

## BIPM Capacity Building & Knowledge Transfer Programme

### 2019 "Optimizing the CIPM MRA - the KCDB 2.0"

#### Programme highlights

*Course Dates: 4-8 November, 2019*

*Location: BIPM, Sèvres Cedex, France*

Course content and dates of instruction may change marginally.

| <b>Date</b> | <b>Course Topic</b>  | <b>Outline of content</b>  | <b>Instructors</b>                           |
|-------------|--|--|--|
| Day 1       | Introduction to the CIPM MRA and its mechanisms  | <ul style="list-style-type: none"> <li>• CIPM MRA</li> <li>• Consultative Committees</li> <li>• Regional Metrology Organizations</li> <li>• Joint Committee of the Regional Metrology Organizations and the BIPM</li> <li>• CIPM Requirements and documentation</li> <li>• Supporting evidence:               <ul style="list-style-type: none"> <li>- <i>technical evidence and traceability</i></li> <li>- <i>Quality System</i></li> </ul> </li> <li>• Outcomes of the CIPM MRA review</li> </ul> | BIPM<br>Participants<br>Invited<br>lecturers |
|             | <p><b>Case study:</b> <i>Sharing experiences on reducing workload</i><br/> <b>Group work:</b> <i>What are the things you do to reduce the workload?</i></p>          |  |  |
| Day 2       | Introduction to the KCDB (KCs, SCs, CMCs and statistics)   | <ul style="list-style-type: none"> <li>• KCDB 2.0 introduction</li> <li>• User manual</li> <li>• Account generation (WRITER, TC-CHAIR, REVIEWER, JCRB Exec. Sec., KCDB Office)</li> <li>• Intra-regional CMC review process</li> <li>• Inter-regional CMC review process</li> <li>• CCs' specific guidelines for comparisons and CMCs (Fast Track and Risk-based approaches and representative CMCs)</li> </ul>  | BIPM<br>Participants<br>Invited<br>lecturers |
|             | <p><b>Case study:</b> <i>Experiences in registration and user area</i><br/> <b>Group work:</b> <i>First registration/ Practical exercise- developing of CMCs</i></p> |  |  |
| Day 3       | Calibration and measurement capabilities   | <ul style="list-style-type: none"> <li>• CIPM Requirements and documentation</li> <li>• CCs' specific guidelines for comparisons and CMCs (Fast Track and Risk-based approaches and representative CMCs)</li> <li>• Roles and responsibilities in the CMC review process</li> <li>• WRITER:               <ul style="list-style-type: none"> <li>- <i>Preparing New CMCs, including supporting evidence</i></li> <li>- <i>Updating existing CMCs</i></li> </ul> </li> </ul>                          | BIPM<br>Participants<br>Invited<br>lecturers |

|       |  |   |  |
|-------|--|---|--|
|       |  | <ul style="list-style-type: none"> <li>- <i>Submission of CMCs for intra-regional review and communication with RMO</i></li> <li>- <i>Communication of CMCs for inter-regional review experts</i></li> <li>- <i>Addressing comments</i></li> </ul> <ul style="list-style-type: none"> <li>• <b>TC-CHAIR:</b> <ul style="list-style-type: none"> <li>- <i>Managing technical reviewers pool</i></li> <li>- <i>Managing intra and inter RMO reviews</i></li> </ul> </li> <li>• <b>REVIEWER:</b> <ul style="list-style-type: none"> <li>- <i>Review CMC(s) from 'own' RMO</i></li> <li>- <i>Review CMC(s) from 'other' RMO</i></li> <li>- <i>Submits comments</i></li> <li>- <i>Receives answers to comments (with iteration if necessary)</i></li> <li>- <i>Expresses a view</i></li> </ul> </li> </ul> |  |
|       | <p><b><i>Case study: Challenges in CMC submission and review</i></b><br/> <b><i>Group work: Practical exercise- intra-RMO review of CMCs</i></b></p>   |   |  |
| Day 4 | Measurement comparisons  | <ul style="list-style-type: none"> <li>• CIPM Requirements and documentation</li> <li>• Roles and responsibilities in the comparison process</li> <li>• CCs' specific guidelines for comparisons and CMCs (Fast Track and Risk-based approaches and representative CMCs)</li> <li>• Planning and monitoring measurement comparisons</li> <li>• Calculation of reference values and associated uncertainties</li> <li>• Writing Comparison Reports</li> <li>• Common pitfalls from the practice</li> </ul>   | BIPM<br>Participants<br>Invited<br>lecturers |
|       | <p><b><i>Case study: Challenges in the registration and completion of comparisons</i></b><br/> <b><i>Group work: Practical exercises:</i></b><br/> 1) <i>inter-RMO review of CMCs and publication in the KCDB</i><br/> 2) <i>submission of comparisons and publication in the KCDB</i></p> |   |  |
| Day 5 | KCDB 2.0 features  | <ul style="list-style-type: none"> <li>• KCDB Office role</li> <li>• JCRB role</li> <li>• Search facilities</li> <li>• Statistics</li> </ul>  | BIPM<br>Participants<br>Invited<br>lecturers |
|       | Quality management systems   | <ul style="list-style-type: none"> <li>• CIPM requirements and documentation on quality system</li> <li>• Certificates with the CIPM MRA logo and Statement</li> </ul>  |  |
|       | Brainstorming  | <ul style="list-style-type: none"> <li>• KCDB 2.0 User manual</li> <li>• How to explain to WRITERS</li> </ul>   |  |