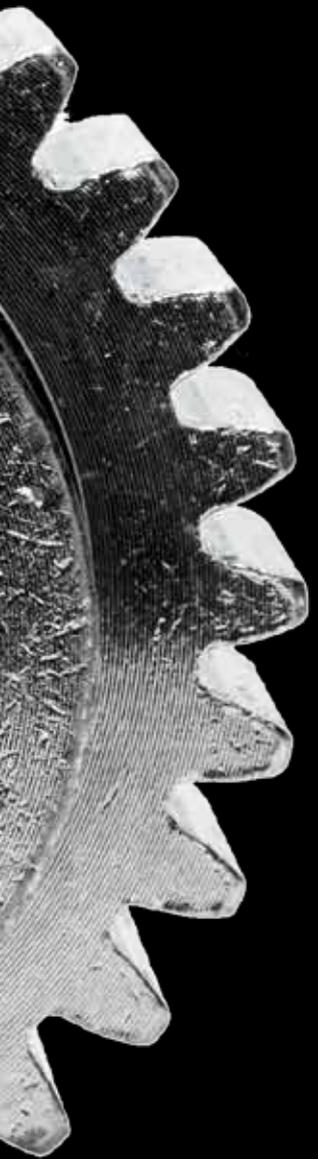


NEW ZEALAND ENGINEERING
DIRECTORY
2017



INCLUDING
BEST OF THE BEST

INCLUDING
NZ ENGINEERING
WHO'S WHO

NEW ZEALAND
Engineering **News**



Jürgen Thiele

Jürgen Thiele, Calibre Consulting's business unit leader for waste recovery, has 38 years of experience in biogas process biochemistry, biotechnology, and process design and implementation (wastewater treatment plants and waste to energy projects).

Thiele applies this expertise to achieve improved energy efficiency in municipal wastewater treatment, innovation in biogas, bioenergy project development, value recovery from organic waste, biogas digester efficiency upgrades and rapid digester process startup.

In the past he enjoyed close involvement in the design and implementation of regional waste to energy facilities in New Zealand, Australia and Asia, including the Camellia biomass project in Parramatta, the commissioning of new thermophilic digesters at the Christchurch Waste Water Treatment Plant, and the Palmerston North sludge digester plant upgrade to digestion of fatty waste.

Recent successes include the design and implementation of innovative ways to upgrade cost-effective digester capacity in the municipal wastewater industry.

A recent example is the digester process optimisation of the existing sludge digesters in Palmerston North and Hamilton to improved biogas production capacity.

Additionally, the retrofit of the Palmerston North City Council municipal sludge digesters to trade waste digestion has achieved quadrupled biogas output without the construction of new digesters.



Katalin Csikasz

In a career that spans some 21 years in a male dominated industry engineer Katalin Csikasz has flourished.

Her bent to engineering manifested in her early desire to dismantle her sewing machine rather than use it under the guiding influence of her

mechanical engineer father.

This saw her go on to complete a masters degree in engineering and to dedicate a lot of her energy to pass on knowledge and enthusiasm to students.

Following this she gained a position as a field engineer for Hilti International. On moving to New Zealand she held roles with James Hardie and Fletchers as part of CSP Pacific.

Gradually she developed a reputation for problem solving based on perception, emotional quotient and intuition combined with practical rationalism, intelligence and ability.

This assisted her greatly in her various roles which have seen her implement training programmes and develop strong relationships

with manufacturers to improve quality and performance, product compliance, product safety, product/process design and risk management.

Out of this she has successfully brought into being her own company TechPro Plus, which has been inundated with positive feedback for helping companies become market leaders.

Of many interesting projects, TechPro Plus conducted an audit of Steel Rollformed Products' product compliance and technical documentation.

The technical foundation that Steel Rollformed Products received from TechPro Plus enabled it to grow massively. For further information visit: www.techproplus.co.nz



Kevin Halsall

Ogo Technology's founder Kevin Halsall created the Ogo after his friend Marcus ended up a paraplegic following a ski accident on Mt Ruapehu.

They were both staunch field archery

fans and their Otaki club offered some challenging terrain. Halsall watched Marcus struggle to make the most of life in a wheelchair.

This inspired him to begin investigating what could be achieved by bringing balance wheel technology to the solution.

Working directly with Marcus, Halsall was able to find the key elements needed to make the idea both useful and safe for someone with reduced mobility.

The challenge was to create a machine that is more than just a seat on top of

a pair of balance wheels. And it wasn't just about the technology; Halsall's specialist skill in product design for rotational moulding was a major asset.

From the day the first Ogo video went on social media in August 2015, Ogo Technology has been inundated with positive feedback. However, most important for Halsall is the personal validation from everyone who has given the Ogo a try.

After four years of development and many iterations of the Ogo, Halsall is confident he has the ultimate machine to bring to market.



Kim Pickering

Pioneering research at Waikato University is looking at everyday applications of 3D printing using sustainable materials such as hemp and harakeke (flax).

Waikato University professor of

materials Kim Pickering and engineering students have been experimenting with waste material to reinforce plastic filaments that are then fed through a 3D printer.

Pickering and her students focus has been fused deposition modelling (FDM). In this regard Pickering envisages a time when every home will have its own easy-to-use 3D printer and when FDM will be an affordable option, catering to individual specification.

To date student research projects have been advised by the Hamilton City Council and Waikato Regional Council on materials that should be diverted from landfill and some students have

even been sponsored by the council to carry out work incorporating building waste into a 3D printing filament. These efforts are also receiving strong support from the commercial sector and consumers who are becoming more focused on preserving the environment.

Pickering concludes by pointing out that a 3D machine and filaments could be used to create bespoke products or "anything anywhere". This effectively translates into a consumer having to look no further than a 3D filament printer to replace a missing gadget, as an example.



Le Hang

Le Hang is a senior structural engineer at Opus International Consultants.

After completing her master of engineering at National University and master of international construction at Nanyang Technological University in Singapore she enjoyed an interesting and varied career before being appointed senior structural engineer at Opus. Her job responsibilities at Opus include providing structural schematic designs, detailed development designs, structural peer reviews and seismic assessments and strengthening for residential projects across the country.

Before her position at Opus she held positions such as senior structural engineer at ARUP and WorleyParsons in Singapore.

She says a project that really stands out for her was designing one of the 34-storey grade-A office towers and basement for the iconic South Beach Development on Beach Rd in Singapore's central business district, which was completed for service last year.

She attributes her current vocation to the influence of her engineer uncle who spent quite some time chatting to her on his engineering projects when she was younger, which she found fascinating.

As to being in a male dominated profession, Hang says for the most part it's "enjoyable and fun to be part of a unique team but also serious".

TAIT COMMUNICATIONS

Tait Communications specialises in designing, delivering and managing innovative radio-based critical communications solutions to assist customers keep communities safe and functional.

The company was founded nearly 50 years ago in Christchurch by Sir Angus Tait, one of the country's leading entrepreneurs and businessmen.

Today the company serves customers in more than 150 countries via its regional offices manned by 550 staff members in the US, Brazil, Singapore, Austria, the UK and Australia.

Tait Communications has always had a strong focus on research and development.

This has enabled it to deliver smart, practical and secure radio technology solutions for customers who need safe, fast and smart solutions that work 24/7.

The sectors Tait targets include critical and high-risk environments such as public safety (police, fire and ambulance), electricity networks and other utilities as well as mining, oil and gas, and transportation.

Tait has adapted with its customers, evolving from a business focused on

simply designing, assembling and delivering mobile radios and mobile solutions to a highly sophisticated company that has the skills and scale to manage and deliver a variety of solutions to best suit customer requirement.

The company also manages existing systems and supports customer transition to future-focused products, services and applications via its global network of trusted partners and dealers.

A large number of police forces around the world rely on Tait Communications systems to help keep their communities safe

TECHPRO PLUS

TechPro Plus offers unique, innovative and practical engineering solutions relating to product compliance, risk management, product safety, quality assurance and economised process/product design.

It sets up systems that achieve the aforementioned on an ongoing basis for clients both in New Zealand and abroad.

Its founder Katalin Csikasz believes this, in combination with easy to use technical documentation, not only builds business confidence but generates increases in both revenue and productivity.

Partnering with clients to identify potential areas of improvement, TechPro Plus can provide either a complete solution from start to finish or

manage part of the process.

Whether that means visiting an installation, working with clients and an installation team or leading a research and development team, the company approaches challenges with a fresh perspective and "outside the box" thinking.

The company has been highly commended, with comments like this abounding. "As a company we took the initiative to conduct an audit to check product compliance and update our technical documentation. We engaged TechPro Plus to manage this process and were very pleased with the excellent outcomes. Principal engineer Katalin Csikasz built a strong working relationship with us and was at all times thorough and profession-



al in her approach. Her attention to detail was exemplary. We confidently recommend TechPro Plus to offer practical solutions backed by professional expertise to deliver excellent results."

Currently, out of many projects, TechPro Plus is inspecting telecommunication towers and providing compre-

hensive written reports with detailed photographs in collaboration with Inter Pro.

The reports are providing the telecommunication companies with the required information to assist in maintaining and repairing their towers for maximum longevity. www.techproplus.co.nz

VEGA

Vega Industries has a rich history in the design and manufacture of specialised navigation lights for safe movement by sea, air and land. Some of the most challenging waterways in the world are effectively marked by the Vega's aids to navigation.

The company's products – renowned for their reliability and high performance – span a comprehensive range of maritime lights in the market, including short to long-range beacons, range lights, rotating beacons, obstruction lights, precision sector lights as well as remote monitoring and control solutions.

Vega's point of difference when designing lights is its focus on superior optical performance from the early design stage whether it be a high-end PEL sector light – a land-based navigation light which shows different colours when viewed from different angles – or a simple but critical low-cost channel marker. The company's highly trained team's high-end PEL sector lights have been in service for over 20 years in some of the world's most iconic ports and waterways such as the Panama Canal, Milford Haven and the Port of Durban. Regular customers include the US Navy. Vega's headquarters are based in



The world's biggest sector light for the United States Navy at Diego Garcia

New Zealand and are accompanied by regional business development

managers and a network of trusted channel partners around the globe.