

**Program at a glance**  
**III School of Medical Physics**  
**23 to 27 October 2017- Havana – Cuba**

	<b>Mo (23)</b>	<b>Tu (24)</b>	<b>We (25)</b>	<b>Th (26)</b>	<b>Fr (27)</b>
8:00	Credentialing				
8:30	<b>Keynote presentation:</b> " Emerging treatment paradigms and future challenges in radiation oncology " M. S. Huq	<b>Refresher course #1.</b> (cont.) The IAEA/FORO approach. C. Duménigo	<b>Keynote presentation:</b> New Clinical and Research Programs in Particle Beam Radiation Therapy: The UCSF Perspective M. Roach	<b>Keynote presentation:</b> "Education, accreditation, and certification in Medical Physics" Y. Pipman, R. Padovani	Different modalities of quality audits in Radiotherapy. F. Aguirre.
9:30	<b>Refresher course #1.</b> "Application of risk analysis methods to radiation medicine: The TG-100 approach" M. S. Huq	<b>Refresher course #1.</b> (cont.) The InSTEC approach. A. Torres	<b>Mini-workshop:</b> Safety and Quality in Radiation Therapy. Y.Pipman	Comparison of Education Curriculums between HIC/LMIC for Medical Physics Programs. S. Avery	The ISOLPHARM project: New production method of high specific activity beta-emitting radionuclides as radiopharmaceutical precursors. A. Andrighetto
10:00				Development of clinically based prediction models using machine learning and Bayesian statistics O. Zambrano	18F-THK for the diagnosis of neurodegenerative diseases T. Valdes
10:30	<i>Coffee break/Poster session</i>		<i>Coffee break/VERT Seminar</i>		
11:00	<b>Refresher course #2:</b> Treatment Planning in SBRT/SRS D. Venencia  5 minute bathroom break	<b>Refresher course #2:</b> Treatment Planning in SBRT/SRS (cont.) D. Venencia  5 minute bathroom break	<b>Refresher course #3:</b> Quantitative techniques in MRI: applications" C. Garrido	IMRT QA meets Deep Learning Y. Interian	Automatic Methods for detecting breast anomalies in digital mammography R. Orozco
11:30				Interpretable Machine Learning Models for Radiation Oncology G. Valdés	Methods for Reducing Metal Artifacts in CT. Y. Rodríguez-Gallo
12:00			<b>Refresher course #4:</b> "Image Guidance in Stereotactic Radiation Treatments D. Roa	MR guided radiotherapy: the new standard of care in 10 years time (Part I). C. Sandín	Estimation of dose distribution I-131 hyperthyroidism treatment: preliminary results A. López
12:30				Recommendations for commissioning VMAT into a Pinnacle TPS. I. Silvestre	Cyclotron production of <sup>67</sup> Cu: A new measurement of nuclear cross sections G. Pupillo
13:00	<i>Lunch</i>				

14:00	Oligometastases: Imaging, treatment planning and delivery M. S. Huq	Promise and Pitfalls of Proton Therapy G. Valdes	Advances in Radiochromic Dosimetry Y. Pipman	"Standardization of Radiomic Feature Extraction for Building Predictive Models in Oncology" O. Morin	
14:35	Discussion of results of IAEA Training course on Small Field Dosimetry P. Andreo, R. Capote, R. Alfonso	Today's technology in Proton Therapy V. Bourel	Advances in brachytherapy dose calculations L. Beaulieu	Optimization and experimental characterization of a 3 points plastic scintillator dosimeter H. Linares	
15:10		Monte Carlo determination of scintillator quenching effect in small radiation fields G. Valdés-Santurio	A simulation platform for virtual clinical trials in chest X-ray imaging S. Rodríguez	On the potential of proton dosimetry using Cerenkov radiation in optical fibers J. B. Christensen	
15:50	<b>Poster session</b>	<b>Poster session</b>	Deflection control study of radiotherapy electron beams R. Figueroa	MR guided radiotherapy: the new standard of care in 10 years time (Part II). C. Sandín	
16:15	Modern applications of Monte Carlo simulations for patient-specific QA A. Popescu	The physical basis of contemporary dosimetry protocols A. Popescu	Scintillation applications for in vivo and small field dosimetry L. Beaulieu	Upgrading a biophysical model to compute radiation-induced indirect damage on a DNA molecule with atomic resolution L. de la Fuente	
16:40	"Basic dosimetry: pathway to solve problems in steep dose radiation fields". G. Massillon		<b>Poster session</b>	VERT Seminar T. Swayne	

### Refresher courses

- Refresher course #1: "Application of risk analysis methods to radiation medicine". Lecturers: M. Saiful Huq, Cruz Dumenigo, Antonio Torres
- Refresher course #2: "Treatment Planning in SBRT/SRS". Lecturer: D. Venencia: Head of Medical Physics, Ma. Curie Foundation, Córdoba, Argentina
- Refresher course #3: "Quantitative techniques in MRI: applications". Lecturer: C. Garrido
- Refresher course #4: "Image Guidance in Stereotactic Radiation Treatments". Lecturer: D. Roa

### Lecturers/Speakers:

Adlín López, Head, Nuclear Medicine Department, Hospital Hnos. Ameijeiras, Havana, Cuba
Alberto Andrichetto, Italian Institute of Nuclear Physics, Legnaro National Laboratories (INFN - LNL), Pavia, Italy
Antoni Popescu: British Columbia Cancer Agency, Vancouver, Canada
Antonio Torres: Department of Nuclear Engineering, Faculty of Nuclear Sciences and Technologies (FCTN), InSTEC, Cuba
Carlos E. Garrido Salmon: Department of Physics, Universidade de São Paulo (USP), Brasil.
Carlos Sandín: Clinical Solutions Sales Support Manager, Elekta Limited, UK
Cruz Duménico: National Center for Nuclear Safety (CNCN), Havana, Cuba

Daniel Venencia: Head of Medical Physics, Ma. Curie Foundation, Córdoba, Argentina
Dante Roa: Clinical Professor, Department of Radiation Oncology, UNIVERSITY OF CALIFORNIA – IRVINE
Gaia Pupillo, Italian Institute of Nuclear Physics, Legnaro National Laboratories (INFN - LNL), Pavia, Italy
Gilmer Valdes, Department of Radiation Oncology, UCSF, California, USA
Grichar Valdes Santurio, Technical University of Denmark
Guerda Massillon, UNAM, Mexico
Haydee Linares, Department of Physics, Université Laval and CHU de Quebec, Quebec, Canada.
Ileana Silvestre, National Physical Laboratory, Teddington, UK
J. Francisco Aguirre, Senior Medical Physicist Radiation Physics, UT MD Anderson Cancer Center, USA
Jeppe Brage Christensen, Technical University of Denmark
Liset de la Fuente Rosales, Institute of Physics Gleb Wataghin - Unicamp, Brazil.
Luc Beaulieu, Department of Physics, Université Laval and CHU de Quebec, Quebec, Canada.
M. Saiful Huq, Director, Med. Phys. Division, Department of Radiation Oncology, University of Pittsburgh, Pennsylvania, USA
Mark Roach: Director, Particle Therapy Research Program, Director, Particle Therapy Research Program, UCSF, USA
Olivier Morin, Department of Radiation Oncology, UCSF, California, USA
Oscar Daniel Zambrano-Ramirez, (Universite Caen Normandie. Laboratoire de Physique Corpusculaire (LPC-Caen). France)
Pedro Andreo, Karolinska University Hospital, Stockholm, Sweden
Renato Padovani: Coordinator Master in Medical Physics, International Centre for Theoretical Physics, Trieste
Roberto Capote, International Atomic Energy Agency, Vienna, Austria
Rodolfo G. Figueroa, UFRO, Chile
Rubén Orozco-Morales, Universidad Central, V. Clara, Cuba
Stephen Avery, Perelman Center for Advanced Medicine, University of Pennsylvania, Philadelphia, USA
Sunay Rodríguez, KU Leuven and SCK-CEN, Belgium
Tania Valdes, CEADEN, La Habana, Cuba
Tom Swayne: Radiotherapy Specialist at Vertual Ltd., Hull, UK
Victor Bourel, Director, Medical Physics Engineering, Favaloro University, Buenos Aires, Argentina
Yakdiel Rodriguez Gallo, Universidad Central. V. Clara, Cuba
Yakov Pipman, Chair, Professional Relations Committee, IOMP; Recent Past Chair - International Educational Activities Committee (IEAC) of the AAPM.
Yannet Interian, Assistant Professor of Analytics. UCSF, California, USA