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IPENZ
ENGINEERS NEW ZEALAND

Engineering Dimension

New Zealand Engineering's got Talent

Clockwise from top left: Peter McCombs FIPENZ, winner of the Fulton-Downer Gold Medal, with Traffic Design Group colleagues; dinner guests at Te Papa, Wellington; MC for the evening, the comedian Te Radar; Janis Swan FIPENZ, winner of the Skellerup Award, with Elizabeth Geddes.

They're the "rock stars" of engineering and for one night last month they took their place in the spotlight.

This year's Fellows' and Achievers' Dinner recognised those who'd excelled themselves in any walk of the engineering world – whether it be for cutting-edge student design, decades-long commitment to the profession or taking knowledge to new levels. Around 300 guests were at the black-tie function, held at Te Papa in Wellington, to celebrate with the newly named Fellows, Distinguished Fellows, Companions and winners of the nine awards' categories. Also recognised were IPENZ's new Professional Development Partners and one tertiary provider which had successfully accredited its engineering programme to internationally benchmarked standards.

Comedian and MC for the night, **Te Radar**, kept the audience entertained with his offbeat brand of humour, at one point shedding light on the great "West Coast uranium rush of 1955". In between gags and officiating, video clips screened highlights of IPENZ's centenary year.

"It's been a privilege to serve you during this very special year in the history of IPENZ," **Kevin Thompson DistFIPENZ**, outgoing President of IPENZ, says. "This past year has been an opportunity to reflect on where IPENZ has come from and where it's going."

Towards the end of the night, a new IPENZ Board was formally inducted, with the Presidential chain of office handed to **Andrew Read FIPENZ**.

"This Dinner is a very special occasion for IPENZ," Mr Read says. "As engineers we're very good at seeing the challenges, we occasionally stop to celebrate our successful projects but I've observed that we have difficulty patting ourselves on the back. Therefore we mustn't forget to celebrate our successful people.

"Many challenges are before us and I'm honoured to be in the position to pick up the baton and take responsibility for leading the implementation of some very important changes."

IPENZ thanks the following sponsors for their support: Opus (Supreme Technical Awards sponsor), GHD (Ray Meyer Medal for Excellence in Student Design sponsor), Beca (Dinner sponsor), SEISMIC MA (Turner Award for Professional Commitment sponsor), and MAS, which brought the SENZ and Emerging Professionals Councils to the event. ■

INSIDE THIS ISSUE Forum speakers on "raising our game" ■ New Fellows and award winners

President's Message

STEPPING INTO OUR SECOND CENTURY

I'd like to start by introducing myself. I'm married to Bridget and we have two children who're both at university in Wellington. We live in Christchurch and enjoy the lifestyle here in spite of the earthquakes.

I graduated from the University of Canterbury with a degree in Electrical and Electronic Engineering and have been involved within the consulting industry ever since. The majority of my working life to date has been based out of Christchurch, although I worked in the United Kingdom for several years in the early 1990s.

In addition to working as a consulting engineer, I've been privileged to have the opportunity to contribute to the profession as a board member with the Association of Consulting Engineers New Zealand (ACENZ) and as a member of the Business Practice Committee of the International Federation of Consulting Engineers (FIDIC).

Having survived the 1987 stock market crash and then the downturns in the construction industry in the 1990s and 2000s, I've spent the last four years adapting to the post-Canterbury earthquakes landscape in which we now live.

This year marks IPENZ's first steps into its second century. As a nation, we've reached a number of significant milestones: 175 years since the signing of the Treaty of Waitangi and New Zealand officially becoming a British colony; 150 years since the seat of government moved from Auckland to Wellington (maybe it's about time it moved to Christchurch now that we're building an earthquake resilient city!); and 100 years since New Zealand entered the First World War and landed at Gallipoli.

We celebrated the start of this second century at the 2015 Fellows' and Achievers' Dinner in Wellington by acknowledging those who've achieved success in the profession. As always, it's humbling to see the contribution that so many selflessly make to the advancement of the engineering profession. The Engineering Professions Forum was again held in conjunction with the Dinner. Two excellent speakers challenged the profession to throw off the "cloak of invisibility" we've been wearing for too long and step up to our place in society.

Looking to the year ahead, we, as an organisation and as a profession, face some fundamental changes to the environment within which we operate. The introduction of occupational regulation and the proposed health and safety reforms reflect just some of the changes society expects of us. As I see it, we have a choice. We can continue to wait for society to direct how we should behave, or we can step up and truly behave as professionals.

"As always, it's humbling to see the contribution that so many selflessly make to the advancement of the engineering profession."

Changes to IPENZ's Membership structure to provide a stronger focus on professionalism were initiated during the centenary year and will be further developed this year.

I welcome the opportunity to help strengthen the engineering profession and look forward to working on your behalf in the coming year.

Andrew Read FIPENZ

Raising our Game in a Changing World

An advertising supremo and a world-renowned engineering academic wouldn't ordinarily cross professional paths, especially when engineering is on the agenda. But insights from both about what engineers must do to thrive in the face of a changing world gave delegates at this year's Engineering Professions Forum plenty to think about.

Peter Cullinane, former Chief Operating Officer of Saatchi & Saatchi Worldwide, outlined how engineers can take advantage of their unique place in society. The co-founder of Lewis Road Creamery (the company behind last year's much publicised chocolate milk shortage) says people have traditionally been categorised as either a leader or follower. He proposes a third group: "independents".

"Engineers, by and large, fit the criteria of the independent really well."

Independents, he says, are typically creative, hardworking, vocal when it matters and possess strong inner confidence. They dislike administrative detail and aren't driven to manage. However, this doesn't mean they don't make good leaders – in fact, the opposite is true.

"Those who don't fit the typical leader mould make the best leaders," he says. Leaders whose primary motivation is their craft, not a desire to lead, tend to run very successful companies.

Conventional thinking on business emanates from post-war "white American economists" who extolled the ethos of "might is right", that the traditional leadership model is the one road to success. Mr Cullinane says the world has changed and it's time to rethink this philosophy.

He believes the future for independents is bright, but only if they develop the skills that make them unique – and communicating well will be crucial.

"Failure to communicate creates a vacuum that's filled by poison, drivel and misinformation."

James Trevelyan, a Professor at the University of Western Australia's School of Mechanical and Chemical Engineering, painted the picture of a profession whose members are out of touch with the society around them. He says too much emphasis is placed on engineers' technical, problem-solving ability when this is but a small part of engineering.

"Engineers around the world have an appalling reputation in the boardroom. This is for good reason: our failure rate is high. Most engineering failures have their origins in human behaviour."

Engineers have "difficulty" communicating, he says. "In essence, our game is about collaboration. Engineers can't do their job without influencing others. Communication needs to be taught at engineering school but this isn't happening."

The challenge is to rebuild people's respect for engineers, and that starts with engineers themselves better appreciating the value of what they create. He believes incorporating the social sciences into an engineering degree would go a long way to properly preparing engineers for entering the workforce. ■

"In essence, our game is about collaboration. Engineers can't do their job without influencing others."

Clockwise from top left: delegates in group discussion; James Trevelyan addressing the Forum; Student Engineers New Zealand (SENZ) representative Ashleigh Philpott with Emerging Professionals Council members Dipal Raniga GIPENZ and Rachel Blewden GIPENZ; Glynn McGregor GIPENZ of Technology Education New Zealand with SENZ representative Oliver Ewert.

Supreme Technical Awards for Engineering Achievers

The Supreme Technical Awards, sponsored by Opus International Consultants, recognise technical expertise in engineering exemplified by contributions to the advancement of engineering practice, innovation or technical breakthroughs.

EVAN PARRY AWARD

Energy Systems

Steven Taylor MIPENZ

Steven receives the Evan Parry Award in recognition of his technical expertise in energy systems. He has more 25 years' experience in the hydro-electric industry, working with Meridian Energy since 2004 and currently holding the position of Mechanical Engineering Team Leader, based in Twizel.

Steve's skills and experience have improved the reliability, availability and maintainability of Meridian's hydro plant. He has been at the forefront of major refurbishments of Aviemore, Manapouri, Benmore and Waitaki power stations. His root cause failure analysis and engineering solutions of plant faults have helped improve the long-term reliability and operational output of plants, sometimes in innovative ways. He is acknowledged by his peers as a leader in his field and is regarded as a role model for younger engineers due to his work in mentoring and passing on specialist technology knowledge. He is described by his peers as modest, having a subtle sense of humour and at the same time a unique ability to explain immensely complicated technical issues in an easy-to-grasp way.

SKELLERUP AWARD

Chemical, Bioprocess and Food

Janis Swan FIPENZ

Janis receives the Skellerup Award for Chemical, Bioprocess and Food for her distinguished contribution to the food, bioprocess and chemical engineering industries in New Zealand. In particular, she is recognised for her work in the meat industry, her contribution to developing the profession of chemical engineering and for her work with IPENZ and the Society of Chemical Engineers, now IChemE.

Janis is the Deputy Dean of the Faculty of Science and Engineering at the University Of Waikato. She studied at Massey University and gained a PhD in Chemical Engineering from the University of Waterloo in Canada. She has made an outstanding contribution in shaping the direction of engineering education, particularly in relation to the University of Waikato's teaching and research capability. She has been on the Marsden Fund Council and was the inaugural chair of the Engineering and Inter-disciplinary Science panel. She was made a Member of New Zealand Order of Merit in 2009 for services to engineering, and is a Fellow of IPENZ and of the New Zealand Institute of Food Science and Technology.

FREYSSINET AWARD

Building and Construction

Robert Davey FIPENZ

Robert receives the Freyssinet Award for Building and Construction in recognition of his work in earthquake engineering design and his contribution to structural engineering. He practises as a structural engineer specialising in the seismic response of lifelines' structures including those for buildings, liquid retention and hydro generation.

Robert's contribution to earthquake insurance loss estimation and modelling in New Zealand, Australia and Japan is particularly recognised. His work in the Regional Earthquake Damage and Casualty Assessment study for Wellington Regional Council in 1995 is widely drawn upon and he played a key role in restoring telecommunications throughout the South Island in the aftermath of the Canterbury earthquakes. He has been the recipient of three innovation awards for excellence in building design and seismic assessment projects and chaired the committee for the development of the Concrete Structures for Retaining Liquids Standard, NZS 3106: 2009.

ANGUS AWARD

Water, Waste and Amenities

Garry Macdonald FIPENZ

Garry receives the Angus Award in recognition of his expertise in water engineering. He graduated from the University of Canterbury in 1976 and in his subsequent 38-year consulting engineering career with Beca has led many technical and project teams in the delivery of improved wastewater schemes for New Zealand's major cities. In recent years, his capability in this branch of engineering and his experience in strategic planning for wastewater management have been recognised through his appointment to lead peer reviews of major local authority wastewater schemes.

Garry is a former President of IPENZ, was the President of the New Zealand Water and Waste Association (now Water New Zealand) in 2000/2001 and has served on the Board of Trustees of the Washington-based Water Environment Federation for a number of years. He has authored and co-authored 45 technical papers and won 12 technical and project awards. In 2001 he received the Richard S. Engelbrecht International Activities Service Award from the Water Environment Federation for furthering advancements in the global water environment.

Individual Distinction Awards

FULTON-DOWNER GOLD MEDAL – THE PRESIDENT'S AWARD

The Fulton-Downer Gold Medal - the President's Award for Public Service, acknowledges a Member's effort and achievement, particularly when this demonstrates the strengths of the engineering profession in its public service role.

Peter McCombs FIPENZ

Peter is awarded the 2015 Fulton-Downer Gold Medal – The President's Award, for his outstanding contribution to the development of engineering and in particular, transportation engineering, and for upholding IPENZ ethical and professional standards.

Of particular note in his professional contribution to IPENZ is his work as both a Chair of Disciplinary Committees and of Investigating Committees responsible for overseeing the professional integrity of IPENZ Members throughout New Zealand. In these roles, Peter has presided over more than 90 disciplinary cases during the past 12 years. Beyond these contributions, Peter was founding Chairman (and now Life Member) of the IPENZ Transportation Group, and contributes to conferences, publications and technical seminars.

Peter is a Chartered Professional Engineer with more than 35 years' experience in all aspects of traffic engineering and transport planning for public agencies, regional and local authorities and the commercial sector. He's also an appointed member of the Advisory Board for the Department of Civil and Resource Engineering at The University of Auckland.

FULTON-DOWNER SILVER MEDAL – THE PRESIDENT'S AWARD

The Fulton-Downer Silver Medal - the President's Award for Meritorious Service, recognises a Member's meritorious service within the engineering profession and is conferred only when a case of particular merit is identified.

Fritha Bevin-McCrimmon GIPENZ

Fritha has demonstrated leadership in roles with emerging professionals' groups Engenerate Canterbury and the Emerging Professionals Council of IPENZ.

Fritha graduated with a Bachelor of Engineering (Civil) (Honours) from the University of Canterbury in 2011. She became a Student Member of IPENZ in 2008 and has been a Graduate Member since 2011. She's currently working for Fulton Hogan Rebuild as a site engineer on several major projects including wastewater, bridges, stormwater and roading for the Stronger Christchurch Infrastructure Rebuild Team (SCRIT), which is rebuilding Christchurch's earthquake-damaged horizontal infrastructure.

Since 2013, Fritha has been a committee member, treasurer and is currently Chair of Engenerate Canterbury. She has demonstrated leadership in improving the dynamics of Engenerate Canterbury, in encouraging fellow committee members to contribute and in working to create events that foster the development of professional skills. She has been a member of the Emerging Professionals Council and a Canterbury Branch Committee Member since 2013. She's now the Branch's Deputy Chair.

MACLEAN CITATION

The MacLean Citation is an award made from time to time to a Member who has rendered exceptional and distinguished service to the engineering profession.

Steve Abley FIPENZ

Steve is awarded the IPENZ MacLean Citation for distinguished service in the advancement of engineering practice and leadership in the profession.

Steve graduated from the University of Canterbury in 1997 and has practised in New Zealand and the United Kingdom. On returning to New Zealand in 2003, he founded Abley Transportation Consultants Ltd.

Steve's service to IPENZ includes being Chair of the Canterbury Branch from 2004 to 2006, an IPENZ governing Board member from 2006 to 2011 and supporting a number of initiatives such as Futureintech and the South Pacific Engineers' Association. He also served on the Competency Assessment Board from 2007 to 2009 and the Engineering Practice Board from 2010 to 2011. Steve was an inaugural member of the Engineering Practice Advisory Committee in 2010 and continues to assist on the Committee. IPENZ particularly recognises his input into the Code of Ethics Review working group, which he has chaired since it began in April 2013. In this role, he has demonstrated dedication and significant diplomacy as IPENZ navigates its way through this challenging task.

TURNER AWARD FOR PROFESSIONAL COMMITMENT

The Turner Award, sponsored by SEISMIC MA, recognises a continuing contribution to the engineering profession as demonstrated by a commitment to the ideals of a self-regulating profession.

Win Miskelly FIPENZ

Win receives the 2015 Turner Award for Professional Commitment in recognition of his commitment to engineering and the promotion of engineering as a career.

A member for many years of the executive committee of the New Zealand Manufacturing Engineers Federation, which evolved into the New Zealand Engineering Federation, he was President of that organisation when the Industry Training Act was passed. This resulted in Win becoming a foundation board member of the Engineering Industry Training Organisation. He has also represented the Institution of Mechanical Engineers in New Zealand for the past 18 years.

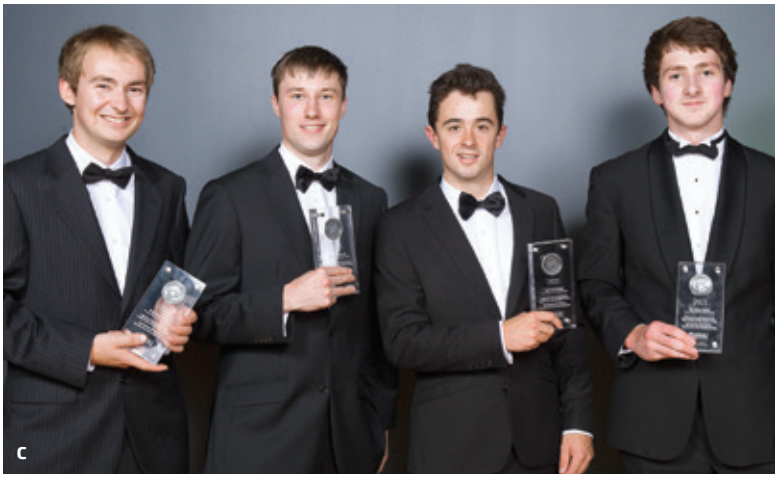
Win has upheld and promoted the ideals of the engineering profession through his involvement with IPENZ, both at Branch and council level. Additionally, he has been an assessor and committee member of the Mechanical Engineering Group (MEG) for more than 40 years, including being a past chair. He has actively promoted engineering as a career, mentored young engineers and regularly disseminated technical information to colleagues and the wider community.


A

B

"The award ... reflects the outstanding capability of our students to complete projects [where] tangible deliverables have significant impact for end-users, companies, sponsors and the country."

– John Pearse of the University of Canterbury, supervisor of the students who won the Ray Meyer Medal for Excellence in Student Design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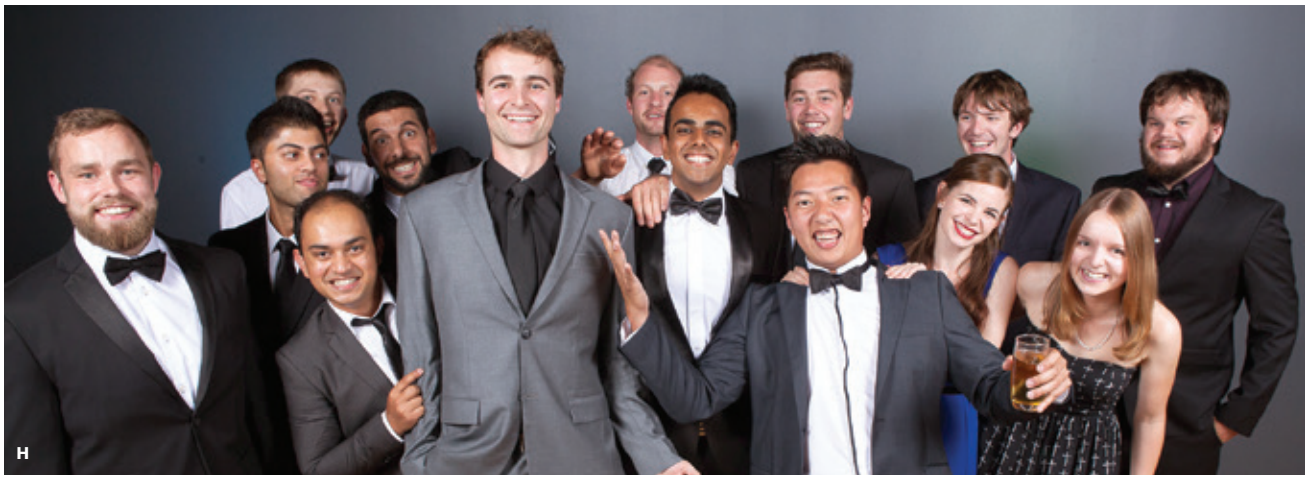
"I'd certainly encourage all my fellow engineers to take any opportunities to be involved with IPENZ, particularly for professional development and the skills you'll gain from the experience."

– Fritha Bevin-McCrimmon GIPENZ, winner of the Fulton-Downer Silver Medal – The President's Award



A. James Trevelyan and John Pfahlert CompIPENZ; **B.** IPENZ Chief Executive Susan Freeman-Greene; **C.** Winners of the Ray Meyer Medal for Excellence in Student Design, Sean Syman, Ryan McKay, Charles More and Craig MacDonald; **D.** New IPENZ Board member Craig Price FIPENZ with wife Julie; **E.** Audrey and Peter Vernon FIPENZ; **F.** Past and present employees of Opus; **G.** Fritha Bevin-McCrimmon GIPENZ, winner of the Fulton-Downer Silver Medal; **H.** Members of the Student Engineers New Zealand Council; **I.** MC Te Radar with Stephen Coll FIPENZ and Byron Coll; **J.** Outgoing IPENZ President Kevin Thompson DistFIPENZ (right) handing the presidential chain to Andrew Read FIPENZ; **K.** Steve Abley FIPENZ (centre), winner of the MacLean Citation, with Graham Dockrill, Mark Robbins, Michelle Abley and Rachael Robbins.

Ray Meyer Medal for Excellence in Student Design

The Ray Meyer Medal for Excellence in Student Design is sponsored by GHD Ltd. The medal, presented by Ray Meyer DistFIPENZ, is awarded to a student or group of students who submit the best final-year design project as part of an IPENZ-accredited qualification.

From left: Sean Syman, Craig MacDonald, Ray Meyer DistFIPENZ, Ryan McKay, Kevin Thompson DistFIPENZ, Charles More, Ian Fraser and Steve Jenkins FIPENZ.

Highwire Extreme Experience: Eddy Current Braked Zipline Trolley

Ryan McKay, Sean Syman, Charles More and Craig MacDonald, supervised by Bruce Robertson and John Pearse from the University of Canterbury

The team accepted a challenge from Holmes Solutions to design a high-wire zipline trolley that would create an adventure ride attraction worthy of being classified an extreme experience. The proposed use for the design was a 400-metre high-wire ride dropping 150 vertical metres down the face of Coronet Peak. The design involved an offset load point using the weight of the rider to generate the necessary rope contact forces that would operate an automatic and self-regulating eddy current brake to control the trolley's speed. What they produced was a self-contained, on-board braked trolley. The panel considered the design to be wonderfully balanced between engineering and visual impact, providing a new attraction that expands the opportunities for, and captures the very essence of, adventure tourism.

TERTIARY PROVIDER AWARDED

IPENZ is the New Zealand accreditation authority of qualifications recognised by several international agreements. One tertiary provider has been recognised for successfully accrediting its engineering programme to international benchmark standards in the past 12 months.

The Open Polytechnic of New Zealand

The Open Polytechnic of New Zealand's civil, electrical and mechanical engineering programmes have been reaccredited in the last 12 months by IPENZ.

Right: David Viviers (left) of The Open Polytechnic of New Zealand's School of Engineering is presented with an accreditation certificate by Kevin Thompson DistFIPENZ.

Distinguished Fellows

Distinguished Fellows are Fellows who've made eminent contributions to leadership in engineering in a technical or wider context.

Richard Fenwick

Richard Fenwick is elected a Distinguished Fellow for his eminent contribution to the advancement of engineering knowledge and technological education. That contribution has spanned 40 years as a teacher and researcher, as a contributor to the development of standards and more recently, as one of the three Canterbury Earthquakes Royal Commissioners. While lecturing he ensured hundreds of civil engineering graduates acquired a thorough knowledge of the seismic design of reinforced and pre-stressed concrete structures. His work on the New Zealand Concrete Structures Standard NZS3101 led to the conferring of two Meritorious Service Awards from Standards New Zealand and the 2013 Standards Council Award. He was the principal concrete expert on the Canterbury Earthquakes Royal Commission. Along with his fellow Commissioners, his work earned the respect of the international earthquake engineering community. His contribution to engineering was recognised in 2010 when he was made an Officer of the New Zealand Order of Merit. In 2013, his contribution to the Royal Commission was recognised with both the William Pickering Award for Engineering Leadership and the New Zealand Society for Earthquake Engineering's President's Award.

Tony Lanigan

Tony Lanigan is elected a Distinguished Fellow of IPENZ for his eminent contribution to the application of engineering and technology in the community and his substantial contribution to the advancement of technological education. He's a professional civil engineer, project management consultant and former General Manager with Fletcher Construction. His interest in the application of technology to meet business needs was instrumental in carrying out research into predicting thermal stress conditions in box girder bridges. The research followed major post-construction problems with Auckland's Newmarket Viaduct and resulted in a design approach to accommodate solar-induced thermal loads on civil engineering structures. A belief that engineering schools weren't producing sufficiently well-rounded graduates led to his involvement in educational programmes. He played a significant part in the former Auckland Institute of Technology gaining university status as the Auckland University of Technology (AUT) in 2000. He went on to become AUT's inaugural Chancellor. As co-founder of the charitable organisation Habitat for Humanity in New Zealand, he has contributed practical engineering knowledge to helping fulfil the housing requirements of those in need. Tony was made an Officer of the New Zealand Order of Merit in 2013 for services to tertiary education and the community.

Fellows

Fellowships acknowledge a Member's significant contribution to leadership or to the advancement of the profession or of IPENZ.

Carl Ashby is elected a Fellow for contributing to the advancement of engineering practice and leadership. He has helped advance civil engineering through his service and commitment to the Structural Engineering Society New Zealand and the New Zealand Society for Earthquake Engineering. He's a recognised leader in building structural engineering with experience in projects ranging from multi-storey buildings to residential and civil structures. He helped review the Building Act and the NZS3101 Concrete Standards following the Canterbury earthquakes.

Derek Bradley is elected a Fellow for contributing to the advancement of engineering knowledge and developing IPENZ. He's recognised for his commitment to improving structural engineers' assessment and for authoring publications providing help and advice on meeting standards. He made a substantial submission to the Canterbury Earthquakes Royal Commission on engineers' training and has been a key member of the Structural Engineering Society New Zealand working group on improving the framework for ensuring structural engineers' technical ability.

Deion Campbell is elected a Fellow for contributing to leadership in the profession and innovation in creating engineering works. He's recognised for his leadership in wind generation, both in his work and as Co-Chair of the New Zealand Wind Energy Association. Notable work includes developing industry-standard land access agreements, community engagement models and environmental consent conditions. He also championed the development of New Zealand-based wind turbine repair capability and made important contributions in asset management, particularly for smaller and more remote hydro power stations.

"I'm extremely privileged and humbled to have received this honour, and I'm particularly proud to have been able to share the moment with family and friends."

– Steve Abley FIPENZ, MacLean Citation winner

CY Chin is elected a Fellow for advancing engineering practice and for his leadership. He's particularly recognised for his technical and editorial contributions on geotechnical engineering guidance and for his high level of daily practice. Since arriving in New Zealand in 1999, he has worked in significant roles on large and complex infrastructure projects. He has been a leader through various roles with the New Zealand Geotechnical Society. He recently chaired a sub-committee preparing industry guidelines on the seismic design of retaining walls.

Winston Clark is elected a Fellow for contributing to the advancement of engineering practice and applying engineering technology in the community. He's particularly recognised for his knowledge of structural and earthquake engineering and contributing to preserving, restoring and strengthening significant structures. He has contributed significantly to guidelines for assessing and strengthening earthquake-risk buildings and to post-Canterbury earthquake heritage work. He has also been a spokesperson on issues relating to earthquake-prone buildings.

John Cocks is elected a Fellow for contributing to the advancement of engineering practice and technological education. He has been prominent in developing waste management and minimisation plans, and led significant waste management infrastructure projects for over 20 years. He's particularly recognised for developing and running professional development courses and preparing standards and guidelines locally and internationally. He served on an Australasian committee developing on-site wastewater management standards. He also served on the Board of, and chaired, the Waste Management Institute New Zealand.

Stephen Coll is elected a Fellow for his contribution to advancing technical education and innovation in creating technological products. Particularly recognised is his input into researching and developing timber products in residential construction, along with training modules on basic engineering principles for non-engineers. These were incorporated into the Building Officials Institute of New Zealand Training Academy. He helped review standards associated with timber residential construction and created a range of farm buildings using timber. More recently, he has worked on the post-earthquake residential housing rebuild.

Rajesh Dhakal is elected a Fellow for his advancement of engineering knowledge and leadership in the profession. Particularly recognised are his contribution as an engineering educator and researcher, and his work post-Canterbury earthquakes. In his role at the University of Canterbury, he has been a respected teacher, researcher, mentor and editor. His reputation saw him lead the inspection of buildings following the earthquakes and being invited to make submissions to the Canterbury Earthquakes Royal Commission. It also led to his appointment as Editor-in-Chief of the New Zealand Society for Earthquake Engineering's bulletin.

Jeremy Eldridge is elected a Fellow for his contribution to advancing technology education and engineering practice. His contribution to professional development and mentoring, along with improving dam safety, is particularly recognised. He has been a member of the New Zealand Society of Large Dams management committee and contributed to developing and reviewing new dam safety guidelines. In his role with Genesis Energy, he has been involved in groundbreaking work relating to earthquake response. He has also provided building expertise in large assets and life-line responses to earthquakes.

Graham Gilkison is elected a Fellow for leadership in engineering and the application of engineering or technology in the community. Particularly recognised are his expertise in gas compression and input into complex engineering projects for Independent Technology Ltd and more recently, Australian sharemarket-listed firm LogiCamms. His technical and commercial skills have seen significant business growth while his support for the efficient use of oil and gas resources has resulted in environmental benefits. He has also mentored young engineers and fostered understanding of and interest in engineering through school programmes.

Robert Heebink is elected a Fellow for his contribution to advancing engineering practice and leadership in the profession. His major role in technology product development through his work with technology company Gallagher Group is recognised. His leadership of a large research and development team has established Gallagher as a New Zealand benchmark for product engineering. He has also demonstrated leadership through developing opportunities to share best practice in the high-tech export industry and in improving engagement between industry and the University of Waikato's School of Engineering.

Rob Jagar is elected a Fellow for contributing to the advancement of engineering practice and leadership. His important roles in New Zealand's oil and gas industry as Chairman of Shell Companies New Zealand and General Manager of Shell Todd Oil Services. He has more than 35 years' experience in the oil and gas industry. His leadership roles extend to other industries and Taranaki community organisations, along with chairing the Government taskforce that reviewed workplace health and safety.

Nihal Kularatna is elected a Fellow for contributing to the advancement of engineering knowledge and innovation in the creation of technological products. He's recognised for developing numerous specialised training programmes and reference books for industrial electronic engineers. He's also recognised for developing new applications for super-capacitors which resulted in patents being filed and agreements with major firms. His achievements were recognised in 2013 when he was named Engineering Innovator of the Year in the New Zealand Engineering Excellence Awards.

Allan Leahy is elected a Fellow for leadership in engineering and for advancing technological education. He helped lead the stormwater industry through its growth over the last three decades. In roles that include heading specialist teams and providing technical support, he encouraged young engineers' development. He has been a leading figure in professional and industry organisations such as the Association of Consulting Engineers New Zealand (ACENZ) and Water New Zealand. He has served as a judge on both ACENZ awards and the New Zealand Engineering Excellence Awards.

Jack Mains is elected a Fellow for contributing to the advancement of engineering practice and leadership in the profession. He helped lead the development of the Recreation Safety Engineering Technical Group, recognised by WorkSafe New Zealand as the representative body for amusement rides. He also advocated for continuous improvements in certifying not only amusement rides but also logging machinery and cranes. He was instrumental in WorkSafe's decision to redefine container handlers as cranes to improve port safety.

Stefano Pampanin is elected a Fellow for his application of engineering technology in the community and innovation in creating technological products. As an internationally-regarded researcher, educator and innovator, he progressed the theory and practice of earthquake engineering. His work alongside others on developing earthquake-resistant buildings and materials aims to reduce seismic risk. He was on the expert panel investigating earthquake damage to major Christchurch buildings, reported to the Royal Commission of Inquiry and has advised the Engineering Reference Group.

Amal Punchihewa is elected a Fellow for advancing engineering knowledge and practice. He's recognised in New Zealand and internationally as an information and communications technology engineering expert. He has been a leader in regional and international broadcast engineering, supporting the development of modern television services. At Massey University he was a mentor, adviser and course content developer. In his work with the Asia-Pacific Broadcasting Union, he's responsible for technical standards development and promotes new research and the reservation of spectrum for future broadcasting.

Sarah Sinclair is elected a Fellow for contributing to the advancement of engineering practice and leadership. Currently Chief Engineer for Auckland Council, her past work has involved leading sustainable practice for a major engineering firm and supporting women in engineering. Her role at Auckland Council has a community engineering focus, particularly in addressing the challenges posed by the consolidation of engineering practice and design standards that vary across Auckland. In 2014, she was appointed to the board of earthquake-related organisation, Southern Response.

Donald Tate is elected a Fellow for advancing engineering practice and developing IPENZ. He has contributed to engineering consulting leadership and developing and promoting good applied engineering practice for dams. He has managed the geotechnical and civil aspects of projects ranging from large dam construction and wind farm development to subdivision design and cliff stability. He has served the New Zealand Society of Large Dams, is an IPENZ Practice Area Assessor, has supported technical group activity and mentored other engineers.

"I was greatly honoured and see this as a tribute to my Traffic Design Group colleagues and those many engineers who have given freely of their time and energy to IPENZ in so many ways."

– Peter McCombs, recipient of the Fulton-Downer Gold Medal – The President's Award

Lincoln Taylor is elected a Fellow for advancing engineering practice and for his leadership. He played a leading role in improving heavy vehicle certification standards. As a leading designer in the heavy road vehicle industry, he has helped make logging trucks and trailers lighter, stronger and safer. He was an inaugural member of the Heavy Vehicle Engineering Technical Interest Group and was involved in the Log Transport Safety Council's work on load security. He was also instrumental in developing the Bolster Attachment Code.

Cliff Tipler is elected a Fellow for professional leadership and advancing engineering practice, particularly in environmental engineering and industry training. He has led many multi-disciplinary resource consent applications, presented expert evidence before the Environment Court and was a Commissioner for Environment Canterbury on consent applications. He's a past President of the New Zealand Water and Waste Association and led its involvement in industry training along with the merger of the Agriculture Industry Training Organisation (ITO) and its horticulture counterpart to form the Primary Sector ITO.

Murray Wallace is elected a Fellow for contributing to engineering in the community and to IPENZ. He helped develop engineering disciplines and professional engineering organisations in local government. He had a significant role in establishing the Association of Local Government Engineers and served as President of one of its successors. In this role, he helped introduce competitive tendering for local government roading work. He has worked in all aspects of roading asset management and engineering, and has been an IPENZ office-holder and a competency assessor.

COMMITMENT TO EMPLOYEE DEVELOPMENT RECOGNISED

Four new Professional Development Partners (PDPs) have been recognised. Under the PDP Programme, employers provide their staff with a holistic career development pathway throughout their engineering careers. IPENZ recognises the time and commitment made by these employers to retain and further develop their engineering workforce.

New PDP Partners

- Norman, Disney & Young
- Auckland Council
- Woods
- Powerco

NEW COMPANIONS ANNOUNCED

Two IPENZ staff have been promoted to Companion. This Membership class recognises those who aren't professional engineers but who've made a significant contribution to the profession through their hard work and dedication.

- Kavita Kansara
- Margaret Dawson

NIGEL PRIESTLEY ONZM DistFIPENZ

21 July 1943 – 23 December 2014

Nigel with his daughters at the 2013 Fellows' and Achievers' Dinner, where he was elected a Distinguished Fellow of IPENZ for his eminent contribution to engineering knowledge and practice.

Nigel was a huge presence in the earthquake engineering community, locally and internationally. Graduating with a Bachelor of Engineering (First Class Honours) from the University of Canterbury at the age of 20, Nigel went on to complete his PhD in 1966. He then spent the following decade heading the Structures Laboratory of the Ministry of Works Central Laboratories.

From 1976 to 1986, Nigel was on the University of Canterbury faculty. Alongside Professor Tom Paulay, he researched the seismic behaviour of masonry structures and reinforced concrete columns. Many of his research papers are now recognised as the basis of current understanding on the topic. Throughout his career, he was closely involved with the New Zealand Society for Earthquake Engineering's study groups and was the Society's President in 1985/1986.

Nigel, whose consulting work took him to earthquake-prone countries around the world, had extensive links with overseas institutions. In 1986, he joined the faculty at the University of California San Diego (USCD), where he was a Professor for 14 years and researched seismic design of concrete bridges. During his last three years, he was a visiting fellow funded by the New Zealand Earthquake Commission.

He was then appointed Co-Director of the ROSE School in Pavia, Italy. Staying until 2007, he was involved in advising, teaching and helping set the programme curriculum. Nigel's work at the University of Canterbury, USCD and the ROSE School is said to have had a profound impact by bringing prominence to each of the three institutions.

Nigel took a leading role in the investigations into the Canterbury earthquakes. He gave evidence to the Canterbury Earthquakes Royal Commission and chaired a panel examining the collapse of the CTV and Pyne Gould Corporation buildings, along with damage to the Forsyth Barr building and the Hotel Grand Chancellor.

Nigel's honours and accolades are numerous and include honorary doctorates from institutions around the world. Last year, he was made an Officer of the New Zealand Order of Merit for services to structural engineering. He is widely published: 450 papers, mainly on earthquake engineering, along with several seismic design books he co-authored.

Revolutionary seismic enhancements Nigel helped develop throughout his career have been incorporated into structures worldwide. The legacy of this is enduring, producing much safer and more efficient structures which will ultimately save people's lives and minimise damage during earthquakes. ■

IPENZ
ENGINEERS NEW ZEALAND

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