The International Medical Physics Certification Board

Raymond Wu PhD
CEO, IMPCB

Carmel J. Caruana PhD FIPEM
Formerly: Member Accreditation Committee IMPCB
Acknowledgements
We thank the following for their dedication and input

Members of the Accreditation Committee
Board of Directors
Elected Officeholders
The International Medical Physics Certification Board was officially formed on May 23rd, 2010 with help from the IOMP Professional Relations Committee
<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
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<tr>
<td>President and Chair of BOD  -</td>
<td>Colin G. Orton, PhD</td>
<td>January 2014 – December</td>
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<td>Chief Executive Officer -</td>
<td>Raymond K. Wu, PhD</td>
<td>January 2014 – December</td>
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<td>Secretary General -</td>
<td>Ti-Chuang (Timothy) Chiang, B.Sc.</td>
<td>January 2014 – December</td>
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<td>Registrar and Chair of Registry and Records Committee -</td>
<td>Tae Suk Suh, PhD</td>
<td>January 2014 – December</td>
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<td>Chief Examiner and Chair of Accreditation Committee -</td>
<td>Adel Mustafa, PhD</td>
<td>January 2020 – December</td>
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<td>At-Large Board Member 1 -</td>
<td>Wendy Smith, PhD</td>
<td>January 2019 – December</td>
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<td>At-Large Board Member 2 -</td>
<td>Xiance Jin, PhD</td>
<td>January 2014 – December</td>
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<td>At-Large Board Member 3 -</td>
<td>Ahmed Meghzifene, PhD</td>
<td>January 2020 – December</td>
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<td>Board Member and IOMP Liaison 1 -</td>
<td>John Damilakis, PhD</td>
<td>January 2016 – December</td>
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<td>Board Member and IOMP Liaison 2 -</td>
<td>Paolo Russo, PhD</td>
<td>January 2016 – December</td>
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<td>Board Member and IOMP Liaison 3 -</td>
<td>Arun Chougule, PhD</td>
<td>January 2020 – December</td>
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Website (https://www.impcbdb.org/)
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<tr>
<th>Charter Supporting Organizations</th>
<th>Regular Supporting Organizations</th>
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<tr>
<td>Associação Brasileira de Fisica Medica;</td>
<td>Hong Kong Institution of Physicists in Medicine</td>
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<td>American College of Medical Physics;</td>
<td>Japanese Board for Medical Physicist Qualification</td>
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<td>Australasian College of Physical Scientists and Engineers in Medicine;</td>
<td>Nigerian Association of Medical Physicists</td>
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<td>Chinese Society of Medical Physics;</td>
<td>College of Medical Physics of India</td>
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<td>Chinese Society of Medical Physics – Taipei;</td>
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<td>Federación Mexicana de Organizaciones de Física Médica;</td>
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<td>Iraqi Medical Physics Society;</td>
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<td>Korean society of Medical Physics;</td>
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Role of IMPCB

• Accredit national certification boards where they exist and provide help for the setting up of such boards where they do not
  – IMPCB will provide guidance and support to medical physics organizations for the establishment of national medical physics certification boards.
  – IMPCB has established the infrastructure, requirements and assessment procedures for the accreditation of medical physics certification programs in accordance with the requirements of IOMP guidelines.

• Certify individual Medical Physicists where national certifications boards do not exist – this presentation will focus on this
Examinations for Certification of Individuals

- Part I written examination: General Medical Physics 100 MCQs, 3 hours
- Part II written examination: Medical Physics Specialty e.g., Radiation Oncology Physics, Diagnostic and Interventional Radiology Physics, 100 MCQs, 3 hours
- Part III oral examination: Medical Physics Specialty
Requirements for Admission to Examinations

Part I Written Examination (General Medical Physics)
Education – Masters or Doctorate in physics, medical physics or an equivalent degree in an appropriate physical or engineering science discipline.
Professional Training – none required

Part II Written Examination (Medical Physics Specialty)
Professional Training – 2 years full-time equivalent training preceding the date of application for examination. The training should be carried out under the supervision of a Certified Medical Physicist (CMP) specializing in the same specialty.

Part III Oral (Medical Physics Specialty)
Successfully passed Part I and II

*These follow IOMP recommendations see IOMP Policy Statement No. 2, Basic Requirements for Education and Training of Medical Physicists
Requirements for Part I: Undergraduate core physics/maths courses expected in cases when 1st degree non-conventional

**Physics Core Courses:**
- Classical and Relativistic Mechanics
- Electricity and Magnetism
- Optics
- Physics of Fluids and Gases
- Quantum Mechanics
- Atomic and Nuclear Physics
- Solid State Physics
- Thermodynamics and Statistical Physics
- Measurement, Instrumentation and Signal Processing
- Computational Physics and Computer Programming

**Mathematics Core Courses:**
- Applied Linear Algebra
- Advanced Calculus
- Complex Variables
- Differential Equations
- Numerical methods
To Prepare for Exams

Are you ready for the examination?

- Minimum qualifications
- Undergraduate Core Courses
- Subjects Covered in Part I
- Preparing for Part II
- Residency training
- Part III is Oral Examination
- IMPCB requirements V10b
- Samples of questions

Other Links

- About
- Exams
- Contact Us
- Model Program
- Policies
- Supporting Organizations
Travel Considerations

• One can take Part I and II in the same exam session, if qualified
• No need to re-take Part II if only failing Part I
• Cannot take Part II and III in the same session
• Following Part II candidates must wait a minimum of 5 months before taking Part III
Part III Orals

- Panel of five oral examiners
- Each examiner asks questions in five categories in one-on-one setting in 25 minutes, in front of a computer screen displaying the questions
- Total time is two and half hours
- The assessment result is based on the average score of the examiners in the Panel
Part III Orals The Five Categories of Questions

• Patient-Related Measurements
• Image Acquisition, Processing and Display
• Calibration, Quality Control and Quality Assurance
• Equipment
• Radiation Protection and Patient Safety
Current situation – updated Jan 1, 2020

- 16 Supporting Organizations - IOMP is the principal supporting organization
- 3 national certification boards have been accredited and a fourth is being evaluated
- Since 2017, the following certification examinations have been held:
  - 2017, Trieste, 6 took Part I, 4 Part II (RO)
  - 2017, Trieste, 30 took Part I, 13 Part II (RO), 4 Part III (RO).
  - 2018, Dakha, Bangladesh, 13 took Part I, 5 took Part II (RO)
  - 2018, Prague, 6 took Part III (RO)
  - 2018, Mexico City, 9 took Part I, 6 took Part II (3 in RO, 3 in DI)
  - 2018, Trieste, 23 took Part I, 12 took Part II (RO)
  - 2019, Riyadh, SA, 25 took Part I, 11 took Part II (9 in RO, 2 in DI)
  - 2019, Trieste, 5 took Part I, 2 took Part II (RO)
  - 2019, Amman, Jordan, 12 took Part I, 6 took Part II (5 in RO, 1 in DI)
  - 2019, Vienna, 5 took Part I, 5 took Part II (RO)
  - 2019, Santiago, 3 took Part I, 3 took Part II (RO)
  - October 2019 Doha Qatar, 27 took Part I, 19 took Part II, 11 took Part III
  - December 2019, Trieste, 11 took Part I, 14 took Part II
  - 2020: Saudi Arabia, Yucatan Mexico...
- 180 candidates from 40 different countries have been admitted into the examination process: 16 have completed all three parts, 80 are qualified to do Part II, 50 are qualified to do Part III.
Certificate for Individuals

The International Medical Physics Certification Board

This certifies that

Wei Long Jong, MSc, Ph.D.

has passed the examinations conducted under the authority of

The International Medical Physics Certification Board

and has demonstrated to the satisfaction of the Board the fulfillment of all certificate requirements to practice the specialty of

Radiation Oncology Medical Physics

Ongoing validity of this certification is contingent upon meeting the requirements of Maintenance of Certification

_________________________
IMPCB President
Colin Orton, Ph.D.

_________________________
IMPCB Chief Examiner
Tomas Kron, Ph.D.

_________________________
IMPCB Chief Executive Officer
Raymond Wu, Ph.D.
Formation and Accreditation of National Boards

IMPCB will provide guidance and support to medical physics organizations for the establishment of national medical physics certification boards.

IMPCB has established the infrastructure, requirements and assessment procedures for the accreditation of medical physics certification programs in accordance with the requirements of IOMP guidelines.
Thank you

https://www.impcbdb.org