#### International Organization for Medical Physics



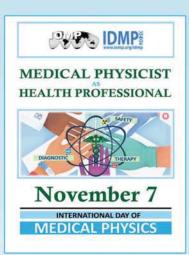
## <u>eMPW</u>

Volume 36 Number 2 December, 2020

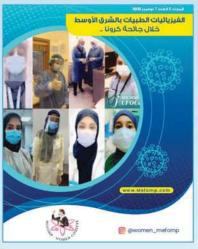


















1DMP 2020

## Medical Physics World

## Medical Physics World

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#### **IOMP NMOs**

#### **National Member Organisations**

Algeria Morocco
Argentina Myanmar
Australia & New Zealand Nepal
Austria Netherlands
Bangladesh New Zealand
Belgium Nigeria
Brazil Norway
Bulgaria Panama

Cameroon Peoples Rep. of China

Canada Peru
Chile Philippines
Colombia Poland
Croatia Portugal
Cuba Qatar

Cyprus Rep. of China - Taiwan
Czech Republic Rep. of Macedonia
Denmark Rep. of Moldova

Ecuador Romania
Egypt Russia
Estonia Saudi Arabia
Finland Singapore
France Slovenia
Georgia South Africa
Germany Spain
Ghana Sri Lanka

Greece Sudan
Hong Kong Sweden
Hungary Switzerland
India Tanzania
Indonesia Thailand

Iran Trinidad & Tobago

IraqTurkeyIrelandUgandaIsraelUkraine

Italy United Arab Emirates
Japan United Kingdom
Jordan United States
Korea Venezuela
Kuwait Vietnam
Lebanon Zambia
Lithuania Zimbabwe

Malaysia Bangladesh - AFFILIATE

Mexico Mongolia

#### **Editorial**

### Magdalena Stoeva, PhD Editor IOMP Medical Physics World



Dear Colleagues and Friends,

Welcome to the December 2020 issue of IOMP Medical Physics World!

2020 has been difficult year for all of us but despite all the hardship we are proud to present you another issue rich in content and with a very strong forward looking statement.

This is one of the largest issues of Medical Physics World presenting IOMP ExCom reports, detailed IDMP reports, IUPESM related publications and important announcements.

IDMP 2020 has been a great success and therefore MPW's cover is dedicated to all of you who celebrated IDMP despite all the difficulties. Please refer to the IDMP report also for the official announcement of the IDMP 2021 theme.

It is my pleasure to congratulate the IUPAP and IDMP awardees, as well the IUPEM Fellows.

As the year end approaches we are at the edge of another challenging year. Medical Physics World has great plans for 2021 which we hope will bring us even closer to you, our readers, with the latest updates from IOMP, our partnering

organizations and last but not least our worldwide professional community.

And finally let me wish all of you a Happy Holiday Season, a Healthy and Prosperous New year 2021!



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#### **President's Report**

### Madan M. Rehani, PhD President of IOMP



Dear Colleagues,

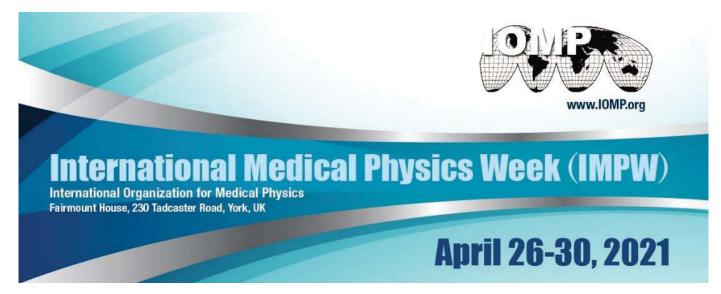
COVID-19 pandemic continues unabated and rather peeking higher in some countries than the original phase in March/April 2020. I wish our medical physics colleagues all over the world and their loved ones safety and good health. We are now

approaching the holiday period of Christmas and New year which of course is unlike before, but we are all now used to this "new normal". We all are attending or speaking in meetings/ conferences online while sitting in comfort of home with pajamas. However, things move on. The patient load in many hospitals is back to pre-pandemic era. Thanks to protective arrangements and dedication of our colleagues in clinical practice who are on front end in dealing with infected patients. Hats off to them.

We had difficult decisions to make which were rather exceptional. They were connected with shifting the cycle of our conferences and our elections by one year to make 2020 as silent year. It became something like what happens in change in time

every year where because of adoption of day-light time one hour gets either missed out or gets added, in this case the year is missed out, even though we are working no less, some even more than pre-pandemic days.

It has been testing time on what to do and what not to do as the most affected activities pertain to lack of travel. No travel to be at the conferences and meetings. Many and rather most of us are working or worked for many months from home. Whatever was considered impossible before has been made possible. To name a few, the audit and accreditation activities are ongoing virtually. National conferences have become virtual with better attendance in sessions. Of course, international conferences



which are held once in two or three years are being rescheduled with the hope that things will be back to normal.

Every organization jumped to establish COVID-19 resource page, so did IOMP. The challenge was how to prune contents so as to keep only credible information. We created links to professional societies of medical physics, radiology and radiotherapy and of course to WHO, CDS, ECDC.

An important activity was the start of IOMP webinars as a part of IOMP School activity. This was started during the International Medical Physics Week (IMPW) 11-15 May 2020. The successful experience made us continue with webinars on

twice monthly basis and they have been great success with registrations always going over 1000 and many times near 2000. The final attendance has hovered around 450± 150. The topics covered included Artificial Intelligence & Machine Learning in Medical Physics, New technologies, Learning and how to publish in physics journals. medical webinar on 7th Nov was on IDMP and there was representation from IAEA and all regional organizations of IOMP to deliberate on the theme of IDMP the "Medical Physicist as Health Professional".

An agreement was signed between IOMP and J of Medical Physics (JMP) of Association of Medical Physicists

of India to include JMP as one of the official publications of IOMP.

We are now planning webinars for 2021. The webinars in Spanish language is on the cards and we shall have the program laid out soon. Structured paid courses with certification is another activity we are debating.

We had decided the dates for IDMP2021 and it is 26-30 April 2021. Please plan to organize your actions for that week. In any case IOMP shall have a program of activities which we are working on

I wish you all safe and healthy time during this pandemic.



## Mind the gap: Technology is accelerating but Medical Physics training is lagging behind

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



Medical technology is evolving rapidly in all specialties including the fields of diagnostic interventional radiology, nuclear medicine and radiation oncology. Training of medical physicists needs to keep up with the technology advances. Unfortunately, this is not the case. Various new CT techniques and tools, for example, have been developed recently. Thus, automatic kV selection, organ-based tube modulation, dynamic current bowtie filter and other methodologies help optimizing CT exams. Research is being published providing new knowledge on how to use these tools properly. Currently, medical physicists are left on their own to be informed and figure out how to incorporate the evidence into a change in their practices. In other words, opportunities for medical physicists to learn how to use these tools in everyday clinical practice are rare.

The problem described above is not limited to Medical Physics education The European and training. Commission launched the **MEDRAPET** project (MEDical RAdiation Protection Education and Training, MEDRAPET) in December 2010 to improve the radiation protection education and training of medical professionals in the European Union (EU) member states. The results of this project showed that medical professions working with ionizing radiation require educational and training platforms suitable for radiation protection teaching. These platforms are not generally available in the EU member states. On a national level, the main reasons for the absence of specific training schemes are financial, and there is lack of academic staff specialized in all aspects of medical radiation protection. Networks of excellent teaching centers should be created that will develop high level radiation protection courses to bring health care professionals to the required scientific level. An effort should be made to increase the number of continuous professional development courses in radiation protection education and training for all professions and specialties. The **EUTEMPE-NET** (European Network for Training and Education of Medical Physics Experts) is an education and training network for Medical Physicists working in a hospital, in a medical device

company or in a nuclear safety authority and want to boost their career. EUTEMPE modules include face-to-face and teaching. The aims of EUTEMPE-NET to ensure that module participants become knowledgeable about all current issues in radiation safety culture in health care centers and make the Medical Physics radiation Expert protection advocate for patients. Covid-19 has **EUTEMPE-NET** prevented organizing modules this year. The network has announced a series of EFOMP-EUTEMPE didactic webinars, followed by online masterclasses. The webinars, which are free of charge, are in a familiar format, introducing a specific subject by means of a presentation, with room for interaction with the lecturers. The masterclasses provide the opportunity to delve deeper into the subject, gaining more comprehensive understanding of the topic and helping cement the knowledge gained. More information about EUTEMPE-NET can be found at www.eutempenet.eu.

The IOMP has established the 'IOMP School' to improve medical physics worldwide by disseminating knowledge through education and training. The 'IOMP School' organized this year a series of webinars to connect experts with learners ensuring continuity in education and training activities. IOMP decided to upload recordings

of all webinars at https://www.iomp.org/iomp-webinars-impw-2020-recordings/and https://www.iomp.org/iomp-school-webinars-recordings/ giving

the flexibility to all Medical Physicists to watch the webinar free-of-charge whenever they wish. IOMP is planning to organize more webinars and other online education and training events in the future to cover more topics. We need to close the gap. Stay tuned! hub and then stimulate other groups to engage.



#### IUPESM World Congress on Medical Physics and Biomedical Engineering 2022 (IUPESM WC2022)

12 - 17 June 2022 Sands Expo and Convention Centre, Singapore www.wc2022.org

The Biomedical Engineering Society (Singapore) and the Society of Medical Physicists (Singapore) are proud to be co-organising the IUPESM World Congress on Medical Physics and Biomedical Engineering 2022 (IUPESM WC2022).

IUPESM WC2022 is the world's leading forum for presenting the scientific results and major innovations in health-related technologies to the global medical physics and biomedical engineering fraternity.

This event will be held for the first time in Southeast Asia from 12 – 17 June 2022 at the Sands Expo® and Convention Centre, Marina Bay Sands.

Mark your calendars for one of the largest gatherings of medical physicists and biomedical engineers in the world. For more information, please visit www.wc2022.org.

#### **IUPESM 40th Anniversary celebrations**

## Slavik Tabakov IUPESM Vice-President and IOMP Past-President



This year the union of IOMP and IFMBE - the International Union of Physical and Engineering Sciences in Medicine (IUPESM) celebrates 40 years since its establishment. The Union also celebrates 20 years since one of its great

achievements — the international recognition of the scientific fields of medical physics and biomedical engineering, through the IUPESM membership to ICSU (now ISC — International Science Council).

To celebrate this occasion the Awards Committee of IUPESM developed and launched a new Fellowship scheme to recognise outstanding contribution to the international development of medical physics and biomedical engineering.

During these 40 years over 500 distinguished colleagues from many countries have been elected to serve in the various committees and the leadership of IUPESM. All their services have

been on a voluntary basis and the IUPESM Administrative Council expresses heartfelt gratitude to them. 58 Inaugural Fellows of IUPESM from 26 countries were selected and awarded FIUPESM at a Virtual ceremony on 20 November 2020. This List with outstanding international leaders of medical physics and biomedical engineering included also 15 of the initial builders of the Scientific Union, awarded posthumously. The list is available as an annex to the current issue of Medical Physics World.

In future IUPESM will award its Fellowships at each World Congress and related International events.

8



the most prominent international leaders of the profession: Poster download IUPESM, the Union of IOMP and IFMBE, was formed in 1980 and celebrates this year its 40<sup>th</sup> anniversary. In this period IUPESM achieved recognition of the professions of medical physicists and biomedical engineers through a Full membership to the International Science Council (ISC), and also achieved their inclusion in the International Standard Classification of Occupations (ISCO 08).

To celebrate its Anniversary IUPESM introduced a Fellowship (FIUPESM) to be awarded to the most prominent leaders of the Union during these 40 years. The Virtual ceremony, celebrating the Anniversary and awarding the Fellowships, will be on 20 November. The video from the ceremony will be available in December.

The current IUPESM leads express their gratitude to all colleagues, who contributed to the various IUPESM Committees and were part of the many successful IUPESM activities aimed at the advancement of physical and engineering sciences in medicine for the benefit and wellbeing of humanity.

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#### **International Union for Physical and Engineering Sciences in Medicine** www.IUPESM.org

The IUPESM represents the combined efforts of over 150,000 medical physicists and engineers globally. **IUPESM** is a Full Member to the International Science Council (ISC).

IUPESM seeks to contribute to the advancement of physical and engineering sciences in medicine for the benefit and wellbeing of humanity.







































































































































#### **Treasurer Summary Report**

#### Ibrahim Duhaini IOMP Treasurer



The Treasurer's Report for the Year Ended 31st December 2020 will be reported in the next eMPW issue. During this period, especially with Covid-19 pandemic many of the meetings and conferences have been postpones or done virtually, hence, very limited financial expenses have been observed.

For this issue, I will talk about the National Member Organizations (NMOs) Dues Arrangements.

The revised subscription was based on the list of GDP per capita in reference to the this link (https://en.wikipedia.org/wiki/List\_of\_countries\_by\_GDP\_(PPP)\_per\_capita) and according to the set criteria of IOMP National Member Organizations (NMOs) Dues Arrangements as follows:

#### **Procedure for Assessing Dues:**

- 1. Every three years, a member country's ability to pay its dues is assessed by FinCom using the following published information.
- a) United Nations (UN)'s List of Industrialized and Developing Countries.
- b) Purchasing Power (PP) per capita index.
- 2. Member countries will be listed in the Assessed Due List in one of the following category:
- "A" 100% Dues: Industrialized and other countries with PP > US\$ 12,000;
- "B" 50% Dues: Developing countries with their PP < US\$ 12,000 and > US\$ 6,000 and;
- "C" 10% Dues: Developing countries with their PP < US\$ 6,000.
- 3. Every three years, FinCom will determine the reduced dues rate and will submit the Assessed Dues List to ExCom for approval.
- 4. NMOs with less than 10 members are not required to pay an annual subscription.

#### **Procedure**

1. The Secretary-General's office will mail out the annual renewal assessed dues of NMOs at the start of the year and send reminders on a regular basis. Every year, member countries are expected to remit an updated list of their officers in addition to the assessed dues.

- 2. The Secretary-General's office will maintain a list of member countries that have not paid their assessed dues and/or not provided an updated list of their officers.
- 3. NMOs are requested to pay all transfer fees and bank charges.

#### NMOs Whose Dues are less than \$30 pa.

The charges for transferring small amounts is high and it has been agreed that where the annual dues are less than US\$30.00 per year that NMOs may choose to pay for either two or three years in the first year. However, NMOs must return the National Member Directory form every year.

#### **Special Fund Arrangements**

Member organizations who have difficulty in remitting subscriptions to IOMP may be allowed to set up a special fund in their own country for the following purposes:

- (a) to organize a conference in their own country with free participation from other member countries, i.e., a regional group meeting held under IOMP auspices and publicized through that body;
- (b) to pay local expenses of visiting lecturers or experts to further medical physics in that country. The fund need not be disbursed each year but a special

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IOMP account must be set up, with details submitted to the Secretary-General each year and full audited accounts every three years, to be incorporated into the IOMP accounts.

If any NMO wishes to set up a special fund they must contact the Secretary-General

#### **Unpaid Dues**

The Byelaws state:

3.6 Countries that are more than one year in arrears for annual dues and have not applied for reduced fees or waiver of dues as specified in Statute 3.2 or 3.2 above should be listed as "Inactive Members" until they reactivate their membership.

3.6.1 Inactive Members cannot receive financial support for any program.

3.6.2 If inactive national organizations wish to be reinstated to full Membership, they must supply the updated society information for the current year and pay any unpaid dues for up to maximum of three at the rate

specified in the current Dues Scheme for that country. The Executive Committee have the discretion to reduce the number of years of unpaid dues which are required to be paid.

Finally, around 50 NMO's have paid their dues which is slightly less than usual but we will be sending final reminders out the beginning of December 2020 so that hoping other NMO's will settle their dues before the end of 2020.

#### **IDMP 2020 Message**

#### Ibrahim Duhaini

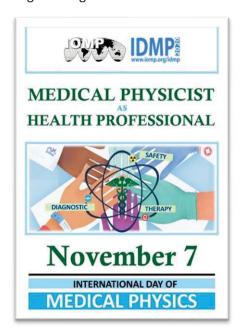


- Ola Holmberg, Giorgia Loreti from IAEA
- Madan Rehani, President IOMP
- Ibrahim Duhaini, IDMP
- Ad Maas, Europe, EFOMP
- Hassan Kharita, Middle-East, MEFOMP
- Sandra Guzman, Latin America, ALFIM
- Taofeeq Ige, Africa, FAMPO
- Arun Chougule, Asia, AFOMP
- Freddy Haryanto, South East Asia, SEAFOMP

#### **IDMP** Coordinator

The theme for IDMP 2020 is "Medical Physics as a Health Professional". This year celebrations were virtual in most countries as many of the events around the World due to the Covid-19 Pandemics. In this report I will share with you some of these celebrations that took place around the world.

The main celebration was done from the IOMP as a webinar titled: "Medical physicist as a health professional" that took place on Saturday, November 7, 2020. The webinar was moderated by IOMP President Madan Rehani and included the following speakers and panelists representing IAEA, IOMP and the regional organizations:



Finally, the next IDMP 2021 theme is:

"Communicating the Role of Medical Physicists to the Public" a new poster will be prepared and send to all accordingly.

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## IDMP 2020 Report eMPW December 2020 Ibrahim Duhaini IDMP Coordinator



The theme for IDMP 2020 is "Medical Physics as a Health Professional". This year celebrations were virtual in most countries as many of the events around the World due to the Covid-19 Pandemics. In this report I will share with you some of these celebrations that took place around the world.

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- ✓ Ola Holmberg, Giorgia Loreti from IAEA
- ✓ Madan Rehani, President IOMP
- ✓ Ibrahim Duhaini, IDMP
- ✓ Ad Maas, Europe, EFOMP
- ✓ Hassan Kharita, Middle-East, MEFOMP
- ✓ Sandra Guzman, Latin America, ALFIM
- ✓ Taofeeq Ige, Africa, FAMPO
- ✓ Arun Chougule, Asia, AFOMP
- ✓ Freddy Haryanto, South East Asia, SEAFOMP





Madan congratulates all medical physics around the world and showed their deep involvement as a health care professional. He then announced the winners of the IDMP 2020 awards in each corresponding regional organization as follows:

AFOMP Tae Suk-Suh
ALFIM Carlos E. Almeida
EFOMP Oliver Blanck

FAMPO Christoph Trauernicht
MEFOMP Mohammad Hassan Kharita

SEAFOMP Djarwani S. Soejoko

AAPM Robert Jeraj















Then all speakers were introduced and talked about different topics in connection to the occasion.

#### A. AFOMP and SEAFOMP Celebrations:

1. Australia is the first to witness the November 7 celebration with a special activity send by Tomas Kron and I quote his message:

"IDMP Down Under in Melbourne. IDMP is a big event and a group of medical physicists in Melbourne decided to spell it 'big'. What better way to do this than 'strava art'? Strava is an app that records activities on a mobile phone. The group decided to take a bicycle ride and leave a track on strava that spells IDMP. This takes a bit of planning (but this is what physicists like doing anyway) in selecting the right part of town, with streets, back



streets and cobbled lanes that can be followed to form the desired pattern. Being approximately 2 x 1 km<sup>2</sup> in size the writing could theoretically just be made out from the moon using a high quality telescope...Best wishes from Peta, Deepak and Tomas (wearing IDMP shirts of different vintages)"

2. AFOMP celebrated with a program organized under leadership of Prof. Arun Chougule President of AFOMP (see Full report in this issue)





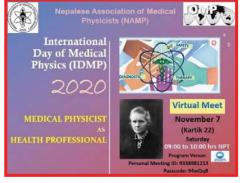
3. India Celebrated with a Virtual Symposia at SMS Medical College& Hospitals, Jaipur with organization of Prof. Arun Chougule and Mary Joan.





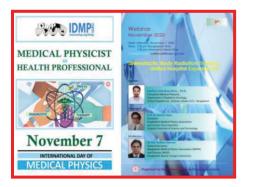


4. IDMP Program by Nepalese Association of Medical Physicist (NAMP)





5. Bangladesh Medical Physics Society (BMPS) and Bangladesh Medical Physics Association (BMPA) both celebrated International Day of Medical Physics (IDMP) with a webinar.





6. Taiwan: This year to commemorate IDMP 2020, CSMPT launched an Official Facebook Page as a new platform for communication and information sharing with medical physicists and for raising awareness of our profession to the public.

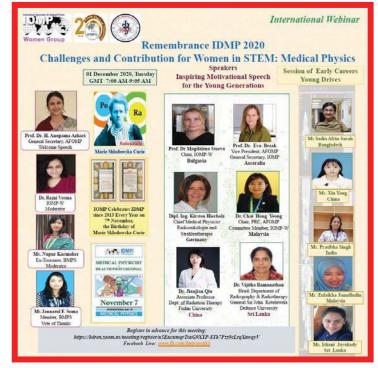


7. Malaysia: The promotional poster for the webinar organized by the Medical Physics Unit of the UMMC. The medical physicists at the National Cancer Institute created a short video clip to be uploaded on the IAEA website. A preview of the video clip is available here.



https://drive.google.com/file/d/17GA9huas?dSNduPQLZ5yJ3nz8LOdoVzv/view?usp=drivesdk

8. Bangladesh Medical Physics Society (BMPS), Women International Organization for Medical Physics, and Women (IOMP-W) Asia-Oceania Federation of Organizations for Medical Physics (AFOMP) organized a programme with panel of renowned women medical physicists who shared motivational speech for the young generations followed by session of early careers.

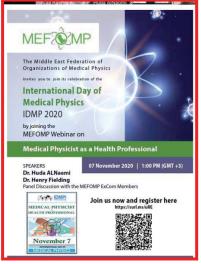


#### **B.** MEFOMP Celebrations

Dr. Hassan Kharita from Qatar participated in the IOMP webinar with the presentation highlighting statics about the Middle East Federation of Organization of Medical Physicists (MEFOMP) countries.







#### 1. Qatar:

The Qatar Medical Physics Society chaired by Dr. Huda Al Naomi has celebrated the IDMP 2020 with a seminar followed by a context and buffet reception that included all medical physicists working in Qatar.



#### 2. Kuwait:

Dr. Meshari Al Nuaimi, Head of Nuclear Medicine Physics Unit Kuwait Cancer Control Center (KCCC) sent the following: "The Kuwait Association of medical physics was celebrated this year for the international day of medical physics is special, we met with Health professionals (Academic Professor, Medical doctors, Technologists) to describe and importance the role of the medical physicist at the hospitals in different sections. We also recorded a video about this collabration you will find the video in the links, better



about this celebration you will find the video in the link: https://youtu.be/hU\_LVJ4tMkQ"

#### 3. Iraq:

A joint workshop between the Iraqi Medical Physicists Society (IMPS) and Al-Falloja University of Applied Sciences was organized on the 7<sup>th</sup> of November 2020 as celebration for the International Day of Medical Physics. In line with the MEFOMP countries celebration for this special occasion. The workshop program contained lectures about the role of IMPS and MEFOMP in developing the medical



physics profession especially in Iraq and the region as well the importance of being part of the international medical physics community. Dr. Nabaa Naji (IMPS President) focused in her lecture on the IMPCB exam, and the great experience that Iraqi medical physicists had during their participation last year in the board exam hosted in Doha, Qatar. The total number of attendees were 213. They were academic staff of the Iraqi Universities, the physicists and medical physicists of the radiotherapy centers and cancer research center, the undergraduate students of the medical physics departments, the MSc. and PhD. students. It is worth mentioning that medical physicists in Iraq are recognized as health professionals by the Iraqi Ministry of Higher Education and Scientific Research as well by the Ministry of Health.

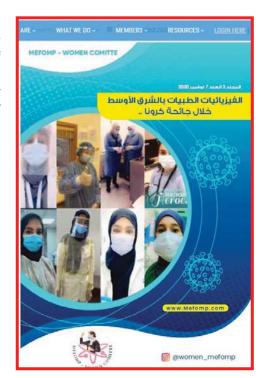
#### 4. Yemen:

For the second (2nd) year and in difficult situations the Yemen Medical Physics Association (YMPA) managed to take the challenge to organize a celebration for International Day of Medical Physics (IDMP) ON 7TH November 2020. The opening celebration started with welcome note from Dr. Mogib Al – Makdad, Head of Medical Physics Department and YMPA president. He thanked everyone for their time and mentioned special



thanks to Mr. Abdo Al – Qubati, YMPA Coordinator for organizing the event. The ceremony attended by 30 participants ended by cutting a special cake for the event.

5. As a celebration for the IDMP 2020, MEFOMP women committee chaired by Dr. Hanan Al Dousari issued the 2nd booklet of publication which is focused on effort and experience from women medical physicists during COVID – 19 which was challenging for all medical community including physicists. Women physicists bravely faced the epidemic accepting the risks by taking all precautions to protect themselves and their beloved ones.



#### C. EFOMP Celebrations:

Many countries in the EFOMP region has celebrated this year with webinars, symposia, gatherings and professional meetings to mark the IDMP 2020. The link to these events is below:

https://www.efomp.org/index.php?r=pages&id=idmp-2020

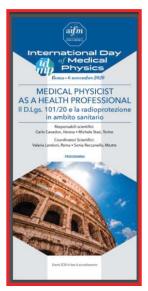














#### XIII NATIONAL MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING CONFERENCE NMPEC-2020

with international participation

2-13 November 2020, Online Conference organized by BSBPE, co-organizer MU Plovdiv with the kind support of EFOMP and IOMP















#### Virtual Special Issue of Physica Medica



November 7th 2017 has marked the 150 th anniversary of the birth of Marie Sklodowska Curie. The European Journal of Medical Physics celebrated the occasion by publishing a special Virtual Issue which looks back at her remarkable career and the impacts she has had on modern science.

More: Celebrating the 150th Anniversary of Marie Curie



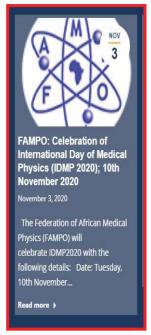
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#### **D. FAMPO Celebrations**

FAMPO celebrated IDMP 2020 with a programme that had a panel of medical physicists who shared experiences on the recognition of medical physics within Africa.







Algeria celebrates IDMP 2020 with a seminar that was held at the university of El-Oued, Algeria, November 7, 2020. More than 159 attended the virtual seminar from different countries around the world such as Belgium, Jordan, India, Malaysia, Turkey, Egypt, USA, Filipin, Kenya, Tunisia, Morocco...etc. All the recorded videos of the 12 speakers are available on the "Hello Medical Physics" YouTube channel. https://www.youtube.com/channel/UCZ8EjsXDxH KTdopoU1R8MlQ

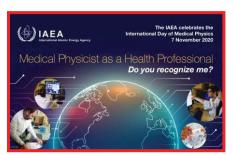




#### E. IAEA:

IAEA celebrations was with webinar and promotional medical physics materials on their website: www.iaea.org





#### F. USA:

AAPM Celebrations was all over the USA and the president sends a video message on this occasion.

For more information, check www.aapm.org





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G. Canada: The Canadian Organization of Medical Physicists/L'Organisation canadienne des physiciens médicaux, celebrated this IDMP 2020 from their workplace, and even one of our colleagues baby was promoting *Physics Interactions from the Drive Seat !!!* (see photos below)



- H. **Others:** These celebrations were gathered from the social media with physicists are celebrating the IDMP 2020 and taking into consideration the following three main precautions for Covid-19 protocols:
  - 1. Social Distancing
  - 2. Wearing Masks
  - 3. Hands off their faces....



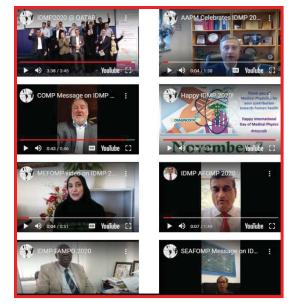


#### I. Happy Medical Physics SONG:

https://www.youtube.com/watch?v=pi3Iz2ibCYk&feature=emb\_logo









## Low Dose Radiotherapy treatment [LDRT] for COVID-19 pneumonia patients- reality and feasibility

Arun Chougule Chair Education and Training Committee



Radiation sterilization is being used since the late 1950s to eliminate microorganisms and it is well documented that ionising radiation can be used to sterilize the fruits, vegetables, food item and also medical accessories. However to kill pathogens [bacteria, viruses, fungi and spores] the ionising radiation dose required is of the order of kilo Grays [20- 100 kGy]. In addition blood irradiated in order to prevent a potentially fatal complication blood transfusion is well established; however the ionising radiation dose given is 15 kGy- 50 kGy. Gamma irradiation as a treatment to address pathogens of animal biosecurity concern being practiced [1] and the gamma radiation doses required for this are of the order of kGy. Significant literature exists supporting the use gamma radiation sterilization method, with viral inactivation of SARS-CoV reported at doses of at most 10 kGy [2], with other studies supporting 5 kGy for many types of viruses [3]. Kumar et al [4] have studied inactivation and safety testing of Middle East Respiratory Syndrome Coronavirus and showed that the doses required are [kGy] much higher than the radiation dose delivered cancer treatment by radiotherapy [a few Gy].

Since COVID-19 infection turned into a global pandemic in March 2020, number of drugs and protocols including antiviral, antiretroviral, antibiotics, antimalerial, anti parasitic, anticoagulant, steroids, plasma therapy and so on in combination with immune enhancing allopathic, ayurvedic and homeopathic interventions are being tried. COVID-19 pneumonia is one of the fatal manifestations of corona virus to COVID-19 syndrome. This is the devastating situation without any effective unique surely treatment. Even after one year in COVID-19 pandemic

fatality due to infection complication across the world is not yet contained despite of all sorts of researches in progress and efforts towards development of vaccine. In this situation alternative possibilities are suggested and have been tried, one being Low Dose Radiotherapy (LDRT) for COVID-19 pneumonia. Though LDRT is used during 1940-1970s for treatment of bacterial and viral pneumonia and over 700 patients of various types of pneumonia were treated by LDRT with dose ranging from 0.3Gy -1 Gy [5, 6, 7]. Most of the reports are case reports and no randomized clinical trials were conducted and due to advent of effective antibiotics, the role of LDRT in treatment of pneumonia became irrelevant as its utility diminished. However with onset of COVID-19 pandemic and fatality due to COVID-19 pneumonia, to try **LDRT** suggested treatment of COVID-19 pneumonia [8]. Some trials started in April 2020, even in India one trial with 10 patients of COVID-19 pneumonia treated with LDRT took place. Till date [November 2020] about 10 institutions across the world carried out clinical trials to study the efficiency of LDRT of

treatment of COVID-19 induced pneumonia. However no randomized multicentre clinical trial with large sample size to prove the efficiency of LDRT for COVID-19 induced treating pneumonia was conducted so far, most of the trials were institute centric with a very small sample No randomization, size. common methodology, protocol or assessment was designed followed which makes these studies a very preliminary and localized one. Further no late effects of ionising radiation are studied, though the dose delivered is are of the order of 0.3 - 1.0 Gy in single fraction. The LDRT is used in Germany for treatment orthopedic benign degenerative inflammatory disorders and several thousands of patients with painful joints or osteoarthritis have been treated and they got encouraging results [9]. However this LDRT for inflammatory degenerative disorder is given in 4-6 fractions of 0.5 Gy each over a period of 2 weeks may not be applicable to COVID-19 pneumonia because the window of effectivity of LDRT for COVID-19 is very small. In few days the condition patient with COVID19 pneumonia gets worsened therefore the dose need to be given in a single fraction in a very short window period. Further, the radiobiology of LDRT has not been very well understood, what is known about LDRT is that it works as an anti inflammatory agent and by reducing the inflammation; it gives an opportunity to treating physician to make the treatment of pneumonia more effective. There is other side of LDRT and antiinflammatory effect that disrupts

suppresses the immune system and cytokine storm which is in response to invasion of the virus. That means the anti-inflammatory effect may stimulate the growth and multiplication of corona virus and also trigger apoptosis leading to aggression of the pneumonia. Also there is no unanimity regarding the LDRT dose to be delivered to entire lungs on only to the areas of inflammation which is cause of blockage strangulation requiring ventilation. Irradiating entire lungs stimulate the Corona virus which may lead to worsening of pneumonia situation and therefore LDRT is double aged sword and need to be used very carefully and consciously.

Further already there is shortage of radiotherapy facilities/machines and the existing facilities are overloaded with the cancer patients with a waiting period of months because of shortage of existing facility to take care of all the cancer patients requiring radiotherapy treatment. Also there is an increased chance that the cancer patients who are not COVID-19 positive and who are undergoing radiotherapy treatment will have added risk of getting infected by the corona virus due to COVID-19 positive pneumonia patient being treated by LDRT at same site/machine. Also the radiotherapy staff getting infected by entry of COVID-19 patient will also increase. Even if LDRT proves to the very effective in COVID-19 pneumonia, there is a need to create a separate isolated facility for treating COVID-19 pneumonia patients by LDRT.

In favor of LDRT for COVID-19 pneumonia, it is claimed that even when the Penicillin was discovered by the Alexander Fleming, its application got used without any clinical trial and therefore opportunity using LDRT for COVID-19 pneumonia which is at present very fatal should be used for the benefit. However in present circumstances fast-forward controlled multicentre trials with a standard protocol and assessment are necessary so as to prove the utility of LDRT for COVID19 pneumonia treatment. Furthermore, even if the dose is low, the long term schochastic radiation hazard cannot ignored, needs some consideration while selecting patients for the treatment.

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- 9. Kriz J, Seegenschmiedt HM, Bartels A et al (2018) Updated strategies in the treatment of benign diseases—a patterns of care study of the German cooperative group on benign diseases. Adv Radiat Oncol 3:240—244

#### **Report of Awards & Honours Committee**

Simone K. Renha, Cyril Schandorf, Pedro Ortiz, Tomas Kron, Patricia Mora, Leif Schröder, Keiichi Akahane, Huda M.Al-Naemi, Melissa C. Martin, Madan Rehani, , John Damilakis

#### Introduction

2020 has been a difficult year. However, medical physics and IOMP has been strong and in addition to the annual awards, the **Awards** and Honors Committee would like acknowledge all medical physicists who worked hard to maintain the imaging radiotherapy departments safe as for the patient as for health professionals. Our medical physicists, as other health professionals, faced many challenges. The number patient increased both imaging and therapy while staff numbers reduced, due to the age of many professionals. However, even with limited staff, the quality control and dosimetry of the equipment were conducted radiotherapy regularly, treatments of the patient did not stopped and the new patients was carried planning following established protocols. Medical physicists in imaging departments, besides the increase of routine work. contributed with radiologists to the development of imaging acquisition protocols for

differential diagnosis of COVID-19. Our sincere thanks to our medical physicists who working on the front lines and all the despite risks are demonstrating their professionalism and responsibility through special care and attention to patients in their diagnostic and treatments.

In addition to this, we want to thank all medical physicist in their dedicated efforts to explore new ways of sharing information in this difficult time. To keep us updated, thev promote webinars, on-line courses and other virtual tools to disseminate technical information. Also, researchers contributed searching for the improvement of protocols and carrying out surveys to verify how the departments are working in all three areas. For example, the worldwide IAEA study presented important aspects of CT in COVID-19 infection from the justification of its use to specific scan protocols for optimizing radiation dose and diagnostic information. Also, the upcoming book to be publishing Medical Physics during the COVID 19

pandemic: clinical practice, teaching and research, editors Kwan Hoong Ng and Magdalena Stoeva will provide important information from all corners of the world.

The Awards and Honors Committee would like to demonstrate our recognition for the efforts of all medical physicists to bring solutions, information, and contributing to the best diagnostic and treatment to the benefit of the patients.

#### **IOMP Awards 2020**

IUPAP Young Scientist Award in Medical Physics 2020



This award was established and funded by the International Union of Pure and Applied

Physics (IUPAP) and awarded by the International Organization for Medical Physics (IOMP) as the IUPAP affiliated International Commission for Medical Physics. On this year, the winner was Jaydev K. Dave, given to nominated by AAPM, for his pioneering work in "Utilizing subharmonic signals from ultrasound contrast agents (encapsulated microbubbles) for non-invasive real-time in vivo cardiac pressure estimation.".

Jaydev Dave was born in Mumbai, India. He earned his B.E. degree in Biomedical Engineering from Mumbai University, in 2006, and his M.Sc. and Ph.D. degrees in Biomedical from Engineering Drexel University, Philadelphia, PA, in 2008 and 2012, respectively. He currently Associate an Professor of Radiology at the Thomas Jefferson University in Philadelphia, PA. Javdev actively involved in ultrasound and applied physics research.

The primary focus of his research has been in a non-traditional application that he has engineered – using subharmonic ultrasound technology with microbubble contrast agents to perform non-invasive real-time pressure estimation, as a means for replacing manometer-tipped catheters, especially for cardiac applications. For his research, he

has received funding and support from the National Institutes of Health, the American Heart Association and industry Additionally, partners. his scientific research is also related to his clinical imaging physicist role. To date, his research has cumulated to several conference abstracts (100+),published conference proceedings (18), and peer-reviewed publications (35). Dr. Dave has been active also in mentoring and teaching, serving as a scientific reviewer for 17 scientific journals, and also to act as an expert reviewer for national and international foundation grants, inter-society consensus documents, and draft standards. He has received numerous awards including the award for "Research excellence in recognition of outstanding dedication and achievement in heart disease and stroke research" from the American Heart Association (2015)."Dean's award for excellence in education at Sidney Kimmel College" Medical from the Thomas Jefferson University (2017), and "Young Alumni -Emerging Leader Award" from the Drexel University (2020).

He is currently a member of the American Association of Physicists in Medicine, the American College of Radiology, the American Heart Association, the American Institute of Ultrasound in Medicine, the IEEE and IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society, the International Contrast Ultrasound Society and the Society of Photo-Optical Instrumentation Engineers.

Congratulations Dr Jaydey Dave!

#### **IDMP AWARD 2020**

The IDMP award has been given since 2015. The main objective of this award is to give recognition to medical physicist of each region who has made significant contribution to promoting Medical Physics, including development of scientific work, improvements in patient care and/or contributions for education and training in medical physics. This award recognises excellence in Medical Physics with a particular view of promoting medical physics to a larger audience and highlighting contributions medical physicists make for patient care. The IDMP Award is linked to the International Day of Medical Physics (IDMP) from which it takes its name. The 2020 IDMP theme is "Medical Physicist as a Health Professional".

We note that each year the evaluation has become more difficult for the committee. This year, beside the documents usually required, we introduced a nomination form which

presents many indicators which have specific scores. The proposal is to be even more transparent and to be very fair with the nominees, where all achievements and contributions are properly considered and scored. Even with all tools the evaluation was not easy

considering the large number of outstanding nominees. The committee is very happy with the participation of all regional organizations and hoping for the same success in the next years. On this opportunity, the AHC presents the winners and thanks them for their efforts to improve

the medical physics practice worldwide and provide a continuous improvement of the medical physics applications for the benefits of the patients. Congratulations to this year's winners who are presented below.

#### **AFOMP**



Tae Suk

#### **ALFIM**



Carlos E.V. de Almeida

#### **EFOMP**



Oliver Blanck

#### **FAMPO**



Christoph Trauernicht

#### **MEFOMP**



Mohammad H. Kharita

#### **SEAFOMP**



Djarwani S. Soejoko

#### **AAPM**

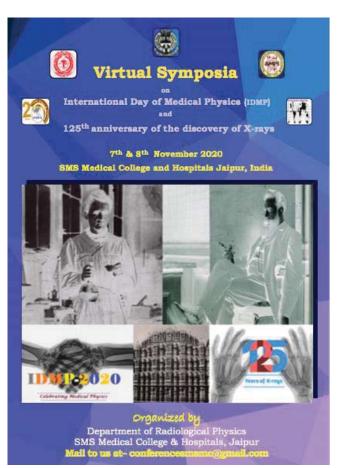


Robert Jeraj

# Virtual Symposia to celebrate the International Day of Medical Physics and the 125th anniversary of the discovery of X-rays SMS Medical College& Hospitals, Jaipur 7th & 8th November 2020

Arun Chougule and Mary Joan

The Department of Radiological Physics, SMS Medical College & Hospitals Jaipur, India celebrated the International Day of Medical Physics (IDMP) 2020 on the theme, "Medical Physicist as Health Professional" by organizing a virtual symposium to commemorate the birthday of great physicists and Nobel laureates



V Raman on 7th November 2020. The 125th anniversary of the discovery of X-rays and the 175<sup>th</sup> birth year of Prof W C Roentgen was celebrated by the virtual symposium on 8th November 2020. The scientific programme included several lectures on the role of medical physicists as healthcare professionals in the use of radiation in medicine by eminent speakers across the globe. Medical Physicists play a fundamental role in the development and application of medical radiation technologies and ensure the quality and safety of imaging and treatment procedures. This year's IDMP celebrations gave us the opportunity to understand and tackle the concerns of medical physicists as healthcare professionals. The virtual symposia organized by the department of Radiological Physics, SMS Medical College and Hospitals, Jaipur was an effort to make the medical physicists ready to meet the professional challenges of modern healthcare systems and now we could confidently say that this was a morale booster for all medical physicists facing professional challenges of diverse multi dimensions. Medical physicists from different parts of the world had participated in these virtual symposia and showed their solidarity with peers.

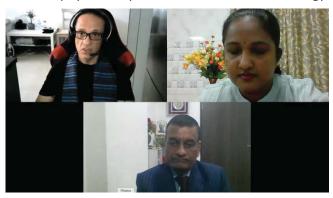
Madame Marie Curie and Bharat Ratna

Sir C

The scientific programme of the first virtual symposium on the 7<sup>th</sup> November 2020 started with



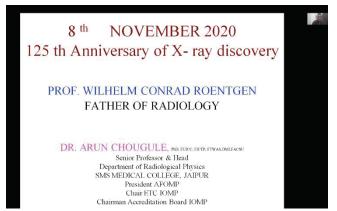
lighting of the lamp and Sarasvati Vandana [Invoking the presence of the Goddess of knowledge, learning and wisdom] as per the Indian tradition. The Principal and Controller of SMS Medical College and Hospitals Jaipur and the Hon. Vice Chancellor of Rajasthan University of Health Sciences Jaipur who were patrons of these events sent their felicitation messages and the video clips were played before starting the scientific lectures. Dr Mary Joan, organizing secretary of the virtual symposium welcomed all the participants, speakers and has given an overview of the program and the significance of celebrating the international day of medical physics 2020 with virtual symposia. Prof Arun Chougule organizing chairman (President AFOMP, Chair ETC and Accreditation Board IOMP) gave the first talk on the theme of IDMP celebrations this year "Medical Physicist as Health Professional". He showcased the diverse roles of medical physicists in various applications of radiation in healthcare and the significance of their role in the efficient and effective use of these applications. Prof S D Sharma Head, Medical Physics section, Radiological Physics and Advisory Division, Bhabha Atomic Research Centre Mumbai spoke on the journey of medical physics in India. An eventful journey spanning about six decades, keeping in pace with the technological advancements worldwide, India is the second largest medical physics community with the highest annual growth rate in the number of medical physicists. In the next talk, Dr V Subramani Assistant Professor medical physics, department of radiation oncology,



All India Institute of Medical Sciences New Delhi gave a comprehensive review of the achievements challenges and horizons for medical physics both national and international perspectives. Prof Carmel J Caruana, head department of medical physics, university of Malta delivered his talk on Medical Physics- what resources? He presented a clear prospect of how medical physicists can grow up to proficient leaders in scientific clinical and strategic dimensions of healthcare utilizing the available resources efficiently. In the question answer session followed, the queries from the audience were answered by the eminent speakers. The organizing chairman Prof Arun Chougule made the concluding remarks and thanked all the eminent speakers and participants across the world for their esteemed participation. The organizing secretary, Dr Mary Joan also thanked the virtual gathering and welcomed evervone for the symposium on 8th November to

celebrate the 125<sup>th</sup> anniversary of the discovery of X-rays.

The virtual symposium on 8<sup>th</sup> November was an attempt by the department of radiological physics, SMS Medical College and Hospitals Jaipur to pay tributes to the great physicist Prof W C Roentgen and his legacy as this year we are celebrating the 125<sup>th</sup> anniversary of the discovery of X- rays and the 175<sup>th</sup> birth year of Prof Roentgen. The scientific programme started with the lighting of the lamp and Saraswati Vandana. Prof Arun Chougule presented the



biography of Prof Roentgen highlighting the milestones in his life leading to the historical discovery of X-rays and how it completely changed the medical practice thereafter. Prof Roentgen's decision to not patent the discovery paved the way for cheap availability of X-ray examinations making it affordable for everyone who is in need. Following Prof Chougule's talk, Prof Mahesh Mahadevappa, Johns Hopkins University USA spoke on the impact of discovery of X-rays on the practice of medical physics. He very concisely described how the medical physics practice was before X-rays and how it achieved prominence and significance over time with technological advancements. He emphasized that medical physicist should increase their professional utility by enhancing knowledge to gain recognition from clinical colleagues. Prof. Renato Padovani, medical physics consultant, ICTP, Italy shared his experience on how medical physics education is essential to tune to clinical and technological developments in LMI countries and the efforts put forth by ICTP in this regard.

A good number of people from LMI countries already received the training from ICTP in collaboration with other international agencies and they are instrumental in establishing radiological facilities in

The ICTP & Trieste University Master of Advanced Studies in Medical Physics



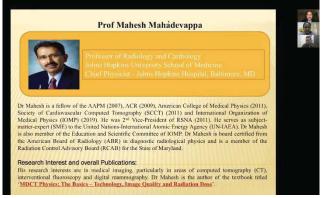


their home countries. Prof Slavik Tabakov, Director, department of medical engineering and physics, King's college, London (Immediate past President IOMP and Vice President IUPESM) spoke on 125 years from the discovery of X-rays: an evolution of medical physics and medical imaging diagnosis. He holding the leadership positions of many international organizations for medical physics enlightened the virtual gathering about the international prospects the recognized teaching and and training programmes worldwide so that the younger of medical generation physicists could advantage. The first IDMP celebration broadcasted live by IOMP was held at Jaipur in 2017 and Prof Tabakov mentioning that and sharing pictures from the event brought in nostalgic feelings. The queries from the audience to each speaker were answered at the end of each talk. The highlight and very interesting aspect of the virtual symposia was the panel discussion on impact of X-ray discovery on radiotherapy, radiology imaging and medical physics. Stalwarts from respective specialties very actively interacted and put forth their valuable opinion on various queries raised by the audience. It was indeed a morale booster for each and every one attended. Prof Pratik Kumar, head, department of medical physics, AIIMS, New Delhi moderated the panel discussions. Prof G K Rath, head, NCI and IRCH, AIIMS, Delhi. Prof Deep Narayan Srivastava. New department of radio diagnosis, AIIMS, New Delhi, Prof

Paul Ravindran, department of radiological physics, CMC Vellore, very actively took part in the discussions sharing their experience, current information and much valued knowledge on the current and futuristic perspective of medical physicist as a multi-disciplinary health professional. The organizing chairman, Prof Arun Chougule delivered the concluding remarks.

Over 250 participants from across the world were present at any point during both the virtual symposia. The diversity in the professional roles of the attendees were also noted and it was very heartening to see professionals working in the field of radiation oncology, radiology, and nuclear medicine including medical physicists, radiation oncologists, radiologists, nuclear medicine physicians, radiation technologists, students and several non-medical radiation professionals who are dealing with radiation attended both the virtual symposia.

These virtual symposia organized by the department of radiological physics, SMS medical college and hospitals Jaipur was a great opportunity to reach out and raise awareness about the role of medical physics



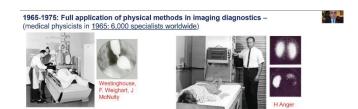
in healthcare as well as the role of medical physicists in Hospitals. We could wholeheartedly say that the purpose of IDMP celebration initiated by International Organization of Medical Physics (IOMP)

is fulfilled in all aspects including awareness about the role and importance of medical physics professionals among fellow medical and nonmedical professionals, students community and general public by the activities organized by the Department of Radiological Physics, SMS Medical College and Hospitals, Jaipur, India. Let the life and work of Madame Curie, Sir. C. V. Raman and Prof. W. C. Roentgen enlighten and inspire us to achieve greater heights.

The organizers of the virtual symposia, the department of radiological physics under the able leadership and guidance of Prof Arun Chougule, Organizing Chairman and Dr Mary Joan, Organizing Secretary would like to thank every participant for their active attendance. There are great times ahead of us. Our respective countries need our services.



Each one of us is needed in our country, community, university and hospital to ensure decisive, visible and measurable actions are taken for the medical physics profession. We hope that the spirit of these virtual symposia will make each and every one of us to be a leader within and beyond our own spheres of influence and commit to take pragmatic action to accelerate professional and personal development.



Introduction of Gamma Camera

## AFOMP IDMP 2020 CELEBRATIONS- 7th November 2020

#### Arun Chougule, President AFOMP

This year International Day of Medical Physics (IDMP) celebrations were very special due to COVID19 pandemic situation worldwide, which has changed the conventional method of almost doing anything & everything. This has a huge impact on education system as well as organizing conferences/seminars. Today technology is playing a very crucial role in knowledge dissemination through various virtual meeting or gathering platform. Therefore this year Asia-Oceania Federation of Organizations for Medical Physics (AFOMP) has used virtual platforms to celebrate IDMP The program was scheduled on 7th November 2020 at 7:00 am GMT. This year's theme of IDMP

"Medical physicist as a health Professional"



is very relevant and useful as we are still struggling to get recognized as a health professional in most of the Asia-Oceania region.

The registration link was generated to register for the program in advanced. Around 350 registrations from all around the world were received for the program. The program included various interesting talks from imminent speaker relevant for the theme and occasion

TIME	PROGRAM
7.00-7.05 AM GMT	IOMP Presidential Message Dr. Madan Rehani (IOMP President)
7.05-7.25 AM GMT	Opening remarks and talk on Medical Physics in AFOMP Dr. Arun Chougule (AFOMP President)
7.25-7.40 AM GMT	Growing Tall Poppies: Empowering young medical physicists  Dr. Eva Bezak (AFOMP Vice- President)
7.40-8.00 AM GMT	Role of Medical Physicists in the era of High tech Technology Dr. Tae Suk Suh (AFOMP Immediate Past President)
8.00-8.20 AM GMT	Medical Physicist as Health Professional Dr. Hasin Anupama Azhari ( AFOMP Secretary General)
8.20-8.30 AM GMT	IOMP IDMP Awardee 2020: Dr. Tae Suk Suh
8.30-9.00 AM GMT	Q & A- feed back, conclusion

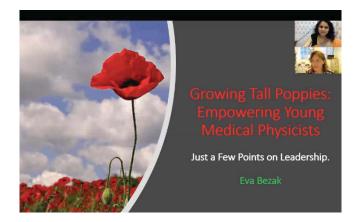
Program was organized under leadership of Prof. Arun Chougule President of AFOMP



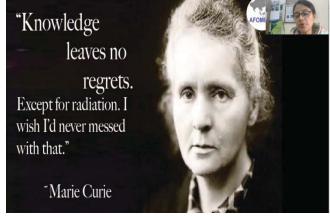
The "program coordinator" for this virtual celebrations was Rajni Verma, AFOMP webmaster. The program started with playing of recorded IDMP message from Prof. Madan Rehani, President IOMP

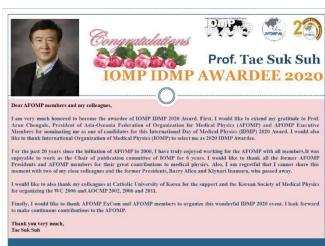


followed official opening of the program by AFOMP president Prof. Arun Chougule. He has talked about the status of medical physics in AFOMP region and various challenges and efforts of AFOMP for better recognition of medical physics as subject and profession. After his talks Prof. Eva Bezak, vice president, AFOMP explained the importance of leadership in overall development of profession. She emphasized on importance of preparing new line leadership. She explained the concept of leadership in very interesting way with a reference to the Poppy flower. This approach of explanation has given a very appealing impact on participants about the leadership concept. This talk is followed by a recorded presentation by Prof Tae Suk Suh, Immediate past president, AFOMP. Due to some unexpected medical emergency in the family he was not able to participate in the live virtually program but made sure the availability of his recorded presentation with organizers. He talk focused on the increasing technological challenges in medical physicist life with rapidly developing high tech technology in radiotherapy, radio-diagnosis and Nuclear Medicine. He presented his view of systemic approach to combat these challenges and given in sight of futuristic technological development in medical





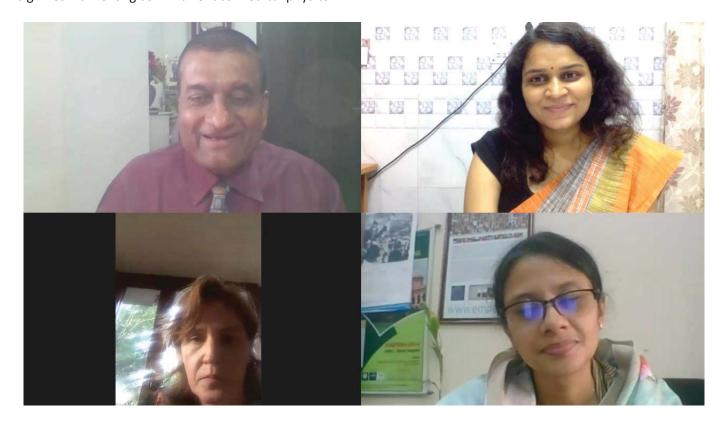




physics. His presentation was followed by the talk from Prof. Hasin Anupama Azhari, secretary general AFOMP. She has chosen the theme of this year's IDMP as her title of the talk. She explained and justified beautifully the role of medical physics as health professional in health care industry. She also emphasized the importance of professional development and role of medical physics in this pandemic time. Various aspect of administration view to establishment of medical physics as a profession was presented. After talks from the speakers, it was time to hear the IOMP IDMP awardee of this year who was none other than Prof. Tae Suk Suh. AFOMP has sent heartiest congratulations to Prof. Tae Suk Suh for his outstanding achievement. This award signifies his life long commitment to medical physics

profession and his contribution in development medical physics as subject. Prof. Tae Suk Suh has sent his written message for all AFOMP members and colleagues, which was read by Prof. Arun Chougule for benefit of all the participants. The whole program witnessed very active participation in form of live discussion at the end. The program was concluded with remarks form all the eminent speakers for the day with happy note to work hard in wake of better visibility and recognition of medical physics as a profession.

Organizers are thankful to AFOMP EXCOM, all AFOMP NMO's, all the speakers, participants and volunteers.





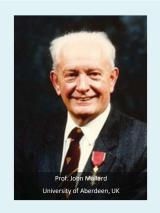
THE INAUGURAL FELLOWS OF IUPESM (1980-2020):

THE OUTSTANDING INTERNATIONAL LEADERS OF MEDICAL PHYSICS AND BIOMEDICAL ENGINEERING

Congratulation to all elected Inaugural Fellows of IUPESM

IUPESM Administrative Council (2018-2022) The International Union for Physical and Engineering Sciences in Medicine

#### **IUPESM Fellow:** Prof. John Mallard





- First IOMP Secretary General, 1962-1965
- IOMP President 1979-1982

#### Achievement

- Pioneering Role in MRI Imaging research
- Pioneering Role in PET Imaging research
- One of the 50 outstanding medical physicists 2013

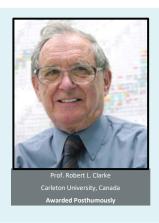
#### Honours and Awards

- IOMP John Mallard Award established 2016IUPESM Award of Merit, 1988

- IoP Fellow
   IPEM Fellow

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#### IUPESM Fellow: Prof Robert L. Clarke





#### Service

- IUPESM Founding Group member, 1975
- IUPESM Founding Sec-General, 1980-1985
- Serve in various IUPESM Committees
- Serve in various IOMP Committees
- Founding role in medical physics in Canada
- Secretary General of Canadian CAR

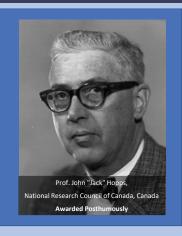
#### Achievement

- Founding of IUPESM and suggesting its name
- Leading role in medical physics educational standards in the world

#### **Honours and Awards**

- Robert L. Clarke Scholarship founded in Canada
- AAPM Fellow

#### IUPESM Fellow: Prof. John "Jack" Hopps





#### Service

- IUPESM Founding Group member 1975
- IUPESM Secretary-General, 1985 1988
- IFMBE President, 1971 1974
  IFMBE Secretary General, 1976 1985
- Founding President, Canadian Medical and Biological Engineering Society, 1965

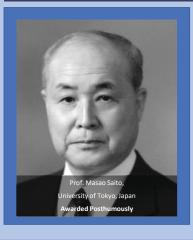
#### Achievement

Co-invented the world's first cardiac pacemaker. This significant technical and scientific achievement continue to improve the lives of millions of people the world over. Left a legacy of medical devices and instruments that help people with a variety of disabilities.

#### Honours and Awards

- Officer in the Order of Canada
- IUPESM Merit Award
- Leadership Award , Alliance for Engineering in Medicine and Biology
- General A.G.L. McNaughton Award, IEEE
- Distinguished Scientist Award, North American Society for Pacing and Electrophysiology.

### IUPESM Fellow: Prof. Masao Saito





#### Service

- IUPESM Vice-President, 1982 -1985
- IFMBE President, 1979-1982
- Served as IFMBE AC and various
   Committees member for 12 years

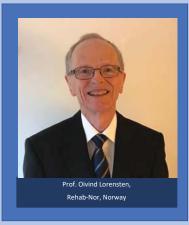
#### Achievement

 Guided many policy-making national committees in Japan for engineering for infants and senior persons, in various aspects of care, positive life, assistive devices, manpower problems and industries. Strong interest in interaction of high technologies with human thought and published books, which is expected to guide many misdirected research efforts to the right way.

### Honours and Awards

- IUPESM Merit Award (BME), 2000
- IFMBE Honorary Life Member, 1985
- IAMBE Fellow, 1997
- Fulbright Exchange Program at UPenn, U.S.A, 1959-1960

# IUPESM Fellow: Prof. Oivind Lorentsen





#### Service

- IUPESM President, 1985 1988
- IFMBE President, 1982 1985
- IFMBE AC Member, 1973 1982

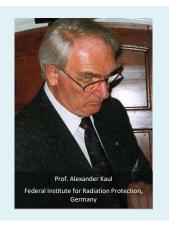
### Achievement

- Development of Assistive
  Technology Devices and services
  to enhance the daily life of people
  with disabilities and the elderly
- Initiating and responsible for building up a National Center for Rehabilitation Technology, and establishing a network of county centers for service provision.

### **Honours and Awards**

- Advocate of Rehabilitation Technology, Co-founder of EATS and TELEMATE programs
- Awarded His Majesty The King's Medal of Merit in Gold for national achievements in the field of Rehabilitation Technology

### IUPESM Fellow: Prof. Alexander Kaul





#### Service

- IUPESM Vice-President, 1985-1988
- Serve in various IUPESM Committees
- IOMP President 1982-1985
- IOMP Vice-President 1979-1982
- Serve in various IOMP Committees
- President German Society DGMP
- EFOMP Founding ETC Chair 1980

#### **Achievement**

- Leading role in medical physics in Furone
- Active role in radiation protection research

#### **Honours and Awards**

- Hanns-Langendorff-Medal
- Bundes verdienst kreuzes
- Honorary member EFOMP

### IUPESM Fellow: Prof Lawrence H. Lanzl





### Service

- IUPESM President, 1988-1991
- Serve in various IUPESM Committees
- IOMP President 1985-1988
- IOMP Vice-President 1982-1985
- Serve in various IOMP Committees
- AAPM President

#### Achievement

 Leading role in medical physics educational standards in USA and the world

#### **Honours and Awards**

- William D. Coolidge Gold Medal
- Farrington Daniels Award
- AAPM Fellow

### IUPESM Fellow: Prof. Nandor Richter





- IUPESM Vice-President, 1988 1991
- IFMBE President, 1985 1988

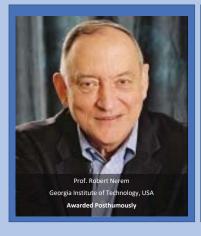
#### Achievement

Served as a UN expert in the field of health-related technical activities. An expert for project evaluations in the EU and for UN agencies (UNIDO, WHO). Head of Product Development and Design Laboratory of Medicor, the largest medical equipment company in Central Europe.

#### **Honours and Awards**

- Dr. Katona Zoltán Medal
- Founding Fellow, International Academy for Medical and Biological Engineering
- Honorary Life Member, Hungarian National Society of Medical Engineering

### **IUPESM Fellow:** Prof. Robert Nerem





#### Service

- IUPESM President, 1991 to 1994
   IFMBE President, 1988 1991
   AIMBE President, 1992-1994

- TERMIS President, 1992-1994
  TERMIS President, 2002 to 2004
  Council Member, National Academy of Engineering, 1998 2004
  Founder of IAMBE
  Achievement

An outstanding mentor, educator and statesman, a highly regarded leader in the global Biomedical Engineering community. Strong advocate of integration, bringing BME communities around the world together and collectively with one voice to effectively raise public policy issues.

- National Academy of Engineering, 1988

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## IUPESM Fellow: Prof John R Cunningham





#### Service

- IUPESM Vice-President, 1991-1994
- Serve in various IUPESM Committees
- IOMP President 1988-1991
- IOMP Vice-President 1985-1988
- Serve in various IOMP Committees

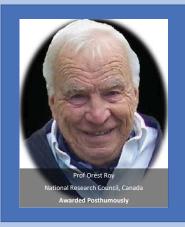
#### Trestaent canadian soc. con

- Leading role in medical physics education
- Leading role in radiotherapy development
- One of the 50 outstanding medical physicists 2013

#### **Honours and Awards**

- IOMP Marie Curie Award
- William D. Coolidge Gold Medal
- CAD/COMP Memorial Peter Kirkhy Medal
- COMP Medal for "outstanding contributions to the field of medical physics in Canada"
- Officer of the Order of Canada
- AAPM Fellow
- CAP Fellow

## IUPESM Fellow: Prof. Orest Roy





#### Service

- IUPESM Secretary-General, 1991 1994
- IFMBE Secretary General , 1988-1991
- Canadian Medical and Biological Engineering Society President, 1976 to 1980

#### Achievement

Instrumental in establishing Technical Aids and Systems for the Handicapped (TASH). Awarded the Walter Dinsdale Award for exceptional achievement in the development of technical aids for the benefit of disabled persons.

#### **Honours and Awards**

- Fellow, Rehabilitation Society of North America
- Honorary Life Member, IFMBE
- Senior Member, IEEE

### IUPESM Fellow: Prof. Niilo Saranummi





#### Service

- IUPESM President, 1994 1997
- IFMBE President, 1991 1994
- Co-Founder of EAMBES and HL7
   Finland
- Editor-in-Chief, IEEE Transactions of Information Technology in Biomedicine

#### Achievement

 A distinguished engineer and remarkable scientist who left a deep impact in the field of biomedical engineering and health informatics worldwide.

### Honours and Awards

- Fellow of FACTE, IAMBE, AIMBE, IEEE, EAMBES and HL7
- IFMBE Otto Schmitt Award

### IUPESM Fellow: Prof Udipi Madhvanath





#### Servic

- IUPESM Vice-President, 1994-1997
- Serve in various IUPESM Committees
- IOMP President 1991-1994
- IOMP Vice-President 1988-1991
- Serve in various IOMP Committees
- Founding member and President of Indian Society AMPI
- Editor AMPI Medical Physics Bulletin
- Chair Asia Congress of Medical Physics, 1992

### Achievement

Leading role in medical physics in Asia

### **Honours and Awards**

- Dr. Ramaih Naidu award
- AFOMP Outstanding Medical Physicist
- AMPI Fellow







#### Service

- IUPESM Secretary General, 1994 1997
- IFMBE Secretary General, 1992-1998
- Chair, IFMBE Publications and Federation Journal Committee, 1988-1991
- EAMBES President, 2005
- MBEC Editor in Chief , 2006-2012

#### Achievement

 Applied biomedical engineering principles for the understanding of the mechanics, control and blood distribution in the coronary circulation and the role of the endothelial glycocalyx.

#### **Honours and Awards**

- Knight in the Order of the Dutch Lion
- Fellow of American Heart Association and Cardiovascular Section of the American Physiological Society
- Fellow of IAMBE; AIMBE; EAMBES
- Isaac Starr Lecture (2004) CSDS, Banff, Canada
- Wiggers Award, American Physiological Society, 2015
- IUPESM Awards of Merit, 2018

## IUPESM Fellow: Prof Keith Boddy





#### Service

- IUPESM President 1997-2000
- Serve in various IUPESM Committees
- IOMP President 1994-1997
- IOMP Vice-President 1991-1994
- Served IOMP ExCom and various committees
- EFOMP President
- IPEM President

### Achievement

- Leading role in ICSU recognition of IUPESM membership
- One of the 50 outstanding medical physicists 2013

#### **Honours and Awards**

- IUPESM Award of Merit, 2000
- Glazebrook Medal of IoF
- Order of the British Empire
- Honorary Doctorate, De Montford University
- Fellow of IPEM, IoP, BNMS, RCR, BIR, SRP

## IUPESM Fellow: Prof. Kajiya Fumihiko





#### Service

- IUPESM Vice-President, 1997-2000
- IFMBE President, 1994 1997
- Served in various capacity in IFMBE for 18 years (1982-2000)

#### **Achievement**

 Basic and clinical biomedical engineering mainly in the cardiovascular fields.

#### **Honours and Awards**

- IUPESM Award of Merit (BME), 2015
- IAMBE Fellow

### IUPESM Fellow: Prof. Gary Fullerton





#### Service

- IUPESM Secretary General, 1997-2003
- Serve in various IUPESM Committees
- IOMP Secretary General, 1997-2003
- Served IOMP ExCom and various committees
- Co-President WC 1988
- AAPM President

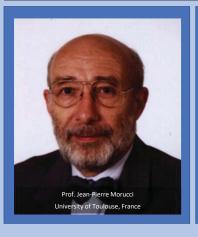
### Achievement

- Leading role in ICSU recognition of IUPESM membership
- Active role in Latin America medica physics development

#### **Honours and Awards**

- IUPESM Award of Merit, 2009
- Silver Medal International Society of Magnetic Resonance in Medicine 2002
- Fellow of AAPM; ACR; ISMRM; IOMP

### IUPESM Fellow: Prof. Jean-Pierre Morucci





#### Service

- IUPESM President, 2000 2003
- IFMBE President, 1997 2000
- French representative at the Commission of the European Communities (Brussels) in the Concerted Action Committee for Biological and Medical Engineering (1980-1990)

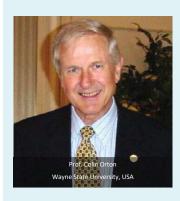
#### Achievement

 Advancement of Bioelectrical Impedance Techniques in Medicine

#### **Honours and Awards**

- Ampère Award, 1997
- Fellow Emeritus, International Academy of Medical and Biological Engineering

# IUPESM Fellow: Prof. Colin Orton





#### Service

- IUPESM Vice- President, 2000-2003
- Serve in various IUPESM Committees
- IOMP President, 1997-2000
- IOMP Vice-President, 1994-1997
- IOMP Secretary-General, 1988-1994
- Served IOMP ExCom and various committees
- AAPM President
- IMPCB President

#### Achievemer

- One of the 50 outstanding medical physicists, 2013
- Editor-in-Chief of J. "Medical Physics"

#### Honours and Awards

- IOMP Marie Curie Award
- IUPESM Award of Merit
- AAPM Coolidge Award
- ACMP Marvin M. D. Williams Award
- Ulrich Henschke Award, ABS
- IOMP Fellow

## IUPESM Fellow: Prof. Kwan Hoong Ng





#### Service

- IUPESM AC Member. 2000 2006
- Served IOMP ExCom and various committee
- SEFOMP Founding President, 2000-2006
- AFOMP President, 2010-2012

#### chievement

- Active role in establishing medical physics activities in South-East Asia
- Active role in radiation protection research
- Active role in IOMP education/training activities
- One of the 50 outstanding medical physicists 2013

#### **Honours and Awards**

- IOMP Marie Sklodowska- Curie Award
- IOMP Award for IDMP
- Academy of Sciences Malaysia Fellow
- Fellow of IOMP; IoP
- Included in the 100 Asian Scientist, 2019

### IUPESM Fellow: Prof. Inger-Lena Lamm





#### Service

- IUPESM AC Member, 2000 2006
- Serve in various IUPESM Committees
- Serve in various IOMP Committees
- EFOMP President
- Swedish Society SHPA President

#### Achievement

- Leading role in medical physics in Europe and establishing educational standards
- Active member of the pioneering e-learning projects

### Honours and Awards

- Co-awarded EU Leonardo da Vinci Award
- IEC Award 2016
- Honorary member EFOMP
- Honorary member Swedish SHPA

### IUPESM Fellow: Prof. Azam Niroomand-Rad





#### Service

- IUPESM AC Member, 2000 2007
- IUPESM Vice-President, 2006-2007
- Serve in various IUPESM Committees
- IOMP President, 2003 2006
- IOMP Vice-President, 2000-2003
- Editor Medical Physics World Newsletter
- Served IOMP ExCom and various committees

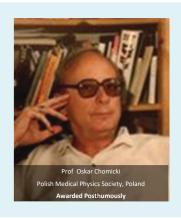
#### Achievement

- Active role in ILO recognition of medical physicists and biomedical engineering profession in ISCO
- Active role in founding of IUPAP Medical Physics Commission
- Active role in IOMP education/training activities

#### **Honours and Awards**

- IOMP Marie Sklodowska- Curie Award
- AAPM Achievement in Med Physics Award
- Fellow of AAPM; ACR; IOMP

### IUPESM Fellow: Prof Oskar Chomicki





#### Service

- IUPESM President, 2003-2006
- Serve in various IUPESM Committees
- IOMP President 2000-2003
- IOMP Vice-President 1997-2000
- Serve in various IOMP Committees
- Polish Society PTFM President

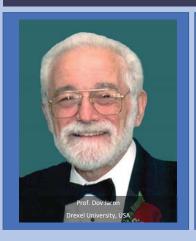
#### Achievement

- Active role in medical physics development in developing countries
- Founding member of Polish Society PTFM

#### **Honours and Awards**

- Honorary Member of EFOMP
- Honorary member Polish PTFM
- Knight of Gold Cross for Merit
- IOMP Fellow

### IUPESM Fellow: Prof. Dov Jaron





#### Service

- IUPESM Vice President, 2003 2006
- IFMBE President, 2000 2003
- ICSU Executive Board, 2008-2014

#### Achievement

 Dynamic, multiscale cardiovascular models that had led to the development, optimization, and clinical implementation of the cardiac assist device - the Intra-aortic balloon pump; and using the innovative models to elucidate complex mechanisms in the microcirculation

#### **Honours and Awards**

- Fellow of IAMBE; AIMBE; IEEE; BMES
- Fellow of American Association for the Advancement of Science; Academy of Surgical Research; World Academy of Biomedical Technology
- IUPESM Merit Award (BME)
- Foreign member, Polish Academy of Sciences

### IUPESM Fellow: Prof. Heikki Teriö





#### Service

- IUPESM AC Member, 2003 2010
- IUPESM Secretary General, 2003 2010
- IFMBE Secretary General, 1997 2003
- Chair, IFMBE Clinical Engineering Division, 2006-2009

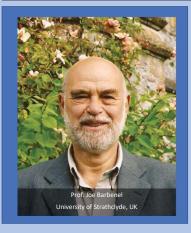
### Achievement

 Development of education/training in biomedical engineering internationally and supporting/strengthening management and maintenance systems of medical equipment in order to increase patient safety in emerging countries through development of international co-operation

#### **Honours and Awards**

- IFMBE Honorary Life Member, 2018
- Honorary Life Member, Swedish Society for Medical Engineering, 2018

### IUPESM Fellow: Prof. Joe Barbenel





#### Service

- IUPESM AC Member, 2003 2009
- IFMRF AC Member 1988 1994
- Chair, IFMBE Constitution and Bylaws Committee, 2002-2012
- EAMBES Founding Member, 2003; Council Member, 2003-2006; Chair Academic Division 2003-2009.
- President, Biological Engineering Society, UK

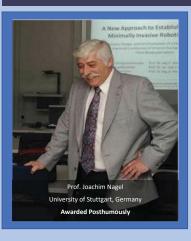
#### Achievement

- Contributed extensively to secure global acceptance of Biomedical Engineering as an independent Academic discipline, appropriate for research, teaching and clinical application, and as a profession. Developed BME Postgraduate Courses in University of Patras, Greece and Chongqing University, China. Initiated discussion on formation of IPEM.
- Research expertise in structure and properties of the soft tissues to direct clinical applications.

#### **Honours and Awards**

- Founding Fellow EAMBES, 2012
- Presidents Medal, Society of Cosmetic Scientists
- Lifetime Achievement Award, European Pressure Ulcer Panel

### IUPESM Fellow: Prof. Joachim Nagel





#### Service

- IUPESM AC Member, 2003 2012
- IUPESM President 2006 2009
- IFMBE President 2003 2006
- Founding Member, EAMBES

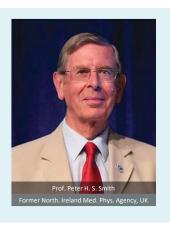
#### Achievement

- Led initiatives to increase visibility and importance of biomedical engineers and medical physicists in medicine and health.
- Research expertise in the cardiovascular monitoring, and physiology, medical imaging, Bio-MEMS, neurosciences, biological effects as well as therapeutic applications of ultrasound, and patient safety

#### **Honours and Award**

- IUPESM Award of Merit (BME), 2012
- Fellow of IAMBE; BMES; AIMBE; IOP
- Founding Fellow, EAMBES
- Honorary Life Member, IFMBE
- Academician Member, UNESCO/UATI World Academy of Biomedical Technologies

## IUPESM Fellow: Prof. Peter H. S. Smith





#### Service

- IUPESM AC Member 2003 2009
- IUPESM Treasurer, 2006 2009; 2012 2015
- Serve in various IUPESM Committees
- IOMP Secretary General, 2003 2009
- Served IOMP ExCom and various committees
- EFOMP Treasurer
- IPEM President-Elect

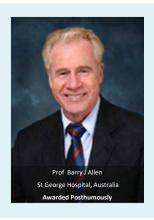
#### Achievemen

- Active role in ILO recognition of medica physicists and biomedical engineering profession in ISCO
- Active role in IOMP WHO relations
- Chair, ICMP 2001

#### **Honours and Awards**

- IUPESM Award of Merit (MP), 2015
- IPEM Fellow
- IOMP Fellow

## IUPESM Fellow: Prof Barry J Allen





#### Service

- IUPESM AC Member, 2003 2015
- IUPESM President 2009-2012
- IUPESM Vice-President, 2008-2009
- Served various IUPESM committees for 12 years
- IOMP President 2006-2009
- IOMP Vice-President 2003-2006
- Served IOMP ExCom and various committees
- AFOMP President
- Australasian ACPSEM President
- Co-President WC 2003

#### Achievemen

- Leading role in medical physics in Asia and Oceania
- One of the 50 outstanding medical physicists 2013

#### Honours and Awards

- AFOMP Outstanding Medical Physicist Award
- Order of Australia Medal
- AloP Fellow
- ACPSEM Fellow
- IOMP Fellov







- IUPESM AC Member, 2003 2012
  IUPESM Vice-President, 2009-2012
  IFMBE President, 2006 2009
  Served in various capacity in IFMBE for 24 years
  (1985-2009)
  Japan Association for the Advancement of Medical
  Equipment (JAAME) President, 2020
  President of Mindful Home Care Product Design
  Research Institute

- IFMBE Honorary Life Member 2015
   Kelvin Premium, IEE
   Medical Instrument Society of Japan Award
   Magna cum Laude Citation, American Society of
- Japanese Society of Laser Surgery and Medicine
- Industry (MITI) of Japan
  Decoration of 3rd Order of the Sacred Treasure

### **IUPESM Fellow:** Prof. Ratko Magjarevic





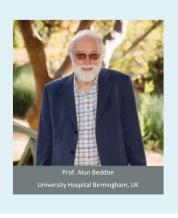
- Served in various IUPESM Committees, ie Union Journal, Nominating & Awards Committees etc IFMBE President, 2012 2015

- Served IFMBE AC and various committees, ie Awards, Conference, Federation Journal, Nominating & Publicity Committees.

- Golden Medal "Josip Lončar", University of Zagreb, 2014
- Honorary Senator, University of Ljubljana, Slovenia, 2013
- Recognition of the Senate of the Republic of Colombia for excellence in his career and his constant work in progress and the development of bioengineering and science in Colombia and worldwide, 2009
- IFMBE medal for "extraordinary services, exceptional dedication and outstanding contributions", 2006

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### IUPESM Fellow: Prof. Alun Beddoe





#### Service

- IUPESM AC Member, 2006 2009
- President of the Australasian ACPSEM
- Served various IUPESM committees
- Editor of J. New Zealand Medical Physics and Bio-medical Engineering
- Editor of J. Australasian Physical and Engineering Sciences in Medicine
- Editor-in-Chief Physics in Medicine an Biology

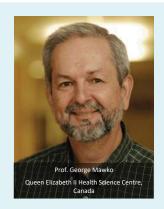
#### Achievement

Active role in medical physics education and training standards and of publishing

#### **Honours and Awards**

- · AFOMP Outstanding Medical Physicist Award
- ACPSEM Fellow
- IPEM Fellow
- IoP Fellow

## IUPESM Fellow: Prof. George Mawko





#### Service

- IUPESM AC Member, 2006 2009
- Serve in various IUPESM Committees
- IOMP Treasurer, 2006 2009
- Editor Medical Physics World Newsletter
- Served IOMP ExCom and various committees

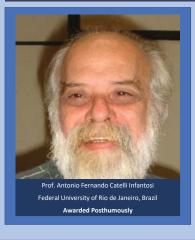
### Achievement

• World Congress and ICMP Finance Com, from 2003 - 2009

#### **Honours and Awards**

- CCPM Fellow
- COMP Fellow
- IOMP Fellow

### **IUPESM Fellow:** Prof. Antonio Fernando Catelli Infantozzi





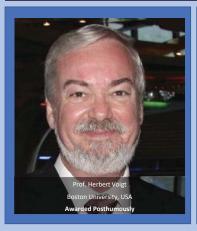
- SBEB President, 1979-1981; 1994-1996; 2000-2002
- Latin American Regional Council on Biomedical Engineering (CORAL) President, 2001-2004

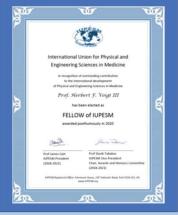
Prof Fernando played a fundamental role in the development of the Brazilian Journal of Biomedical Engineering, which subsequently re-named the international Research on Biomedical Engineering journal. He became an expert on biosignal processing, with particular emphasis on Neural Engineering, the main focus of his long career.

#### **Honours and Awards**

Giulio Massarani Prize, COPPE Institute

## **IUPESM Fellow:** Prof. Herbert Voigt





- IUPESM AC member, 2006 2018
   IUPESM President, 2012—2015
   IFMBE President, 2009-2012
   AIMBE President, 2006-2007
   BMES President, 1999

Contributed extensively to global health, notably his travel to Nigeria, Sweden, Malaysia and Peru. Recipient of a Fulbright Scholarship to the Pontifical Catholic University of Peru (2014–15) to develop a new biomedical engineering PhD program and worked with Peru's National Institutes of Health to create a research program to detect heavy metals in biological samples.

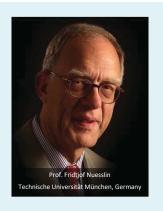
#### **Honours and Awards**

- Fellow, American Institute of Medical and Biological Engineering

- Alpha Eta Mu Beta's Outstanding Dedication and Service Award, 2016
- BMES's President's Award, 2002 & Distinguished Service Award, 2004
- IEEE Distinguished Lecturer, 2012-2013

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## IUPESM Fellow: Prof. Fridtjof Nuesslin





#### Servic

- IUPESM AC Member, 2006 2015
- IUPESM Vice-President, 2012 2015
- Serve in various IUPESM Committees, 2006 2015
- IOMP President 2009-2012
- IOMP Vice-President 2006-2009
- President EFOMP

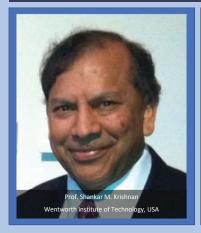
#### Achievemer

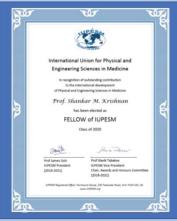
- Active role in ILO recognition of medical physicists and biomedical engineering profession in ISCO
- Fostering the IUPESM role in the formation of ICSU Bio Cluster
- One of the 50 outstanding medical physicists 2013
- Active role in IOMP WHO relation:
- Active role in IOMP IUPAP relations
- Editor-in-Chief European Journal Medical Physics

#### onours and Awards

- · Richard-Glocker-Award of the DGM
- Honorary member EFOMP
- Honorary member Med.Phys Societies of Czech Rep., Saudi Arabia,
- Honorary member of German and Austrian Soc. Radio Oncology
- IOMP Fellow

### IUPESM Fellow: Prof. Shankar M. Krishnan





#### Service

- IUPESM AC Member, 2006 2022
- IFMBE President, 2018 2022
- Served IFMBE Administrative Council for the past 17 years, as Treasurer, Secretary General, Vice President and President

#### Achievement

 Served over 30 years in academia, R&D in MedTech industry, consultancy, design, commissioning, operations management in hospitals; founded and led three Biomedical Engineering programs (in Illinois, Singapore, and Boston); Designed, developed, and managed modern teaching and research labs, earned two cycles of successful ABET accreditation

#### **Honours and Awards**

- CIMIT Kennedy Innovation Award,
- Fellow, American Institute of Medical and Biological Engineering
- Henry C. Lord Chair Professorship

### IUPESM Fellow: Prof. Caridad Borrás





#### Service

- IUPESM AC Member, 2006 2009
- IUPESM HTTG Chair, 2006 2009
- · Serve in various IUPESM Committee
- IOMP Science Com Chair 2000-2009
- Served IOMP ExCom and various committees
- AAPM Intern. Educ. Activities Com Chair

#### Achievement

- Active role in IOMP professional/scientific activities
- Leading ILIPESM HTTG Book Rural Health Centre
- Active role in Latin America medical physics development
- One of the 50 outstanding medical physicists 2013

#### **Honours and Awards**

- IUPESM Award of Merit, 2009
- IOMP Award for IDMP
- AAPM Achievement in Med Physics Award
- Fellow of AAPM: ACR: HPS: IOMP
- Diplomas and Recognition awards of societies of Spain, Brazil, Peru, Cuba, Middle East

## IUPESM Fellow: Prof. Kin Yin Cheung





#### Service

- IUPESM AC Member, 2009 2022
- IUPESM President 2015-2018
- Served various IUPESM committees
- IOMP President 2012-2015
- IOMP Vice-President, 2009-2012
- IOMP ExCom member 2006 2018
- Served IOMP ExCom and various committees
- AFOMP Founding President

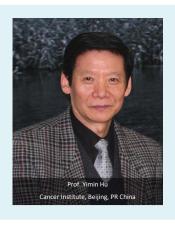
#### Achieveme

- Leading role in medical physics in Asia and establishing of AFOMP
- Leading role in establishing the definition of roles & responsibilities of medical physicists
- Active role in IOMP education/training activities
- Active role in IOMP WHO relations

#### Honours and Awards

- AFOMP Outstanding Medical Physicist Award
- IOMP Fellow

### **IUPESM Fellow:** Prof. Yimin Hu





#### Service

- IUPESM AC Member, 2009 2015
- Served various IUPESM committees
- AFOMP President
- President Chinese Society CSMP

#### Achievement

- One of the 50 outstanding medical physicists 2013

#### **Honours and Awards**

- Prize Development of Medical Science and Technology, Chinese Academy
- IOMP Fellow

### **IUPESM Fellow:** Prof. James Goh





- IUPESM Secretary General, 2010 –

- IUPESM President, 2018 2022
  IFMBE President, 2015- 2018
  IFMBE Secretary General, 2006- 2012

• Pioneered BME education and activities in Singapore, actively engage regional development of BME programs. Foster global BME community through closer interactions. Expertise in Orthopaedic Biomechanics Engineering

#### **Honours and Awards**

- Fellow, American Institute of Medical and Biological Engineering
- and Technology
- Fellow, Institute of Engineers Singapore

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### IUPESM Fellow: Prof. Slavik D. Tabakov





#### Service

- IUPESM AC Member, 2009 2022
- IUPESM Treasurer, 2009-2012
- IUPESM Vice-President, 2018-2022
- Serve in various ILIPESM Committee
- IOMP President, 2015 2018
- IOMP Vice-President, 2012-2015
- IOMP Treasurer, 2009-2012
- Served IOMP ExCom and various committees

#### Achievement

- Develon / Lead the first Med Phys e-Learning
- Develop/Lead MP Encyclopaedia+Dictionary
- Active role in IOMP education/training activities in Low-Middle Income countries
- Active role in IOMP WHO relations
- Co-Editor-in-Chief I Med Phys International
- Co-Director ICTP College on Medical Physics
- Established IOMP Company

#### **Honours and Awards**

- IOMP Harold John Medal
- Lead co-award EU Leonardo da Vinci Award
- Medals/Diplomas of societies of Bulgaria, UK, Lithuania, Thailand, India, Middle East
- Dr Hon. Causa Medical Univ. Plovdiv, Bulgaria
- Dr Hon. Causa VUARR, Bulgaria
- Fellow of IPEM, IOMP and HEA

### IUPESM Fellow: Prof. Madan Rehani





#### Service

- IUPESM AC Member, 2009 2022
- IOMP President. 2018 2022
- IOMP Vice-President, 2015-2018
- IOMP Secretary General 2009-2015
- Served IOMP ExCom and various committees

#### Achievement

- One of the 50 outstanding medical physicis 2013
- Active role in radiation protection research
- Active role in IOMP WHO relations

### Honours and Awards

- IOMP Harold John Medal
- Butterfly Award by Image Gently 2015
- Homi Bhabha Oration, 1999
- Dr. K.M. Rai Oration, 2001
- Honorary Membership of Society for Pediatric Radiology, 2011
- IOMP Fellow







#### Service

- IUPESM AC Member, 2009 2015
- Served various IUPESM committees
- IOMP Awards & Honours Com Chair
- Served IOMP ExCom and various committees
- President of the Australasian ACPSEM
- IMPCB Board member

#### chiovomont

- Leading role in medical physics in Asia
- One of the 50 outstanding medical physicists 2013

#### **Honours and Awards**

- IOMP Award for IDMP
- AFOMP Outstanding Medical Physicist Award
- Order of Australia Medal
- ACPSEM Fellow
- IOMP Fellow

### IUPESM Fellow: Prof. De Pei Liu





#### Servic

- IUPESM AC Member, 2012 2015
- IUPESM WC 2012 Chair
- IFMBE AC Member, 2006 2009
- Co-Chair, IFMBE Strategic Planning Committee (2009-2012),

#### **Achievement**

 Contributions to scientific insights and higher education leadership in biomedical engineering

#### **Honours and Award**

 Fellow, International Academy of Medical and Biological Engineering (2013)

## IUPESM Fellow: Prof. Monique Frize





#### Service

- IUPESM AC member, 2012-2018
- Chair, IUPESM WiMPBME Committee
- IFMBE AC and Chair, CoS, 2015-2022
- Chair, IFMBE Clinical Engineering Division, 1985-1990

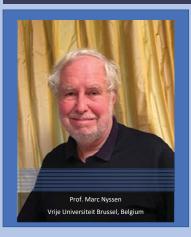
#### Achievement

Contributed extensively in BME education for 20 years, after 18 years as a clinical engineer in hospitals. Enjoyed sharing clinical engineering knowledge and experience with students, supervising their thesis (over 85 of them), and publishing over 200 papers in refereed journals and conference proceedings.

#### **Honours and Awards**

- Athlone Fellow (1967-1969)
- Officer, Order of Canada (OC) in 1993
- Fellow, Canadian Academy of Engineering (1982)
- Gold Medal, Professional Engineers Ontario (2000)
- Fellow (2012) and Life Member (2015) of IEEE
- Fellow of CMBES (2015); Engineers Canada (2010)

## IUPESM Fellow: Prof. Marc Nyssen





- Service
- IUPESM AC Member, 2015 2022
- IUPESM Treasurer, 2015-2018
- Serve in various IUPESM Committees from 2003 – 2021, for instance Union Journal, Nominating & Awards Committees just to name a few.
- IFMBE Treasurer, 2012 2022
- Served IFMBE AC and various committees for the past 15 years from 2006 – 2022, for instance Secretaries Committee.
- Achievement
- Privileged to witness the birth and rising of electronic and ICT technologies and was able to design systems and contribute to their deployment, assisting thousands of patients and health care professionals and teaching talented students.
- Honours and Awards
- Member, Royal Belgian Academy of Oversees Sciences
- Founding Member, Belgian National Committee on Biomedical Engineering

### IUPESM Fellow: Prof. Eva Bezak





#### Service

- IUPESM AC Member, 2015- 2022
- Served various IUPESM committees
- Founding member and Chair of IUPESM Women in MP and BME Task Group
- IOMP Secretary General 2019-2022
- Served IOMP ExCom and various committees
- President of the Australasian ACPSEM
- AFOMP Vice-President
- · WC2025 Co-President

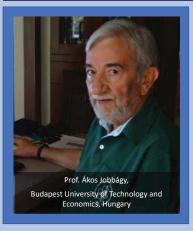
#### **Achievement**

 Leading role in medical physics in Asia and women in medical physics

### Honours and Awards

- IOMP Award for IDMP
- Women's Honour Roll, S.Australia
- ACPSEM Fellow

## IUPESM Fellow: Prof. Ákos Jobbágy





#### Service

- IUPESM AC member, 2015 2018
- IFMBE AC member, 2006 2012
- Served as Chair in numerous IFMBE committees from 2003 -2021, for instance National Secretaries' Committee, Membership Committee, IFMBE Constitution and Bylaws Committee

#### **Achievement**

 Development of devices and algorithms for early diagnosis and objective assessment of patients with neural and cardiovascular diseases

### **Honours and Awards**

- Honorary Life Member of IFMBE, 2015
- Order of Merit of the Hungarian Republic, Knight Cross, 2008

## IUPESM Fellow: Prof. Kang Ping Lin





#### Service

- IUPESM AC member, 2015-2022
- Chair, IUPESM Public & Intl Relations Comm, 2015-2022
- IFMBE Secretary General (2015 2022)
- Editor, IFMBE NEWS (2009-2015)

#### Achievement

 Linking and serving in biomedical engineering and medical physics communities particularly in the areas of biomedical imaging, bio-signals and medical devices.

#### **Honours and Awards**

- 2019 TSBME Wei Han Biomedical Engineering Service Award
- 2017 ACCE (USA) Antonio Hernandez International Clinical Engineering Award
- 2016 Chinese Institute of Engineers: Outstanding Engineering Professors Award
- 2013 Fellow, International Academy of Medical and Biological Engineering (IAMBE)

## IUPESM Fellow: Prof. Virginia Tsapaki





#### Service

- IUPESM AC Member, 2015 2019
- Served IUPESM various committees
- IOMP ExCom member 2012 2019
- IOMP Secretary General, 2015-2019
- Served IOMP ExCom and various committees
- Editor Medical Physics World Newsletter
- Founding Chair of IOMP Women Sub-Com.
- EFOMP Committees Chair
- President Greek Society HAMF

#### Achievement

- Active in role in medical physics in Europe and establishing professional standards
- Active role in radiation protection research

#### Honours and Awards

- IOMP Award for IDMP
- Appreciation Diploma Middle East
- IOMP Fellow

### IUPESM Fellow: Prof. Howell Round





#### Service

- IUPESM AC Member, 2015 2018
- IUPESM Secretary General 2015-2018
- Served various IUPESM committees
- Served IOMP various committees
- President of the Australasian ACPSEN
- AEOMP Secretary General 2012-2018

#### Achievement

 Leading role in medical physics in Asia and establishing educational standards

#### **Honours and Awards**

- IOMP Award for IDMP
- AFOMP Outstanding Medical Physicist Award
- ACPSEM Fellow
- IOMP Fellow

### IUPESM Fellow: Prof. Magdalena Stoeva





#### Service

- IUPESM AC Member, 2018 2022
- IUPESM Treasurer, 2018 2022
- Serve in various IUPESM Committees
- IOMP ExCom, 2015 2022
- 101VII EXCOIN, 2013 2022
- Editor IUPESM Health & Technology Journal
- Editor Medical Physics World Newsletter
- Technical Editor J. Med. Phys. International

#### Achievement

- Leading role in IT of Med. Phys web sites development – Encyclopaedia, MPI Journal, MPW Newsletter, e-learning, IOMP.org, IOMP Women Sub-com
- Active member of the pioneering e-learnin projects

#### Honours and Award

- IUPAP Young Scientist Award Medical Physics
- Co-awarded EU Leonardo da Vinci Award
- IOMP Fellow

### IUPESM Fellow: Prof. John Damilakis





#### Service

- IUPESM AC Member, 2018 2022
- IOMP ExCom member 2012 2022
- IOMP Vice-President, 2018-2022
- Served IOMP ExCom and various committees
- EFOMP President
- President Greek Society HAMP

#### Achievement

- Active role in radiology dosimetry research
- Active role in radiation protection research
- Active role in IOMP education/training
   activities

#### **Honours and Awards**

- Walter E. Berdon Award of The Society for Pediatric Radiology
- IOMP Fellow

### IUPESM Fellow: Prof. Timo Jämsä





#### Servic

- IUPESM AC member, 2018-2022
- Co-Chair, IUPESM Edn & Trg Comm, 2018 2022
- IFMBE AC and EA-RGR, 2016-2021
- President, EAMBES, 2019-2021

#### Achievement

 Leadership and significant contribution in biomedical engineering education and research locally, at the European level, and internationally

#### **Honours and Awards**

- EAMBES Fellow (2016)
- Knight, First Class, Order of the White Rose of Finland (2011)
- Clinical Biomechanics Award 2004, European Society of Biomechanics

## IUPESM Fellow: Prof. Geoffrey S. Ibbott





#### Service

- IUPESM AC Member, 2018 2022
- Serve in various IUPESM Committees
- IOMP Scientific Com Chair 2013 2022
- AAPM Award and Honors Com Chair
- AAPM President
- ABR Board of Governors member
- IEC 62C Chair

#### Achievement

 Leading specialist on radiotherapy dosimetry standards and uncertainty of calibrations

#### **Honours and Awards**

- Farrington Daniels Award
- AAPM Fellow
- IOMP Fellow
- ACR Fellow
- ASTRO Fellow

## IUPESM Fellow: Prof. Stephen Keevil





#### Service

- IUPESM AC Member, 2018 2022
- IUPESM HTTG Chair, 2018 2022
- Serve in various IUPESM Committees
- IOMP Company Group, 2015 2018
- President IPEM, UK 2013-2015

#### Achievement

- Leading role in the Alliance for MRI, related to the EU Physical Agents (EMF) Directive
- Active member of the pioneering elearning projects
- Active role in establishing IOMP Company

#### **Honours and Awards**

- Co-awarded EU Leonardo da Vinci Award
- IPEM Fellov
- IoP Fellow
- ESMR Fellow
- Honorary Member, Royal College of Radiologists

### IUPESM Fellow: Prof. Leandro Pecchia





#### Service

- IUPESM AC member, 2018 2022
- IUPESM Secretary General, 2018 2022
- IFMBE AC and Chair, HTA Division, 2015- 2018

#### **Achievement**

 Significant contribution in enhancing biomedical signal processing for patient monitoring in real setting, using wearable sensors and machine learning.

#### **Honours and Awards**

- Pilot Manager, Odin Project, 2020
- Large Scale Pilot Manager, Gatekeeper Project, 2019
- IFMBE Young Investigator Competition Award, ICBHI 2019 Taiwan
- Clinical Engineering Best Paper Award, 2018
- Fellow, British Higher Education Academy, 2017

Currently IUPESM has 150,000 members in 102 countries
For these 40 years about 500 distinguished colleagues from all over the world
were elected in the various Committees and the Leadership of IUPESM

The IUPESM Administrative Council (2018-2022) expresses its deep gratitude to all colleagues who were part of the IUPESM activities and contributed to this success!



### **HAPPY ANNIVERSARY!**





### **Calendar of Events**

# Third International Conference on the Advances in Radiation Oncology (ICARO-3)

When: Feb 16 - 19, 2021

Where: Vienna, Austria

www.conferences.iaea.org/event/229/overview

## **Australasian Brachytherapy Group 30th Annual Scientific Meeting**

When: Feb 25 - 27, 2021

Where: virtual

www.abg2021.cw3.events/

## **ESTRO Physics Workshop - Science** in Development

When: Feb 26 - 27, 2021

www.estro.org/Workshops/2020-Physics-Workshop-Science-in-Development

### XXV Congresso Brasileiro de Fisica Media (XXV Brazilian Congress of Medical Physics)

When: Apr 8 - 10, 2021

Where: Joao Pessoa, Paraiba, Brazil

www.cbfm.net.br

### 8th MR in RT Symposium

When: Apr 19 - 21, 2021

Where: German Cancer Research Center, Im Neuenheimer Feld 280, 69120 Heidelberg, Germany

www.dkfz.de/mrinrthd2021

## **Swiss Congress of Radiology - SCR'21**

When: Jun 24 - 26, 2021

Where: Davos Congress Centre, Talstrasse 49a, 7270 Davos Platz, Switzerland

www.myscr.ch