BIPM Workshop on

Accelerating the Adoption of Quantum Technologies through Measurements and Standards

BIPM – March 21-22, 2024

AGENDA
Day 1: Opportunities & Challenges

9:00 Welcome of participants, registration

9:30 Welcoming remarks
- NMI-Q – Tim Prior, NPL
- BIPM – Martin Milton, Director
- CIPM – JT Janssen, CIPM

9:55 Framing the workshop: motivation and goals - Barbara Goldstein, NIST

10:15 Keynote: The emerging quantum economy: the promise & the barriers - Sir Peter Knight

11:00 Break

11:30 Building a quantum economy – what will it take, and what are the challenges?
Moderator: Nicolas Spethmann, PTB
Panelists to include:
- Q-STAR (invited)
- UK Quantum - Jonathan Legh-Smith
- QuIC - Thierry Botter
- QED-C (invited)
- Quantum Industry Canada (invited)
- Panel discussion (40 minutes)

13:00 Lunch

14:00 Break-out groups – In what ways are our organizations supporting the emerging quantum economy?
Facilitator: Kevin Thomson, NRC

14:45 International quantum standardization
Moderator: Tim Prior, NPL
Topics to include:
- The standards landscape
- Standardization readiness – when is it time?
- How do best measurement practices inform the standards process?
- How do standards fuel technology development?
- How does NMI-Q feed into the standards process

- Barbara Goldstein, NIST
- John Devaney, NPL
- Thomas Gerster, PTB
- Panel discussion

16:00 Break

16:30 The role of the metrology community in advancing quantum technology
Moderator: JT Janssen, CIPM
Panelists to include:
- Alexander Tzalenchuk, NPL
- James Kushmerick, NIST
- Felicien Schopfer, LNE
- Georgette Macdonald, NRC

17:30 Day 1 wrap-up, Adjourn – Jan Herrmann, NMI-A

Reception at the BIPM immediately following meeting.
Day 2: Solutions

9:00   Day 1 recap, framing Day 2 - Kevin Thomson, NRC

9:15   NMI Collaborations in standards development Quantum
       Panelists to include:
       • EMN-Q, Qu-Test - Ivo Degiovanni, INRiM
       • Superconducting qubit round robin – SQMS (invited)
       • Quantum photonics – NIST (invited)
       • Angela Gamouras, NRC

10:00  Break

10:30  How do we work together, as NMIs and with industry; what do we work on; and what do we produce?

10:30  Break-out 1 – What should we do together?
       Facilitator: Nicolas Spethmann, PTB
       Topics to include:
       • Pre-meeting survey results
       • What industry technologies and applications can we advance through cross-NMI collaboration?
       • What should we produce? What are industry-relevant outputs?

11:45  Report out

12:00  Lunch

13:00  Break-out 2 – How should we work together?
       Facilitator: Jan Hermann, NMI-A
       Topics to include:
       • Candidate organizational models
       • How do we organize ourselves, what constrains us?
       • How do we engage industry?
       • Which other organizations do we need to include?
       • How do we share our outputs?
       • Role of CIPM/BIPM?

14:15  Report out

14:30  Wrap-up panel
       Representative participants will be asked to share their perspectives and suggested next-steps from the workshop.

14:50  NMI-Q wrap-up

15:00  Adjourn