



"MEFOMP in cooperation with the IAEA, organize the 2021 Virtual MEFOMP Medical Physics Conference 5-7 April, 2021"

Special Issue



MEFOMP President Message

Conference Chairman Message



MEFOMP is organising the 2021 Virtual Medical Physics Conference, from 5 to 7 April 2021. This event aims to enhance the knowledge of healthcare professionals in various aspects of medical physics by providing state-of-the-art and up-to-date developments in the profession.



On behalf of the organizing committee, It is my pleasure to welcome all medical physicists and health professionals to participate in MEFOP virtual medical physics conference.

Following the successful middle east federation of medical physics (MEFOMP) first conference in January last year that was held in Kuwait, we are looking forward to continuing this success and to go virtual this year. As covid-19 continues to pose a major global health threat, MEFOMP developed a virtual platform that will provide live streaming for the conference sessions as well as on-demand views.

This conference is offering a series of diverse continuing education lectures in medical physics and medical radiation applications. The Event is accredited by the International Organization of Medical physics (IOMP) and participants will earn 15 IOMP CPD points. The prospective audience include medical physicists, radiologists, oncologists, clinical scientists, radiological technologists, nurses, radiochemists, radiation therapists and biomedical engineers.

Our profession has always been constantly moving along with the new techniques and methods to support healthcare providers. A key objective of MEFOMP is to promote the trends of medical physics communications by sharing ideas, updating knowledge and enhancing professional developments.

This conference is sponsored by Kuwait Foundation for the Advancement of Sciences (KFAS) and Hamad Medical Corporation (HMC). It is endorsed by several leading regional and international organizations such as the EFOMP, AFOMP, FAMPO, and IOMP. These concerted and integrated efforts will enable us to strengthen the overall program for this scientific event.

The conference will focus on latest advancements and innovations in all areas of medical physics and will offer a unique opportunity to virtually meet with distinguished and prominent speakers who excel in the field.

On behalf of the Organizing Committee, I would like to invite all medical physicists and other health professionals to participate in this conference. I hope that all participants will find this conference beneficial and useful to their professional development.

I hope that at the end of the conference all participants would have acquired the knowledge they expected to receive, the knowledge that will further strengthen their competencies.

Looking forward to a very successful conference and we will make any possible effort to make sure that your participation will be scientifically rewarding.

**Dr. Huda M. Al-Naemi,
MEFOMP President**

**Dr Meshari Al-Nuaimi
Conference Chairman**

Conference Sponsors and Endorsements

MEFOMP in cooperation with the **International Atomic Energy Agency (IAEA)** organize the **2021 Virtual MEFOMP Medical Physics Conference**. The International Atomic Energy Agency is the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field. It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security and the United Nations' Sustainable Development Goals.



This conference is sponsored by:

Hamad Medical Corporation (HMC) and **Kuwait Foundation for the Advancement of Sciences (KFAS)**.



مؤسسة حمد الطبية
Hamad Medical Corporation
HEALTH · EDUCATION · RESEARCH صحة · تعليم · بحوث

HMC is Qatar's premier non-profit health care provider and one of the leading hospital provider in the Middle East managing 15 different hospitals and it is leading the development of the region's first academic health system. HMC is the only healthcare organization outside the United States to receive simultaneous Joint Commission International (JCI) re-accreditation for all its hospitals, the ambulance service and home healthcare. <https://www.hamad.qa/>



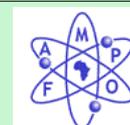
مؤسسة الكويت للتقدم العلمي

KFAS, a private non-profit organization was established in 1976 by an Amiri Decree under the direction of the late Amir of Kuwait, HH Sheikh Jaber Al-Ahmad Al-Jaber Al-Sabah. His enduring vision has been to create and develop a thriving culture of science, technology and innovation for a sustainable Kuwait. The foundation's strategic objectives have focused on promoting and harvesting STI for four main stakeholders: society at large (especially the youth), the research community, the private sector, and the government. www.kfas.org

The event is endorsed by **International Organization of Medical Physics (IOMP)** and the following Regional Medical Physics Organizations:

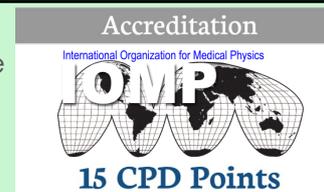
1. **Asia-Oceania Federation of Organizations for Medical Physics (AFOMP)**
2. **European Federation of Organisations for Medical Physics (EFOMP)**
3. **Federation of African Medical Physics Organizations (FAMPO)**

Endorsed by:



Conference Summary

The conference will focus on latest advancements in all areas of medical physics and provide an in-depth view of future directions, innovations, and techniques in this field. The main topics will be equally distributed on General medical physics issues in addition to medical imaging and radiation therapy. This will be conducted on three days and will cover the following topics:



The program is accredited by IOMP with 15 CPD points.

General topics

The focus of these topic is about the general issues related to medical physics such as current status and future directions, artificial Intelligence, radiation protection and dosimetry, global and local Impact and lessons learned from COVID-19. Under this topic the following presentations will be delivered during the conference:

- Medical Physics in the Middle East: Current Status by **Dr. Huda Al Naemi**
- Current and future direction of radiation physics in medicine by **Dr. David Bradley**
- IAEA Support to the Medical Physics Profession by **Ms. Giorgia Loreti**
- How to run effective technical services during COVID-19 pandemic by **Dr. Filip Vanhavere**
- Radiation Protection and Dosimetry of Eye Lens by **Dr. Meshari Al-Nuaimi**
- Contribution of medical physicists during COVID-19 in the Middle East by **Dr. Hassan Kharita**
- Global and Local Impact of COVID-19 on Nuclear Medicine & Radiology Departments – A Local Hospital Response by **Dr. Somanesan**
- New developments in personal dosimetry by **Dr. Filip Vanhavere**
- Radiation Protection of Patients: Current Challenges and Actions by **Dr. Jenia Vassileva**

Conference Summary

Medical Imaging

This field focused on the roles of a medical physicist in Medical Imaging such as estimation of patient dose, fetal dose, and skin dose for patients who undergo interventional radiology in addition to performing QC of various digital imaging technologies like Computed tomography and other X-ray imaging modalities and nuclear medicine systems, including SPECT and PET. The following presentations will be delivered under this topic:

- RetroSPECT: Gallium-67 As A Theranostic Imaging Agent by **Dr. Dale Bailey**
- Recent Advances in PET/CT and PET/MR Designs by **Dr. Osama Mawlawi**
- NEMA Acceptance Testing of PET Scanners by **Mr. Refaat AlMazrou**
- Establishments of Diagnostic Reference Levels in the Middle East by **Dr. Abdullah Al-Haj**
- Artificial Intelligence in medical imaging: Challenges and opportunities by **Dr. John Damilakis**
- Angiographic and fluoroscopic systems-QC protocol by **Dr. Lucie Sukupova**
- Radiation safety in radioembolization with Y90 for hepatic carcinoma and use of Y-90 PET by **Dr. Somanesan**
- PETMR in Clinical Practice by **Prof. Nuriye Kucuk**
- Digital breast tomosynthesis including synthetic 2D imaging by **Dr. Ishmail Badr**
- Update on Radiobiology of Radionuclides by **Dr. Yaser Gholami**
- Precise CT dosimetry in diagnosis and radiotherapy: Why it matters? by **Dr. John Damilakis**

Therapy

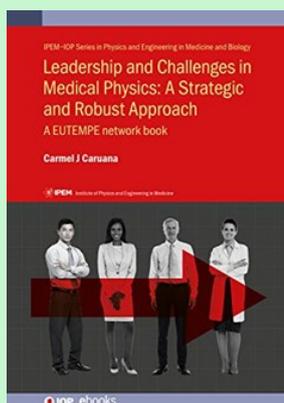
The focus of this field is on the role of medical physicists to create, implement, and monitor advanced cancer radiation treatment technologies and procedures that allows for the best treatment on a case-by-case basis, while also taking into account the protection and safety of patients and staff. The following presentations will be delivered under this topic:

- Novel radiotherapy technologies by **Dr. Saiful Huq**
- Dose calculations in radiotherapy by **Dr. Tomas Kron**
- Recent Advances in SGRT by **Dr. Rabih Hammoud**
- The Development of High Resolution, Carbon and Glass Dosimetry Systems for Use in Radiotherapy Regimes by **Dr. David Bradley**
- MRI-Guided Radiotherapy by **Prof. Cem Onal**
- Latest Advancement in Proton Therapy by **Dr. Alejandro Mazal**
- Size matters: radiotherapy for paediatric and bariatric patients by **Dr. Tomas Kron**
- Towards Personalized Dosimetry in Liver SIRT by **Dr. Kathy Willowson**

Monday, 5 April (11:50 - 12:00)

Book title: Leadership and Challenges in Medical Physics: A Strategic and Robust Approach

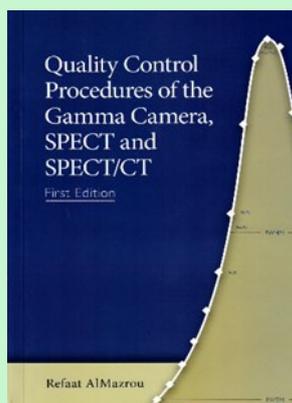
Presentation by the author **Dr Carmel Caruana**



Tuesday, 6 April (11:50 - 12:00)

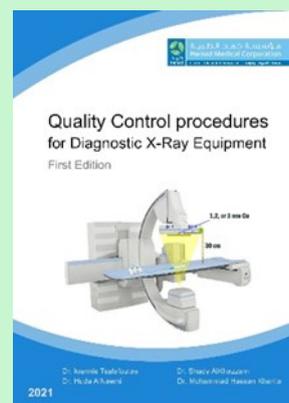
Book title: Quality Control Procedures of the Gamma Camera, SPECT and SPECT/CT

Presentation by the author **Mr Refaat AlMazrou**



Wednesday, 7 April (11:50 - 12:00)

Book title: Quality Control procedures for Diagnostic X-Ray Equipment For group authors and will be presented by **Dr Hassan Kharita**





SPONSORED BY



MEFOMP in cooperation with the IAEA organize the 2021 Virtual MEFOMP Medical Physics Conference

📅 5 - 7 April, 2021 ⌚ 10:00 AM (Kuwait Time / GMT+3) 📄 Free registration

Organizing Committee & Local Speakers



Meshari Al-Nuaimi, PhD
MEFOMP Vice President



Abdalla Al-Haj, PhD
MEFOMP Past President



Refaat Al-Mazrou, MSc
MEFOMP E&T Committee Chair



Huda Al-Naemi, PhD
MEFOMP President



Rabih Hammoud, PhD
MEFOMP Treasurer



M. Hassan Kharita, PhD
MEFOMP Secretary General

International Speakers

Main Topics

- Diagnostic Medical Imaging
- Nuclear Medicine and PET Imaging
- Artificial Intelligence in Medical Imaging
- Radiation Therapy
- Radiation Detection
- Radiation Protection
- Radionuclide Therapy
- Dosimetry & Quality Assurance

Target Audience

- Medical Physicists
- Biomedical Engineers
- Imaging Scientists
- Physicians
- Radiation Therapists
- Radiological Technologists
- Researchers
- Students

Accreditation

International Organization for Medical Physics



15 CPD Points



Ishmail Badr, PhD
London, UK



Dale Bailey, PhD
Sydney, Australia



Sabine Bernard, MSc
Brussels, Belgium



David Bradley, PhD
London, UK



Arun Chougule, PhD
AFOMP President



John Damilakis, PhD
IOIMP Vice President



Yaser Gholami, PhD
Sydney, Australia



Tomas Kron, PhD
Melbourne, Australia



Nuriye O. Kucuk, PhD
Ankara, Turkey



Ms. Giorgia Loreti
IAEA



Osama Mawlawi, PhD
Houston, USA



Daniel A. Mazal, PhD
Madrid, Spain



Cem Onal, PhD
Adana, Turkey



M. Saiful Huq, PhD
AAPM Chair of the Board



Mr. S. Somanesan
Singapore



Lucie Sukupova, PhD
EFOMP Member



Filip Vanhavere, PhD
Mol, Belgium



Jenia Vassileva, PhD
IAEA



Kathy Willowson, PhD
Sydney, Australia



MEFOMP



www.mefomp-conference.com

