

The kelvin redefinition opens exciting opportunities for realizing and disseminating thermodynamic temperature. The mise-en-pratique for the definition of the kelvin (*MeP-K*) allows dissemination either by thermodynamic methods or defined scales, but challenges remain in linking these approaches and demonstrating equivalence.

This unique 3-day symposium designed as an interactive summer school, aims to equip temperature metrologists with up-to-date knowledge on primary thermometry and temperature dissemination. The programme covers theory and practice of gas-based (i.e. acoustic, refractive-index, dielectric) and other (e.g. Johnson noise, Doppler broadening, quantum techniques) primary thermometry methods. Introductory lectures address temperature metrology fundamentals, establishing the ITS-90 from cryogenic to high temperatures. The lectures will be given by world leading experts in the field.

#### Who should attend?

Metrologists from NMIs, calibration laboratories, and researchers who need precision thermodynamic temperature measurements.

**Registration fee:** 200 €

**Accommodation fee** including lodging at the UIMP Residence for 3 nights, and full board meals for two days :160 €

**Limited seats:** only 35 participants!

No online option, experience it in person!

**Register by April 17, 2026:**

<https://forma.administracionelectronica.gob.es/form/open/corp/dca14da8-43a5-4bb3-b6eb-f87eb7a93b30/ejDW>

EUROPEAN  
PARTNERSHIP



Co-funded by  
the European Union

METROLOGY  
PARTNERSHIP



#### Organisation

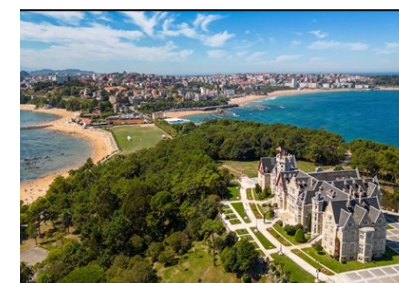
**Euramet EMP Research Project Dissemination  
of the redefined kelvin (DireK-T)**

**under the auspices of Universidad  
Internacional Menéndez Pelayo (UIMP)**

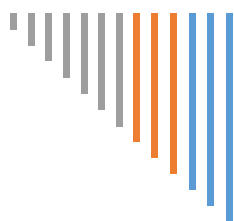
Dr. R. Gavioso (INRiM),  
Dr. G. Machin (NPL)  
Dr. M. Dobre (SMD)  
Dr. M. J. Martín (CEM)  
Dr. P. Castro (Univ. Cantabria)



## Contemporary Issues in Primary Thermometry

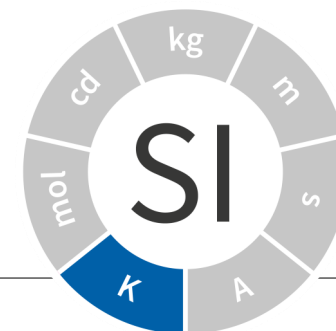


**Symposium  
13 - 15 May 2026  
Santander, Spain**



## Symposium Contemporary Issues in Primary Thermometry

## Programme



### Wednesday 13 May 2026

#### 9:30 School opening

D. del Campo (CEM), President of the Consultative Committee for Thermometry (CCT) and

R. Gavioso (INRIM), Coordinator of the DireK-T Project

**10:00 Introduction to metrology** focusing down on temperature metrology

M. Dobre (SMD)

#### 11:00 Coffee break

**11:30 Historical introduction to thermometry** Discussing scales (especially ITS-90), kelvin redefinition and the role of the *mise-en-pratique* for the definition of the kelvin (*MeP-K*)

G. Machin (NPL)

**12:30 How to set up ITS-90** Contact thermometry

A. Peruzzi (NRC)

#### 13:30 Lunch

**15:00 How to set up ITS-90** Non-contact thermometry

M. Sadli (LNE-CNAM)

**16:00 Common realisations to ITS-90**

J. Pearce (NPL)

### Thursday 14 May 2026

**9:00 Acoustic Gas Thermometry: Theory**

R. Gavioso (INRiM) & R. Underwood (NPL)

**10:00 Acoustic Gas Thermometry: Practice**

R. Gavioso (INRiM) & R. Underwood (NPL)

#### 11:00 Coffee break

**11:30 Refractive-Index Gas Thermometry:**

Theory & Practice

P. Rourke (NRC)

**12:30 Dielectric-constant Gas Thermometry:**

Historical development, Theory & Practice

C. Gaiser (PTB)

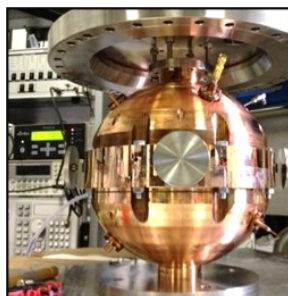
#### 13:30 Lunch

**15:00 Primary radiometric thermometry: Theory**

H. Yoon (NIST)

**16:00 Primary radiometric thermometry: Practice**

D. Taubert (PTB)



### Friday 15 May

**9:00 Johnson Noise Thermometry**

P. Bramley (Metrosol)

**10:00 Photonic thermometry:** Doppler Broadening Thermometry, quantum methods...

O. Kozlova (LNE-CNAM)

#### 11:00 Coffee break

**11:30 Evolving traceability,** self-validation, practical primary thermometry.

J. Pearce (NPL)

#### 12:30 Closing, feedback

Universidad Internacional Menéndez Pelayo  
Campus de Las Llamas

Av. de los Castros, 42, 39005 Santander,  
Cantabria, SPAIN