EFOMP: A global Player in the Education and Training of Medical Physics Experts

Marco Brambilla, PhD
Head of Medical Physics Department
University Hospital of Novara, Italy
marco.brambilla@maggioreosp.novara.it
President of the EFOMP
Mission

• to harmonize and advance medical physics throughout Europe,
• to strengthen the activities of the National Member Organisations (NMO)
  – bringing about and maintaining systematic exchange of professional and scientific information,
  – the formulation of common policies, and
  – promoting education and training programmes.
Objectives

• coordination activities with NMOs
• collaborating with other international organisations, particularly the IOMP
• disseminating information through publications and meetings
• encouraging scholarship and the exchange of Medical Physicists between countries
• guidelines for education, training and accreditation programmes
• recommendations on the appropriate responsibilities, organisational relationships and roles of workers in Medical Physics
• encouraging the formation of Organisations for Medical Physics where such organisations do not exist.
European Training and Education for Medical Physics Experts in Radiology

http://www.eutempe-net.eu/

EU funded project - Main contractors:

Katholieke Universiteit Leuven
State-of-the-art Education for Medical Physicists in Radiology

Network of excellent teaching centers
Dedicated courses at EQF level8
Course content driven by the "Guidelines of the MPE project"
Balanced e-learning (40 hours workload) and face-to-face session (40 hours workload)
Multicampus Educational and Training platform
Support of a Scientific Advisory Board

Educational Tools and Methods
Creation of "groups of learners" and guided tasks prior to the face-to-face moments
Online communication & feedback between teachers and learners
Interactive self-assessment test
Up-to-date multi media material
Solutions for practical training
Interactive exercises
Databases of Material
Effective sharing of material, software tools and knowledge
Cross-fertilization between course modules

http://www.eutempe-rx.eu/
ESMPE

- 2013 July – First Edition
- 2016 September Manual of Operation of the School approved by EFOMP Council 3rd September 2016- Athens
- 2017 March Members of the Scientific Board nominated by the National Member Organizations of EFOMP and elected through a Postal Ballot among Council members.
- 2017 June nomination of the Chair and Vice Chair of the school
ESMPE – Board

Chair of ESMPE
Marco Brambilla
University Hospital Novara - ITALY

Chair of E&T Committee
Markus Buchgeister
Beuth University
Berlin - Germany

Vice Chair of ESMPE
Alberto Torresin
Niguarda Hospital
Milan - ITALY

Chair of Science Committee
Mika Kortesniemi
University of Helsinki
Helsinki - FINLAND
ESMPE - Board

Local Organizing Committee

Efi Koutsouveli
Hygeia Hospital
Athens - GREECE

Brendan McClean,
St Luke’s Hospital,
Dublin - IRELAND

Manuel Bardiès
INSERM Toulouse - FRANCE

Annalisa Trianni
University Hospital
Udine - ITALY

Jaroslav Ptacek
University Hospital
Olomouc- Czech Republic
<table>
<thead>
<tr>
<th>Edition</th>
<th>Period</th>
<th>Title</th>
<th>Specialty</th>
<th>Duration (Hours)</th>
<th>Scientific Chair</th>
<th>Chair of the school</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>2013 Jul 4-6</td>
<td>Clinical Medical Device Management: Specification, Acceptance testing, Commissioning, QC and Advanced applications in Whole-body PET/CT</td>
<td>Nuclear Medicine</td>
<td>19</td>
<td>M. Brambilla</td>
<td>C. Caruana</td>
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<tr>
<td>2nd</td>
<td>2014 Jul 10-12</td>
<td>Advanced Kinetic Modeling and Parametric Methods. Advanced SPECT and PET Applications in Cardiology, Neurology and Oncology</td>
<td>Nuclear Medicine</td>
<td>19</td>
<td>M. Brambilla</td>
<td>C. Caruana</td>
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<td>3rd</td>
<td>2015 Jan 29-31</td>
<td>Digital Mammography and Quality Controls</td>
<td>Diagnostic Radiology</td>
<td>18</td>
<td>G. Gennaro</td>
<td>A. Torresin</td>
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<tr>
<td>4th</td>
<td>2015 Jul 2-Jul 4</td>
<td>Radiopharmaceutical dosimetry</td>
<td>Nuclear Medicine</td>
<td>17</td>
<td>M. Bardies</td>
<td>M. Brambilla</td>
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<tr>
<td>5th</td>
<td>2016 Jan 28-30</td>
<td>Computed Tomography Imaging: Dosimetry, Optimization and Advanced Clinical applications</td>
<td>Diagnostic Radiology</td>
<td>20</td>
<td>A. Torresin</td>
<td>M. Brambilla</td>
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<td>6th</td>
<td>2016 Jul 7-9</td>
<td>Practical aspects of Radiation Dosimetry in Targeted Radionuclide Medicine Therapy</td>
<td>Nuclear Medicine</td>
<td>18</td>
<td>M. Bardies</td>
<td>M. Brambilla</td>
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<td>7th</td>
<td>2017 Jan 26-28</td>
<td>Imaging in Radiotherapy</td>
<td>Radiotherapy</td>
<td>19</td>
<td>G. Loi</td>
<td>A. Torresin</td>
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<tr>
<td>8th</td>
<td>2017 Jul 6-8</td>
<td>Magnetic resonance Imaging: Advanced clinical applications Safety aspects Quality controls</td>
<td>Diagnostic Radiology</td>
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<td>D. Lurie</td>
<td>A. Torresin</td>
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<tr>
<td>9th</td>
<td>2018 Jan 25-27</td>
<td>Computed Tomography. Technology, Dosimetry, Optimization</td>
<td>Diagnostic Radiology</td>
<td>17</td>
<td>M. Kortesniemi</td>
<td>M. Brambilla</td>
</tr>
</tbody>
</table>
Geographical Distribution - Macro Areas

West Europe

- 2013 NM: 27
- 2014 NM: 29
- 2015 Mx: 28
- 2015 NM: 29
- 2016 CT: 13
- 2016 NM: 24
- 2016 RT: 19
- 2017 MRI: 41
- 2018 CT: 37

East/Central Europe

- 2013 NM: 27
- 2014 NM: 29
- 2015 Mx: 28
- 2015 NM: 29
- 2016 CT: 13
- 2016 NM: 24
- 2016 RT: 19
- 2017 MRI: 41
- 2018 CT: 37

Non European Countries

- 2013 NM: 0
- 2014 NM: 0
- 2015 Mx: 1
- 2015 NM: 1
- 2016 CT: 1
- 2016 NM: 3
- 2016 RT: 3
- 2017 MRI: 2
- 2018 CT: 2
<table>
<thead>
<tr>
<th>Price Policy</th>
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</thead>
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| **Registration fee** | 300 €  
| 2 main meals, 5 coffee breaks included, 1 social dinner |
| **Reduced registration fee**  
- subsidized by EFOMP  
- first-come, first-served policy | 150 € - for the first 15 attendees (max. 3 from one country) coming from the following European countries: Albania, Belarus, Bosnia, Herzegovina, Bulgaria, Croatia, Cyprus, Estonia, Greece, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey, Ukraine. |
| **Maximum number of participants** | 40 |

A distinctive tract of the school is to provide subsidized fees for a number of participants coming from low income European countries.

Centre of Europe  
Low cost flight connections  
Affordable accommodations  

**Location**
ESMPE 2017 MRI – Practical Part
Forthcoming editions of the ESMPE

ECMP 2018- Copenhagen 22 August 2018

Further information on these satellite meetings can be found at: www.ecmp2018.org, https://www.facebook.com/ECMP2018/#
Collaborating with other international organisations

Relationship with other societies

We have signed Memoranda of Understanding:

- EANM
- ESTRO (renewal 2017)
- ESMRMB
- MELODI (2014)
- EFRS (renewal 2017)
- ESR (renewal 2018)
- AAPM (2015)
- COCIR (2017)
- MEFOMP (2017)
Jointly organised by ESMPE and ESMIT
January, 24th-26th January 2019
Prague, Czech Republic

The EFOMP and EANM (The European Association of Nuclear Medicine) in collaboration with the Czech Association of Medical Physicists and the Department of Dosimetry and Application of Ionizing Radiation of Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague would like to invite you to the next ESMPE NM 2019.

The school is aimed at advanced tasks connected with radiopharmaceutical dosimetry in a context of therapeutic nuclear medicine. The school will cover mostly practical computing aspects, on freely available software (Slicer 3D).

This two- and half day event will be accredited by EABMP (European Board of Accreditation for Medical Physics) and is intended for practising clinical Medical Physicists who are involved in Nuclear Medicine dosimetry. As is the case in most ESMPE schools, there will be an optional examination at the end for those seeking a higher level of certification beyond attendance.

Content
Refresher on the basics of Radiopharmaceutical Dosimetry – Radiopharmaceuticals and clinical applications - TRT and SIRT – relevance of dosimetry
Introduction to Slicer – Basic features – Plugins – Input / Output – basic image data processing
SIRT Dosimetry – Data input – DICOM files management – Image segmentation – Absorbed dose calculation – Result output
TRT Dosimetry – Data input – DICOM files management – Image segmentation – Absorbed dose calculation – Result output
Final exam
The final exam is voluntary. Participants can gain additional credits when successfully pass the test.

Organizers
Jaroslav Ptácek, Tereza Kráčmerová (Czech Republic)
Manuel Bardies (Scientific Chair), Marco Brambilla (Chair of the School)

Faculty
Manuel Bardies CRCT, Toulouse, France.
Carlo Chiesa Istituto Tumori, Milan, Italy
Ludovic Ferrer ICO, St Herblain, France
Glenn Flux Joint Department of Medical Physics, RMH, Sutton, UK

Further Information

<table>
<thead>
<tr>
<th>Course language</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
<td>MPE</td>
</tr>
<tr>
<td>Registration fee*</td>
<td>300 €</td>
</tr>
<tr>
<td>(2 main meals, 5 coffee breaks, 1 social dinner)</td>
<td>350 € (from 09.12.2018)</td>
</tr>
<tr>
<td>Reduced registration fee*</td>
<td>150 € - for the first 10 attendees (max. 2 from one country) coming from the following European countries: Albania, Belarus, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, Estonia, Greece, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Ukraine.</td>
</tr>
</tbody>
</table>

Maximum number of participants 40
Duration 24th January 2019 – 26th January 2019
Study load 16 hours of lectures and demonstrations

Venue
Department of Dosimetry and Application of Ionizing Radiation, Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague, Břehová 7, 115 19 Prague 1, CZECH REPUBLIC

GPS coordinates 50°52'7.337"N, 14°24'58.713"E

Accommodation Individual
Information, program, etc. www.efomp.org
Practical information at: to be announced
Registration to be announced
Registration period 1st September 2018 – 23rd December 2018

* payment must be done in 14 days following the pre-registration, otherwise pre-registration will be cancelled and neither free place nor subsidized or ordinary fee can be granted for repeated registration

Follow ESMPE editions on
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- EFOMP Twitter @EFOMP_org
- EFOMP LinkedIn
- EFOMP Facebook @ECMPE2018
Free download
https://www.efomp.org/index.php?r=fc&id=protocols
Free download
https://www.efomp.org/index.php?r=fc&id=protocols
Quality control in cone-beam computed tomography (CBCT)

EFOMP-ESTRO-IAEA protocol

EFOMP CBCT working group set up in December 2013

Unification of quality controls in CBCT for dental, Angiography and Radiotherapy applications

- to develop a practical, unifying protocol for image quality control (and dose) of CBCT
- using contrast: noise ratio and Fourier measures

Approved From IAEA and ESTRO

- Image quality factors
- Phantoms
- Software
- Dosimetry

https://www.efomp.org/index.php?r=fc&id=protocols
Education, training and accreditation programmes

EUROPEAN EXAMINATION BOARD (EEB)

The EEB will have the responsibility for two types of assessment:

It will award a:
European Diploma of Medical Physics (EDMP) as recognition that the holder is qualified to Master's degree level and has at least 2 years equivalent clinical training in the field of medical physics.

It will also examine candidates against the criteria set by RP 174 and award the European Attestation Certificate to those who have reached the level of the Medical Physics Expert (EACMPE).

First Round of Examination: Prague 6-8 July 2017
20 applications from 16 countries

http://www.efomp.org/index.php/eeb
Bridging knowledge across specialities

2nd European Congress of Medical Physics
Copenhagen - August 23-25 2018

578 participants
06 June
~ 100 invited speakers
4 Satellite meetings
12 Refresher Courses
9 Joint sessions
27 Scientific sessions
2 Special sessions
404 accepted abstracts or posters
178 oral presentations
226 poster

Organized by

Hosted by

ecmp2018.org