Czech Association of Medical Physicists

EFOMP School for Medical Physics Experts – Prague, July 2015

Radiopharmaceutical dosimetry

July 2 – July 4, 2015
Prague, Czech Republic

The Czech Association of Medical Physicists in collaboration with EFOMP and Department of Dosimetry and Application of Ionizing Radiation of the Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague would like to invite you to the **EFOMP School for Medical Physics Experts (Nuclear Medicine) - Prague Summer 2015**. The school will be aimed at advanced tasks connected to **Radiopharmaceutical dosimetry**. This two-and-half day event will be an EFOMP accredited one and is intended for practising clinical Medical Physicists who are at the level of a Medical Physics Expert (MPE) in Nuclear Medicine or working towards becoming an MPE. As in last year's school, there will be an optional examination at the end for those seeking a higher level of certification beyond attendance.

Content

First day of school will be aimed at theoretical aspects of radiopharmaceutical dosimetry. On second day, theoretical background will be used and clinical studies will be presented. The last day will be devoted to general discussion with participants, discussion on available software tools etc.

Theoretical aspects of radiopharmaceutical dosimetry

Introduction to radiopharmaceutical dosimetry (Indications: Diagnostics and therapy, common formalism for dosiemetry), **Quantitative SPECT imaging** (Specificities of quantitative imaging for dosimetry), **Quantitative PET imaging** (Specificities of quantitative imaging for dosimetry), **Pharmacokinetics modelling** (TAC assessment, sampling, fitting, introduction to compartmental modelling), **Absorbed dose computing** (Radiation transport and absorbed dose computation, local deposition, convolution, Monte Carlo simulations), **Diagnostic dosimetry** - ICRP 103 (ICRP reports and evolution, implementing present and future ICRP recommendations, hybrid imaging and impact on dosimetry), **Therapy dosimetry** - absorbed dose / effect relationship (status of dosimetry in therapy, how/when to implement dosimetry, absorbed dose effect relationship: toxicity and/or efficacy).

Clinical studies

Clinical study – planar – presentation of case report, WB dosimetry (ROI definition, TAC modelling, extrapolation (surrogate emitter), residence time and absorbed Dose calculation), discussion of results

Clinical study – PET-based dosimetry – presentation of a case report

Clinical study – SPECT – VOI definition, TAC modelling, Residence time, absorbed dose calculation (OLINDA-like), discussion of results

General discussion

Feedback from lecturers, participants and clinical examples, discussion on available software

for dosimetry.

Final exam

Final exam is voluntary. Participants can gain double MPE credits when successfully pass the test. The basic number of MPE credits (only for attendance) is 15.

EFOMP CPD Accreditation

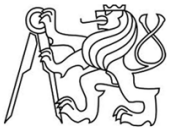
The Summer school 2015 will obtain EFOMP accreditation as Continuing Professional Development for Medical Physicists.

Organizers

Jaroslav Ptacek, Tereza Hanusova (CAMP)
Marco Brambilla, Manuel Bardiès, Alberto Torresin, John Damilakis (EFOMP)
Bernhard Sattler (EANM)

Teachers

Manuel Bardiès	Centre de Recherches en Cancérologie de Toulouse, Toulouse, France
Klaus Bacher	Department of Basic Medical Sciences, University of Gent, Gent, Belgium
Glenn Flux	Royal Marsden Hospital and Institute of Cancer Research, Sutton, United Kingdom
Mark Konijnenberg	Nuclear Medicine Department, Erasmus MC, Rotterdam, Netherlands
Bernhard Sattler	Department of Nuclear Medicine, University Hospital, Leipzig, Germany
Robin de Nijs	Department of Clinical Physiology, Nuclear Medicine and PET Rigshospitalet, Copenhagen University Hospital




Time-table

1st July Wednesday	Title	Description	Lecturer
15:00-18:00	Registration		

2nd July Thursday	Title	Description	Lecturer
8:00-9:00	Registration		
9:00-10:00	**Introduction to Radiopharmaceutical dosimetry**	Indications: diagnostics and therapy, common formalism for dosimetry	Bardiès
10:00-10:30	coffee break		
10:30-11:30	**Quantitative imaging SPECT**	Specificities of quantitative imaging for dosimetry	De Nijs
11:30-12:30	**Quantitative imaging PET**	Specificities of quantitative imaging for dosimetry	Sattler
12:30-14:00	lunch time		
14:00-15:00	**Pharmacokinetics modelling**	TAC assessment, sampling, fitting, introduction to compartmental modelling	Konijnenberg
15:00-16:00	**Absorbed dose computing**	Radiation transport and absorbed dose computation, local deposition, convolution, Monte Carlo simulations	Bardiès
16:00-16:30	coffee break		
16:30-17:30	**Diagnostics dosimetry: ICRP 103**	ICRP reports and evolution, implementing present and future ICRP recommendations, hybrid imaging and impact on dosimetry	Bacher
17:30-18:30	**Therapy dosimetry: Absorbed dose / effect relationship**	Status of dosimetry in therapy, how/when to implement dosimetry, absorbed dose effect relationship: toxicity and/or efficacy	Bardiès / Flux
20:00-23:00	Social dinner - participants + lecturers		

3rd July Friday	Title	Description	Lecturer
9:00-10:00	**Clinical study: planar 1**	Presentation of a case report	Bardiès
10:00-10.30	coffee break		
10:30-11:30	**Clinical study: planar 2**	WB dosimetry: ROI definition, TAC modelling, extrapolation (surrogate emitter), residence time and absorbed dose	Bardiès / Flux

		calculation	
11:30-12:30	**Clinical study: planar 3**	Discussion of results	Bardiès / Flux
12:30-14:00	**lunch time**		
3rd July Friday	**Title**	**Description**	**Lecturer**
14:00-15:00	**Clinical Study: PET-based dosimetry**	Presentation of a case report	Sattler
15:00-16:00	**Clinical Study: SPECT 1**	VOI definitiv, TAC modelling, residence time	Bardiès / Flux
16:00-16:30	**coffee break**		
16:30-17:30	**Clinical Study: SPECT 2**	Absorbed dose calculation (OLINDA-like)	Bardiès / Flux
17:30-18:30	**Clinical Study: SPECT 3**	Discussion of results	Bardiès / Flux

4th July Saturday	**Title**	**Description**	**Lecturer**
9:00-10:00	**General discussion**	Feedback from the lectures and clinical exemples, discussion on available software for dosimetry	All
10:00-12:00	**coffee break**		
12:00-14:00	**Final exam**		

Further information

Course language	English
Level	MP to MPE
Registration fee	**300 €** 2 main meals, 5 coffee breaks included, 1 social dinner
Reduced registration fee **- subsidized by EFOMP and CAMP** **- first-come, first-served policy**	**150 €** - for the first 20 attendees (max. 4 from one country) coming from the following EFOMP NMO countries: Albania, Bulgaria, Croatia, Cyprus, Estonia, Greece, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey, Ukraine
Maximum number of participants	**50**
Duration	**2 Jul 2015 – 4 Jul 2015**
Study load	15 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°5'27.737"N, 14°24'58.713"E**
Accommodation	Individual
Information, program, etc.	www.csfm.cz/summer2015.html
Registration	Electronic registration via www.csfm.cz/summer2015.html
Registration period	**15 Feb 2015 – 21 June 2015**

For all practical information, including accommodation and public transport in Prague, please contact Czech part of organizing committee: summer2015@csfm.cz. You will be informed about accommodation possibilities, transportation etc. in registration confirmation e-mail.

Electronic registration and e-mail address will be functional from 15 Feb 2015.