

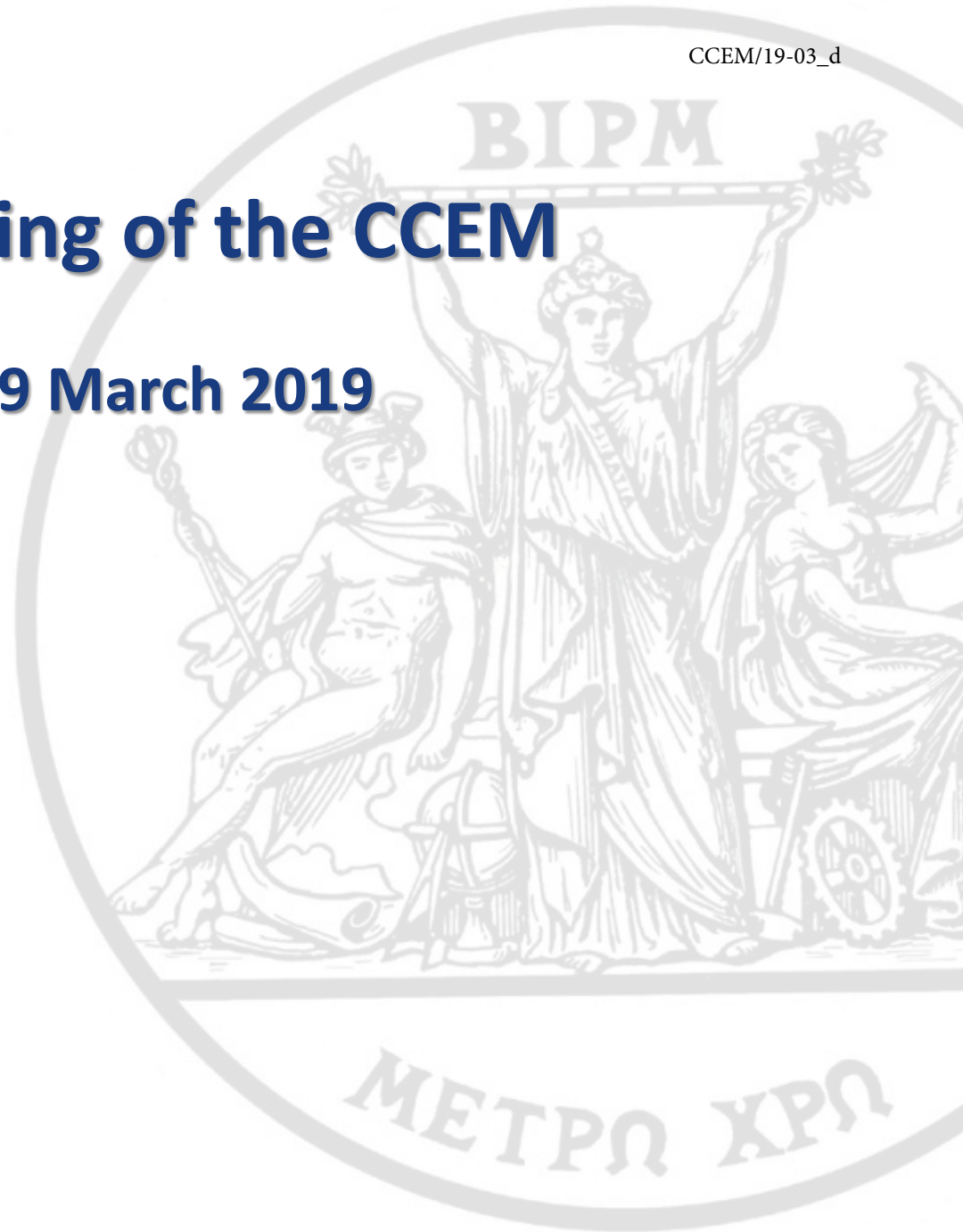
31th Meeting of the CCEM

28 – 29 March 2019

Gerrit Rietveld
CCEM President

Michael Stock
CCEM Secretary

Bureau
International des
Poids et
Mesures



Prof. Dr-Ing. Dieter Kind, 1929 - 2018

- ◆ Electrical engineer by training,
HV measurement techniques
- ◆ PTB president 1975 – 1995
 - DKD, Bessy, 100 year PTB, clean room,
Unification of PTB and ASMW
- ◆ Great stimulator of international
cooperation: Euromet, WELMEC, ...
- ◆ CIPM: 1978 – 1996, last 12 years as
President
- ◆ CCEM: 1992 – 1996 President
- ◆ CPEM 1994: recognition for
“Excellence, Leadership, and
Inspiration in World Metrology”



1. Agenda (summary)

3. News from CIPM, CGPM and BIPM
4. Matters related to fundamental constants and the SI
5. GT-RF report
6. WGRMO report
7. WGLF report
8. CCEM strategy
9. BIPM electricity work programme
10. CCRI challenge in low current measurements
11. Membership review
12. Miscellaneous

2. Actions from previous meeting

Five actions agreed at CCEM 2017 meeting:

1. Propose suitable note regarding the 'var' for the SI brochure
2. Revised SI: final comments to mise en pratique, implementations guidelines and '100-word' paragraph
3. Update CCEM strategy document
4. Possible IEC representation at the CCEM
5. Review news bulletins published by other CC's

Propose NIS as CCEM observer to CIPM

not only to
read-out

special unit
dimension.
defined. For
the unit
expressed

frequency is
per second.
condition, the
needed. It is
, because
may cause

The International Electrotechnical Commission (IEC) has introduced the var (symbol: var) as a special name for the unit of reactive power. In terms of SI coherent units, the var is identical to the volt ampere.

3. News from the CIPM

- ◆ CIPM meetings since March 2017: Oct 2017, June 2018
- ◆ CC presidents meeting: June 2017, June 2018

All CIPM decisions and reports are public!

<http://www.bipm.org/en/committees/cipm/meeting/107.html>

<http://www.bipm.org/en/committees/cipm/publications-cipm.html>

**International Committee
for Weights and Measures**
Proceedings of the 107th meeting
(20-22 June 2018)

Decisions of the 106th CIPM (October 2017)

3. News from the CIPM

CIPM 2017 and 2018 discussions and decisions on:

- ◆ Revised SI
 - Agreed CCM – CCU conditions for revision are met \Rightarrow Resolution A
 - Support publication of defining constants by TGFC CODATA
 - Final draft SI brochure
 - Updates of CC *mises en pratique*, and common CC statement
 - CCM to define ‘consensus value’ for dissemination of the kg
- ◆ BIPM finances, pension fund
- ◆ Finish CIPM WG MRA review; start WG on data reproducibility
- ◆ Agree on new members & observers for CC’s (NIS)
- ◆ BIPM Mission, Vision, Objectives; 2020-2023 work programme

CC objectives and decision making

Decision CIPM/106-16

The CIPM decided the following text for inclusion in CIPM-D-01:

In order to be informed of technical developments and evolving stakeholder needs in different areas of metrology, the CIPM has Consultative Committees with agreed scopes and the following three objectives:

- to progress the state-of-the art by providing a global forum for NMIs to exchange information about the state of the art and best practices,
- to define new possibilities for metrology to have impact on global measurement challenges by facilitating dialogue between the NMIs and new and established stakeholders, and
- to demonstrate and improve the global comparability of measurements. Particularly by working with the RMOs in the context of the CIPM MRA to:
 - plan, execute and monitor KCs, and to
 - support the process of CMC review.

News from the CIPM: CC presidents meetings

CC presidents meeting 13-14 June 2017 and 19-20 June 2018:

- ◆ Review of the CIPM MRA – status CC actions & RMO actions
 - Exchange experiences
 - Interaction between CCs and RMOs / JCRB
- ◆ CC matters
 - Definition of key and supplementary comparisons
 - CC web pages on BIPM site; open access of CC documents
 - CC strategies
- ◆ CGPM planning – CC presentations, posters and reports
- ◆ Update CIPM-D-01 “Rules of procedures for CCs”

CGPM news: CCEM presentation – revised SI

CCEM/19-03_c

Achievements in the quantum electrical effects

- CCEM report

Please: say



to the revised SI...



Dr.ir. Gert Rietveld
CCEM President

Dr. Michael Stock
CCEM Executive Secretary



CGPM election CIPM & CIPM appointment CC presidents

→ CIPM bureau members:

		Election to the CIPM bureau (or first election)	Me (re)elect the
↳ President	Dr W. Louw (South Africa)	20 March 2019	
↳ Secretary	Dr T. Usuda (Japan)	20 March 2019	
↳ Vice-President	Prof. J. Ullrich (Germany)	9 March 2015	
↳ Vice-President	Dr J. Olthoff (United States of America)	20 March 2019	

Decision CIPM/108-07

The CIPM appointed Dr S.-R. Park as the President of the Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM) for a four-year term.

Decision CIPM/108-08

The CIPM appointed Dr N. Dimarcq as the President of the Consultative Committee for Time and Frequency (CCTF) for a four-year term.

→ Other CIPM members:

		Me (re)elect the
↳ Dr F. Bulygin (Russian Federation)		
↳ Dr I. Castelazo (Mexico)		
↳ Dr D. del Campo Maldonado (Spain)		
↳ Dr Y. Duan (People's Republic of China)		
↳ Dr N. Dimarcq (France)		
↳ Dr H. Laiz (Argentina)		
↳ Dr T. Liew (Singapore)		
↳ Prof. P. Neyezhmakov (Ukraine)		
↳ Dr S.-R. Park (Republic of Korea)		
↳ Dr M.L. Rastello (Italy)		
↳ Dr P. Richard (Switzerland)		
↳ Dr G. Rietveld (Netherlands)		
↳ Dr M. Sené (United Kingdom)		
↳ Dr A. Steele (Canada)		

Decision CIPM/108-09

The CIPM thanked the Presidents of the Consultative Committees for their work and their excellent reports to the 26th meeting of the CGPM. It decided to reappoint the Presidents of the following Consultative Committees for four-year terms:

- Consultative Committee for Acoustics, Ultrasound and Vibration (CCAUV): Dr T. Usuda.
- Consultative Committee for Electricity and Magnetism (CEM): Dr G. Rietveld.
- Consultative Committee for Length (CCL): Dr I. Castelazo.
- Consultative Committee for Mass and Related Quantities (CCM): Dr P. Richard.
- Consultative Committee for Photometry and Radiometry (CCPR): Dr M.L. Rastello.
- Consultative Committee for Ionizing Radiation (CCRI): Dr W. Louw.
- Consultative Committee for Thermometry (CCT): Dr Y. Duan.
- Consultative Committee for Units (CCU): Prof. J. Ullrich.

↳ **ex officio** Dr M.J.T. Milton (United Kingdom), Director of the BIPM