

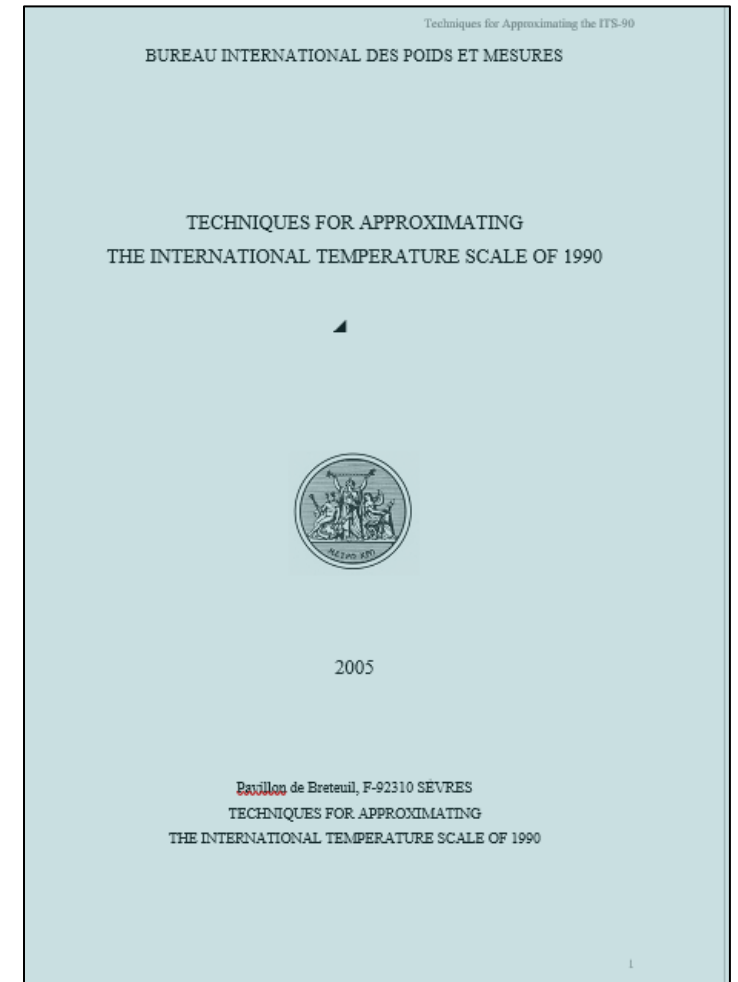
Activity Report: CCT Task Group for Guides on Thermometry

Rod White

Terms of Reference

To promote good thermometry practice and traceability to the SI by preparing and publishing guides on thermometry, with a focus on secondary thermometry.

The guides should include techniques, thermometers, instrumentation, and uncertainty analyses for traceable temperature measurements.



**Techniques for Approximating
the International temperature
Scale of 1990**

Membership

Chair: Dr Rod White (MSL)

Dr Pieter Bloembergen (NIM)

Dr Dolores Del Campo (CEM)

Dr Stanislav Duriš (SMU)

Dr Frank Edler (PTB)

Dr Karen Garrity (NIST)

Dr Martti Heinonen (MIKES)

Mr Luigi Iacomini (INRIM)

Ms Alina Ivanova (VNIIM)

Dr Ferdouse Jahan (NMIA)

Dr Murat Kalemci (UME)

Dr Emile Webster (MSL)

Dr Yong-Gyoo Kim (KRISS)

Dr Christopher Meyer (NIST)

Dr Hideki Ogura (NMIJ/AIST)

Dr Peter Pavlasek (SMU)

Dr Jonathan Pearce (NPL)

Dr Steffen Rudtsch (PTB)

Dr Jianping Sun (NIM)

Dr Jun Tamba (NMIJ/AIST)

Dr Weston Tew (NIST)

Dr Kazuaki Yamazawa (NMIJ/AIST)

Prof. Dr Davor Zvizdic (FSB-LPM)

Meetings

- **Chengdu/Tempmeko 14 June 2019**
- **Online by Video 8 Dec 2020**



Tasks/Guides

- **Thermistor Thermometry** ([online August 2014](#))
- **Specialised Fixed points above 0 °C** ([online October 2018](#))
- **Thermocouple Thermometry Part I: General Usage** ([Almost ready for approval by CCT](#))
- **Thermocouple Thermometry Part II: Reference Thermocouples and Calibration** ([draft, 50%](#))
- **Industrial Platinum Resistance Thermometry** ([draft, 90%](#))

Issues

Specialised Fixed points above 0 °C (online October 2018)

- **Online database for secondary fixed points planned – no progress.**
- **Requires revision to include guidance on sealed metal fixed point cells.**
 - **TG-SMFPC report based on comparison of cell temperatures by world-class NMIs**
 - **Did have recommendation for calibration and verification for lowest uncertainties**
 - **No guidance for use**
 - **No guidance on uncertainty evaluation**

Issues

Thermocouple Thermometry Part I: General usage (67p, almost ready for approval)

Will be posted online before end of February

- **Please email comments to rodwhitenz@gmail.com by 30th March 2021**
- **No response will be assumed to mean approval**
- **Final format check to be completed by BIPM**

Reminder

Thermocouple Thermometry Part II: Reference Thermocouples and Calibration

Need to provide advice:

- **Ambiguity about annealing of Type R and S thermocouples.**
- **Ambiguity about reporting – must report calibration state.**
- **Uncertainty budget, including treatment of inhomogeneities.**

Part II is additional to Part I: General usage, but has much reduced audience and contains mathematics

Issues

Rod now retired, resigning as Chairman, but will continue to contribute to current activities

CCT WG-Strategy decided (26 Jan 2021):

- Set up shorter-lived task groups, one for each guide
- Current author groups within TG-GoTh to become task groups, lead authors to become chairperson
- Chair of TG-GoTh to be replaced by coordinator to oversee the establishment of new groups and ensure that all of Bluebook is revised and online (Jonathan Pearce NPL).
- New group to prepare guide on Industrial Radiation Thermometry (Mohamed Sadli LNE-CNAM chair)

Thanks

- to all group members, past and present, who have contributed.
- to Susanne Picard and helpers for formatting and checking.