

# 150 Years

OF NEW ZEALAND STANDARD TIME



**Measurement  
Standards  
Laboratory**  
*of New Zealand*



Ministry  
for Culture  
& Heritage

Te Puna Mātauranga o Aotearoa  
**NATIONAL LIBRARY**  
OF NEW ZEALAND

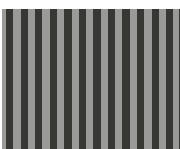
# | Event Details

**Thursday, 1 November**

**5.45 pm – 7.30 pm**

**Te Ahumairangi (Ground Floor) National Library |  
70 Molesworth Street | Thorndon | Wellington**

- Networking and refreshments
- Welcome by Dr Fleur Francois, Director, Measurement Standards Laboratory
- Presentation by Gerard Morris, New Zealand Historian – ‘History of adoption of NZ Standard Time’
- Presentation by Dr Bruce Warrington, Chief Executive, National Measurement Institute of Australia (NMIA) – ‘Keeping time: cool science and new inventions’
- Networking and event concludes



# Presenters



## **Gerard Morris**

Gerard Morris is a faculty member at the Ara Institute in Christchurch, and teaches Cultural Studies. He has been a researcher for 40 years and is a member of the Professional Historians Association of New Zealand Aotearoa. His 2012 Masters' Thesis is titled 'Time and the Making of New Zealand'.



## **Dr Bruce Warrington**

Bruce Warrington is Chief Metrologist and CEO of the National Measurement Institute, Australia, a counterpart to and partner of New Zealand's Measurement Standards Laboratory. A graduate of the University of Otago, he completed a DPhil in Oxford on atomic physics research and worked with CSIRO in Sydney on the development of atomic clocks.

# Measuring Up – The revision of the International System of Units

The International System of Units, known as the SI, will undergo a major revision in May 2019, implemented by the international measurement community. This global change involves moving away from material artefacts (e.g., the kilogram prototype in Paris), and instead defining all base units in terms of a set of constants of nature.

Four of the base units – the kilogram, ampere, kelvin, and mole – will be redefined based on fixed numerical values of the Planck constant ( $h$ ), the elementary charge ( $e$ ), the Boltzmann constant ( $k$ ), and the Avogadro constant ( $N_A$ ), respectively. The three remaining base units – the second, metre, and candela – are already defined by physical constants, so there will be no change in their definitions.

The Measurement Standards Laboratory is the primary agency responsible for implementing the new SI redefinitions in New Zealand. Adopting the definitions will allow New Zealand to remain consistent with international best practice and allow precision measurement to be available to everyone.

More information about the SI redefinition and associated events can be found on the MSL [website](#).

## Contact us

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The logo graphic for the Measurement Standards Laboratory of New Zealand consists of a series of vertical bars of varying heights, resembling a bar chart or a staircase, with a dotted line at the bottom.

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