

measurement equivalence – a fundamental backbone for IMS

Tuesday, 20 June 2023 16:00 (30 minutes)

Since 1875, the Metre Convention has established the principles for all nations to act in common accord in matters relating to units of measurement. In 1960 the system became known as the International System of Units (abbreviated SI from the French “Système International d’Unités”). Today, the SI is the widely accepted basis for the international mutual recognition of measurement results and provides confidence in measurement data traceable to this system.

This seemingly simple system of mutual recognition of measurement data across international borders and trading economies is based on the “CIPM-MRA”, an international recognition arrangement under the CIPM, which came into force in 1999. Its implementation involves national metrology institutes and regional metrology organisations in a permanent infrastructure that ensures the international equivalence of measurements.

In the establishment and operation of such a complex network as the IMS, the CTBTO can realise significant benefits by linking to the SI and the associated metrology processes and rules that underpin this system. Recognising the potential benefits of linking to the SI, the CTBTO contacted the CIPM in 2017 and initiated a formal liaison in 2021.

This talk will present a history of the unification of the metric system under the Metre Convention, the development of a global network to enable CIPM-MRA, and some common technical highlights related to CIPM and CTBTO.

Oral preference format

Promotional text

E-mail

Primary author: Mr USUDA, Takashi (National Institute of Advanced Industrial Science and Technology (AIST))

Presenter: Mr USUDA, Takashi (National Institute of Advanced Industrial Science and Technology (AIST))

Session Classification: Panel discussion on Metrology

Track Classification: Invited talks