

New Agreement for International Engineering Technicians

IPENZ has signed an Agreement for International Engineering Technicians at the annual meeting of the International Engineering Alliance, which was held this year in Istanbul, Turkey.

The Agreement establishes a benchmark international standard of skills and qualifications for competent engineering technicians. A key aim is to develop an International Engineering Technicians (IETn) register to promote mutual recognition and mobility of engineering technicians.

In practice, this will mean the skillset of an individual, rather than a particular qualification, will be marked against the benchmark standard to establish a Technician's level. Therefore, a person recognised in one country as meeting the internationally agreed competence standard will only need minimal assessment on local knowledge to be registered in another signatory country.

This is the seventh international agreement managed by the International Engineering Alliance (IEA) governing mutual recognition of engineering qualifications and professional competence.

As one of six founding provisional members, IPENZ will have a say in the Agreement's initial development. We will not have to complete a formal application process to get provisional membership. But IPENZ will have to work through a process to become an



One of the many beautiful mosques in Istanbul.

authorised member of the Agreement.

Brett Williams, IPENZ Director Learning and Assessment, says: "IPENZ was pleased to have the opportunity to sign this Agreement, which completes the suite of education and registration mobility agreements operating under the IEA (see table, page 3). The development of an IETn register recognises the key role that technicians play within engineering teams. There is an acknowledged shortage of technicians in the engineering workforce in New Zealand. The opportunity for registration on an international register can only enhance New Zealand engineering technicians' standing and support wider initiatives to attract greater numbers of people into these roles in industry.

"The exemplar competence standard adopted by the Agreement is very closely aligned with the competence standard IPENZ already uses to assess technicians for AIPENZ Membership and CertETn registration. This means we should be able to offer registration on a New Zealand section of the IETn register without any change to existing assessment standards or processes."

The annual conference, which took place between 21 and 26 June, saw 153 engineering delegates attending from around the world. The meeting gives the opportunity for representatives of the engineering profession to build closer global engineering ties.

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President's Message

GETTING INVOLVED

Since joining the Board, I've been really impressed by the number of Members who give their time to support and advance the profession.

Members volunteer in a multitude of areas, including:

- Student Members organising social and engineering related events for undergraduates
- Graduate Members getting involved with the Futureintech programme, encouraging school students to consider engineering as a career
- Experienced engineers acting as Practice Area assessors to ensure the competence of Members across diverse fields of Practice
- Members co-ordinating Branch activities and providing support at the local level
- Members getting involved with committees and specialist technical groups.

For me, these people truly represent one of the core attributes of being a professional - giving something back for the good of the profession.

When I consider the ways in which IPENZ endeavors to provide value to its Members, almost all rely on the significant contribution of Members to make sure they are successful.

Particular areas include:

- Representing our industry and advocating on behalf of Members
- Promoting professional and ethical practice
- Performing independent verification of competence
- Shaping opinion on engineering matters
- Providing access to current engineering knowledge
- Facilitating global mobility
- Encouraging employers to support professional development and registration
- Raising the profile of engineers and increasing public understanding of engineering matters
- Forming partnerships with schools and industry to inspire the next generation of engineers.

IPENZ as an institution can't, and shouldn't, operate in a vacuum remote from the input and support of its Members. Member input not only ensures the delivery of many of our work programmes, but also, and more importantly, provides guidance to the Board on which projects and issues we should be addressing. This guidance helps us to prioritise the Institution's strategic objectives, making sure we use our resources effectively.

"May I offer my sincere thanks, to those of you who already give freely of your time for the benefit of us all."

For those of you who are yet to contribute, I encourage you to do so in whatever way you can. Whether this is by attending Branch events to show support for your local committee, offering to act as a Neighborhood Engineer or providing feedback on consultation papers we publish from time to time, every bit helps.

As a Member of the Institution, you have a right to have your view considered. As I have personally found, contributing to the profession is a very rewarding experience. My knowledge of what it means to be a professional has grown as a result of getting involved and I have met, and continue to meet, some amazing people.

So, when next the opportunity arrives, please take the time to contribute and give something back to our profession.

Andrew Read FIPENZ

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IEA education and registration mobility agreements		
Engineering role	Educational Agreement	Professional Competence Agreement
Professional Engineer	Washington Accord <i>IPENZ accreditation of an academic qualification leads to recognition of graduates under the relevant Accord</i>	International Professional Engineers Agreement and APEC Engineer Agreement <i>IPENZ currently operates the New Zealand section of the IntPE register under these agreements</i>
Engineering Technologist	Sydney Accord	International Engineering Technologists Agreement <i>IPENZ currently operates the New Zealand section of the IntET register under this agreement</i>
Engineering Technician	Dublin Accord	Agreement for International Engineering Technicians, which will establish the International Engineering Technician (IETn) register

Recognising New Zealander's contribution

At the end of the conference, **Basil Wakelin MNZM DistFIPENZ** stepped down from his role as Chair of the IEA Governing Group.

Mr Wakelin is highly regarded in the New Zealand engineering profession and is a long-committed IPENZ volunteer. His work has included significant roles in developing engineering education and competence standards in New Zealand and internationally, and establishing the accreditation of engineering degrees. He also led the development of the competence standard established under the Chartered Professional Engineers of New Zealand Act 2002.

Mr Wakelin, who became chair of the Governing Group in June 2011, was acknowledged by signatories for his significant contribution to the IEA.



Dr Yavuz Ercil of MUDEK Turkey with fellow delegates. Dr Yavuz was a key part of the organising committee.



Mr Basil Wakelin MNZM DistFIPENZ, retiring Governing Group Chair.

Growing the Agreements

The meetings highlighted the strong interest in membership of the various agreements, in particular the Washington Accord. Costa Rica was admitted as a provisional signatory to the Washington Accord, while Mexico is also in the process of being accepted as a provisional signatory. Current provisional signatories that are undergoing reviews to progress to full membership include China and the Philippines, while a review of Pakistan is currently on hold pending safety concerns.

One region that is seen as key to the Agreements' future growth is Europe. The IEA has been working to build strong links with the European Network for the Accreditation of Engineering Education (ENAE). At the meetings a joint IEA/ENAE *Best Practice Guide of Accreditation* was endorsed by IEA members for publication.

Next year's conference will be held in Kuala Lumpur, Malaysia from 30 May to 3 June. ■

FELLOWS' & ACHIEVERS' AWARDS 2016

"NEW" AWARDS JOIN IPENZ AWARDS' FAMILY

Changes to next year's Fellows' and Achievers' Awards.

The Young Engineer of the Year Award and the William Pickering Award for Engineering Leadership will become part of the IPENZ family of Awards. They were formerly included in the Engineering Excellence Awards, which are currently being reviewed. We want to make sure young engineers and engineering leaders continue to have their achievements celebrated in the meantime. These Awards will be offered to Members and non-members of IPENZ.

The "new" Awards will be presented at the Fellows' and Achievers' Dinner in March 2016 along with our existing Awards and Fellowships.

Nominations are now open

The Awards are our chance to recognise your hard work, dedication, technical expertise and leadership. To succeed, however, we need you to nominate standout individuals.

IPENZ Fellowships

Distinguished Fellow - Recognises a Fellow of IPENZ's eminent contribution to leadership in engineering, technology or science over an extended period.

Fellow - Recognises a Member's significant contributions that advance the engineering profession or IPENZ.

Honorary Fellow - Recognises a person's eminent contribution to the advancement of engineering over an extended period. The nominee does not have to be an engineer.

Fellowship nomination forms are available on the IPENZ website or by emailing [Karen Cooper](mailto:ka-cooper@ipenz.org.nz) (ka-cooper@ipenz.org.nz)

Fellowship nominations close on 31 October 2015.

Turner Award for Professional Commitment

This Award, sponsored by Pacific Steel Group, recognises the extraordinary volunteer; the one that goes above and beyond in their commitment to IPENZ, the profession and the community at large.

Supreme Technical Awards for Engineering Achievers

These Awards, sponsored by Opus International Consultants, recognise those who have demonstrated excellence and leadership in engineering practice during their career for the engineering profession's benefit. Awards are offered in four engineering practice areas:

- Dobson Award for Transportation Infrastructure
- Rabone Award for Information, Communication, Electrical and Electronic Technology
- John Cranko Award for Mechanical and Manufacturing
- Furkert Award for Sustainability and Clean Technology.

Young Engineer of the Year

This Award, sponsored by AECOM, is given to an engineer who can demonstrate they're a well-rounded individual who not only excels in their career but also demonstrates leadership qualities and contributes to the community.

William Pickering Award for Engineering Leadership

The Award recognises an engineer who has demonstrated outstanding leadership and is a role model for other engineers. It is one of our most prestigious awards.

Award entries and nominations close on 31 October. More information is available on the IPENZ website or by emailing [Jan Macandrew](mailto:jan-macandrew@ipenz.org.nz), Awards Co-ordinator (awards@ipenz.org.nz). ■



Update: The New Zealand Society for Safety Engineering

IPENZ's newest Technical Interest Group (TIG), the New Zealand Society for Safety Engineering, is a year old.

Over the last 12 months, the Society has pursued its three main objectives, which are to provide:

- Support and continuing professional development (CPD) to engineers to help them fulfil their safety responsibilities
- Technical expertise in the development of regulations and legislation affecting the profession
- A voice for the engineering profession, which represents its interests with policymakers and groups like the Health and Safety Association of New Zealand.

Its Chair, **Dr Joe Bain MIPENZ** and his colleague, the Society's Secretary, **Matt Bishop MIPENZ**, say engineers' interest in the Society has been very encouraging.

The Society has 60 members and Dr Bain says the level of interest is illustrated by the response to the CPD workshops it has run. The courses, delivered by Dr Bain



Joe Bain MIPENZ. Photo: BVT.

and the University of Canterbury's **Dr Dirk Pons MIPENZ**, have proved popular - they've taken place across New Zealand, from Whangarei to Invercargill, with up to 27 participants at each.

"When IPENZ asked us if we could put together a course on safety we thought maybe that might amount to two or three workshops," Dr Bain says. "But it snowballed - we've delivered 17 so far all over the country and there are three more scheduled for August-September, telling people about the Health and Safety

Reform Bill and giving them tools to help satisfy the requirements of the law."

Over the last year, the group has focused on building links with WorkSafe New Zealand and other groups with a safety focus, and growing its membership base. The Society has a busy second year planned. Within the next six weeks, they plan to kick off their first working party, which will revise the IPENZ Practice Note 4, written in 2004. This Practice Note, by its own admission, is not intended as a definitive guide to the Health and Safety in Employment Act, but rather to raise awareness of issues that engineers need to keep in mind and learn more about.

Dr Bain is pleased with the Society's progress so far. He says: "It's taken a while to get some traction - a lot of the year has been focused on infrastructure and finding our feet. But, judging by the response to the workshops, it seems there's a real hunger for this sort of group, so we'll keep at it".

If you'd like to learn more or are interested in joining the New Zealand Society for Safety Engineering, email Dr Bain at joe.bain@bvt.co.nz ■

SPONSORED DEGREES

Sponsored degrees (also known as advanced or higher apprenticeships), which provide on-the-job training with completion of a degree-level qualification in engineering, are increasingly being offered around the world. They allow employer engagement in curriculum design and delivery, which is particularly relevant to rapidly changing high-tech industries, such as engineering. Engineering Education to Employment (E2E) is investigating what works, what doesn't, and which models could be successfully applied in New Zealand to deliver the Bachelor of Engineering Technology degree.

Associate Professor **Jane Goodyer FIPENZ** of Massey University was contracted to lead an investigation into employer-tertiary engagement in the form of advanced apprenticeships. With **Dr Greg Frater**, she has conducted a literature review of learning models with high levels of

employer involvement and interviewed tertiary providers involved in delivering degree apprenticeships.

They found there was a "need for effective collaboration between employers and educationalists at the design and planning stage, and clear pathways to higher levels of education. Employers have to be in the driving seat, specifying degree standards that are outcome-based and occupation-driven."

Professor Goodyer and Dr Frater endorsed apprenticeships as a viable model for educating engineering technologists and have provided recommendations for establishing new degrees based on an apprenticeship learning model.

Their report, *Stepping into One Another's World*, is available on the Engineering E2E website: www.engineering2e.org.nz ■

IPENZ SELECTED TO HOST 2016 MEETING OF ASIA PACIFIC NATION NETWORK MEETING

In February, IPENZ submitted a proposal to host the 2016 meeting of the Asia Pacific Nation Network (APNN). At the 2015 APNN meeting, which was held in Mongolia on 25 June, it was officially announced that IPENZ's proposal had been accepted.

The APNN is a regional network of the International Network of Women Engineers and Scientists (INWES) and includes 12 Asia Pacific nations - New Zealand, Australia, India, Japan, Korea, Malaysia, Mongolia, Taiwan, Pakistan, Vietnam, Sri Lanka and Nepal. Representatives of the 12 countries meet annually to discuss the progress of women in science and engineering in their countries.

"The APNN gives us a chance to showcase the progress our engineering profession has made."

IPENZ Chief Executive, **Susan Freeman-Greene**, says: "I'm delighted IPENZ has been selected to host this event. It'll give us a chance to showcase the progress our engineering profession has made while also giving us a nudge to go further in making our engineering profession more inclusive, and accepting of diversity".

The 2016 meeting is likely to be held in Wellington towards the end of the year and will be accompanied by a conference. Planning is now underway to make sure the APNN meeting and conference are a success. IPENZ will keep Members up to date on the progress of this event. ■

CELEBRATING AUCKLAND'S ENGINEERS

Described as "a great night out", this year's Arthur Mead Awards drew 160 guests to the Royal New Zealand Yacht Squadron in mid-June. The Awards' evening, which this year was held in conjunction with the Presidential Visit, is the annual highlight in the Auckland Branch's events calendar. The Awards celebrate New Zealand engineering projects that address environmental sustainability and recognise Auckland Branch Members' contributions to conservation.

Arthur Mead Award Head Judge, **Simon Hall MIPENZ**, presented Awards to this year's finalists.

Congratulations to:

- Watercare Services and Brian Perry Civil for their project, Eastern Interceptor Pipe Bridge
- Auckland Council, Auckland Transport and Morphum for their project, Alexandra Stream Enhancement.

The Alexandra Stream Enhancement project is located in Oteha Valley, North Shore City and involved integrating a major public cycle-way project with stream restoration, wetland enhancement and stormwater infrastructure improvements.

The Eastern Interceptor Pipe Bridge project involved replacement work to the Eastern Interceptor Sewer at Van Damme's Lagoon in Mt Wellington. The work was completed early this year without environmental incident. ■

IPENZ FORMER DEPUTY CHIEF EXECUTIVE APPOINTED GNS BOARD CHAIR



Dr Nicki Crauford FIPENZ, former Deputy Chief Executive of IPENZ, has been appointed Chair of the Institute of Geological and Nuclear Sciences (GNS) Board.

The Minister of Science and Innovation, the **Hon. Steven Joyce**, announced the appointment in June, alongside appointments and reappointments to seven Crown Research Institutes (CRIs), which conduct scientific research in New Zealand.

Dr Crauford, who was Deputy Chief Executive at IPENZ from 2011 to 2014, took up her new role on 1 July.

Mr Joyce said Dr Crauford, and the other directors appointed to CRI Boards, "are all experts in their field, and I would like to thank them for agreeing to serve on the Boards". ■

Environment and economics - can we have both?

Coasts and Ports 2015 Conference
15-18 September 2015, Pullman Hotel, Auckland

The Coasts and Ports 2015 Conference - an amalgamation of the 22nd Australasian Coastal and Ocean Engineering Conference and the 15th Australasian Port and Harbour Conference - is the pre-eminent forum in the Australasian region for professionals to meet and discuss issues extending across all disciplines relating to coasts and ports. The Conference will include three keynote speakers, more than 160 peer reviewed papers and targeted site visits around the Auckland region.

The conference theme is "Environomics. Environment and economics - can we have both?" The idea behind this theme is the balancing act between protecting and preserving the environment and achieving economic growth and prosperity. How can investors, regulators and the public develop a win-win strategy? What is the appropriate balance of protecting against future climate change scenarios while enabling societies to benefit from their locations?

Keynote speakers include Ngāti Whātua's **Ngarimu Blair**. Mr Blair is a well-known Māori leader, who has spent 15 years advocating on *iwi* issues in Auckland. His work includes establishing the largest ecological restoration project on the Auckland isthmus at Bastion Point, and spearheading city art and urban design projects highlighting Māori history in Auckland.

Mr Blair is joined by keynote speakers **Todd S. Bridges** and **Arthur Webb**.

Dr Bridges is the U.S. Army's Senior Research Scientist for Environmental Science, the Director of the Centre for Contaminated Sediments and the Programme Manager for the Dredging Operations Environmental Research programme.

Dr Arthur Webb is presently a lead author on the Intergovernmental Panel on Climate Change's (IPCC) 5th Assessment Report - Chapter 29 (Small Islands) and was a contributing author to the recently released comprehensive Secretariat of the Pacific Community (SPC) study *Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change*. He is also a co-author of the 2010 paper *The dynamic response of reef islands to sea-level rise: Evidence from multi-decadal analysis of island change in the Central Pacific*.

The 160 conference's paper topics include:

- Port and maritime engineering
- Shelf, coastal and estuarine processes
- Dredging, mining and monitoring (including biosecurity)
- Tsunami, tropical cyclones and extreme events
- Climate change and adaptation
- Coastal structures and facilities
- Planning, policy and management (both coast and ocean).

Registrations for the Conference close on 1 September. Register at www.coastsandports2015.com ■



Ngarimu Blair



Todd S. Bridges



Arthur Webb

WALKING THE WALK: IPENZ ENGINEERING TOURS APP EVENTS



IPENZ Members in Auckland and Wellington test out the new Engineering Tours app.

IPENZ Members got together in Auckland and Wellington in June to try out the new IPENZ Engineering Tours app.

The Auckland Branch held a public event on 13 June. Around 40 people walked or cycled the route of the Auckland Waterfront Walking Tour. They started at the Auckland Harbour Bridge, where they enjoyed barbequed sausages and coffee to raise funds for Engineers Without Borders.

A week later, the Wellington Branch and Heritage Chapter Members shared the Wellington Heritage Walking Tour and

Networking Breakfast with their friends and families. The event was a “road test” for the Wellington Heritage Walking Tour, which will be officially launched later this year.

Despite the grey morning, a dozen individuals walked the route. IPENZ Heritage Advisor, **Karen Astwood**, says “It was great to get on the spot feedback from participants and suggestions for additional tour content”.

You can download the IPENZ Engineering Tours app free of charge from the Apple or Google app stores. ■

MEMBERSHIP UPDATE

The following is a list of additions and changes to the classes of Membership for the period 3 June – 6 July 2015

Elected to Graduate Member:

OA Adeoye, RT Agno, S Ahmed, SA Ahmed, G Ahuja, MT Aitken, SW Allen, JN Aldape, N Al-Shakarchi, MJ Arefi, P Ariyaratna, V Arunchaya, MLA Aspell, B Aswarithdumrong, Y Averianova, AA Baikie, CA Baker, CMA Barber, AD Barnett, TSW Belworthy, CAJ Bennett, DM Bethwaite, JJ Bird, DJ Bond, AJ Bowmar, DA Broughton, M Buhr, OP Bupha-Intr, LJ Butler, IRM Cameron, K Canning, JN Carter, AI Cayzer,

A Chaudhary, A Chen, GG Cooper, RA Cooper, SO Corbett, MMW Crane, DC Cunningham, SW Currie, RE Darby, AS Davy, CK DeLong, TE Dombroski, JR D'Souza, AJ East, AA Enriquez, JM Estoras, MA Fernando, JA Formosa, CR Francis, MJ Geddes, R Giray, RR Girija, R Goldwater, D Golub, BD Goodison, MAP Grange, GS Grewal, SH Grieve, MD Hannerich, TCA Hanson, SS Hargreaves, SKL Hayward, DJ Hazard, CR Hearn, VG Hider, PD Horne, JP Huse, AK Kar, CGT Iltumin, Z Iqbal, J John,

SR Kanagaratnam, TJ Kelly, M Khassenov, RJ King, AM Kirk, TTL Kuek, PK Kuwar, AKH Lai, SJ Landreth, SB Langton, G Lepnyakova, Boda Li, Bo Li, G Li, JH Lim, KZ Lin, T-MA Ling, G Liu, L Lobo Coutinho, CL MacDonal, N Mahon, JB Makwana, A Manokaran, SM Maquiling, CB Mardon, DJ Maritz, MM Marshal, TJB Martin, ST Mathews, KJ McClean, JA McKellar, NM McLean, CS Miller, NDT Milne, IC Mischevski, AA Montador, GJ Morris, SJ Murphy, BA Nicholson, JM Nightingale, MR Norman,

JR Norris, V Oliveira Nascimento, S Oliver, CA O'Neill, SK Palapati, TG Patrick, RM Phelps, T Powell, MJ Pratchett, JT Prendergast, C Qian, L Raj, A Rana, SNT Ranasinghe Arachchige, NL Reardon, TD Riddell, KM Robinson, CI Roche, WL Rodenburg, B Roje, MP Ryan, TP Ryan, JM Scully, KR Shaffer, DS Sidhu, M Singh, I Siracusa, MS Sirena, NE Smith, N Soloman, N Srinivasan, JFW Stainton, AP Stubbs, SJ Tait, LL Tang, CD Taylor, A Thomas, BS Thomson,

JL Thomson, EJ Tok, F Valeroso, MF van Leeuwen, DA Vernall, B Wang, W Wang, IB Williams, A Wong, SA Wong, DJR Woolner, EE Worthington, MG Wright, Z Wu, S Xiang, H Yan, T Yee, ALM Young, IMS Zahrani, C Zhu

Elected to Professional Member:

S Aggarwal, A Almulla, TM Ashman, R Catalo, JN Creelman, JT DeLor, CK Lam, JS-W Lo, CG McCarthy, MJ Pelenur, BM Phillips, BA Schimke,

DG Smith, JCR Spinks, AC Spring, AQ Tao, JJ Thompson, P Wadan, MP Walker, ST Williamson

Elected to Technical Member:

BR Harris, GL Ramsay

Elected to Affiliate Member:

PR Ballard, P Fleckney, E Ghunaim, C Jones, JM Lea, M Sellars, PJ Sleeman, A Thorpe, K Twohill, J Young

IPENZ regrets to announce the passing of:
JMW Clarke FIPENZ



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