traffic performance, simplified construction and saved MRVP $10 million dollars. The success of the project has resulted in improved access to other freeways and arterial roads. The freeway upgrade has also increased safety for more than 165,000 drivers and improved freight efficiency for 22,000 trucks each day.



Project of the Year nominee

Wandana Stormwater System

Villawood Properties
CREO Consultants, SPEL Stormwater, Drapers Civil Contracting, Biofilta and Noyce Environmental Consulting

Villawood Properties's triple-system stormwater network at its Wandana community in Geelong is a sophisticated network servicing a sharply-sloped 202-lot hillside estate. The extremely valuable views needed protection and presented several challenging issues, requiring the integration of three innovative, high-end engineering solutions:

- an underground 1.6 million-litre stormwater mitigation system
- an aerobic/anaerobic water treatment to stormwater system
- a six-metre deep wetlands retarding basin.

Villawood collaborated with several consultants in designing these creative systems and best implementing the most sustainable outcomes.

Villawood was able to achieve maximum engineering efficiency, and environmental and community benefit while at the same time safeguarding the commercial integrity of the overall residential project. Its designs achieved minimal or nil impact on lifestyle or downstream links.

Project of the Year nominee

Clean Up of Australia's Worst Toxic Waste Dump

Enviropacific Services Limited
EPA Victoria

Enviropacific were engaged by the Victorian EPA to remediate Australia's worst toxic waste dump, located in pristine farmland in north-western regional Victoria, with a range of unique challenges previously unencountered in the industry.

The site had historically been used for the burial of thousands of tonnes of dangerous goods including solid and liquid chemicals, acetylene gas bottles, syringes, blood and tissue samples, pesticides, PFAS, explosive airbag detonators and asbestos. The waste was indiscriminately buried across the 1400-acre site with no burial records. Enviropacific was required to identify, delineate, excavate, classify and dispose of all buried wastes and return the site to a condition that does not present ongoing risks to the environment and local community.

A range of significant innovations were implemented to mitigate the challenges, ultimately resulting in the delivery of a safe, environmentally sound and highly successful project, returning the local environment to its original condition.

Project of the Year nominee

ANCA Integrated Manufacturing System (AIMS)

ANCA

The ANCA Integrated Manufacturing System (AIMS) project leverages ANCA's vertically integrated capabilities to consider cutting tool production as a system and integrates and automates normally discrete manufacturing processes to enable efficient, autonomous, lights-out manufacturing. The AIMS system is flexible and modular and enhances productivity, quality and cost-efficiency for tool manufacturers.

The AIMS project is nominated for an excellence award as the system that a cross-functional team of engineers in Melbourne has created is ground-breaking for the cutting tool industry – there is nothing in the market capable of offering this level of connectivity and automation. The project incorporates advanced technologies with engineering solutions, demonstrating resourcefulness, creativity, and innovation.

Incorporating mechanical, robotic, mechatronic, systems, and software engineering disciplines, the project has excited an industry as a smart solution for production challenges and for end-to-end cutting tool manufacturing.

Project of the Year nominee

Albert Park Track Resurfacing Project

IEDM: Hart Consult International GmbH, Kamen Engineering, Lanigan Civil

The Australian Grand Prix Corporation (AGPC) engaged IEDM to undertake a redesign and complete resurfacing of the Albert Park Grand Prix Circuit. Tasked with the brief of achieving a surface that provides both increased grip and abrasion, AGPC and IEDM worked with Hart Consult, Kamen Engineering and Downer Group, to refine an international F1 circuit asphalt mix specification using available Victorian aggregates and a locally produced binder to ensure these characteristics were achieved.

Changed crushing and screening at quarries, new sieve sizes and screens for the asphalt batch plant, and new materials never used on a Formula 1 track. The result is a uniquely Australian race mix asphalt, delivered to the highest technical standards and within the toughest service conditions in motorsport.

Formula 1's return to racing at Albert Park yielded the highest attendance at any Formula 1 or Australian sporting event to date. Overtaking on the circuit increased by five times when compared to previous years and saw record speeds. The project has successfully rehabilitated an aging asset that is essential to the staging of future Grand Prix's and has delivered community benefits that align with the Albert Park Master Plan.

Project of the Year nominee

Winner

Development of Apple Harvesting Robot

Monash University

The Apple Harvesting Robot project stands as a significant milestone in addressing the global labour shortage challenge. Over its five-year 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.

Project of the Year nominee

Fitzsimons Lane Upgrade

BMD Constructions

BMD delivered increased road safety and traffic capacity in a busy corridor in Melbourne's north east for Major Road Projects Victoria (MRPV). A significant project as part of Victoria's Big Build, the upgrade was the first MRPV delivered under a new Program Delivery Approach model and resulted in outstanding and industry leading innovations in design, cost, time, quality, safety and the environment.

BMD and MRPV collaborated to engineer solutions in the early phase including challenging horizontal and vertical geometry for pavement overlays and drainage extents to be optimised, and utility clash points were identified and service relocations mitigated through modification of the road geometry and drainage.

The Fitzsimons Lane Upgrade was successfully completed under time and budget as a result of four expedited construction blitzes within the original time frames with no overruns of blitz timing. This was achieved all while raising the bar in infrastructure delivery through industry leading initiatives across sustainability and social procurement for disadvantaged Victorians.

Project of the Year nominee

Preston Level Crossing Removal Project

North Western Program Alliance

As part of Victoria's landmark Level Crossing Removal Project (LXRP), the Preston LXRP was a complex and ambitious project to remove four level crossings, construct 2km of elevated viaducts and two new premium stations on Melbourne's Mernda Line. The Project revitalised a rail corridor creating 60,000m2 of new public spaces, and optimised the flow of 82,000 vehicles and 200 trains a day.

The challenge was to deliver this large-scale $564 million infrastructure upgrade in a busy metropolitan area, with minimal disruption to traffic, rail services and the local community. Project site constraints significantly limited construction methods, however through a coordinated and collaborative effort with key project stakeholders, North Western Program Alliance developed and implemented two innovative and elegant engineering solutions, Single-Line Running and Radiant Heat Curing. These innovations overcame project constraints, minimised disruption and provided a cost-effective and clever solution.

Project of the Year nominee

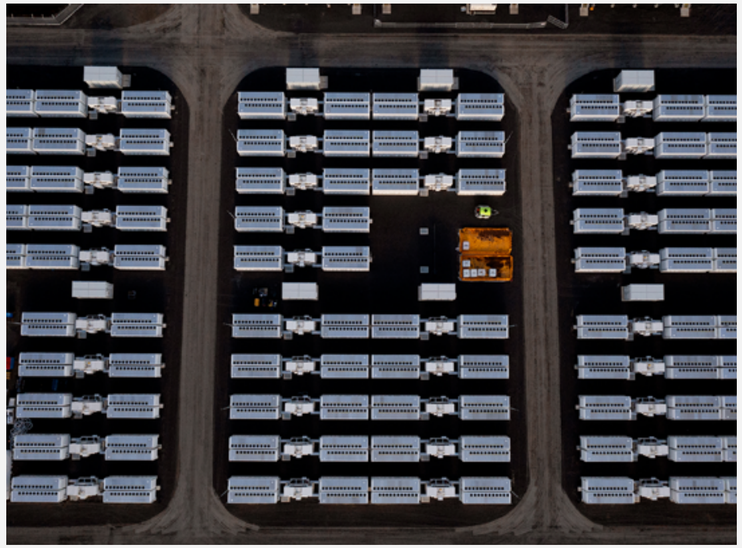
Victorian Big Battery

AusNet, Jacobs, Neoen and Tesla

The 300 MW Victorian Big Battery (VBB) near Geelong is one of the largest energy storage facilities in the world. The VBB project has advanced society through great engineering in numerous ways:

- Assists in the reduction of costs for energy consumers.
- Supports Victoria's legislated targets of 50 per cent renewables by 2030 and net zero emissions by 2050 by enabling more wind and solar.
- Helps to avoid blackouts and the associated costs.
- Construction brought a significant economic boost to the Geelong region through the COVID-19 pandemic lockdown period, creating more than 150 construction jobs and six full time permanent positions.

The battery is owned and operated by Neoen and was delivered in collaboration with Tesla (via its Megapack technology) and with network partner AusNet Services. The design of the new 220 kV and 33 kV connection assets was undertaken by Jacobs on behalf of AusNet. The battery is connected to the Victorian Transmission Network at AusNet's Moorabool Terminal Station.



Project of the Year nominee

Centres for National Resilience Melbourne (CNRM)

AECOM Australia
Multiplex and Billard Leece Partnership

The Centre for National Resilience, Melbourne, was initiated to address Australia's urgent requirement for a dedicated quarantine accommodation facility to mitigate the spread of COVID-19 and prepare for future health crises, emergencies and humanitarian responses.

AECOM was entrusted with delivering the business case and detailed design of the Victorian, Queensland and Western Australian sites for the Department of Finance, Commonwealth of Australia.

Delivery of the $513 million Centre for National Resilience, Melbourne, achieved social and economic outcomes by protecting the community from the spread of disease and contributing to local employment and positive economic activity during a time of unprecedented uncertainty. AECOM achieved these outcomes by adopting modern methods of construction, digital design workflows and thorough infection prevention control (IPC) design, all within a compressed 12-month delivery timeframe.

Project of the Year nominee

Victorian Heart Hospital

AECOM

The $577 million Victorian Heart Hospital is Australia's first state-of-the-art specialist cardiac hospital. The hospital provides innovative, holistic, patient-centred care in heart disease and world-leading research and education. Constructed on the Monash University Clayton campus, the purpose-built centre for education and research facility is a collaboration between the Victorian Health Building Authority, Monash Health and Monash University.

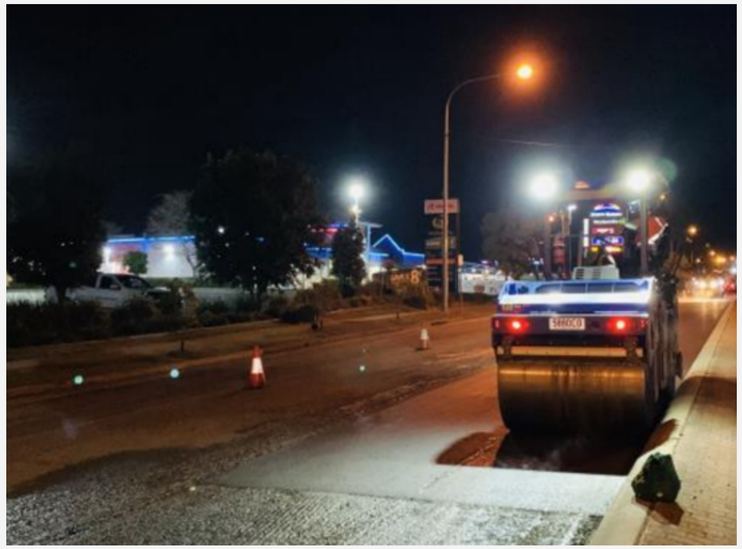
AECOM combined innovative and best-practice healthcare engineering solutions to deliver the Victorian Heart Hospital, setting a benchmark for cardiac hospital design in Australia. Offering an integrated engineering solution, AECOM designed and delivered an innovative thermal break solution and integrated façade shading system that achieved reduced mechanical conditioning loads and raised the standard of Australian engineering within the healthcare sector.

Project of the Year nominee

Intelligent Construction of Transport Infrastructure Addressing Sustainability, Digitalisation and Productivity

Smart Pavements Australia Research Collaboration (SPARC) Hub
EIC Activities, Austroads and Monash University

The Intelligent Compaction Analyser (ICA) developed by SPARC Hub is a ground-breaking technology that revolutionises road construction. With its integration of proximal measurement techniques for material density and temperature, the ICA ensures unparalleled quality control and assurance for road material compaction. Real-time monitoring and analysis capabilities can provide immediate feedback, eliminating the need for hazardous tests (e.g. Nuclear Gauge). SPARC Hub's specifications, specifically tailored to meet the unique requirements of the Australian construction industry, maximise the benefits of intelligent compaction technology for quality control and assurance of road materials compaction. These technological advancements, together with the tailored specifications, fill critical knowledge gaps, facilitate widespread adoption of intelligent compaction in Australia, and position the country as a global leader in intelligent compaction technology. The ICA's retrofitting capability, compatibility with construction specifications, and real-time visualisation and record of compaction data for the entire construction corridor further enhance its impact on productivity, safety and sustainability in road construction.



ENGINEERS AUSTRALIA

Excellence Awards

Western Australia

Chief Judge - People

Nee Nee Ong

FIEAust CPEng EngExec NER

Nee Nee Ong has more than twenty five 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 Co-Chair of the Engineers Australia Electrical College Board, Chair of WA branch College of Leadership and Management, member of the Accreditation Board and Congress.

Western Australia Judging Panel - People

Perry Beor

MIEAust CPEng NER

Stanley Joseph

MIEAust CPEng NER

Erica Smith

FIEAust CPEng NER

Luca Zappia

AffilIEAust

Tiina-Maija Ratamo

FIEAust CPEng EngExec NER

Chief Judge - Project

Kassia Ralston

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.

Western Australia Judging Panel - Project

Brian Haggerty

FIEAust CPEng NER

Gerry Hofmann

FIEAust CPEng NER

Chensong Dong

MIEAust CPEng

Vittorio Tassone

FIEAust CPEng NER

Justin Byrne

FIEAust CPEng

Emerging Professional Engineer of the Year nominee

Finn Loos

GradIEAust

In 2022, Finn graduated from Curtin University with a First Class Honours in Mechatronic Engineering. His passion for robotics expanded into a specialisation in industrial automation working as a SCADA Engineer for Australian Control Engineering Pty Ltd. In his spare time Finn volunteers as a mentor in a range of STEM Initiatives such as the First Robotic Competition. Other volunteering extends to the WA Robotics Playoffs (WARP) and The First Lego League (FLL) in conjunction with Curtin University to inspire students about STEM and help them develop problem solving, critical thinking and teamwork skills

Faisal Ur Rahman Awan

GradIEAust

Faisal is a Technical Support Engineer at School of Engineering, Edith Cowan University (ECU) Australia. Faisal has 10 years of technical engineering, teaching and research experience. He is an active member of prestigious professional organisations such as Society of Petroleum Engineers, American Chemical Society, Energy Institute, Energy Club of Western Australia, International Association of Engineers, Pakistan Engineering Council and Pakistan Engineering Congress. Faisal has delivered unparalleled dedication to promoting and ensuring the highest standards of engineering research and development at a young age. Through exceptional leadership and pioneering initiatives, he has made a significant impact on creating a safe and healthy environment for all in the space he works.

Nicholas Keage

MIEAust CPEng NER

Nick Keage, the Civil Structures Technical Practice Lead at AECOM, spearheads the practice area's technical excellence throughout ANZ. Renowned for delivering complex, large-scale infrastructure projects across Australia, Nick is a force to be reckoned with. He is a trailblazer, constantly challenging the status quo to enhance sustainability and social impacts on projects. To transform the built environment, he took the initiative to establish and now leads an Environment, Social, and Governance (ESG) working group. Through his technical prowess, innovative mindset, and dedication to making a difference, Nick is reshaping the landscape of civil structures and setting new benchmarks for excellence.

Emerging Professional Engineer of the Year nominees

Stephen Murphy

MIEAust

Stephen Murphy is a talented young engineer who completed his Bachelor of Science and Master of Civil Engineering from the University of Western Australia in 2020. Joining Georgiou in 2021 as part of the Leach Welshpool Alliance team, he quickly rose from Graduate Engineer to Site Engineer within eight months. Stephen's rapid career progression at the age of 26 reflects his dedication and hard work. He actively supports the growth of his colleagues – mentoring cadets, graduates and apprentices. With his recent promotion to the role of Project Engineer, Stephen's ambition and proven capabilities make him an invaluable asset to Georgiou.

Andie Gell

GradIEAust

Andie is a dedicated advocate for promoting females in the field of engineering. Through her continuous involvement in the Girls+ in Engineering Program at UWA, she has volunteered her time to inspire university and high school students, encouraging them to pursue careers in STEM. Andie's technical expertise and problem-solving are evident in her work as she assisted with implementing a new wagon recall management and alerts platform for Rio Tinto's wagons.

Chien Foo

GradIEAust

Chien was born on Christmas Island, moved to Perth for high school and graduated top of her class in Chemical Engineering. After graduating during an economic downturn, she started her career in Melbourne and quickly progressed to lead a prestress concrete project in Adelaide. Chien was later seconded to Shell's Prelude FLNG project before joining Shell itself and is currently the Offshore Operations Engineer. She is passionate about helping others access opportunities and is involved in Women In Subsea and Energy's high school outreach program, Future Engineers.

Emerging Professional Engineer of the Year nominees

Blake Marxsen

GradIEAust

Blake Marxsen is a visionary engineer who constantly challenges the status quo and pushes the boundaries of innovation. With a relentless drive to go beyond what is expected, Blake seeks to create transformative solutions that make a lasting impact.

One of Blake's greatest rewards comes from helping individuals and the environment achieve what was once considered impossible. He thrives on the opportunity to empower others to reach their full potential and unlock new possibilities. Whether it's through his innovative projects or his collaborations with diverse teams, Blake is driven by the belief that engineering has the power to make a difference

Kelsie Clarke

MIEAust

Kelsie is an engineering leader with experience across maintenance, engineering and operations, and is currently Business Readiness Lead - SAP/4HANA ERP at Woodside Energy. She was previously at the Karratha Gas Plant as a Maintenance Engineering Team Lead. She moved back to Perth in 2022 as a Business Advisor, before moving to her current role.

Kelsie won the Subsea Energy Australia Emerging Talent Award 2016 and the CME Outstanding Young Woman in Resources Award 2023. Kelsie is Vice Chair of the Board of Engineers Without Borders and an alumnae of Homeward Bound, a global leadership program for women in STEM.

Winner

Nicole Locke

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.

Emerging Professional Engineer of the Year nominees

Esma Kaya

MIEAust CPEng NER

Esma is a project engineer with eight years' experience in delivering major infrastructure projects in Perth. Her journey has been challenging, but her motivation is deeply rooted in her love of engineering and breaking barriers for all women alike. Esma's continued determination in driving change in the construction industry has seen her stepping into the role of Chair of the Mentoring Committee at NAWIC. As she navigates the dynamic landscape of engineering in construction, Esma remains steadfast in her pursuit of progress and continues to use her role to support and empower women who want to challenge the status quo.

Arsen Ilhan

MIEAust

Arsen is a mechanical engineer with more than four years' experience in works involving mechanical design of heating, ventilation, air conditioning (HVAC) systems for buildings. She is passionate about fostering a more sustainable future by making the world a better place as an engineer and championing diversity and inclusion across the industry. She's an innovator and stand out role model for future young engineering professionals proven through her contributions to knowledge sharing and entrepreneurial endeavors that foster a more inclusive and sustainable future for engineering and education.

Professional Engineer of the Year nominees

Tharindu Weerasinghe

MIEAust CPEng

Tharindu, a Chartered computer engineer with more than 15 years of Industry exposure in Sri Lanka and Australia, currently serves as the Operations Manager of Austal Technology, Austal Ships Pty Ltd. WA. Tharindu became a senior member of the most distinguish engineering professional organszation in the world, IEEE in 2021, which is a significant achievement of his professional journey. He was awarded Chartered status by the Engineers Australia in Project Management which is another professional achievement! Tharindu was awarded the International Professional Engineer (IntPE) by the Institute of Engineers Sri Lanka in October 2022.

Yu Jordan Zhao

FIEAust CPEng NER

A Chartered Professional Engineer with 18 years of industry experience in Australia. Jordan has played a key role in successful delivery of large utility electrical, instrumentation and SCADA projects with his experience from his years working in water, power, transportation. His recent projects include more than 17 new Metronet stations, more than 100 Water Corporation local servers and Sunrise Dam Power Station Generation Expansion.

Yu is passionate about implementing new technologies in Australia, believing that Cloud Based Monitoring Systems will transform many industries by improving efficiency and reducing cost of living for the local communities. He has been active on social media with his education and engineering videos, being driven by his passion to help young engineers grow and uncover their full potential.

Kevin Chong

FIEAust CPEng NER

Principal Engineer (Utilities Reliability) Kevin has more than 20 years of experience in the energy, mining and resources industries. He has extensive experience in planning, operation, maintenance, asset management, reliability engineering and capital investment for non-process infrastructure (NPI) assets.

He is passionate about innovation and has delivered countless safety and reliability improvements through the application of many cutting-edge technologies including industrial IoT, predictive analytics and data visualisation to sustain world class level asset performance. In recognition of his achievements, Kevin was named on the prestigious list of 2020 Australia's Most Innovative Engineers for mining, oil and gas by Engineers Australia.

Professional Engineer of the Year nominees

Winner

Kala Senathirajah

MIEAust CPEng NER

Kala Senathirajah 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.

Michael von Bertouch

FIEAust CPEng EngExec NER

Mike von Bertouch is a multi-faceted 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.

Manfred Braun

MIEAust CPEng EngExec NER

Manfred Braun, boasting more than 30 years of experience, is distinguished for his innovative, strategic solutions and steadfast commitment to sustainability. Leaving indelible marks on international projects like the RTIO CLA Dolphin Head Life Extension and Kuala Lumpur Monorail Project, he has fostered economic growth while balancing environmental and societal considerations. His recent work on the AMC IIP project showcases his championing of sustainability and safety. As the Marine Structures Leader for the Tender Design of the Alkimos Desalination Project, his designs prioritise longevity and resource efficiency. Beyond his technical acumen, Manfred fosters a diverse, inclusive engineering culture, facilitating significant societal contributions.

Professional Engineer of the Year nominee

Pratik Shrestha

MIEAust CPEng NER

Smart technical skills, a passion for advanced technology and a commitment to strong client relationships are hallmarks of Pratik Shrestha's career. An active industry contributor, a lecturer, generous mentor and an award winner, Pratik, Aurecon's Principal, also champions ideas that could help Australia's built environment make a large, sustainable leap forward. Pratik led a world-first robotics technology trial at Murdoch University's Boola Katitjin – Western Australia's first and largest mass-engineered timber building. Robots provided a proof of concept that could automate a labour-intensive task, boost productivity, reduce costs, improve safety and ultimately deliver more sustainable timber buildings.

Engineering Technologist of the Year nominee

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.

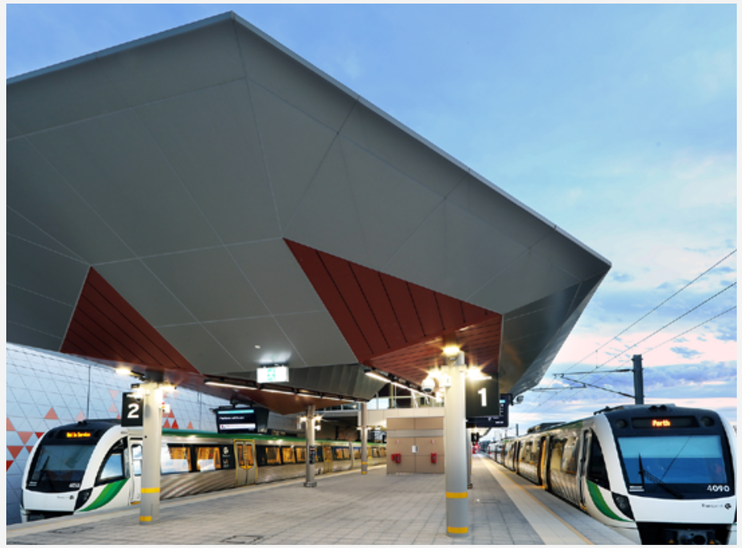
Project of the Year nominee

Forrestfield-Airport Link

Webuild - NRW Joint Venture
Public Transport Authority and GHD

The $1.86 billion METRONET Forrestfield-Airport Link is jointly funded by the Australian and Western Australian governments and has delivered a new rail service to the eastern suburbs of Perth – with three new stations at Redcliffe, Airport Central and High Wycombe. The Public Transport Authority awarded the design, construct and maintenance contract to Webuild – NRW Joint Venture in 2016.

The rail link, now known as the Airport Line, adds 8.5km to Perth's rail network, and travels underneath the Swan River and Perth Airport, reaching around 27 metres below ground at its deepest point. The Airport Line opened on 9 October 2022 - it is the first new train line to be introduced into the network since 2007.



Project of the Year nominee

Coastal Infrastructure – Seawalls

Town of Port Hedland
M P Rogers and Associates, GTS Australia, and WA Limestone Contracting

Cyclone Veronica in late March 2019 caused substantial damage to many of the coastal assets and several areas of Port Hedland. This cyclone had significantly advanced risks with erosion impacts to coastal and drainage infrastructure, undercutting vegetation and rock strata, resulting in extended beach scarps and substantial shoreline movement with minimal buffer to high value assets. Detailed site assessments were completed to determine the extent of damages and necessary level of protection that it would require. A range of options were considered for the coastal protection and the selected option involved construction of granite rock seawalls to protect against coastal erosion.

This multi-million project was undertaken focusing on ethical, sustainable and safety practices, placement of geotextile, testing of strength and density of rock and its marine grade durability. Wildlife Management Plans were prepared in consultation with the Department of Biodiversity, Conservation, and Attractions regarding the marine wildlife, particularly, the flatback turtles and their nesting habitat. The seawalls will not only protect the wildlife and assets but also preserve the beautiful coastline for future generations to come.

Project of the Year nominee

Leach Highway
Welshpool Roach Interchange

Leach Welshpool Alliance: Georgiou Group, Main Roads Western Australia, BG&E and Golder Associates

The Leach Highway and Welshpool Road Interchange project was a challenging project addressing one of Perth's most congested and dangerous intersections. To fast-track the project Main Roads WA used a new project delivery methodology involving an Alliance Development Agreement phase, allowing the early involvement of constructor Georgiou Group, designer BG&E, and geotechnical engineers Golder & Associates. This delivery model fast-tracked project delivery by up to five months, reduced project costs by millions of dollars and facilitated major design enhancements.

One major enhancement was a more efficient and sustainable roundabout design to replace a signalised diamond intersection. Several millions of dollars were saved by reducing the construction footprint and slashing land acquisition impacts on adjacent businesses, while ultimately delivering better traffic flow and capacity, and improved road user safety.

Challenges included construction of a non-traditional three-span post-tensioned bespoke tapered bridge over live rail. To tackle the challenge of live traffic and major level differences in northbound and southbound carriages the team meticulously staged numerous traffic switches to ensure two lanes each way remained active on Leach Highway throughout construction.

Project of the Year nominee

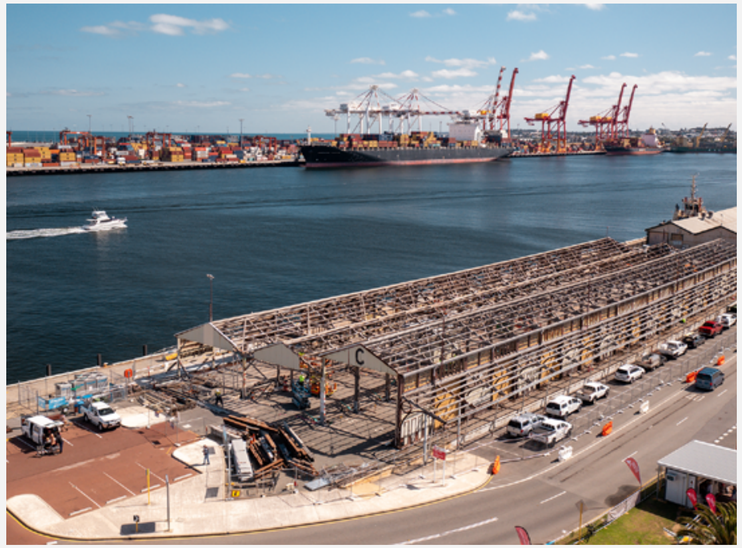
C-Shed Phase 3 Remediation

Advanteering Civil Engineers

Situated in Victoria Quay, C Shed stands as a historic landmark, having been one of the earliest structures to grace the precinct. The timber framed shed was used throughout the 20th century to store cargo but also witnessed the arrival and departure of passengers, migrants and even the Queen, before the passenger terminal opened in 1960. However, years of wear and tear resulted in significant deterioration of the shed.

Advanteering Civil Engineers was engaged by Fremantle Ports to complete remediation works including repair post footings and timber truss framing, shed realignment and straightening, new sheet pile wall, roofing and wharf repairs. There were a number of factors which made this task challenging, including the age of the structure, degradation of timber, working on a Heritage Listed building and differing foundation types.

Each of these challenges were overcome with skill, expertise and ingenuity resulting in the successful realignment and straightening of the heritage listed shed. The success of the project can be attributed to engineering excellence.



Project of the Year nominee

Winner

Boola Katitjin | Murdoch University

Aurecon
Murdoch University

Murdoch University Boola Katitjin is the largest mass-engineered timber building in Western Australia. Boola Katitjin 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 long-term 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.

Project of the Year nominee

Kwinana Big Battery

Synergy

Synergy has developed a series of utility scale batteries for the isolated WA power system to meet the challenge of demand/supply matching of typical daily peak loads of 2500MW with 2000MW distribution DPV plus large renewable generators. The Synergy team has established a program of delivering a series of battery installation projects, from 100MW to 1GW, each with a different load matching objective.

All these projects provide both ultra-fast response ancillary services but also dispatchable generation in a rotating generation equivalence, obviating many of the gaps in power system security created by variable renewable sources. The projects contribute significantly to the advancement of society by the provision of a secure supply of electricity through an environmentally sustainable generation source. The use of BESS systems in the mode being installed by Synergy, enables greater use of renewable generation resources with the consequent reduction in greenhouse gas production.

Project of the Year nominee

Gudai-Darri Project

Rio Tinto

The Gudai-Darri project delivers a new production hub for Rio Tinto's iron ore business in Western Australia. It incorporates a mine with an annual capacity of 43 Mtpa and a 166 kilometre rail line.

The project, which involved more than 15 million workhours, had a key objective to be one of the most advanced mines in the industry. This was achieved by implementing autonomous trucks, trains and drills, a full digital replica of the plant and many other novel engineering innovations. Gudai-Darri is also powered by an on-premise solar farm supplying around one third of its daily power requirements. The project team sourced A$3.2 billion of goods and services within WA during the construction of the project, with contracts valued at A$1.5 billion awarded to WA businesses.

Gudai-Darri represents a step-change in the engineering and deployment of automation and technology in Rio Tinto's Iron Ore business and truly demonstrates the talent, ingenuity and capability in the Western Australian engineering and construction industry.

Project of the Year nominee

Bellevue Railcar Assembly Facility and Multifunctional Depot

Public Transport Authority of Western Australia and Aurecon Australasia

The Bellevue Railcar Manufacturing and Maintenance Facility represents a new benchmark of railcar depot design and engineering. At 400,000m2, Bellevue is the largest Electric Multiple Unit (EMU) and Diesel Multiple Unit (DMU) depot in WA. The site provides an infinitely flexible facility able to perform major overhauls and half-life refurbishments as well as all running maintenance on PTA's collective fleets, both standard and narrow gauge.

The facility makes effective use of every square metre to accommodate more than 400 individual overhead line equipment (OLE) structures, 50 custom track turnouts (narrow, standard, dual and mixed gauge), 12 km of electrified track, and 3 km of non-electrified track. The design incorporates decorative pre-cast panels and custom profiled wall and roof cladding to deliver a visually iconic campus which supports DevelopmentWA's vision for the Midland precinct, paying respect to the iconic legacy grain silos the site was once home to for over half a century.

Not only does it provide a world class maintenance centre, the project has been the catalyst for the railcar manufacturing renaissance occurring across Australia.

Project of the Year nominee

Coolzy – A Sustainable Personal Cooling Solution for a Warming World

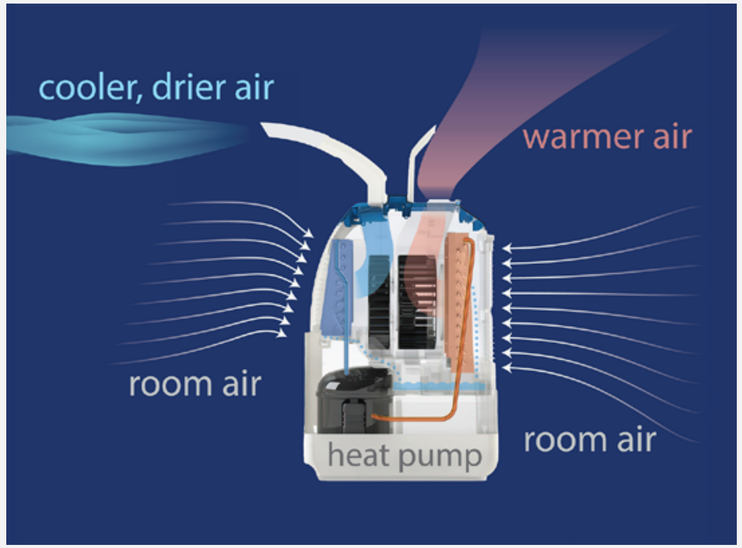
Close Comfort

Coolzy directs a focused stream of air to create a microclimate that cools nearby people. People feel comfortable, no energy is wasted cooling the building, and it runs on only 350 watts.

A special bed tent intensifies cooling for sleeping and prevents diseases like malaria.

Coolzy came from thinking differently about air-conditioning when faced with the need to reduce power consumption to ~100 watts per person.

The result: Coolzy was awarded the best portable air conditioner by customers on productreview.com.au in both 2022 and 2023 and receives hundreds of five-star ratings in Indonesia.



Project of the Year nominee

Water Corporation Process Control Training Centre

Water Corporation

Automation is essential for Water Corporation's 24/7 service to customers across Western Australia. This project is upskilling staff and contractors, enabling them to learn and improve their skills in the maintenance, troubleshooting and repair of SCADA, control and automation systems. These skills are crucial for continuity of service, as well as supporting accuracy and continuity of reporting and optimisation practices.

By creating a bespoke training centre for our people to learn and improve their skills, the improvements in knowledge have been huge. So far 48 courses have been run with almost 200 attendees from across the state. Each course is written by experienced, in-house practitioners, making for a sustainable and inclusive approach to education.

The centre equipment is also used to research and test the suitability of equipment, processes and protocols proposed to be used within Water Corporation, creating economies of scale for the resources put into the centre.

Project of the Year nominee

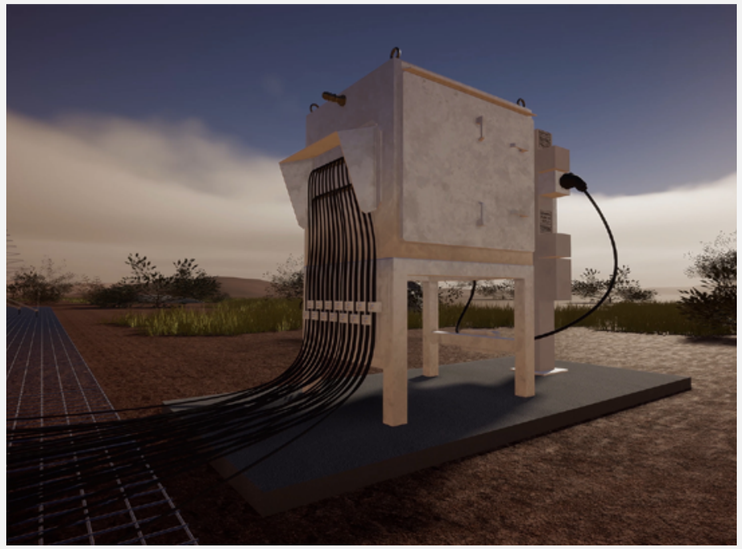
Design of a radio-quiet Power and Signal Distribution System for SKA-Low

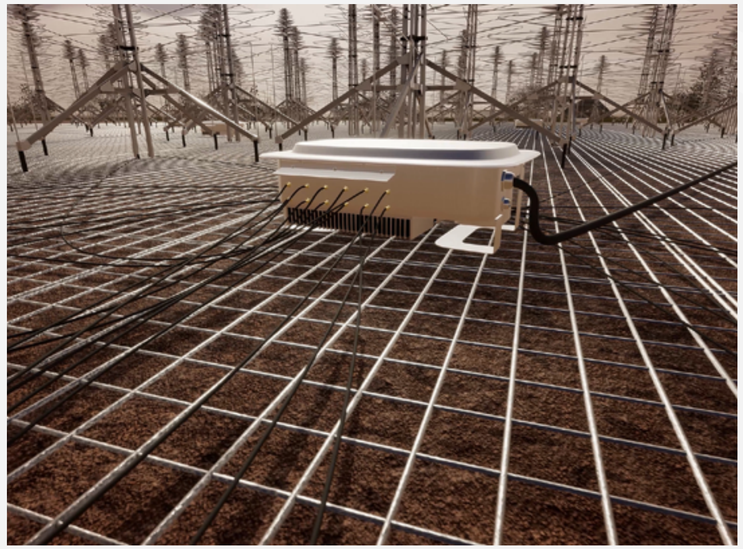
Curtin University

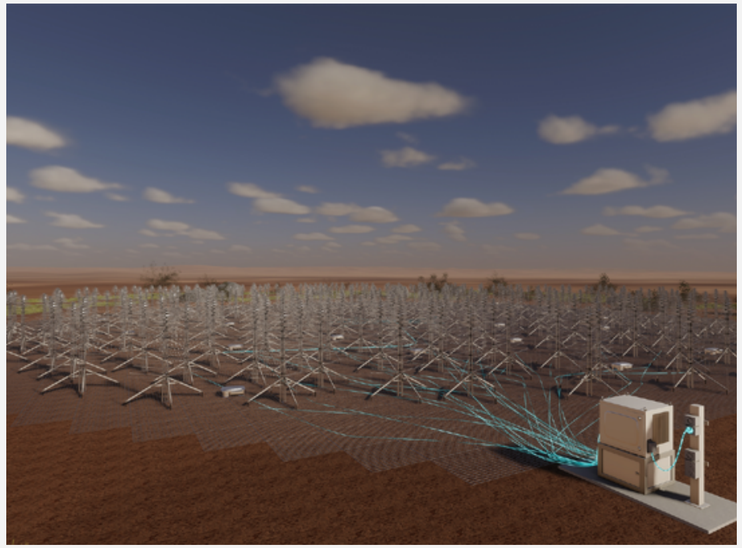
Engineers at the Curtin University node of the International Centre for Radio Astronomy Research (ICRAR) have designed the Power and Signal Distribution (PaSD)^ system for the SKAO's Low telescope. The SKA-Low is being built in remote Western Australia on the traditional lands of the Wajarri Yamaji. It will be sensitive to the faintest low-frequency radio signals travelling across the universe for billions of years.

To be capable of this transformative science, the systems that make up the telescope must meet a uniquely demanding suite of electromagnetic compatibility (EMC) specifications. Situated among the extremely sensitive antennas that substantially determine the ultimate performance of SKA-Low, the PaSD is subject to unprecedented EMC requirements.

In meeting the extraordinary challenge of designing a sophisticated, reliable, and cost-effective power conditioning, control and monitoring system that has an almost undetectable electromagnetic footprint, the ICRAR-Curtin PaSD design has retired a significant technical risk to the success of SKA-Low.







Project of the Year nominee

Marandoo & Hope Downs 4 (HD4) Primary Crusher Upgrades

BG&E Resources
Engineering Dynamics Consultants (EDC)

Rio Tinto's Marandoo and Hope Downs 4 (HD4) Primary Crushing Facilities process run-of-mine (ROM) material and is essential for delivering the required capacity at both sites. Excessive levels of vibration were identified at the facility over an extended time, which was resulting in structural fatigue/failure, building components rattling loose and risk to personnel.

A world-first innovative design solution was developed that incorporated offering up a large concrete and steel isolation frame to the underside of the existing floor and mounting it on air springs. The solution involved 200 tonnes of Australian-made steel supported on rubber air springs and steel sub-structure. BGER and EDC borrowed technologies from high-rise earthquake isolation, haul trucks and rail chassis to develop a fit-for-purpose solution that minimised the risk of downtime. By leveraging other industries, proven technologies were used in a world-first application without unknown risks for the asset owner.

ENGINEERS AUSTRALIA

Excellence Awards

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

JOHN HOLLAND

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 city-shaping 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.

Join us:

Engineers Australia Excellence Awards Gala dinner 2023

2023 Engineers Australia Excellence Awards will be held on Wednesday 29 November at Palladium, Crown Towers in Melbourne.

We are thrilled to be announcing and celebrating the national winners of the:

- Emerging Professional Engineer of the Year
- Emerging Engineering Technologist of the Year
- Emerging Engineering Associate of the Year
- Professional Engineer of the Year
- Engineering Technologist of the Year
- Engineering Associate of the Year
- Project of the Year
- President Prize
- Honorary Fellows
- Peter Nicol Russell Career Achievement Memorial Medal

Each finalist has showcased outstanding examples of innovation and resourcefulness within the engineering profession, the highest technical, professional and community service standards in engineering and inspiring engineering professionals who demonstrate contribution to the well-being of people, communities and sustainable engineering practices, promotion of the engineering profession, and the formulation of resourceful, innovative and aesthetically appealing engineering solutions.

To register for this prestigious event, please head to the website.

ENGINEERS AUSTRALIA

Excellence Awards

Excellence Awards 2023

Showcase Booklet