

The International System of Units (SI) in **FAIR** digital data.



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On-line Workshop – 22nd 26th February 2021

Provisional Programme

The CIPM is developing a Grand Vision for a SI Digital Framework. This on-line workshop will provide the opportunity to hear about the CIPM's vision and to take part in discussions that will build a consensus on the next steps.

All presentation sessions will discuss the importance of units of measure and the impact of digital transformation in the quality infrastructure, regional metrology organizations and industrial infrastructure. Days 2 and 3 will be organized in collaboration with the Regional Metrology Organizations in their time zones.

The workshop will help guide the metrology community, on the one hand ensuring its services are suitable for the digital future, and on the other hand highlighting opportunities for the user community to best embed and exploit these new capabilities.

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Plenary and Invited Sessions

Day 1 - Monday 22nd February

OPENING PLENARY SESSION

Setting the scene for the workshop with reports of achievements and strategies from other organizations

With the confirmed participation of Wynand Louw (CIPM), Joachim Ullrich (PTB), Mark Wilkinson (GO-FAIR), Barend Mons (CODATA), Kylie Rodier (ISO), Roman Schwartz (OIML) and Etty Feller (ILAC)

Day 2- Tuesday 23rd February

TOPIC 1 – GLOBAL DATA SCIENCE

Challenges for the reproducibility of scientific results and progress toward FAIR principles

TOPIC 2 – INTERNATIONAL QUALITY INFRASTRUCTURE

The challenges of digital transformation in the metrological quality infrastructure

With the confirmed participation of Simon Cox (CSIRO), Martin Milton (BIPM), Erik Schultes (GO-FAIR), Sarah Jones (EOSC), David Hanlon (IEC), Roman Schartz (OIML), Leslie Pendrill (ISO) and Etty Feller (ILAC)

Day 3- Wednesday 24th February

TOPIC 3 – REGIONAL METROLOGY ORGANISATION

Challenges of digital transformation in Regional Metrology Organizations and National Metrology Institutes

TOPIC 4 – INDUSTRIAL DIGITAL INFRASTRUCTURE

Challenges of digital transformation in regards with units of measure in industries

TOPIC 5 – DIGITAL REPRESENTATION OF UNITS

Challenges implied by digital transformation on the representation of units of measure

With the confirmed participation of Bob Hanisch (CODATA), Stuart Chalk (CODATA), Maxime Lefrancois (W3C), Michael Trott (Wolfram), Steve Ray (QUDT) and Thomas Engel (Siemens, GEMIMEG)

Day 4 - Thursday 25th February

JOINT PLENARY SESSION followed by parallel BREAKOUT SESSIONS (see over)

Jointly discussing the outcome of the presentation sessions

Day 5 - Friday 25th February

FINAL PLENARY SESSION

Discussing joint aims for the future of The International System of Units in FAIR Digital Data.

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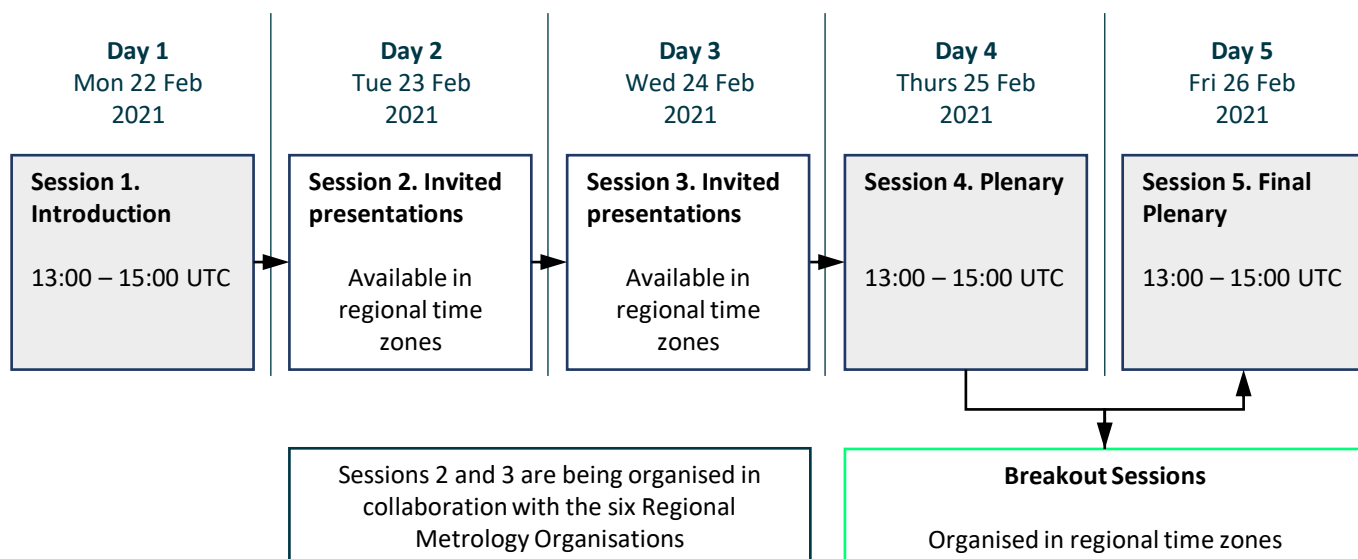


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Program overview



Parallel breakout sessions

The parallel breakout sessions are guided by the FAIR principles for data, services and tools.

Days 4 and 5

TOPIC 1 – SI CORE REPRESENTATION AND SERVICES, INTEROPERABILITY

Essential information about physical quantities that must be captured to allow autonomous digital systems to exchange and make use of data without ambiguity

TOPIC 2 – MACHINE-ACTIONABLE METADATA AND DATA, MAKING DATA FAIR

Digital representation of key metrology concepts: SI brochure, VIM, GUM, Key Comparison Data (KCDB) and CMC lists

TOPIC 3 – DIGITAL CALIBRATION CERTIFICATES (DCCS)

Adoption of DCCs as key for traceability in metrological data

TOPIC 4 – READINESS OF DATA FOR ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Digital representation of measurement procedures, measurement workflows, analysis, provenance and metrological traceability chains making data “ready for analysis”

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Registration

Details of the workshop are being finalised and will be made available from the BIPM website.

In order to receive information about the event and to participate please use the following link:

<https://form.jotform.com/BIPM/Workshop-SI-2021>

We will be sending a short on-line questionnaire to all those who pre-register to enable us to summarize the interests of participants ahead of the workshop.

Steering Committee

S. J. Chalk	UNF, US
D. N. Coppa	INTI, Argentina
F. Flamenco	CENAM, Mexico
A. Forbes	NPL, UK
B. Hall	MSL, New Zealand
R.J. Hanisch	NIST, US
A. Henson	BIPM, France
K. Hosaka	NMIJ, Japan
D. Hutzschenreuter	PTB, Germany
J.S. Park	KRISS, Korea
J. Ullrich	PTB, Germany