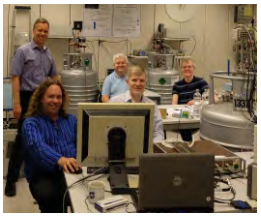
AIM QuTE Newsletter

The newsletter from the EMRP project SIB53 — Issue 3
Automated Impedance Metrology extending the Quantum Toolbox for Electricity — December 2015

IN THIS PROJECT, we will revolutionise impedance metrology. The best uncertainties now available will also become available for arbitrary ratios and intermediate phase angles and for values demanded by nanotechnologies. The new impedance bridges will furthermore be automated, resulting in very simple operation. A summary of the project is available here. Or email the coordinator.

LATEST RESEARCH HEADLINES:

INRIM and CMI have published a new paper that analyses a current comparator bridge network with a topology featuring self-compensation (4-TP). A digitally-assisted test bridge has been implemented; test measurements on ac resistance comparison in the 25 Ω to 100 Ω range, at 1 kHz, are reported.



SP and PTB have performed the world's first Josephson impedance bridge comparison. 1:1 and 10:1 capacitance ratios for 100 pF to 10 nF have been measured in the frequency range from 25 Hz to 2 kHz. The results agree well from parts in 10^8 to ppm-level.

The University of Zielona Góra has developed a new sinewave source for impedance bridges with 7 channels. INRIM has purchased one set of these electronics for use in a three-arm four terminal-pair digitally-assisted current comparator bridge.

Interested in more information? See our webpage or email us!

OPT-OUT:

The Management Support Unit (MSU) for the EMRP program would like to contact stakeholders to receive feed-back about project impact even after the end of the project. If you do do not want to be contacted please email us **before 31 December!**

DISSEMINATION MEETING:

On **18 & 19 May 2016,** we will hold our dissemination meeting in Prague. A perfect chance to get in touch with all impedance experts and bridge developers.
Let us know if you are interested in attending the public part!

CONFERENCE:

The project will be also present at the Conference on Precision Electromagnetic Measurements (CPEM 2016) in Ottawa from **10-15 July 2016**.
Attend our talks or poster presentations and take the chance to join us for discussions at the conference!