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MEDICAL PHYSICIST AS HEALTH PROFESSIONAL



November 7

INTERNATIONAL DAY OF

MEDICAL PHYSICS

Medical Physics World

Medical Physics World

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Editorial

Magdalena Stoeva, PhD
Editor IOMP Medical Physics World



Dear Colleagues and Friends,

Welcome to the June 2020 issue of IOMP Medical Physics World! Following our anniversary year we are back on track and ready to deliver the most recent news and information originating from IOMP,

its regional and national member organizations.

Times are difficult and confusing for each one of us and the global COVID-19 challenge lead to dramatic changes in our professional and personal lives, environment and routines. Difficult times however are there to show you whom you can trust. I believe IOMP proved once again that we are a reliable partner.

Regardless of the difficult times, IOMP continued providing pro-active support for its members and partners at all levels – regional, national, individual. IOMP offered a large number of activities during the past months to support and improve the professional development of its members and to recognize their efforts.

The pages that follow are full of pro-active content - successfully completed or newly planned initiatives.

Please read through the reports of the IOMP officers and committee chairs for more details on our activities during the first half of 2020.

There is more to come. This issue of Medical Physics World is dedicated to the upcoming International Day of Medical Physics 2020.

Medical Physics World is here to support you, to keep you up to date to the major activities driving our professional societies and to reach everyone of you.

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IOMP
Fairmount House
230 Tadcaster Road
YORK YO24 1ES, UK

Editorial Board

Magdalena Stoeva Editor, ms_stoeva@yahoo.com

Virginia Tsapaki, Honorary Editor, IOMP SG, virginia@otenet.gr

Ibrahim Duhaini, Calendar Editor, IOMP Treasurer, duhaini@yahoo.com

Madan Rehani, IOMP President, madan.rehani@gmail.com

John Damilakis, IOMP Vice President, john.damilakis@med.uoc.gr

Eva Bezak, IOMP Secretary General, eva.bezak@adelaide.edu.au

Slavik Tabakov, IOMP Past President, slavik.tabakov@emerald2.co.uk

Paolo Russo, IOMP Publications Committee, russo@na.infn.it

Simone Kodlulovich Renha, IOMP A&H Committee, simone@cnen.gov.br

President's Report

Madan M. Rehani, PhD
President of IOMP



Dear Colleagues

We are all passing through a most difficult time of our lifetime wherein caution is the best resource for avoidance of COVID-19 virus infection. When we are out of this phase, we would have learnt many lessons and become wiser for future events of this kind. I wish safer

sailing for all our medical physics colleagues globally and their respective families and colleagues. During the past 6 months, IOMP has made many achievements. We celebrated our very first International Medical Physics week (IMPW) on 11-15 May 2020. In view of COVID-19 pandemic, in-person activities were banned almost in all countries. Webinars became the most important tool, and this was utilized by many countries. IOMP School also organized webinars on a daily basis during the week. Our webinars were a great success with 450-680 participants in different webinars. The feedback from participants made us continue with webinars and we are having 1000 - 1400 registrations in some webinars particularly on artificial intelligence (AI) and machine learning (ML). The recorded webinars have been made available on IOMP website. During

2017-2019, IOMP had joined hands with IAEA for webinar series and a large number of webinars have been held jointly.

The IOMP Newsletter is having increasing audience and is becoming an important medium of communication with grassroots.

The visibility of IOMP is increasing and IOMP is no longer an organization that mainly focusses on dealing with international organizations like IAEA, WHO...

We have signed a new contract with CRC Press for publications of Medical Physics series of books.

The International Day of Medical Physics (IDMP) is scheduled on 7th Nov 2020. The theme is Medical Physicist as a health professional. We encourage all to utilize this opportunity and organize events and actions on IDMP.

Stay safe and healthy during this pandemic.



International Medical Physics Week (IMPW)

International Organization for Medical Physics
Fairmount House, 230 Tadcaster Road, York, UK

April 26-30, 2021

IOMP Vice President Report

Prof. John Damilakis,
IOMP Vice President and President-elect



International Union of Pure and Applied Physics (IUPAP)

To strengthen Medical Physics science within IOMP and to link IOMP to IUPAP the International Commission on Medical Physics (ICoMP) has been established which has been approved as IUPAP Affiliated Commission 4 (AC4). IUPAP sponsors and contributes to the support of important scientific events related to its mission. The IUPAP funding has been used to organize a series of World Congresses and International Conferences on Medical Physics (World Congress in Toronto 2015, International Conference in Bangkok 2016, World Congress in Prague 2018). Moreover, IUPAP accepted our application and supported the International Conference on Medical Physics 2019.

In the beginning of October 2019, the IUPAP Council and Commission Chair meeting was organized in London. One of the main agenda items was the sponsorship and endorsement of conferences and other scientific events. A total of 37 conference

applications were received. The IOMP application for sponsorship of a training event during the 18th Asian Oceanian Congress of Radiology 2020 was successful. The IUPAP Prizes were awarded to Mr. Kuo Men (2018) and Mr. Mitsuhiro Nakamura (2019). Another matter of interest for IOMP which was discussed during the meeting was the centenary of IUPAP. The IUPAP secretariat is working with one of the Vice Presidents at Large, Dr. Monica Pepe-Altarelli, to develop and print materials for the centenary. A poster has been created to promote Medical Physics and the excellent relation between IOMP and IUPAP. Other activities/ proposals are welcome.

WHO interprofessional collaboration for joint advocacy on health workforce

The projected shortfall by 2030 of 18 million healthcare workers globally is a priority for all nations. Health professional organisations have a role to play in helping to address the projected shortfall by coming together and collaborating to address workforce challenges in their countries.

A WHO call to action has stimulated collaborative actions of healthcare professional associations and youth organisations with member states. The call for action asked for examples of solutions to the 2030 projected shortfall at country level that could be implemented by 2023 being the target.

Drawing on the experience of the Global Health workforce Network hubs currently supporting WHO priorities around gender (Women in Global Health) and youth (Global Health Workforce Network Youth Hub) a 'heath workers hub' with a shared aim and share commitment could be a way for the health professions to take forward work on solutions to the projected shortfall in health workers.

A t-con was organized on February 11, 2020 to discuss the aims of the hub and share views on this matter.

This hub would allow to:

- bring together a critical mass of organizations and agents for change across all health professions
- learn from each other and identify areas of perspective, priority and expertise
- identify and share practice across professional associations, employers, unions regulators and other key stakeholders

During the meeting, the difficulties many imaging and radiotherapy facilities have in hiring new medical physicists were discussed. This clearly indicates a shortage in the production and supply of clinically qualified medical physicists. It was proposed that we start with the health professional associations that we already have to contribute to the hub and then stimulate other groups to engage.

Message from Secretary General

Prof. Eva Bezak
Secretary General of IOMP



Dear Colleagues,

What a challenging year 2020 has been so far. Here in Australia, we have barely managed to breathe a sigh of relief following the most horrendous bushfires ever experienced and immediately after we have been thrown into the throes of COVID-19 pandemic.

All our worlds have been turned upside down: adjusting work practices on-the-go to enable safe care of our patients, figuring out how to adjust and deliver services, potentially not having access to CPD as workshops and conferences have been all cancelled/postponed, working from home or not being able to visit family and friends due to isolation requirements.

However, our digital world has seen us become more connected than ever before. Being able to keep in touch, distance learn, research and problem solve via email, teleconferences and other

apps; making it easier to collaborate and keep active links between physicists from different IOMP countries. These collaborations have evolved into professional friendships and now they also include encouragements of staying safe and well during the current pandemic, making me feel a part of this large international community.

We are managing our education quite successfully online, including IOMP and regional webinars that have had excellent and active participation. More webinars, including a series on Artificial Intelligence and Machine Learning in Medicine will take place in the coming weeks.

As an additional activity, the Women in Medical Physics and Biomedical Engineering Task Group of the International Union for Physical and Engineering Sciences in Medicine (IUPESM) is conducting an international survey to collect data about the main issues that biomedical engineers and medical physicists (academics and professionals) and other related STEM professionals are facing when working from home in the current pandemic COVID-19 situation. Analyzed data will be presented at relevant professional conferences and in a publication. The research has been cleared by Carleton University Research Ethics Board-B (CUREB-B Clearance #112898),

under the study title: Gender and work from home during covid19 survey. We are interested in collecting broad, world-wide experiences as each country would have faced specific difficulties. If you are interested to participate, please use this link (Your opinion and input are highly appreciated):

<https://www.surveymonkey.com/r/XF6SG9W>

As a side note, recent invited commentary by Kwan H Ng [1] published in *Physica Medica* comments on the discovery of the coronavirus: "Largely forgotten by the world and scientific community until in the heat of the current pandemic is Dr. June Almeida (née Hart) [2]. She was a technician, originally from Glasgow, Scotland, who never obtained formal qualifications but developed excellent electron microscopy skills on the job. She mastered and pioneered the technique to visualize the ultrastructure of viruses using a technique known as immuno-electron microscopy. She was the first to recognize a new group of viruses, the coronavirus, while researching in St. Thomas's Hospital Medical School, London. Dr. Almeida submitted her work on the newly discovered virus, only to be met with skepticism from the reviewers who thought the images were "just poor-quality pictures of influenza virus". Subsequently, with perseverance, she managed to

publish it in the Journal of General Virology 1967 [3]. This paper received only 169 citations. In 1968, eight virologists, led by Dr. Almeida published a note in Nature and coined the name coronavirus [4]. It is interesting to note that this note managed to receive only 31 citations.”

Well, life is an exercise in perseverance, adaptation and kindness.

Stay safe

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IUPESM
www.iupesm.org

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Task Group WiMPBME

Committee Members



Lenka Lhotská
Chair
IFMBE, Czech Republic



Loredana Marcu
Co-Chair
IOMP, Romania

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Eva Bezak
Chair
IOMP, Australia



Gilda Barabino
IFMBE, USA



Virginia Tsapaki
IOMP, Greece



Monique Frize
IFMBE, Canada



Eleni Kaloudi
IFMBE, Greece



Ana Maria Marques da Silva
IOMP, Brazil



Fatimah Ibrahim
IFMBE, Malaysia



Magdalena Stoeva
IOMP, Bulgaria

WC2021 Liaison



Sierin Lim
WC2021 liaison, BES, Singapore



Peck Ha Tan
WC2021 liaison, BES, Singapore

IUPESM WiMPBME Task Group

Celebrating the 40th Anniversary of IUPESM

Slavik Tabakov

IUPESM Vice-President and IOMP Past-President



This year the International Union for Physical and Engineering Sciences in Medicine (IUPESM) celebrates its 40th anniversary. IUPESM unites the International Organization for Medical Physics (IOMP) and the International Federation for Medical and Biological Engineering (IFMBE).

The Union leadership includes senior colleagues from IOMP and IFMBE and is based on equitable sharing between the two organisations. Currently IUPESM has over 150,000 members in about 100 countries. The aim of IUPESM is to contribute to the advancement of physical and engineering sciences in medicine for the benefit and wellbeing of humanity.

In 1999 IUPESM achieved for its members membership of the International Council of Scientific

Unions (ICSU) - one of the oldest non-governmental organizations in the world. This was an international recognition of our scientific fields. In 2018 ICSU merged with the International Social Science Council (ISSC). Both formed the International Science Council (ISC). IUPESM is the 27th member of the ISC, which currently has 32 full members of Scientific Unions.

In 2012 IUPESM achieved recognition of both professional occupations – medical physicists and biomedical engineer. This was through inclusion of our occupations in the Standard Classification of Occupations (ISCO) of the International Labour Organization (ILO) in Geneva. This was of great importance in many countries, as ISCO includes specific code numbers for each recognised professional occupation. The lack of such specific codes for medical physicists or biomedical engineers had resulted in the past to some cases with undesirable employment of our colleagues (under different recognised professional occupations, often with lower remuneration). Nowadays the occupation of “Medical Physicist” is listed under Unit Group 2111 and the occupation of

“Biomedical engineer” - under Unit Group 2149.

These recognitions could only be achieved by a joint Union of the two professions, which together can overcome the relatively small number of specialists in each one.

IUPESM activities are handled by a number of committees, including: Education and Training, ISC Liaison, Union Journal, Public and International Relations, Awards, Data, the Women in Medical Physics and Biomedical Engineering Task Group, the Health Technology Task Group (HTTG). In 2018 IUPESM set up a new activity (headed by M Stoeva and KP Lin) for organizing joint Workshops between medical physicists and biomedical engineers. The IUPESM scientific publication is the Journal ‘Health and Technology’ (Springer).

A main task of IUPESM is to manage the triennial “World Congress on Medical Physics and Biomedical Engineering”. The Union organises these World Congresses since 1979. The current WC 2021 in Singapore is the 15th World Congress.

To mark its 40th Anniversary, last year IUPESM approved a

Fellowship scheme and plans a number of administrative and scientific activities.

The IUPESM General Assembly is the highest authority of the Union and determines its general policy. It consists of representatives of the Constituent Organizations. The Administrative Council conducts the business of the IUPESM between sessions of the General Assembly. The current members of IUPESM Administrative Council are: Prof James Goh (President, Singapore), Prof Slavik Tabakov (Vice-President, UK), Prof Kin Yin Cheung (Past-

President, Hong Kong), Prof Leandro Pecchia (Secretary General, UK), Prof Magdalena Stoeva (Treasurer, Bulgaria), Prof Madan Rehani (President IOMP, USA), Prof Shankar Krishnan (President IFMBE, USA), Prof John Damilakis (Vice-President IOMP, Greece), Prof Ratko Majjarevic (Vice-President IFMBE, Croatia), Prof Eva Bezak (Secretary General IOMP, Australia), Prof Kang Ping Lin (Secretary General IFMBE Taiwan), Prof Geoff Ibbott (IOMP, USA), Prof Stephen Keevil (IOMP, UK), Prof Timo Jamsa

(IFMBE, Finland) and Prof Marc Nyssen (IFMBE, Belgium).



Logo of the IUPESM 40th Anniversary



IOMP Immediate Past President Report

Slavik Tabakov

IUPESM Vice-President and IOMP Past-President



This report covers several activities, which I manage at the moment:

1. History Sub-Committee (HSC)

- a) During 2019 the HSC updated all IOMP History tables (32 with 158 pages), which were uploaded to the IOMP web site. The necessity of further update will be checked again after a year.
- b) The History project develops well and a new issue was published in March 2020 including History of Dental Radiology, History of Contrast Media in Radiology and also Development of Medical Physics in Africa.

2. Journal Medical Physics International (MPI)

The following activities were carried out after August 2019:

- a) The Annex with Abstracts from the ICMP2019 was prepared and published in MPI during September 2019 (this activity was

together with the Editorial Team of the ICMP2019 Book with Abstracts);

- b) A new MPI issue was published in December 2019. Following the focus on Latin America in the MPI Issue May 2019, the issue from December 2019 had a focus on Africa. This also coincided with the 10th Anniversary of FAMPO.
- c) The third Special Issue associated with the project History of Medical Physics was published at the end of March 2020.

I would like to thank the MPI Co-Editor P Sprawls, the Technical Editor M Stoeva and all colleagues who have supported the work and papers of MPI.

3. IOMP Company activities related to Bank accounts

The Work Group (WG) dealing with this includes S Tabakov (Chair), S Hawking (Admin Secr.), S Keevil

- a) The documents for the new IOMP Company account were signed by me during September 2019. Mrs Hawking continued the negotiations with the Bank and we had further Virtual meetings on the subject. The Bank account in GB pounds was opened successfully at the end of 2019.
- b) The activities for opening an international account at Lloyds Bank appeared to be a slower process, but we hope this to be completed by mid-2020.

I would like to thank the WG members, specially Mrs S Hawking and the staff of the IPEM, who supported this activity.

4. IUPESM Vice-President activities

- a) Sample Contract for Word Congress – I drafted this based on feedback from WC2018. During 2019 the draft was approved and sent to CCC COC for discussion. Small variations were made and accepted by both IOMP and IFMBE. The Contract signing was completed during March 2020.

- b) IUPESM Administrative Council meeting was held at the Clinical Engineering Congress during November 2019 (Italy). A number of colleagues attended the event remotely. The meeting discussed and agreed topics with focus on the IUPESM incorporation and the activities for the celebrations of the 40th Anniversary of the Union. The latter included development of logo, implementation of fellowship scheme, special issue for the journals of the organisations. Some of the activities were initiated, others will be activated after the completion of the pandemic situation.

- c) Joint activities between medical physicists and engineers - this activity was headed by M Stoeva and KP Lin (both members of IUPESM AC). After its successful first event at Taiwan (April 2019), another such event was made at the Clinical Engineering Congress

during November 2019 (Italy). Similar events are planned for June 2020 (Slovenia) and October 2020 (Thailand). Their activation depends on the current pandemic situation.

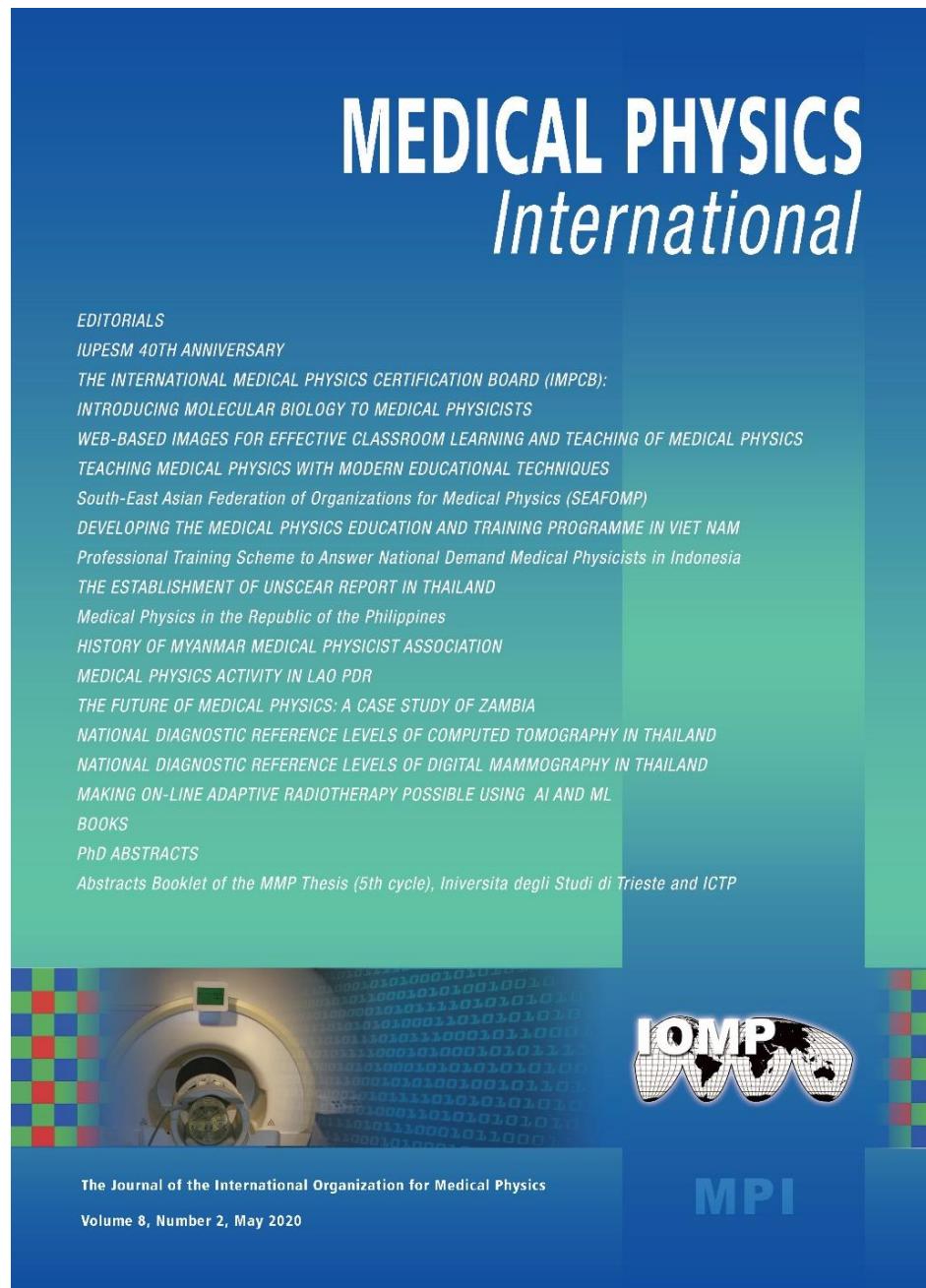
c) An IUPESM Administrative Council meeting was planned for June 2020 (Slovenia), but most likely will be cancelled due to the current pandemic situation. I proposed an alternative meeting

to be held at the AOCMP in Thailand. It was accepted that this will incorporate CCC and COC meetings and plans for the World Congress in Singapore.

d) The IUPESM 40th Anniversary celebrations will take place in 2020, most likely at AOCMP. Special publications are being prepared for the Anniversary.

e) The discussions related to the future incorporation of IUPESM continue.

I would like to thank the other medical physics and engineering colleagues who took part in the abovementioned IUPESM activities.



Treasurer's Report for the Year Ended 31st December 2019

Ibrahim Duhaini
IOMP Treasurer



Total subscription income in 2019 remains relatively unchanged at \$68,866 (2018: \$67,998), including \$2,245 from Corporate Member Varian. Overall, the response from NMO's this past year has been steady with a total of 56 having paid their dues on time compared to 55 in 2018. No new NMOs were approved in 2019.

The amount held in the US Dollar interest-bearing accounts continue to bring in a good return with the amount received being \$8,639 compared to \$4,418 in 2018. However, it should be noted that this

amount now includes the accrued interest of \$2,527 for the remainder of 2019; a calculation which was not previously applied and thus we can expect the 2020 figure to be significantly lower before the situation balances out again in 2021. The total amount currently sitting in such accounts for IOMP is \$181,936.

Total income for 2019 has risen to \$113,613 (2018: \$103,045) largely due to the income relating to new accreditation activity, newsletter sponsorship and the adjustment in reporting interest income as explained above. The income from ICMP 2019 of \$23,392 includes the IUPAP funding (€10,000), PTW sponsorship (€5,000) and assumes an estimated payment of \$6,800 profit share due from the host NMO, the Chilean Medical Physics Society.

Total expenditure has decreased to \$79,718 (2018: \$97,564) largely due to ICMP expenses being lower than 2018's World Congress expenses; the ICMP

costs of \$9,740 are attributed to the IOMP travel awards and general expenditure (catering, plaques etc) but does not include Officer travel expenses. Overall, travel expenses and Committee expenses are both slightly lower than in 2018 while the combined support cost (as a total) is relatively unchanged.

The net result on income against expenditure for 2019 is a higher than expected gain of \$33,895 (2018: \$5,481). There is only a slight loss of -\$678 due to the fluctuation in currency exchange rates between the US Dollar and the Euro and Sterling across the twelve-month period to apply hence the accounts are showing an overall gain of \$33,217.

The Balance Sheet shows that the Organization's reserves continue to be robust and are held in cash deposits, principally in US Dollars (\$345,826), but also smaller holdings in Euros (\$93,699) and Sterling (\$13,990), all of which are currently deposited with Lloyds TSB PLC in the United Kingdom.

IDMP 2020 Message

Ibrahim Duhaini
IOMP Treasurer



Dear Medical Physics Colleagues across the Globe,

It is my pleasure to announce to you the theme of this year to mark the celebrations of the International Day of Medical Physics (IDMP 2020):

"Medical Physicist as a Health Professional"

As we all may know this year has brought remarkable challenges to healthcare systems around the world. As healthcare workers, Medical Physicists as well as many others were in the

frontline in dealing with COVID-19 patients and they also deserve recognition and appreciation for their efforts. Many countries still don't recognize medical physicists as healthcare professionals, hoping that this year's theme is expected to bring awareness and shed light on the importance of our profession in the healthcare field and that the medical physicist is an essential key element not only to help in diagnosis and treatment of many diseases but also to ensure radiation safety for patients, professionals, and staff.

I hope this year's difficulties don't stand in the way of celebrating this day to honor our profession. Taking social distancing measures into consideration, this day can still be celebrated through online meetings, gatherings, contests, and parties.

I wish all my colleagues around the World a Happy Medical Physics Day. Enjoy the celebrations of this day even from your home or behind a screen in your office to show our pride of being a Medical Physicist!



MEDICAL PHYSICIST AS HEALTH PROFESSIONAL



November 7

INTERNATIONAL DAY OF

MEDICAL PHYSICS

Report of Science Committee

Geoffrey S. Ibbott
Chair Science Committee



The IOMP Science Committee is responsible for disseminating current information to medical physicists; assisting in the planning and conduct of regional meetings on medical physics; contributing to and reviewing scientific documents prepared by organizations such as the ICRP, the WHO, and the IAEA; and participating in various forums for the generation of scientific information in medical physics.

The current Committee membership is shown below:

Geoffrey Ibbott, Chair, USA
Abdalla Al-Haj, Saudi Arabia/MEFOMP
Sha Chang, USA
Lawrence Dauer, USA
XiaoWu Deng, China
Benedick Fraass, USA
Reinhard Loose, Germany/EFOMP
Mahadevappa Mahesh, USA
Malcolm McEwen, Canada
Hossein Mozdarani, Iran/MEFOMP

Wilbroad E. Muhogora,
Tanzania/FAMPO
Hugo Palmans, United Kingdom
Mark Rivard, USA
Maria Elisa Rostelato, Brazil/ALFIM
Ferid Shannoun, Austria
Vellaiyan Subramani, India
Yoshiharu Yonekura, Japan
Early work has begun on the organization of the upcoming World Congress in Singapore in 2021. It is expected that members of the SC will contribute to the program committee for the WC 2021.

Several members of the SC have contributed to preparation of a report by the Expert Group on Medical Exposures. This is a project of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). The final report has undergone extensive review by national contacts and will be completed in the next few weeks.

An Invited Commentary was recently published in the European Journal of Medical Physics entitled "Patient doses from image-guided radiation therapy". While this was not strictly a publication of the SC, conversations with SC members contributed to the article, as did the chair's presentation, as an IOMP representative, at the 2017 meeting of the ICRP. The Commentary responded to the publication of several articles by IOMP President Madan Rehani and

colleagues discussing the significance of the recent increase in the dose to the public from CT scans.

The SC recently reviewed applications to the IOMP for sponsorship or support of meetings in Iran, Thailand, Bangladesh and Morocco. Before recommending support or endorsement of a conference, the committee considers the quality of the program and proposed speakers, and the potential benefit to be derived by the intended audience.

The SC reviewed and submitted comments on a draft report from the IAEA called "Radiation Protection in Dental Radiology". This report is nearing publication. The SC also reviewed a draft ISO standard on "Reference measurement standard specifications for the calibration of gamma-ray spectrometers." The SC comments will be particularly useful as the chair participates in a joint working group comprising representatives from the ISO and the IEC. Finally, the SC has just begun review of a draft report from the WHO entitled "WHO/IAEA technical specifications for radiotherapy equipment in cancer treatment". Comments about this report will be submitted shortly.

Report of Education and Training Committee

Arun Chougule
Chair Education and Training Committee



The Education and Training Committee [ETC] of IOMP is entrusted with development of programs related to education and training of medical physics, to promote internationally sponsored education and training programs, consider application from national and regional organisation for IOMP endorsement and funding, to harmonise and standardize medical physics education program, accreditation of educational, residency and CPD program.

The members of ETC and Accreditation Board [AB] are working hard to fulfilling the aims and objectives of ETC and contributing for betterment of medical physics education &

training in IOMP member countries.

During last six months IOMP ETC has done following tasks

1. The manual and application forms for IOMP accreditation of Medical Physics Residency programme was finalised after rigorous review and now uploaded on IOMP website

2. IOMP Accreditation board received application from MMP ICTP for IOMP accreditation renewal, it was reviewed by AT of accreditation board and planned site visit is postponed due to the COVID19 epidemic. IOMP has already received US\$ 4000 from MMP course coordinator towards IOMP accreditation renewal fees. The site visit will be done once COVID19 situation gets under control.

3. The IOMP accreditation Board has received request from South Asia Centre for Medical Physics and Cancer Research (SCMPCR) for IOMP CPD accreditation of 6th Hands-on Workshop course title: Hands-on Workshop: Commissioning, Planning and Quality Control for the IMRT/VMAT Treatment Techniques during 25-27 April 2020 at University of Colombo, Colombo, Sri Lanka and National Cancer Institute, Maharagama, Sri Lanka. After

following the procedure the accreditation board, ETC and IOMP EXCOM has approved the proposal. The organizers have paid US\$ 150 as IOMP CPD accreditation fees.

4. With efforts ETC IOMP, we could get a session – IOMP session on accreditation program during planned JSMP meeting at Yokohama [9 – 12 April 2020] which is now being organized as web based meeting. The ppt presentation of talk is submitted and it will be an opportunity to popularize IOMP accreditation programs.

5. ETC has reviewed six applications received from the conference organizers for IOMP endorsement and/or funding and the report submitted in time for approval to IOMP EXCOM.

6. ETC is decimating all the publications. Announcement and activities of IOMP to its member countries so that medical physicists get benefitted

7. ETC has actively participated in programs on IMPW and looking to present scenario due to COVID19 epidemic, the diminished possibility of holding physical meetings and training programs in near future, ETC of IOMP preparing the IOMP Schools through webinars.

IOMP initiative for accreditation of medical physics education, residency and CPD programs

Arun Chougule

Chair Education and Training Committee, Chairman IOMP Accreditation Board



Medical Physics is one of the most challenging and rewarding application of physics to human health care programme and is mainly concerned with use of ionizing radiation in diagnosis, therapy and research in health care. According to IOMP Policy Statement No.1, [\[https://www.iomp.org/wp-content/uploads/2019/02/iomp_policy_statement_no_1.pdf\]](https://www.iomp.org/wp-content/uploads/2019/02/iomp_policy_statement_no_1.pdf)

medical physics may be classified into six sub-fields/specialties, namely

1. Radiation Oncology Physics
2. Medical Imaging Physics
3. Nuclear Medicine Physics
4. Medical Health Physics (Radiation Protection in Medicine)

5. Non-ionizing Medical Radiation Physics
6. Physiological Measurement.

The environment surrounding healthcare is rapidly evolving and the technological innovation in application of radiation in medicine is in fast progress. Medical physicists working in clinical environment are expected to keep track with the exploding technological development and should have required competency and therefore undergo structured education program and residency under experienced medical physicist from recognized institution. Various institutes/universities are running medical physics education programmes, however to access the minimum standards of the education and provide credibility of the program the medical physics education and residency programs needs to be accredited. Accreditation is important because it helps determine if an institution meets or exceeds minimum standards of quality and helps students determine acceptable institutions for enrollment in addition employers often require evidence that applicants have received a degree from an

accredited school or program. For the public, accreditation promotes the health, safety and welfare of society by assuring competency of public health professionals. IOMP is dedicated to improve medical physics worldwide by disseminating systemized knowledge through education and training of medical physicists, to advance the practice of physics in medicine by fostering the education, training and professional development of medical physicists. For harmonization of medical physics education program as per the IOMP Policy Statement No. 2 [https://www.iomp.org/wp-content/uploads/2019/02/iomp_policy_statement_no_21.pdf] which provides general guidelines for member organizations in defining the basic requirements for education and training of medical physicists. It aims to serve as a reference for medical physics organizations, education institutions and health care providers and authorities in planning and development of their national infrastructures for education, training and certification of medical physicists and for maintenance of standards

of practice. To accomplish the goals, IOMP Accreditation Board [AB] has been set up to ensure that accredited medical physics education and residency programs satisfy the highest standards established by IOMP in collaboration with other international organizations.

The IOMP accreditation board accredits medical physics degree/Post graduate programs, medical physics education and training institutions/centers, residency programs and education and training events.

Benefits of IOMP accreditation:

- Reputation of accredited programs and courses which will result in more demand for these education and training activities
- Provision of an international dimension to an education event that will attract participants from other countries
- Evidence of highest teaching standards and best preparation of medical physicists for the work environment
- Publication of accredited programs and courses on the IOMP website

IOMP AB operates under the guidance of the IOMP ETC and consists of its Chair, the Vice-Chair and 7 members. The IOMP AB is responsible for

- Carrying out accreditation processes
- Maintaining a database of all applications and supporting documents
- Financial control including the setting of fees
- Appointing a committee to investigate appeals and deciding the outcome of these appeals

- Maintaining a register of all accredited centers and associated records

IOMP AB has produced the manuals and the application forms for accreditation of educational program, residency program and CPD accreditation and are available on IOMP website [<https://www.iomp.org/accreditation/>]

This document describes the IOMP accreditation standards and processes for medical physics education program, residency programs and CPD programs. To be clinically qualified Medical physicist [CQMP] needs to obtain Masters Degree in Medical/ Radiation Physics and must have completed at least 2 years duration residency program. The residency program should provide residents with clinical training in a hospital under certified/qualified medical physicists so as acquire the required practical skills and professionalism. To accomplish this goal, adequate organization, facilities, staff, patient, and educational environments should be provided. The medical physics residency programme should be conducted in a clinical environment, having adequate infrastructure and the facilities to support resident education and training. The staff involved in teaching and training should have adequate training and experience. Equipment and instruments specific to the specialty concerned should be available. The duration of clinical training should not be less than 2 years' full time equivalent for a given specialty. For preparing the manual, guidelines and forms , IOMP AB has studied

and referred to many documents/guidelines requirements published by IAEA,AAPM, ACPSEM.

Application Process for getting IOMP accreditation for Educational, residency and CPD programs

The application process, the manuals and forms are available on IOMP website [<https://www.iomp.org/accreditation/>]. The program conducting institutions must submit the completely filled application and supporting documents to the IOMP accreditation board for accreditation of their educational, clinical training/residency, CPD program as case be separately in prescribed format The application will be processed by the IOMP AB as per the procedure of accreditation detailed in the respective manuals for the program.

IOMP AB has accredited four educations programs and six CPD programs in last few years. The accreditation of residency program is initiated in this year. We are looking forward for many more institutes conducting the educational, residency and CPD programs to come forward for IOMP accreditation and request all IOMP office bearers, members of various committees and NMO 's to popularize the IOMP accreditation program for wider acceptability and usefulness.

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[International Organization for Medical Physics](#)



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International Organization for Medical Physics / Accreditation

ACCREDITATION

Accreditation is the means by which IOMP assesses the quality of medical physics postgraduate degree programs and CPD courses and keeps the medical physics community informed. The IOMP Accreditation Board has been set up to ensure that accredited medical physics programs satisfy the highest standards established by IOMP in collaboration with other international organizations.

The IOMP Accreditation Board accredits medical physics degree programs, medical physics education and training institutions/centres and education and training events. Initially its work will be limited to accreditation of postgraduate degree courses and Continuing Professional Development (CPD) courses. The IOMP Accreditation Board will develop guidelines and policies in the future to accredit residencies, conferences and other education and training events.

Accreditation Process

[Accreditation Manual](#)

[Application Forms](#)

[Board Members](#)

[Relevant Documents](#)

[Accredited Programs](#)

[CPD accreditation](#)

[Accreditation of Medical Physics Residency Programs](#)

Report of Publications Committee

Paolo Russo

Chair Publications Committee



Chair

Paolo Russo - Editor of *Physica Medica* – European Journal of Medical Physics (EFOMP Official Journal)

Editor Members

Martin Caon - Editor of ACPSEM
Jong Min Park - Editor of *Progress in Medical Physics*
Ambika Pradhan - Editor of *Indian Journal of Medical Physics*
Magdalena Stoeva - (Secretary)
Editor of eMPW
Jeffrey Williamson - Editor of *Medical Physics*
Simon R. Cherry - Editor of *Physics in Medicine and Biology*
Michael David Mills - Editor of *JACMP*
E. Ishmael Parsai - Past Editor of e-Medical Physics World
Simone Kodlulovich Renha – Editor of *Revista Latino-americana de Física Médica*
Nobuyuki Kanematsu - Editorial Board for *Radiological Physics and Technology*

IOMP Related Members

Slavik Tabakov - Past immediate President of IOMP

Virginia Tsapaki - Past immediate editor of e-MPW / SG of IOMP

John Damlakis – IOMP VP

Siyong Kim - IOMP PRC

The following tasks are assigned to the Publications Committee:

1. To improve medical physics worldwide by providing or supporting appropriate publications or knowledge generated as a result of research, education and professional programs of the organization. The focus of the Committee includes both printed and electronic documents.
2. To manage the operation of *Medical Physics World*
3. To oversee the publication agreements with publishers of the official IOMP journals
4. To make nominations of editorial board members and other such appointments as necessary to the IOMP Executive Committee
5. To identify the need for international scientific, research and professional publications through consultation and cooperation with other committees and task groups of the Organization
6. To assist Regional and National Organizations of medical physics to prepare proposals for publication of new materials in traditional or new formats as necessary to extend the international medical physics knowledge base.

With regard to point 1) above, the PC Chair has finalised the draft of a new agreement with the Publisher Taylor & Francis in relation to the CRC Press Series in Medical Physics and Biomedical Imaging, a publication series coordinated with IOMP which represents the official book series of IOMP. The previous agreement (for which no signed copy was available) traced back to 2006. A liaison person will be nominated by IOMP as Chief Editor of the Series, reporting to IOMP via the PC all the aspects of the scientific management of the Series. The PC Chair will solicit members of the PC to contribute suggesting book title and corresponding authors. The PC Chair has prepared with the collaboration of the President and the SG a list of MPs especially in LMI countries, for delivering books from this Series, due to IOMP by virtue of the previous and new contracts. The PC Chair has solicited participation by CRC Press officers at next ECMP and ICMP where such publications will be presented.

With regard to point 3) above, the PC is still to propose new agreements with the journals *Medical Physics* and *Physics in Medicine and Biology* in order to provide complimentary subscriptions to medical physicists in low and middle income countries. The Chair intends to extend these agreements to other scientific journals in medical physics.

Focus Issue of EJMP on “125 Years of X-rays”

Paolo Russo

Chair Publications Committee, Editor of *Physica Medica*



On the 8th of November, 1895, the German physicist Wilhelm Conrad Roentgen discovered X-rays (Figure 1), and on the 28th of December, 1895, he published a comprehensive report of his findings () (Figure 2) [1].

Physica Medica – European Journal of Medical Physics (EJMP)

(<https://www.physicamedica.com/>) will publish in November 2020 a Focus Issue “125 Years of X-rays” dedicated to celebrate the 125 years from Roentgen’s discovery of X-rays, an experimental observation which gave rise to fundamental diagnostic and therapeutic applications in medicine. The

Focus Issue will include invited articles from international leading scientists in medical physics, highlighting important achievements, recent advances and present challenges for medical physics, related to the use of X-rays.

A curiosity: Naples, Italy (the city where I was born) was at the forefront of such medical applications. In April 1896, in the Military Hospital of Naples, the Lt. Col. (Med.) Giuseppe Alvaro, during the Italy-Ethiopia war, examined with X-rays two wounded Italian soldiers coming from Ethiopia, following a procedure (used for localization of lead bullets in the body from gunshots, or shrapnels) already adopted in the Prussian battlefield as early as February 1896. Lt. Col. Alvaro (who reported his observations in the *Giornale Medico del Regio Esercito*, the medical journal of the Italian Royal Army [2]) also reported, however, the striking forecast that in the future, the same (radiographic) procedure will be used for assessing bone fractures, skeleton diseases,

etc., in the general public: and modern radiology was born!

The author thanks the Deutsches Roentgen Museum (Remscheid, Germany) for kindly providing the photos shown in the figures of this article (<https://roentgenmuseum.de/en/home-en/>).

EJMP is an official publication of IOMP.

Paolo Russo, IOMP Publications Committee

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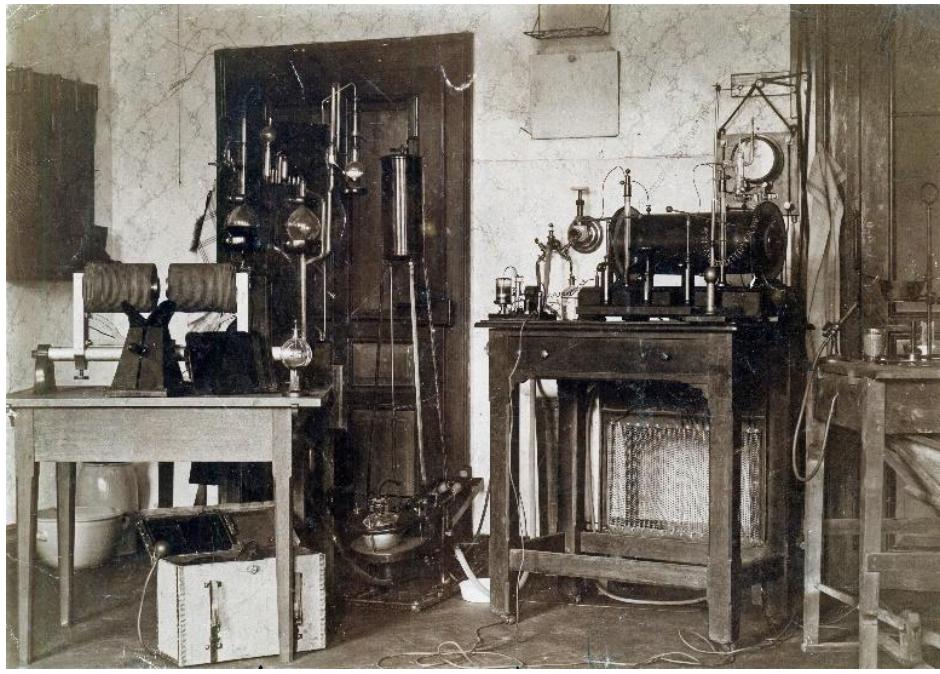


Figure 1. Roentgen's laboratory in Wuerzburg, Germany.

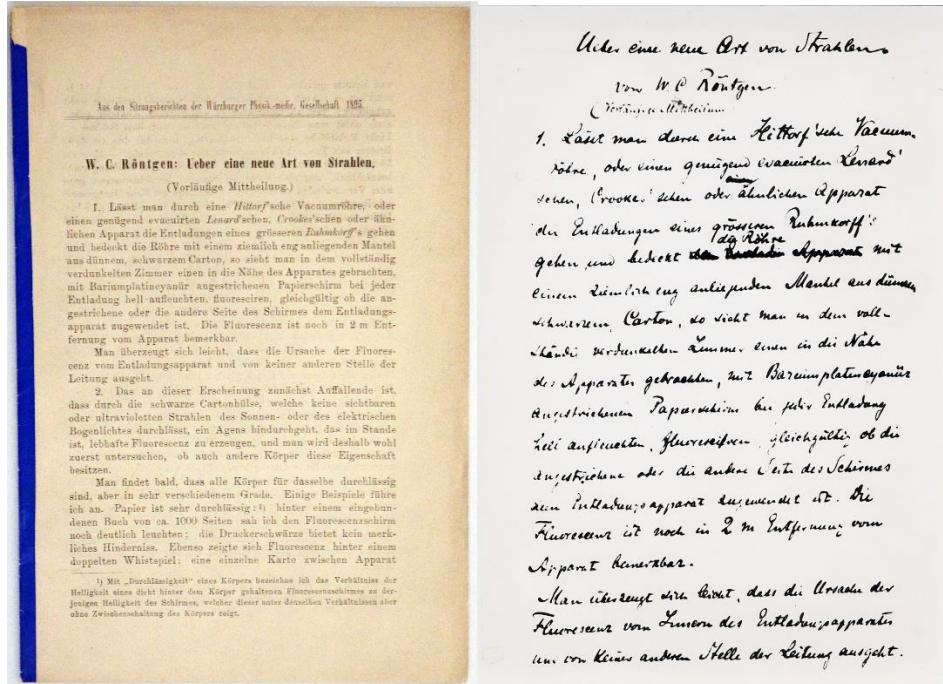


Figure 2. (Left) First page of the publication by W. C. Roentgen, "Ueber eine neue Art von Strahlen" (On A New Kind of Rays" [1]; (Right) corresponding manuscript.

Report of Awards & Honours Committee

Simone Kodlulovich Renha
Chair Awards & Honours Committee



In November of 2019, the Awards & Honours committee announced the winners of the IDMP. This important date has been become more important every year, with the increasingly expressive participation of our community of medical physicists. Medical physics societies around the world have honoured medical physicists in their regions by appointing colleagues who stood out the most to improve the applications of ionizing radiation in the treatment and diagnosis of

patients as well as in the promotion of medical physics. It is a pleasure for the A&H committee to present the winners of IDMP 2019.

Awards 2020

For 2020, the A&H committee have already elaborated the announcements for IUPAP and IDMP Awards and we would like to visit the IOMP webpage and to be updated about the specific information about these awards such as criteria for selection, nomination procedure and deadlines.

This year, the committee decided to introduce a new form which should be sent by the nominator accompanied by the other documents requested for each award. The main objective of this Form is to standardize the way of sending information regarding the nominees as well as to further improve the evaluation methodology of the nominees.

The committee is committed to the continuous improvement of awards processes as well as its transparency. All suggestions are very welcome.

I would like to encourage everyone to send their nominations for these awards, thus expressing the recognition of the excellence and dedication of medical physicists for their contributions to patient care.

Among so many uncertainties and challenges we have been facing this year, we can be more than ever sure about the importance of several contributions from medical physicists to help overcoming this pandemic.

As president of A&H, I would like to thank all members of the committee for the efforts and dedications to our activities.

This report was produced with the contributions of all members of the committee.

It is a pleasure for the A&H committee to present the winners of IDMP 2019.



Efi Koutsouveli
EFOMP



Eva Bezak
AFOMP



Jacob van Dyk
AAPM



Hanan Aldousari
MEFOMP



Moses A. Aweda
FAMPO

Mutual Recognition of HKIPM and KMPCB Certification Boards on Professional Certification of Medical Physicists in Hong Kong and Korea

Kin Yin Cheung, Chairman, HKIPM Medical Physics Certification Board
Sung Kyu Kim, President, Korean Medical Physics Certification Board



The Hong Kong Institution of Physicists in Medicine Certification Board (HKIPMCB) and the Korean Medical Physics Certification Board (KMPCB) have signed a Memorandum of Understanding (MOU) on a scheme of mutual recognition on professional certification granted by these Boards to medical physicists practicing in the specialty of Radiation Oncology Physics in Hong Kong and Korea. The MOU is effective from 1 January 2020 for a period of 5 years and this can be extended.

HKIPMCB and KMPCB are both accredited by the International Medical Physics Certification Board (IMPCB) in 2015. The two boards mutually recognize that the standard and process adopted in their certification systems are equivalent and are in compliance with the requirements specified by IMPCB in accordance with IOMP guidelines on professional certification of medical physicists.

The signing of the MOU marks a new era of collaboration amongst the medical physicists practicing in Korea and Hong Kong. The implementation of the mutual recognition scheme will help promote social and scientific exchanges between the medical physics communities in Korea and Hong Kong. This can also create more opportunities and a wider boundary for professional

and career developments of the medical physicists in these regions.

Currently, this mutual recognition scheme covers only the specialty of Radiation Oncology Physics. The scheme can be extended in the future to cover other specialties of medical physics.



Figure 1: Representatives of HKIPM and KMPCB Certification Boards attended a signing ceremony held in Osaka, Japan during PTCOG-Asia.

Calendar of Events

62nd AAMP Annual Meeting & Exhibition

When: Jul 12 – 16, 2020

Where: Vancouver, BC, Canada; Virtual

Description: www.aapm.org

The 9th Korea-Japan Joint Meeting on Medical Physics

When: Sep 17 – 19, 2020

Where: Seoul, South Korea

Description: www.ksmp.or.kr

European Congress of Medical Physics 2020

When: Sep 24 – 26, 2020

Where: Turin, Metropolitan City of Turin, Italy

Description: www.ecmp2020.org

Re-scheduled for 16-19 June 2021, Turin, Italy

5th CONFERENCE ON SMALL ANIMAL PRECISION IMAGE-GUIDED RADIOTHERAPY

When: Sep 28 – 30, 2020

Where: Munich, Germany

Description: <http://small-animal-rt-conference.com/>

2020 RSNA Annual Meeting

When: Nov 29 – Dec 4, 2020

Where: Chicago, IL, USA

Description: www.rsna.org/annual-meeting
