

IMPACT

ATSE

50
YEARS

MAGAZINE OF THE AUSTRALIAN ACADEMY OF TECHNOLOGICAL SCIENCES & ENGINEERING
ATSE.ORG.AU

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Opportunities of the
future,
created in the
present



Australian Academy of
Technological Sciences
& Engineering
1975-2025

ATSE acknowledges the Traditional Owners of the lands on which we meet and work and we pay our respects to Elders past and present. We recognise the deep knowledge and practices embedded in the oldest continuous culture on the planet. Australia's history of engineering, technology and applied science spans more than 60,000 years.

Above: *Ripples of memory, pathways of tomorrow* by Robbie Beresford, Wiradjuri artist

PUBLISHER

Australian Academy of Technological Sciences & Engineering (ATSE).
We are a Learned Academy of independent experts. We bring together Australia's leading experts in applied science, technology and engineering to provide impartial, practical and evidence-based advice on how to achieve sustainable solutions and advance prosperity.

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Cover image: The Large Hadron Collider is the world's largest and most powerful particle accelerator and consists of a 27km ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way. Australia and the European Commission successfully concluded treaty negotiations in June 2026 to associate with Horizon Europe, the EU's €93.5 billion flagship research and innovation program. Australian organisations are expected to be fully eligible to lead and apply for Horizon Europe grants starting in early 2027.



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The mission made practical — a trusted voice for STEM.



Dr Cathy Foley

AO PSM FTSE FAA

Dr Foley was Australia's ninth Chief Scientist from January 2021 until 2024. Prior to this Dr Foley had a long career at Australia's national science agency, the CSIRO, including as the agency's Chief Scientist. Dr Foley is an internationally recognised physicist with major research achievements in superconductors and sensors which led to the development of the LANDTEM sensor system to locate valuable deposits of minerals deep underground.

▲ Elected 2008

AUSTRALIA IS FACING a convergence of economic, environmental, technological and social challenges that will not be solved by any single discipline, sector or institution acting alone. In such moments, knowledge matters most when it connects across research fields and organisations, informing real-world decisions and outcomes.

Introducing IMPACT for the first time as President of ATSE in the wake of our 50th anniversary celebrations, I'm more motivated than ever to bring to light the people and their projects that are making a difference to our lives. I'm energised by both the scale of what's at stake and the calibre of what ATSE brings to it.

The past months have given me a vivid sense of the range of ground we cover. I've been involved with ATSE's contribution to the response to Ambitious Australia. I have continued to champion the case for quantum technologies as a genuine new industry, not a distant prospect, and as an area where Australia already has leadership. At the same time, we've been responding to government calls for submissions across an unusually broad front: water security, tax reform, critical minerals processing, data centres, biosecurity, education

and more. Each of these is technically complex, economically significant and consequential for Australians' lives.

The fact that ATSE can speak credibly across all of them, drawing on the expertise of our Fellows, is precisely what makes us worth listening to.

ATSE contributes to progress by translating knowledge into impact through interdisciplinary collaboration, policy engagement, standards, education and partnerships that connect research with industry and government.

We're also investing in the pipeline. Programs like IMNIS, Elevate and STELR aren't peripheral to our mission. They are the mission made practical, connecting researchers with industry, building the next generation of technically literate citizens and ensuring that Australia's knowledge base translates into lasting national capability.

As we move forward, my focus is on ensuring ATSE remains what it has always been at its best: a trusted, independent and practical voice. One that helps Australia turn world-class knowledge into enduring prosperity.

I hope you find this issue of IMPACT both stimulating and useful.

Answering the big questions through imagination and collaboration.

THIS LATEST ISSUE of IMPACT features stories from and about Fellows and other inspirational leaders in Australian technology, engineering and applied science. Each one of them features people and teams bringing imagination together with technical skills to answer big questions that touch us all.

ATSE today is an Academy built over half a century by inspired and committed Fellows, collaborative networks of innovators, leaders and mentors that span the gamut of Australian economic endeavour, and thousands of people who are teaching, guiding and learning to be the next generation of great thinkers, inventors and solution seekers. Through ATSE, our networks come together to combine their expertise, perspectives, time and passions. Together, we guide considered and informed decisions, articulate new possibilities for Australia, and create opportunities for young people to excel.

In this, my final introduction to IMPACT as I step down from the CEO role after six and a half years, I'm so proud to note the many strengths and achievements of this very special Academy. In January 2020, I inherited the executive leadership of an organisation ripe with potential and driven by passion. My first issue of IMPACT covered what we were at the time still calling the novel coronavirus, looked at the future of healthcare in Australia, and explored sustainable agriculture and energy, and mitigating major disasters, in the face of climate change.

Technological solutions continue to inform and drive change across healthcare, food and water security, environmental and infrastructure resilience, and many other sectors. Driving down carbon emissions through technology and engineering, and mitigating the worst of natural disasters, remain core preoccupations for our Fellows and their networks – along with the urgent question of ensuring Australia's skills and capabilities for the workforce we'll so clearly need in the decades to come.

During my tenure I've witnessed the passion and potential of ATSE grow into strong and sought-after national leadership, with a proud track-record of timely, clearly communicated, influential and evidence-informed advice across an incredibly broad range of challenges and opportunities for Australia. We've built the reach and impact of our education, skills and careers programs, and grown an internationally-recognised suite of new initiatives to upskill and connect Australian innovators. And with a strong public profile we're a trusted and sought-after commentator on issues of national importance.

I'm immensely grateful for the opportunity to lead ATSE and to discover and share the inspiring stories of people and innovation it represents. I bid you farewell knowing ATSE is in an excellent position as it enters its second 50 years. ▲

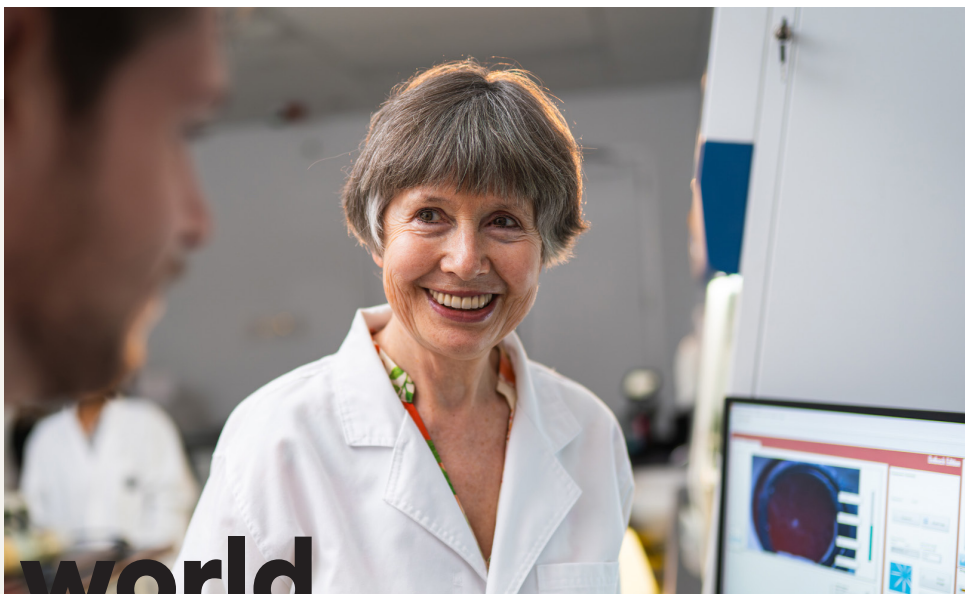


Professor Kylie Walker AM
CEO

Kylie is the Chief Executive Officer of the Australian Academy of Technological Sciences and Engineering. She works with Australia's leaders in applied science, technology and engineering to advise decision-makers, lead crucial national conversations to solve complex challenges, and support Australia's technology-powered, human-driven future. Kylie is Chair of Aged Care Research and Industry Innovation Australia (ARIIA), driving evidence-based quality care for older Australians, and, as a national award-winning science communicator, is a visiting Fellow at the Australian National Centre for the Public Awareness of Science.



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Helping the world breathe easy

Professor Lidia Morawska's career has always focused on practical solutions. From a start measuring radioactivity in the environment, she has found herself one of the world's leading advocates for robust standards on the quality of indoor air.



Distinguished Professor Lidia Morawska FTSE FAA

An unsurpassed global authority on airborne particles, Professor Morawska has redefined the application of air pollution science and translated it into irrefutable evidence and paradigm-shifting advice to government and intergovernmental bodies ...

Elected 2025

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A major health concern that appeared in the public consciousness during the heights of the COVID-19 pandemic, the quality of the air we breathe indoors while at home, out shopping or at the office has a major impact on people's lives. Compounded in Australia by frequent bushfires wafting fine particles of ash into our lungs, and the importance of clean air is clear.

Lidia has been working since 1996 with the World Health Organization, the United Nations and standards bodies across the world to reflect her research about air quality in practical building codes and professional practices. This means combining her passion for scientific discovery with her drive for impact and policy change. Over time, she's had to develop new skills in advocacy. She's come to learn the slow, frustrating and complex path that leads to policy solutions.

And she's learnt that you have to act when the time is right. Pandemics in the past were often accompanied by significant social, policy and infrastructure change. She hopes that indoor air quality standards can be one such change for the post-COVID world. There was no interest in the implementation of the outcomes of indoor air quality research just a few years ago, but performance standards are now within reach.

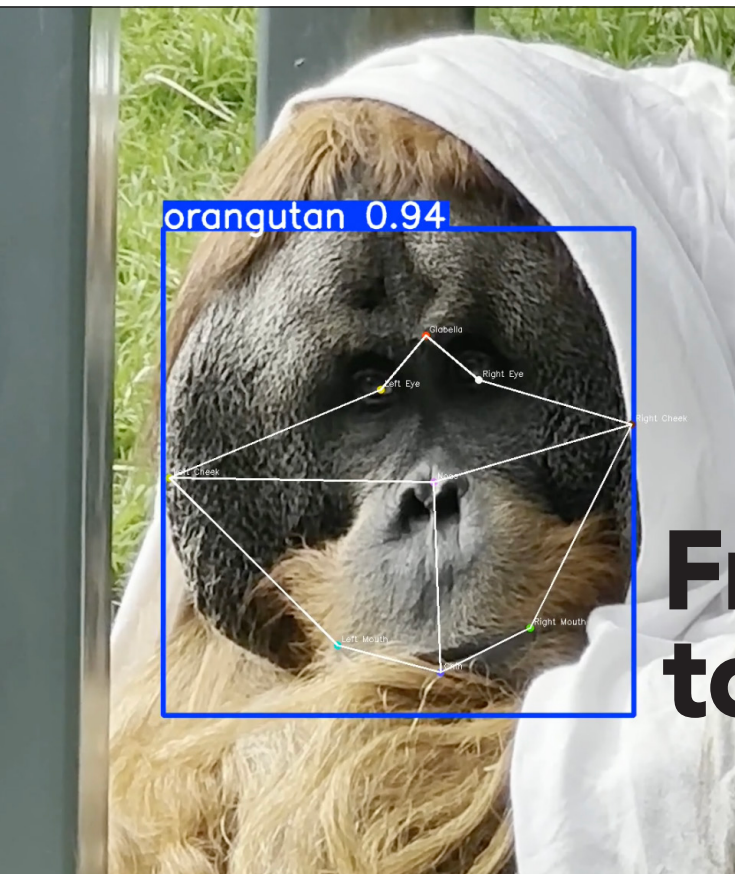
Advocating for better air quality standards affecting millions of people takes many kinds of expertise. Getting every relevant discipline and its experts involved is how we will be able to design effective solutions.

This means working across wildly disparate domains: architecture, medicine, fluid mechanics, environmental science, traffic engineering and many more.

Lidia has become fluent in navigating these different spaces. With terminology and foundational knowledge varying across each area, she's learnt that understanding comes from patience and trust. Her fascination with discovering new things certainly helps too. She brings a multilingual background to the table, using her fluency in English, Polish and Spanish to navigate the global world of science, and to communicate effectively across cultures and collaborators.

This indoor air quality work is slow, deeply careful, and totally evidence-based. Gradually, Lidia is working to make the air we breathe cleaner and healthier.

Through building better new buildings, or retrofitting older ones, we can improve global health through cleaner air. It's thanks to the work of Lidia and her teams that the air we breathe is getting safer over time. 



Georgia Mason

Georgia started a Bachelor of Computer Science (Advanced), supported by an Elevate: Boosting diversity in STEM scholarship, at the University of Adelaide in 2023.

From great apes to space snaps

The first steps of an image computing career

ELEVATE

MORE

[Elevate: Boosting diversity in STEM](#)

In 2023, a young computer enthusiast looks to start a university degree. Settling into the Bachelor of Computer Science (Advanced) at the University of Adelaide, Georgia Mason's career is beginning.

WITH A LIFELONG interest in tech, and now, three years later, planning a master's degree in computer vision - how computers interpret and understand images and videos - using machine learning, Georgia's view of her possible future paths has drastically expanded.

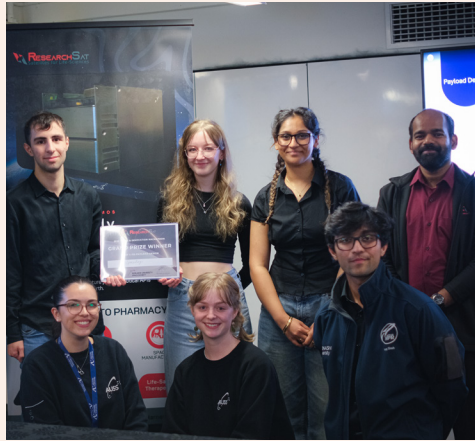
Supported by a lifechanging Elevate scholarship from the Australian Academy of Technological Sciences and Engineering (ATSE), Georgia's time as an undergraduate has given her the freedom, guidance and opportunities to create a space for herself in the tech revolution that's taking place around her.

She's contributed to projects as varied as cow identification, orangutan facial expression recognition and defence software development. Along the way, her skills and her interests have gradually come together in the area of computer vision.

Leveraging machine learning (ML), image recognition algorithms and specialised computational processing, Georgia has become an expert in using computers to efficiently recognise and categorise images.



Through her degree, Georgia took part in many events of the computer engineering community.



Georgia with one of her project teams developing code for image identification.



In October 2025, Georgia was co-MC of the ATSE Awards Gala Dinner in Adelaide alongside Professor Mark Hutchinson from Adelaide University.

It's a field that has wide-ranging benefits - from helping self-driving cars identify obstacles to helping diagnose or monitor illnesses through medical images.

And with research institutes and major businesses across the world actively developing the technology, this is the space to be for a young computer scientist like Georgia who's keen on discovery and new tech.

The academic world has proved alluring for Georgia. At a time when AI and ML expertise is in huge demand across many industries, Georgia is choosing to stay with research on computer vision - this time, focused on analysing satellite imagery. Not content with just pictures of animals, she is now looking at pictures of the Earth taken from space.

But university hasn't just been an academic experience for Georgia. Through the Elevate scholarship, she's accessed mentoring, skills development, communication training and networking opportunities that have supercharged her abilities and her confidence.

In the final weeks of her bachelor's degree, a nerve-wracking highlight was her role as co-MC of the ATSE

Awards Gala Dinner in Adelaide - a prestigious night of celebration featuring more than 300 of Australia's leading scientists, business leaders, engineers and technologists. Not to mention an appearance from (and photo with!) environmentalist and musician Peter Garrett following his election as ATSE Honorary Fellow for 2025.

Alongside Professor Mark Hutchinson from Adelaide University, himself a celebrated innovator and research leader in health and optical technology, Georgia helped guide the event with her energetic and passionate perspective.

"I'm proud of myself for accepting the offer, and grateful for the opportunity to take part," she says.

"Meeting role models like incoming ATSE President Dr Cathy Foley was incredible, as was spending time with other Elevate scholars and getting to interact with so many fascinating Fellows and scientists."

The look into the world of Australian science and technology that Elevate provided over the three years of Georgia's degree was unique. And the career development that grew over the course of dozens of workshops, meetups

and events have well and truly set her on the path to a productive and impactful computer science career - a career with impact, leadership and creativity, driven forward by her clear passion for the potential of the tech she plays with every day.

Working in a space as rapidly evolving as ML and computer vision, and being involved with such varied projects as those she has experienced, has given Georgia a taste for everything that's still out there to learn.

On the value of her scholarship, she's clear that while it was transformative for her university experience, the full benefits are yet to be felt.

"The impact of these programs on students is so much bigger than it looks from the outside. Beyond the financial support, building skills and connections early in our careers will help us all so much in the long run." ►



Creating carbon solutions that work with agriculture



Professor Matthew Harrison FTSE

Professor Harrison is a leading expert in sustainable agriculture with an outstanding track record of impact. He leads the Carbon Storage Partnership, an initiative developing pathways to progress the Australian livestock sector toward net-zero greenhouse emissions by 2030 ...

Elected 2025

[READ MORE](#)

Across the vast landscapes of Australia lie millions of hectares of farms growing millions of tonnes of food for millions of people here and around the world.

FROM MILK TO wheat and beef and many other food products, these outputs of Australian farming sustain the population and power the nation.

Now, farmers and their farms are being asked to contribute even more. This time, to carbon reduction efforts.

With a primary focus on food production, farms growing extra trees to suck up carbon from the atmosphere is not necessarily the best, cheapest or most effective way to use that land. Balancing the productivity of the farm, the cost to the farmer, the benefit to society and the feasibility of implementing an emissions reduction regime in the long-term takes careful listening, modelling and collaborating. Dr Matthew Harrison FTSE from the University of Tasmania collaborated with 7 farmers around Australia over a five-year period to model the different options available to them and the relative attractiveness of each.

Generous farmers provided their stories, their time, their farms and their expertise to showcase the complex matrix of decision making that they face. Alongside Matthew's models, they reached a clear yet complex conclusion: emissions reduction on farms requires solutions tailored for each unique location to address underlying deficits, and often require additional support to make them viable. When done right, greenhouse gas mitigation, profit, biodiversity and productivity benefits can all increase together.

Cattle farms throughout Australia found that strategically swapping in new

species of grasses for the cows to eat helped at the same time reduce methane emissions and increase productivity, making it a neat win-win for both the farmer and the climate.

On other farms, fencing off areas near waterways and creating separate pasture areas, reducing lamb birthrates and increasing wool fineness, or improving biodiversity through native tree planting were all effective interventions.

Matthew's approach of working alongside the farmers to understand their own circumstances brings clarity and realism to the outcomes.

He says "Most studies in this space focus on the effect of a single carbon farming method. This study is different - it combines agriculture, engineering, plant science and mathematics to improve the modelling and make the findings more applicable."

In the end, there's no single solution for reducing agricultural emissions. But many possible interventions that also lift productivity and increase profitability are available.

Financially, nature-based solutions often make better sense for farms than high-tech options. And combining multiple complementary approaches works better than any single action.

The climate and biodiversity solutions will only scale if they make sense for the farms as businesses. That's how we reach the best outcome of profitable, lower emissions agriculture in Australia. ▲

MORE

[ATSE Agriculture & Food Forum](#)

[Carbon neutral agriculture – myth or reality](#)

[Enabling growth in agriculture](#)

[Sustainable agriculture – doing more with less](#)

[Climate health food agriculture nexus](#)

Digging deep in Antarctic mud

Two months on board the Australian research ship RV Investigator, **Talia Hawkes** experienced first-hand the exhilarating aspects of scientific fieldwork and genuine cross-disciplinary collaboration.



A degree in paleoceanography can include a lot of looking at screens, graphs and spreadsheets. It can include long hours in the lab and a lot of reading.

For PhD student from the University of Tasmania Talia Hawkes, it has also included a once-in-a-lifetime trip to Antarctica.

Spending two months on board the Australian research ship RV Investigator, Talia experienced first-hand the exhilarating aspects of scientific fieldwork and genuine cross-disciplinary collaboration. In February 2026, among a group of fantastic scientists and crew members, she saw icebergs, felt the spray of the Southern Ocean and lived through the long days and short nights of an Antarctic summer.

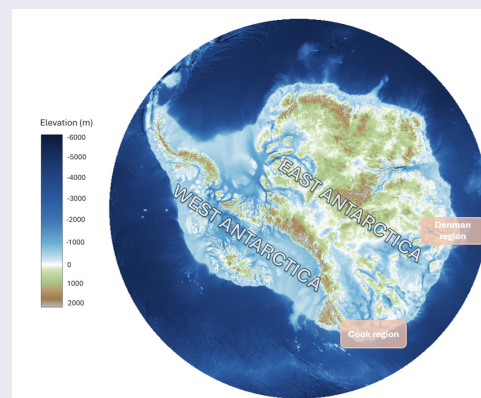
The trip formed a key part of her PhD studies, supported by the Elevate scholarship program from the Australian Academy of Technological Sciences and Engineering. While on board, she collected samples that she will spend the next 2.5 years analysing and understanding. Aiming to optimise analytical chemical methods for the analysis of seawater and rare mud samples from the ocean floor, Talia is building knowledge that will support the work and the findings of other ocean scientists in the future.

To do this, she helped collect long cylinders of mud from the bottom of the ocean, ranging

in length from less than a metre to over 20 metres of silt and minerals deposited millimetre by millimetre over tens of thousands of years to form an untouched and invaluable record of the past. For within these mud cores are traces of the ocean as it once was. They tell us the story of past warming periods and ice ages, and the details of their ancient climates.

Understanding these ancient times helps us also understand the modern ocean and ice sheets. Talia does this through her sediment and seawater samples, and in particular, through the lead isotopes found within them. Lead in the sediments is a proxy for lead in the seawater. Lead in the water can tell us about glacial meltwater. And glacial meltwater tells us about the state of Antarctic rock and ice over the past millions of years.

How has Antarctica changed in the past? And what does that tell us about sea level rise in the future? With 58 metres of possible sea level rise currently trapped frozen in Antarctic ice, it's critical we understand the rates of melting at vulnerable glaciers around the continent. This, and much more, can be learnt from the analysis of ocean floor mud cores.





But applying these methods of analysis to East Antarctic samples is relatively scientifically novel. For Talia, that's both exciting and nerve-wracking. What helps is peers, on board and on land, who help her feel supported, uplifted and empowered. Bringing her own passion to her studies, she is also guided by the cohort of young women all studying alongside her as recipients of the Elevate: Boosting diversity in STEM scholarship. Giving her the freedom to focus on her Antarctic mud, Elevate is also teaching her new skills through workshops that connect her to other young researchers and demystify the processes of scientific research and career building.

Talia knows how important it is for there to be opportunities for her kind of science to continue to be done. There's lots more to know about the impacts of climate change, and many people around the world collaborating to get us there. Whether they are on board Antarctica-bound ships tossing on southern

swells or building on these methods in wet and muddy labs around the world, the global cooperative effort of Antarctic science is not lost on Talia.

Getting to hold - and behold - this ancient mud as a window into the distant past, her analysis is another step in a longstanding journey of ocean discovery. As the climate changes, understanding the state of the modern ocean is only becoming more important. To find those answers, the scientific community will need to keep diving deep into the ancient ocean. ▴

Talia's research is supported by a grant of sea time on RV Investigator from the CSIRO Marine National Facility and by an Elevate: Boosting diversity in STEM postgraduate scholarship.

Getting to hold – and behold – this ancient mud as a window into the distant past, her analysis is another step in a longstanding journey of ocean discovery.



This is the transcript of a speech delivered by The Hon Peter Garrett
at the ATSE Awards 2025 at the National Wine Centre in Adelaide.

A photograph of Peter Garrett, an older man with a bald head and a friendly expression, wearing a blue blazer over a light blue shirt. He is standing behind a black podium, gesturing with his right hand. Behind him is a large screen displaying the 'ATSE AWARDS 2025' logo and a portrait of him. The background features a wall with horizontal wooden slats, some of which are illuminated with blue and orange lights. In the foreground, the silhouettes of audience members are visible, along with some glasses and bottles on a table.

What does a musician and songwriter have in common with ATSE?

ONE WHOSE COPYRIGHT incidentally, the tech sector recently tried to steal without compunction, until artists put up a holy protest, after all the creative sector is worth billions of dollars to the Australian economy, and the government said no. Artists are first users, we are productive, always willing to try new ideas, and needing to do more with less, especially in my field where we occupy the same space as American or European artist with much bigger budgets.

Likewise what does a former politician share with you? A lawyer and a regulator who with his colleagues was able to stop Japan killing whales in the Southern Ocean in the name of science, and aimed to keep the mammoth piles of electric detritus, the digital waste of the modern era, out of landfill as noted in the program? Or a conservation activist, who now spends time working with remote communities under the pump from governments and mining interests trammelling their hard won land rights. Communities, who if they live north of the Tropic of Capricorn, are now, according to the findings of the National Climate Risk Assessment, more likely to die of heat related deaths than previously, and who will have to flee their homes in order to survive.

To these questions I offer that is a working life of public advocacy, i.e. putting a point of view, and if, ostensibly, this was one of the reasons that brings me here, thank you for the honorary fellowship the Academy has seen fit to bestow. Still I feel like an imposter of sorts given the plethora of brains and output represented by this year's ATSE Fellows. It is a helluva time to be gathering!

A much discussed accelerating, energy hungry technology - AI - is upon us, sucking up water and blowing our limited carbon budget whilst promising boundless wealth and opportunity. Its overseas commercial proponents, determined tax avoiders, leery of regulatory guardrails and indifferent to societal impact, are sparing no expense. An accelerating climate crisis, impossible to rationalise, is building terrifying momentum. Hurricane Melissa anyone? Here the promised zero carbon market transformation, assisted by the rapid deployment of new technologies, is being criminally stymied by the power of fossil fuel interests. I use the expression 'criminally' advisedly given the foreseeable harm already being caused by their actions. Yet these entities - sponsoring sport, community, arts - remain protected by most governments, including our own.

They are now in full embrace with right wing governments as genuine climate action is abandoned. The urgent memo from climate and earth scientists that we are racing past the 1.5 degree limit on warming designated to allow a reasonably liveable world, is ignored, scattered like confetti on the floor of the wedding chapel in Las Vegas as the guests depart for the casino and a big night out. This is a climate emergency, a major political and social systems crisis, and it seems self-evident that we need to act as if our lives depended on that fact. Surely armed with knowledge and skill we are all activists now.

Suffragettes, anti-slavers, peacemakers, human rights campaigners ... the road ahead is well lit. And for ATSE, as Nick Fleming laid out in his



The Hon Peter Garrett AM FTSE

Peter Garrett is a renowned campaigner, musician and former politician. He is the lead singer of Midnight Oil, one of Australia's greatest rock bands, known for music that amplifies peace, social justice and environmental activism. Garrett was president of the Australian Conservation Foundation, before entering parliament as a Labor MP in 2004. Across his tenure ...

Elected 2025

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The Hon Peter Garrett FTSE speaking at the ATSE Awards in Adelaide 2025.



I acknowledge the giants of politics and science who advocated for the common good, for the very principles and values that have enabled inquiry leading to science and technology based improvements, to which this Academy is committed.

Peter Garrett

compelling presentation, consider not only how to shape constructive responses to what has been called an existential crisis, but engage with those causing it. Yet in this moment we are witnessing a sustained and visceral attack on facts, and on science itself, by the 47th President of the United States and his government, as reason is discarded, institutions of learning and research eviscerated, and evidence based policy overturned in the blink of an eye. Freedom of speech, academic freedom, freedom full stop, is now imperilled with inevitable, albeit unpredictable consequences – one senses a hard rain is gonna fall. Galileo found out to his detriment what that means.

Karl Popper, Einstein, Jane Goodall and James Hansen, to pick a few names at random, assert, and Indigenous knowledge holders confirm, that scientific and technological endeavour doesn't take place in a values free vacuum. It never has, it never will. The production of reliable knowledge about the natural world, which is the province of science and technology, as American writer Audra Wolfe constantly reminds us, exists in a 'web' of politics and power. Politics and people, their culture and governing arrangements, determine the conditions under which human relations are mediated, and, whether imagination and technical intelligence is encouraged, supported and harvested, or not.

There have been hints at this conference of the tectonic changes that are washing over us, and a whisper (perhaps) that it's not the technology per se that is the issue, helpful, exciting and necessary as it is. At heart it's the character and depth of our human response to an unparalleled situation that is being tested. The world is changed, for better or worse by those who show up, those who reasonably advocate and then act. There is no safe middle ground here, even in our relatively benign circumstances.

We shouldn't think for a moment that compulsory voting and a well-educated populace are sufficient bulwarks against extremism and irrational prejudice. Especially with the fracturing of traditional media. With nature, there is no second guessing. So how long do governments think they can maintain the fiction of aiming to substantially reduce greenhouse gas emissions whilst approving Santos, Woodside and others' massive planet frying emissions intensive projects without consequence?

Mother Nature packs a mighty punch, as we are witnessing in cascading, frequent instances. She is all powerful and cares nothing for our follies or fantasies. With society, it's often gleaned from history, there is not much second guessing either. We can resemble a mob bent on revenge, feeling left behind by progress, fuelled by enmity for the 'other', ready to embrace fascism, nationalism and prejudice. Or we can be civic minded patriots – the true democrats – committed to equality of treatment and opportunity, empowered by knowledge, and resolutely sticking to the ideals of the enlightenment that have brought us this far. Our hope lies here with patriots, citizens who get out of their comfort zone, leap from the ivory tower or the lab, from the boardroom and the barbecue, who refuse to be comfortably numb, and who dive in.

I acknowledge the giants of politics and science who advocated for the common good, for the very principles and values that have enabled inquiry leading to science and technology based improvements, to which this Academy is committed. I applaud that spirit wherever it rises up, and tonight especially in this gathering, where it manifests in breakthrough science and technological innovation that, if fairly deployed, can improve the lives of many and assist in confronting these big 'challenges' that face us all, right here, right now. 

MORE

[The Hon Peter Garrett AM FTSE](#)

[New ATSE Fellows 2025](#)

MOVERS & SHAKERS

We celebrate the achievements of ATSE Fellows over the course of the year. Fellows are frequently recognised for their contributions to national and international applied science, technology and engineering.

JUNE 2026

Five ATSE Fellows recognised in the 2026 King's Birthday Honours

Professor Alex Baitch

AM FTSE

For significant service to power systems engineering, and to electrotechnical standards.

Professor Attila Brungs

AO FTSE

For distinguished service to tertiary education leadership, to research and innovation, and to social justice and equity.

Emeritus Professor Mark Bush

AM FTSE

For significant service to engineering, to tertiary education, and to the community.

Andrew Greig

AM FTSE

For significant service to the community through philanthropic initiatives.

Emeritus Professor Mark Wainwright

AO FTSE

For distinguished service to the tertiary education administration, to academic research, to Australia-China relations, and to governance roles.

MAY 2026

Professor Richard Eckard

FTSE

Professor Eckard has been honoured with Cooperative Research Australia's 2026 Lifetime Achievement Award in recognition of his career bridging the gap between agricultural science and industry, delivering transformative and enduring impact across Australia's innovation ecosystem.

Professor Mary-Anne Williams

FTSE

Professor Williams has been appointed CommBank's first Chief AI Scientist as one of Australia's most internationally recognised AI researchers, with deep expertise spanning Agentic AI, human-AI collaboration and AI innovation.

Four ATSE Fellows elected to the Australian Academy of Science.

Distinguished Professor Yun Liu

FTSE FAA

Internationally recognised for pioneering contributions to materials chemistry and engineering.

Professor Huanting Wang

FTSE FAA

Globally recognised for developing advanced membranes for clean water and sustainable separation technologies.

Dr Deborah Rathjen

FTSE FAA

A highly respected leader whose work has helped shape Australia's biotechnology and pharmaceutical sectors.

Sally-Ann Williams

FTSE FAA

An influential business and innovation leader championing deep technology, entrepreneurship and STEM inclusion.

APRIL 2026

Dr Pep Canadell

FTSE FAA

Dr Canadell has been named the individual category winner of the 2026 Malaspina Award by the Spanish Embassy in Canberra and the Association of Spanish Researchers in Australia-Pacific (SRAP), in recognition of his extensive research in the fight against climate change.

Kerryn Coker

FTSE

Kerryn has been appointed to the Board of the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Sue MacLeman

FTSE FAICD

Sue has been announced as the inaugural Chair of the Women's Health Foundry.

FEBRUARY 2026

Dr Therese Flapper

FTSE

Dr Flapper has been appointed as Chair of the ACT Government Board of Engineering Excellence.

Professor Graeme Clark

AC FRS FTSE FAA

Professor Clark has been awarded the Queen Elizabeth Prize for Engineering in recognition of his invention of the multi-channel cochlear implant, widely regarded as one of Australia's greatest bioengineering achievements.



JANUARY 2026

Distinguished Professor Madhu Bhaskaran

FTSE

Professor Bhaskaran has been awarded a Distinguished Professorship at RMIT University in recognition of her excellence in research and academic leadership.

Distinguished Professor Suresh Bhargava

AM FTSE

Professor Bhargava has been awarded a renewal of his Distinguished Professorship at RMIT University in recognition of his excellence in research and academic leadership.

Distinguished Professor Karin Verspoor

FTSE

Professor Verspoor has been awarded a Distinguished Professorship at RMIT University in recognition of her excellence in research and academic leadership.

Five ATSE Fellows recognised in the 2026 Australia Day Honours.

Professor Peter Cook

AC CBE FTSE

One of Australia's foremost earth scientists and climate innovators.

Scientia Professor Michelle Simmons

AC FRS FTSE FAA

A globally recognised quantum computing and nanotechnology leader.

Distinguished Professor Saeid Nahavandi

AO FTSE

A leading educator, robotics pioneer and Chair of ATSE's Assembly governance group.

Professor Mark Cassidy

AM FTSE FAA

Research leader in geotechnical science, engineering and academia.

Dr Adrian (Adi) Paterson

AM FTSE

Long-time nuclear technologist and advocate for diversity in STEM.

We record the passing of a Fellow in our Annual Review and at our Annual General Meeting, as well as on our website.

Fellows who have passed away since 1 January 2026.



Dame Marie Bashir
AD CVO FTSE
1/12/1930-20/1/2026
Elected: 2006

Marie was elected in 2006 for her contributions to Australian society as a psychiatrist, medical leader and as Governor of New South Wales.

A powerful advocate for young people, reconciliation, Indigenous health and the LGBT community, her diverse interests and her care for the people of New South Wales made her a central figure in Australian public life for many years.



Don Little
AO FTSE
18/6/1926-5/2/2026
Elected: 1987

Don was elected to the Academy in 1987. He held prominent positions in engineering and public service over a long career working in Victoria in the Public Works Department, Environment Protection Authority and the State Rivers and Water Supply Commission.

He was appointed an Officer of the Order of Australia in 1985 for public service, particularly in the field of engineering education.



Dr Neil Willetts
FTSE
10/4/1939-9/2/2026
Elected: 1991

Neil was a leading figure in Australian biotechnology, he was elected to the Academy in 1991 and spent many years as a member of the NSW Division.

Across a long career in biotechnology around the world, he spent time in research and industry translation in the UK following his studies, then in Mexico, the US and Australia. He was Director of Research and Development at Biotech Australia from 1982 to 1997.

He had the rare privilege of being joined as Fellow by his daughter Professor Juliet Willetts FTSE in 2025.



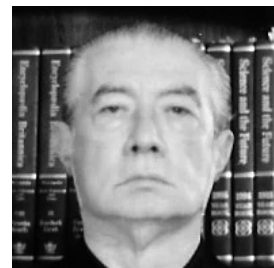
Professor Margaret Bullock
AM FTSE
24/3/1933-1/1/2026
Elected: 1991

Margaret was elected to the ATSE Fellowship in 1991, she was recognised for her outstanding individual achievement and leadership in technological sciences and for her outstanding contributions at the interface between technology and society.

An active member of the Queensland Division, she a member of the Membership committee in 2014.

Her primary area of work was in physiotherapy as a pioneer in the field of ergonomics. She was one of the first two students to graduate with a Bachelor of Applied Science in physiotherapy and occupational therapy in 1955. Her research in the 1960s led to extensive studies on the ergonomics of workspaces in vehicles and aircraft cockpits. In 1973, she was the first person in the world to be awarded a PhD in Physiotherapy.

Her husband Keith Bullock FTSE, an engineer and researcher in vehicle power trains, was also a Fellow of ATSE (elected in 1988).



Professor Alek Samarin
FTSE
18/11/1935-6/3/2026
Elected: 1988

Alek was elected in 1988, a recognition of his international reputation and leadership on materials science focused on concrete.

Working with manufacturers and global collaborators, he spent a large portion of his career contributing to various standards bodies around concrete durability and non-destructive testing.

He was a very active Fellow from the time of his election, chairing the Prizes and Awards Committee from 1992 to 1994, taking on a role on the ATSE Council in 1996, and contributing to the Climate Change Forum from 2008 to 2013. He was also Deputy Chair of the NSW Division from 1996 to 1999 and was a member of the Energy and Infrastructure Forums for many years.



Australian Academy of
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1975-2025

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