



December 2022

Kei te harikoa ngā hararei

At MSL, we have finished the year renewing vital connections with colleagues internationally and regionally with a flurry of meetings. These culminated in welcoming over 200 participants to the Conference on Precision Electromagnetic Measurements in Wellington. Catching up with the scientific progress that has been made, talking through our challenges over coffee, and being inspired in our field reminded us just how much we have missed these opportunities over the past few years. The relationships we develop through these meetings are foundational to our ability to provide NZ with ongoing access to the very best in measurement science.

So we wish you all the best for the holidays, with opportunities to spend time with those important to you. And we look forward to 2023!

Aku mihi nui

Annette Koo

Director and Chief Metrologist



MSA2023 – Register now!

The Metrology Society of Australasia (MSA) conference is back after a three year

break. Hosted by the NZ MSA committee in Wellington, MSA2023 provides a unique opportunity to connect with the metrology community. Attendees will have the opportunity to hear a broad range of technical experts, participate in a number of workshops, learn new skills, ask the experts and talk to the best suppliers, while also experiencing a number of exciting social functions. You will not be disappointed with what's on offer. Quite literally, this will be the greatest little conference in the greatest little capital city. Stay up to date on the [event page](#) as more info is being added regularly, and [click to register now](#) and access standard fees until 9 January.



Measurement
Standards
Laboratory
of New Zealand

Proficiency Testing assesses a laboratory's performance at carrying out a specific test or measurement. So, regular Proficiency Testing provides evidence of the quality of a laboratory's test and measurement capabilities and supports a laboratory's 17025 accreditation.

The Direct-Reading Platinum Resistance Thermometer PT is open for registration now, and the Digital Multimeter PT re-opens for new registrations in January 2023.



Find out more

STEM Spotlight

MSL staff enjoy taking opportunities to host students with an interest in science, technology, engineering and mathematics (STEM)!

This year, Callaghan Innovation had the pleasure of hosting 40 students from the [Innovative Young Minds](#) (IYM) residential programme. Open to female students in year 11 and 12, this programme gives them exposure to a variety of science and technology businesses, Crown Research Institutes and tertiary education providers in the Wellington region. MSL's [Ellie Molloy](#) and [Rebecca Hawke](#) jumped at the opportunity to talk to them about metrology and why MSL exists as New Zealand's national metrology institute, and to show them around the goniospectrophotometer lab.

After the visit, [Joseph Borbely](#) hosted four of these students as part of a school holiday Pilot Student Work Experience Programme organised by Callaghan Innovation in partnership with IYM. Joe set up practical experiments for the students to determine

Planck's constant using light-emitting diodes (LEDs), a diffraction grating and an electrical circuit, then compare their measured values with the fixed value.



MSL also co-hosted students as part of the Paihau – Robinson Research Institute's [Tech Bootcamps](#), which aim to open up pathways to STEM careers for Māori and Pasifika students. Ellie and Rebecca did some activities with the students to help them understand the role of MSL and expose them to some measurement concepts.

[Yin Hsien Fung](#) took part in a week-long discovery sprint looking at the future of the [Wonder Project](#). He formed part of a diverse team that included members from other Callaghan Innovation teams, [House of Science](#), [Pūhoro STEMM Academy](#), and [Creative HQ](#).



Canadian Kibble Balance experts win 2023 Keithley Award

Three scientists from the National Research Council Canada / Conseil National de Recherches Canada have been awarded the prestigious IEEE Joseph F. Keithley Award in Instrumentation and Measurement for 2023.

Dr Richard Green, Dr Carlos Sanchez, and Dr Barry Wood received the award on 13 December 2022 at [CPEM 2022](#), in Wellington New Zealand. Named in honour of Joseph F. Keithley, the founder of Keithley Instruments, this Technical Field Award was established in 2001, and it marks outstanding contribution to the field of instrumentation and measurement.



[Read more](#)

CPEM Radio NZ Interviews

Top scientists meet over measurements with Dr Murray Early – [listen here](#).

General Conference on Weights and Measures (CGPM)

The four-yearly CGPM was held in Versailles in November. Our chief metrologist, Annette Koo, attended this pinnacle event in scientific metrology to represent NZ as a state party to the metre convention.

View the Resolutions/Recommendations [here](#).

Scientists have approved the expansion of prefixes used in the global measurement system, which means the Earth now weighs six ronnagrams. View The Washington Post article [here](#).

They also set the agenda for the next phase of scientific metrology including anticipating the redefinition of the second, endorsing the work programme of the [BIPM](#) and committing to digital transformation.

Festive Close-down Dates

MSL will be closed for business from midday on Thursday 22 December and reopen on Monday 16 January 2023. We look forward to assisting you in 2023!



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Callaghan Innovation, Gracefield Innovation Quarter, 69 Gracefield Road, Lower Hutt, Wellington 5010

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