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# AFOMP Newsletter

Asia-Oceania Federation of Organizations for Medical Physics

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## From the desk of editor

Dear Readers

**“Greeting from the editorial board”** I am happy to bring AFOMP Newsletter, let me wish you, your family and friends a very happy, healthy and prosperous New Year 2019.

I was assigned the job of restarting the AFOMP newsletter as editor in December 2013 by Prof. Yimin Hu & Prof. Tae Suk Suh (President and Vice President of AFOMP in 2013). In last five years, I have tried my level best to improve the content and quality of the AFOMP newsletter with support of my departmental colleague Mukesh Jain and the AFOMP Ex Com especially Prof. Tae Suk Suh & Prof. Yimin Hu. I am thankful to all the authors for providing informative articles for AFOMP newsletter since 2013 to mention few Prof. Slavik Tabakov, Colin Orton, Kitagawa, Tomas Kron, Raymond Wu, Madan Rehani, Saiful Huq, Gavin Cranmer, S.H. Pawar, Carmel Caruana, John Demilikis, SD Sharma, Franco Milano and so on.

Dear Friends, Medical Physics is very dynamic science and playing a big role in healthcare delivery system. To keep updated with the pace of the technological innovations; reading, communicating and participating in educational programmes is very essential for Medical Physicists. You need to be active in your field. I take this opportunity to request you to kindly keep giving feedback so as to improve and make AFOMP more vibrant regional organization of IOMP.

As I have taken over as AFOMP president in November 2018, I would like to relinquish the job of editor AFOMP newsletter and appoint Dr. V. Subramani as new editor for AFOMP newsletter. I am sure you will continue to support Dr. Subramani and he will make the AFOMP newsletter much better and useful.

With best Wishes

**Prof. Arun Chougule**  
Editor, AFOMP Newsletter  
President AFOMP  
Chair-ETC-IOMP

**Vol.11 No.01– Jan 2019**



**Prof. Dr.Arun Chougule**

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# International Conference on Radiological Emergency and Management (ICONRADEM 2019)

*'Better the awareness and preparedness: better the emergency management'*

9-11 February, 2019 at Jaipur, Rajasthan, India

Organized by:

**Department of Radiological Physics  
SMS Medical College & Hospital, Jaipur**

In Co-operation with

**International Atomic Energy Agency**

Under the auspices of

**Asia-Oceania Federation of Organizations for Medical Physics**

Supported by:



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**Organising Chairman**  
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## President's Message AFOMP



**Dear Members of AFOMP**

**Wish you, your family and friends Very happy, healthy and fruitful New Year 2019.**

I take this opportunity to thank AFOMP members and AFOMP ExCom for putting faith in me to serve you as President of AFOMP. As president, I thank all the earlier office bearers of AFOMP who have taken enormous efforts to establish, stabilize and made AFOMP a vibrant Medical Physics regional organization. At present, 21 countries in Asia-Pacific region are member of AFOMP amounting to over 6000 Medical Physicists, second

largest regional organization of IOMP. There is a lot of disparity and inhomogeneity in terms of social, economical and educational level in AFOMP region. AFOMP is trying its level best to improve the standards of Medical Physics education and status of Medical Physics; your active participation and contribution is essential to accomplish the task.

To improve the status, AFOMP has taken many steps. AFOMP's new website [www.afomp.org](http://www.afomp.org) is functioning; the AFOMP news letter is being brought out regularly. AFOMP conducts AOCMP annual conference/ meeting, in various part of AFOMP region and to support young Medical Physicists. AFOMP, travel grants are awarded every year. In December 2017 AFOMP has signed MoU with MEFOMP for scientific & educational collaboration and the AOCMP 2019 is being organized in Kuwait during 10-12 November 2019. AFOMP has started Prof. Kionary Inamura Memorial AFOMP oration from 2018 to recognize and appreciate the contribution of Late Prof. Inamura to AFOMP.

Communication is the key to improve and update yourself .I request you all to contribute actively to AFOMP for welfare and betterment of Medical Physics.

Looking forward for your feedback and communication so as to serve you better.  
With best wishes

**Prof. Arun Chougule**  
**President**

*Let's imagine the future together*

SEPTEMBER 8-11, 2019  
SANTIAGO · CHILE

24<sup>th</sup> IOMP  
8<sup>th</sup> ALFIM

MEDICAL PHYSICS  
IOMP · ALFIM · SOFIMECH

## Welcome message from the Presidents

We are delighted to invite you to participate in the 24<sup>th</sup> International Conference on Medical Physics (ICMP) being held in Santiago, Chile on 8-11 September 2019. This will be 8<sup>th</sup> Latin American Congress of Medical Physics and 2<sup>nd</sup> Chilean Congress of Medical Physics. The most recent ICMPs were 2016 in Bangkok, 2013 in Brighton, UK and 2011 in Porto Alegre, Brazil. ICMPs of IOMP are held in between the World Congress on Medical Physics and Biomedical Engineering.

You can be assured of academic feast with eminent faculty from all over the world. The educational sessions will be highly enriching your knowledge and experience sharing by experts shall give you golden opportunity to learn from several decades of collective experience of experts in the field.

Even though there will be vast coverage of the medical physics field as a whole in its application to radiological sciences (Radiotherapy, Radiology, Nuclear Medicine Imaging), there will be important coverage

of professional issues, education and training and connected areas of physics applications in non-radiological sciences.

There will be participation of the international organizations like International Atomic Energy Agency (IAEA) and World Health Organization/Pan American Health Organization (WHO/PAHO).


The conference will give impetus to development of medical physics and radiation safety in the region. Medical physics in Latin America has been developing steadily and there is a need to keep up with changing scenario globally of technological advances. Medical physicists are best connected with technology and play significant role in safer and effective use of technology. The teaching to residents and postgraduate students in radiological sciences is important part of day-to-day activities of medical physicists. With increasing use of fluoroscopy in areas outside radiology, in operation theatres of urology, orthopedic surgery, vascular surgery and in cath labs of cardiology and electrophysiology necessitates involvement of medical physicists.

The conference will show how medical physicists are getting involved in non-traditional areas and are playing indispensable role. This will help colleagues in Latin American countries to diversify and extend their roles to areas where it has not so far.


Chile is that balcony from where the mountain range of Los Andes looks to the Pacific along more than 6,000 km of coast. It is a country where soaring peaks meet rushing rivers. Long and narrow, it is full of contrasts with arid deserts and the largest reserves of fresh water in the form of glaciers, inaccessible mountains, volcanoes with eternal snows and more than 3,000 islands which make the country of Pablo Neruda a destination for all tastes. It will be the first time that the ICMP would be realized at a Spanish speaking country.

We look forward to welcoming you to Chile Let's imagine the future together!

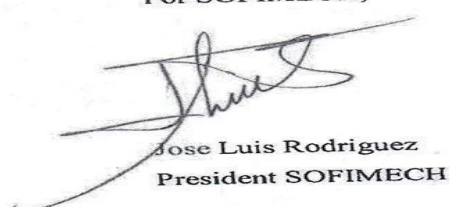
For IOMP,

  
Madan Rehani  
President IOMP

For ALFIM,

  
Rodolfo Alfonso  
President ALFIM

For SOFIMECH,

  
Jose Luis Rodriguez  
President SOFIMECH

## Online learning management system for clinical training in Asia: the IAEA AMPLE software

Anne Perkins, AMPLE Course Administrator and Editor in Chief of the AMPLE Editorial Board

[Anngeo@mmnet.com.au](mailto:Anngeo@mmnet.com.au).

There is an urgent need to increase the number of trained medical physicists in Asia. The most recent in a series of three surveys of medical physics in the Asia-Pacific region published by Tomas Kron and colleagues showed that there has been a rapid expansion in the number of medical physicists in the region between 2008 and 2014 but that there is still vast disparity in the level of medical physics services provided in different countries. We expect that the demand for physicists will be greater in future due to the rapid expansion of radiation medicine. It is not easy to make definitive estimates of how many medical physicists are required but a recent survey conducted in 2016 suggests that the current number of radiotherapy medical physicists in Asian countries is between 25% and 88% of the required level. For nuclear medicine physicists the picture is more varied, with some countries having not a single nuclear medicine physicist and some being relatively well supplied with more than enough physicists to support clinical demand. For diagnostic radiology physicists the situation is dire, with less than 10% of the required number in some countries.

There is a general international consensus that qualified physicists need both academic education at postgraduate level and structured hospital-based clinical training, as specified by the IAEA in the 2013 report "Human Health Series No. 25: Roles and Responsibilities, and Education and Training Requirements for Clinically Qualified Medical Physicists." Similar recommendations for medical physics education and training have been made in the series of AFOMP Policy Statements.

A framework for structured clinical training is set out in the IAEA Training Course Series (TCS) 37, 47 and 50 which cover radiation therapy, diagnostic radiology and nuclear medicine respectively. The IAEA TCS have been adopted in a number of Asian countries including Thailand, Bangladesh, Philippines, Malaysia and Indonesia. Training programs in other countries in the region, such as Australia and New Zealand, follow a very similar framework that has been adapted from the IAEA TCS series.

One of the challenges in establishing structured clinical training is the shortage of qualified physicists to act as clinical supervisors for trainees. This is a significant problem in many Asian countries where the clinical workload is high and there are few qualified physicists. This is particularly true in regional hospitals which are geographically remote from the academic institutions and major teaching hospitals which are found in the major cities. And yet these regional centres are often those where the need for training is most urgent.

The recognition of the urgent need for medical physics training in regional locations and countries with few resources was one of the drivers for the development of the Advanced Medical Physics Learning Environment (AMPLE). AMPLE is an online learning management system hosted on the IAEA's learning management website. It was developed in 2014 as part of and IAEA Regional Cooperative Agreement project RAS6077 "Strengthening the Effectiveness and Extent of Medical Physics Education and Training". The Regional Cooperative Agreement (RCA) is an intergovernmental agreement for the East Asia & Pacific region, under the auspices of the IAEA, in which the countries agree to cooperate in development and training projects in nuclear science and technology.

AMPLE is based on the IAEA TCS guides and offers all the content that can be found in the hard copy guides, including information about the training program and general advice for residents and supervisors. As in the TCS Guides, AMPLE focusses on the Modules and Sub-modules that define the competencies to be achieved by residents during their clinical training. AMPLE provides areas for residents to upload samples of work as evidence of their skills and knowledge in each Sub-module. Clinical supervisors can review the work online, record competency assessments and provide feedback to residents. A major benefit of an online system is that it allows remote supervision, in which the resident and supervisor are located in different hospitals or even in different countries. Other advantages of an online learning management system such as AMPLE include:

- ◆ Content is accessible by everyone involved in training, including residents, clinical supervisors and national training coordinators. Content can be accessed at any time regardless of where in the world the participants are located.

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- ◆ Content can be more easily updated than in the hard copy training guides, which is important because of the rapid development of radiation medicine and the need to continually redefine training requirements.
- ◆ AMPLE provides direct links to useful learning resources such as journal articles, textbooks, codes of practice, webinars, presentations, videos and e-learning modules. In AMPLE, the learning resources are linked to each sub-module making it easy for residents and supervisors to find the information they need.
- ◆ Communication tools to help with learning and reduce the impact of geographical isolation. These include discussion boards, chat rooms and virtual classrooms that can be used for tutorials, webinars and meetings.

The first countries to use AMPLE as part of their clinical training program were Thailand, the Philippines and Bangladesh in 2015. Indonesia was the next country to participate, enrolling their first residents in 2016. AMPLE has been adopted in 2018 by Malaysia and Singapore under a new IAEA RCA Project RAS6087.

*Table 1: Enrolments in AMPLE in November 2018*

Country	Diagnostic Radiology	Nuclear Medicine	Radiotherapy	Total
Bangladesh	-	6	10	16
Cambodia	-	-	1 *	1
Indonesia	1 *	-	6	7
Malaysia	5	5	8	18
Myanmar	-	-	1 *	1
Philippines	11	11	32	54
Singapore	-	-	10	10
Thailand ^	12	7	33	52

\* Remote supervision from Australia

^ Includes residents from Myanmar, Laos, Nepal and Vietnam

Table 1 lists the current enrolments in AMPLE. It is noteworthy that AMPLE is being used to facilitate remote supervision for residents in some countries where the local capacity for supervision is limited. Residents from Myanmar, Nepal, Vietnam and Laos are supported by clinical supervisors in Thailand. Australian supervisors are assisting with clinical supervision for residents in Cambodia, Indonesia and Myanmar.

Experience with AMPLE to date shows that it has been readily adopted by some users. Residents appreciate the structured clinical training and the easy access to learning resources. The facilities for remote supervision are helping residents in isolated centres to participate in clinical training.

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However, there are some barriers to full adoption of AMPLE. Limited internet access in some countries makes it difficult to use AMPLE fully. Some residents do not have access to computers or the internet in their workplaces. We have also found that some users are less comfortable in an online environment and prefer to use traditional methods such as pen and paper to record assessments. This seems to apply to supervisors more than to residents, perhaps reflecting the fact that younger physicists are more computer-literate than their senior colleagues. Although AMPLE is not difficult to use, it does require a certain level of commitment from residents and supervisors.

AMPLE is still being developed under the current IAEA RCA project RAS 6087. We hope to make an offline version available which will help make AMPLE more useful to residents with unreliable internet access. New learning resources are regularly added to AMPLE and we are working to make the software more user friendly including the addition of assessment tools and better ways of monitoring training progress. We also hope to provide an open-access version of AMPLE that can be accessed by physicists from anywhere in the world, not just members of the RCA countries. We hope AMPLE will make a lasting contribution to clinical medical physics training in the Asia-Pacific region and perhaps in time, in other parts of the world. For any queries about AMPLE, you are welcome to contact the author.

1. Kron et al, Medical physics aspects of cancer care in the Asia Pacific region: 2014 survey results, Australas. Phys. Eng. Sci. Med. 2015 38(3) 493-501
2. McLean et al, Recommendations for Accreditation and Certification of Medical Physics Education and Clinical Training Programs in the RCA (2016) Region. [https://humanhealth.iaea.org/HHW/MedicalPhysics/TheMedicalPhysicist/EducationandTrainingRequirements/Accreditation\\_and\\_Certification/Recommendations\\_for\\_accreditation\\_and\\_certification\\_in\\_medical\\_physics.pdf](https://humanhealth.iaea.org/HHW/MedicalPhysics/TheMedicalPhysicist/EducationandTrainingRequirements/Accreditation_and_Certification/Recommendations_for_accreditation_and_certification_in_medical_physics.pdf)
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## FULL CONGRESS REPORT

### 18<sup>th</sup> AOCMP and 16<sup>th</sup> SEACOMP Kuala Lumpur, Malaysia

Chai Hong Yeong, Noriah Jamal and Kwan Hoong Ng

The combined 18<sup>th</sup> Asia-Oceania Congress of Medical Physics (AOCMP) and the 16<sup>th</sup> South-East Asia Congress of Medical Physics (SEACOMP) were successfully held at the Connexion Conference & Event Centre (CCEC), Nexus, Bangsar South City, Kuala Lumpur, Malaysia from 11 to 14 November 2018.

AOCMP and SEACOMP are both important annual events in medical physics. The congress aimed to gather medical physicists and allied health professionals in the regions for the sharing of knowledge, expertise, scientific discussions, cultural exchange and medical technologies updates. Malaysia last hosted this event in 2004. The theme for this congress is “*A Sustainable Future for Medical Physics*”. It resonates with the United Nation Sustainable Development Goals. According to the organizing chairs, a sustainable future of medical physics will be built on these three connected concepts: teamwork, adaptability and leadership. It is important that the medical physics organizations work together, be relevant to current development and constantly train and foster new leaders.

The congress has attracted more than 529 delegates from 40 countries around the world. A whopping 68 renowned speakers from 21 countries spoke at the congress and 300 proffered papers were presented. The congress was well supported by eight international organizations including International Organization for Medical Physics (IOMP), International Union for Physical and Engineering Sciences in Medicine (IUPESM), International Atomic Energy Agency (IAEA), American Association of Physicists in Medicine (AAPM), Institute of Physics and Engineering in Medicine (IPEM), Middle East Federation of Organizations of Medical Physics (MEFOMP), Asian Oceanian Society of Radiology (AOSR) and Japanese Society of Radiological Technology (JSRT); several local organizations and government agencies, universities as well as 32 healthcare industrial partners. Among all, 21 vendors including book publishers have participated in the onsite trade exhibitions. The Congress also supported charity activities whereby the profits made from selling of hand-made souvenirs by the Mon Refugee Organization will all be donated to the refugees in Malaysia.

The Congress is CME-approved by the Ministry of Health, Malaysia. Participants who attended the 4-day Congress are entitled to claim for 26 CPD points and 9.83 MPCEC points accredited by the Commission on Accreditation of Medical Physics Education Programs (CAMPEP).

The first day of the Congress (11<sup>th</sup> November 2018, Sunday) was designated as the Pre-Congress workshops. A total of 6 workshops were conducted by various organizations, namely AAPM/Asia-Oceania Workshop on Radiotherapy (on the theme of “3D Treatment Planning Image-Guided Radiation Therapy”), IPEM Workshop on Nuclear Medicine (on the theme of “Radiopharmaceutical Therapy in the Era of Precision Medicine”), SEAFOMP Workshop on Medical Internal Radiation Dosimetry, the 9<sup>th</sup> ACOMP Workshop on Patient Dose Management and Monitoring in Diagnostic Radiology, JSRT CT Technology Workshop and Radiomics and Artificial Intelligence Workshop.

The Opening Ceremony was held on 12 November 2018. It was preceded by the Presidential Symposium followed by the John Cameron Memorial Lecture. During the Presidential Symposium, the Presidents of AFOMP (Prof Dr Tae Suk Suh from South Korea), SEAFOMP (Dr James Lee from Singapore) and MEFOMP (Dr Abdalla Al-Haj from Saudi Arabia) delivered their 10-min speech on “The Role and Vision in Development of Medical Physics in AFOMP”, “The Role of SEAFOMP in Growing Medical Physics in ASEAN Countries” and “Establishment of Diagnostic Reference Levels (DRLs) in Paediatric CT in Saudi Arabia: Lessons Learnt”, respectively. This year, the invited speaker for the John Cameron Memorial Lecture was Dr Colin Martin, the Vice Chairman of the International Commission on Radiological Protection (ICRP) Committee 3. Dr Martin delivered his lecture entitled “The Role of the ICRP in Medicine: Past, Present and Future” (**Figure 1**). According to Dr Martin, the ICRP is an independent, non-governmental body made up of experts from 30 countries that is supported by charitable donations. The ICRP prepares comprehensive reports that set out fundamental recommendations, describing the overall system of radiological protection. These are used as the basis for radiological protection standards, legislation, guidelines, programmes, and practice world-wide. The recommendations are based on the current understanding of the science of radiation exposures and effects,

combined with value judgements taking into account societal expectations, ethics, and experience gained in application of the system.

The Opening Ceremony started at 9.15 am with welcoming speech by the organizing chairpersons, Dr Chai Hong Yeong and Dr Noriah Jamal, followed by welcome remarks by the Presidents of IOMP (Dr Madan Rehani via a pre-recorded video, refer **(Figure 2)**, AFOMP (Prof Dr Tae Suk Suh) and SEAFOMP (Dr James Lee) **(Figure 3)**. Dato' Dr Dionysius Sharma, Chairman of Malaysian Wildlife Conservation Foundation was the Guest of Honour officiating the ceremony **(Figure 4)**. His address entitled "Creation, Humanity, Science and Sustainability" aptly highlighted and encapsulated the theme of this congress.

*"It is increasingly important for everyone to understand and appreciate the immense biological diversity of planet Earth (our natural capital), the ecosystem services humans depend upon and the impact or footprint we have on the planet. It is our social and moral obligation to care for the environment, as we advance ourselves in the field of science and technology. The future of humanity lies in sustainable development and societies living sustainably,"* said Dr Sharma.

Following Dr Sharma's speech, the Presidents of AFOMP, SEAFOMP and MEFOMP, accompanied by the organizing chairs were invited to go on stage for the opening launch gimmick. In line with the "sustainable" theme, the launch gimmick was in digital format to minimise the use of unsustainable paper or plastic-based materials **(Figure 5)**. A video montage produced by the local organizing committee was then presented. The montage recorded the history of AOCMP and SEACOMP, as well as the development of medical physics in the region. The Opening Ceremony ended with a cultural performance by the undergraduate students from the University of Malaya and group photo **(Figure 6)**.

The four-day Congress was successfully executed with 12 symposiums, 13 invited lectures, 2 round table forums, 2 update lectures, 300 proffered papers presentations (149 oral and 151 poster presentations) and 3 sponsored Tech Talks. In addition, the first AFOMP Oration in the Memorial of Professor Kiyonari Inamura was also held in this Congress. We were honoured to have Prof Dr Tomas Kron, the recipient of the Order of Australia Medal (OMA) for Services to Medicine, Research and Education as the orator. Prof Kron delivered his oration on the topic of "Paediatric Radiation Oncology: Can We Translate All the Technological Advances from Adults to Kids?" **(Figure 8)**. The presentation demonstrated how technology and techniques have changed over the last 20 years making paediatric radiation oncology safer and the use of modern approaches more effective. Prof Kron highlighted that the objectives in paediatric radiotherapy are often different than in adults where growth retardation or IQ reduction are less frequently taken into consideration. He also gave examples of an emerging stereotactic ablative body radiotherapy (SABR) program for children at the Peter MacCallum Cancer Centre, Australia, proving that children can benefit from many technological advances as long as the particular needs of these patients are considered. Other highlights of the Congress are as following:

- ◆ Round table forum on "Medicine in the Era of Artificial Intelligence", moderated by Prof Dr Kwan Hoong Ng, a medical physicist and Dr Raja Rizal Azman, a radiologist. The multidisciplinary panellists comprised of Prof Dr Basri Johan Jeet Abdullah (interventional radiologist), Dr Lye Mun Tho (clinical oncologist), Prof Dr Tomas Kron (radiotherapy physicist), Prof Dr Eva Bezak (radiation physicist) and Prof Dr Arimura Hidetaka (biomedical engineer and medical physicist). Refer **Figure 9**.
- ◆ Round table forum on "Creating a Balanced View of the Risks from Radiation", moderated by Prof Dr Colin Martin and Prof Dr Kwan Hoong Ng. The panellists were Prof Dr Virginia Tsapaki from Greece, Prof Dr Eva Bezak from Australia and Prof Dr Magdalena Stoeva from Bulgaria. Refer **Figure 10**.
- ◆ 11 symposiums: AAPM Symposium on Radiotherapy, IPEM Symposium on Nuclear Medicine, Radiomics Symposium, 3D Printing in Medicine, IAEA Symposium on Radiotherapy Safety, MEFOMP Symposium on Diagnostic Reference Levels, SEAFOMP Symposium on Small Field Dosimetry based on IAEA TRS483, Mammography Symposium, IOMP Symposium

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on Women in Medical Physics, AFOMP Symposium on Education and Training, and IAEA Symposium on Education and Training.

- ♦ Update Lecture on “Molecular Biology for Physicists” by Dr Deming Chau, a biologist from the Universiti Putra Malaysia.
- ♦ Update Lecture on “ICRP Proposals for Use of Effective Dose in Medicine” by Prof Dr Colin Martin, the Vice Chairman of ICRP Committee 3.

On social programmes, a Gala Dinner was held on 12 November 2018, from 7.00 pm to 11.00 pm at The Straits Estate, VE Hotel & Residence. Multiple cultural performances were presented by delegates from Malaysia, South Korea, Taiwan, Thailand, Indonesia, Middle East, Philippines, Australia, New Zealand. The organizer has also arranged multiple lucky draw sessions to give away a total of 33 prizes. The dinner has set a good example on how medical physicists from different countries can unite together via cultural exchange.

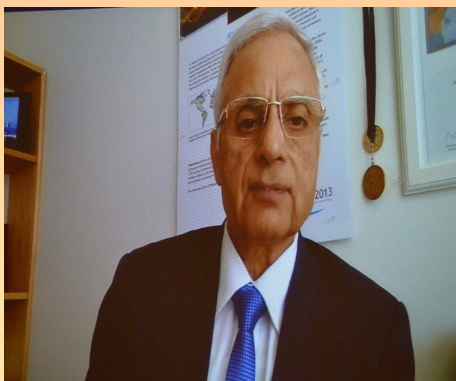
In the spirit of sustaining the future of the profession, 22 travel awards were given out. These awards were funded by the Malaysian Convention & Exhibition Bureau (MyCEB), Asia-Oceania Federation of Organizations for Medical Physics (AFOMP) and Southeast Asian Federation of Organizations for Medical Physics (SEAFOMP) (refer **Figure 11 and 12**). In addition, 18 best oral and poster awards were given out to acknowledge outstanding research works presented by young researchers and students (**Figure 13**). **Table 1** shows the awardees of these awards. A special mention on Young Leader Awards given by the SEAFOMP in recognition of the outstanding achievement of young medical physicists in the region. Among the five recipients were Assoc. Prof. Dr Chai Hong Yeong from Malaysia, Mr. Sornjarod Oonsiri from Thailand, Mr. Randal Zandro Remoto from Philippines, Mr. Wahyu Edy Wibowo from Indonesia and Dr. Mohd Hafiz bin Mohd Zin from Malaysia (**Figure 14**).

During the Closing Ceremony (14 November 2018), the new elected President of AFOMP, Prof Dr Arun Chougule and the President of SEAFOMP, Dr James Lee were invited to give their closing remarks. The ceremony was continued with awards presentation, promotional presentation of AOCMP 2019 (Kuwait), promotional presentation of SEACOMP 2019 (Indonesia), promotional presentation of World Congress 2021 (Singapore) and finally the closing speech by the Congress chairpersons. The ceremony was ended with group photo and tea refreshment.

The organizing committee of the 18<sup>th</sup> AOCMP and 16<sup>th</sup> SEACOMP 2018 would like to take this opportunity to thank all the supporting organizations, government agencies, industrial partners, universities, invited speakers, foreign and local delegates for making this Congress a great success. The 19<sup>th</sup> AOCMP will be held at Kuwait and the 17<sup>th</sup> SEACOMP will be held at Bali, Indonesia. We hope to see all of you there.



**Figure 1:** Prof Dr Colin Martin delivered the John Cameron Memorial Lecture entitled “The Role of the ICRP in Medicine: Past, Present and



**Figure 2:** A pre-recorded video message by the President of IOMP, Prof Dr Madan Rehani was played during the Opening Ceremony.



**Figure 3:** Welcoming speech by (a) Prof Dr Tae Suk Suh (President of AFOMP),



Figure 3: Welcoming speech by Dr James Lee



Figure 3: Welcoming speech by Dr Abdalla Al-Haj



Figure 4: Dato' Dr Dinonysius Sharma, Chairman of Malaysian Wildlife Conservation Foundation delivered his speech



Figure 5: The launching gimmick during Opening Ceremony.



Figure 6: Multi-culture performance, Kita Malaysia, presented by the undergraduate students from the University of Malaya during Opening Ceremony.



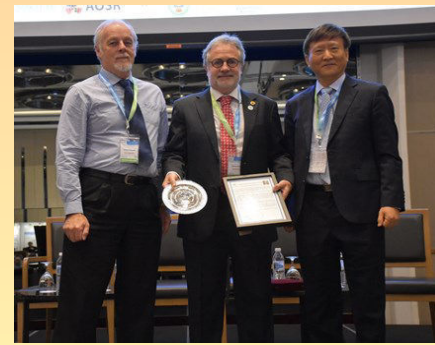
Figure 7: Group photo taken during the Opening Ceremony (11 November 2018). More than 529 delegates from 40 countries have attended the 18<sup>th</sup> AOCMP and 16<sup>th</sup> SEACOMP at Kuala Lumpur, Malaysia



Figure 8:

(a) Prof Dr Tomas Kron delivered the first AFOMP Oration in the Memorial of Prof Kiyonari Inamura on the topic of "Paediatric Radiation Oncology: Can We Translate All the Technological Advances from Adults to Kids?"

(b) Prof Dr Tae Suk Suh (right) and Dr Howell Round (left) presented certificate and plaque to Prof Dr Tomas Kron as a token of appreciation





## WORKSHOP REPORT

### Brachytherapy with special emphasis on Gynecological Brachytherapy Procedures

Prof. Arun Chougule, Jaipur

On 8<sup>th</sup> & 9<sup>th</sup> December 2018, a workshop on 'Brachytherapy with special emphasis on Gynecological Brachytherapy Procedures' was organized by the Department of Radiological Physics and Department of Radiotherapy, SMS Medical College & Hospital, Jaipur. It was organized in collaboration with the Indian Brachytherapy Society (IBS) and was also financially supported by NAMS and AERB. The entire workshop proceedings were held in the Dr. Robert Heilig Library Auditorium at SMS Medical College, Jaipur.



The faculty included renowned radiation oncologists and medical physicists from various reputed hospitals of India. **Dr. Umesh Mahantshetty** from Tata Memorial Centre, Mumbai, **Dr. Bhavna Rai** from PGIMER, Chandigarh and **Dr. T. P. Soni** from BMCHRC, Jaipur were the radiation oncology faculty while **Dr. R. K. Munjal** from Max Healthcare, Delhi, **Dr. V. Subramani** from AIIMS, New Delhi, **Ms. Dheera** from Tata Memorial Centre, Mumbai and **Dr. Arun Chougule** from SMS Hospital, Jaipur were Medical Physics faculty at the workshop. The workshop was attended by 40 delegates including consultant oncologists, resident doctors, medical physicists and intern medical physicists from various hospitals across India.

The workshop aimed at highlighting the role and importance of brachytherapy in various cancers, specifically the gynecological cancers, and provided practical knowledge to the young radiation oncologists and medical physicists about the various types of brachytherapy procedures practiced. The two day workshop had sessions catering to all the basic requisites that one needs to practice brachytherapy in their department and gave them the confidence to take initiatives in the field of brachytherapy.

The workshop started with the inaugural ceremony which was graced by Dr. Sudhir Bhandari, Principal & Controller, SMS Medical College & Hospital as the Chief Guest and Dr. D. S. Meena, Medical Superintendent, SMS Hospital as the Guest of Honour of the ceremony. **Prof. Arun Chougule**, Head, Department of Radiation Physics, SMS Medical College & Hospital and the Organizing Chairman of the Workshop formally welcomed all the guests and



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delegates and threw light on the objectives of the workshop. **Prof. Rohitashwa Dana**, Head, Department of Radiotherapy, SMS Medical College & Hospital and the Patron of the Workshop, welcomed the delegates and shared with them his experiences in brachytherapy and its importance. **Prof. Sandeep Jain**, Unit Head of Department of Radiotherapy, SMS Medical College & Hospital and the Clinical Coordinator of the Workshop, acknowledged the invited faculty for their presence and wished the



delegates a successful workshop. **Dr. Umesh Mahantshetty**, the IBS Course Coordinator, spoke about the relevance of the workshop, the goals of IBS and importance of brachytherapy. **Dr. Sudhir Bhandari** highlighted the importance of Brachytherapy and shared statistics about the big financial investments and industries that are working in the area of Brachytherapy. He also appreciated the efforts of the Department of Radiological Physics headed by Prof. Arun Chougule & Department of Radiotherapy for organizing the first ever workshop on Brachytherapy in the state of Rajasthan. **Dr. D. S. Meena** also spoke on similar lines and wished the Workshop Organizing Team success. The inaugural ceremony ended with **Ms. Mary Joan**, Assistant Professor, Department of Radiation Physics and the Organizing Secretary of the Workshop

extending a vote of thanks to the entire invited faculty, delegates and the team of support persons.

The two day workshop had various sessions which included lectures from the faculty, videos for giving the audience a near-live experience of the OT procedures, live treatment planning and contouring sessions, lectures on the physics & planning of brachytherapy procedures and need of QA/QC, optimization methods, radiobiology of brachytherapy etc. There were ten laptops converted to TPS for giving the delegates a hands-on experience of what was being taught in the workshop. Six Oncentra Brachytherapy Planning stations were provided by Elekta while four Bebig Brachytherapy Planning stations were provided by KTPL, India. Each teaching session held its own importance and gave the delegates an opportunity to explore each aspect of brachytherapy.



Each teaching session ended with discussion and questions and the participants asked their doubts without any apprehension.



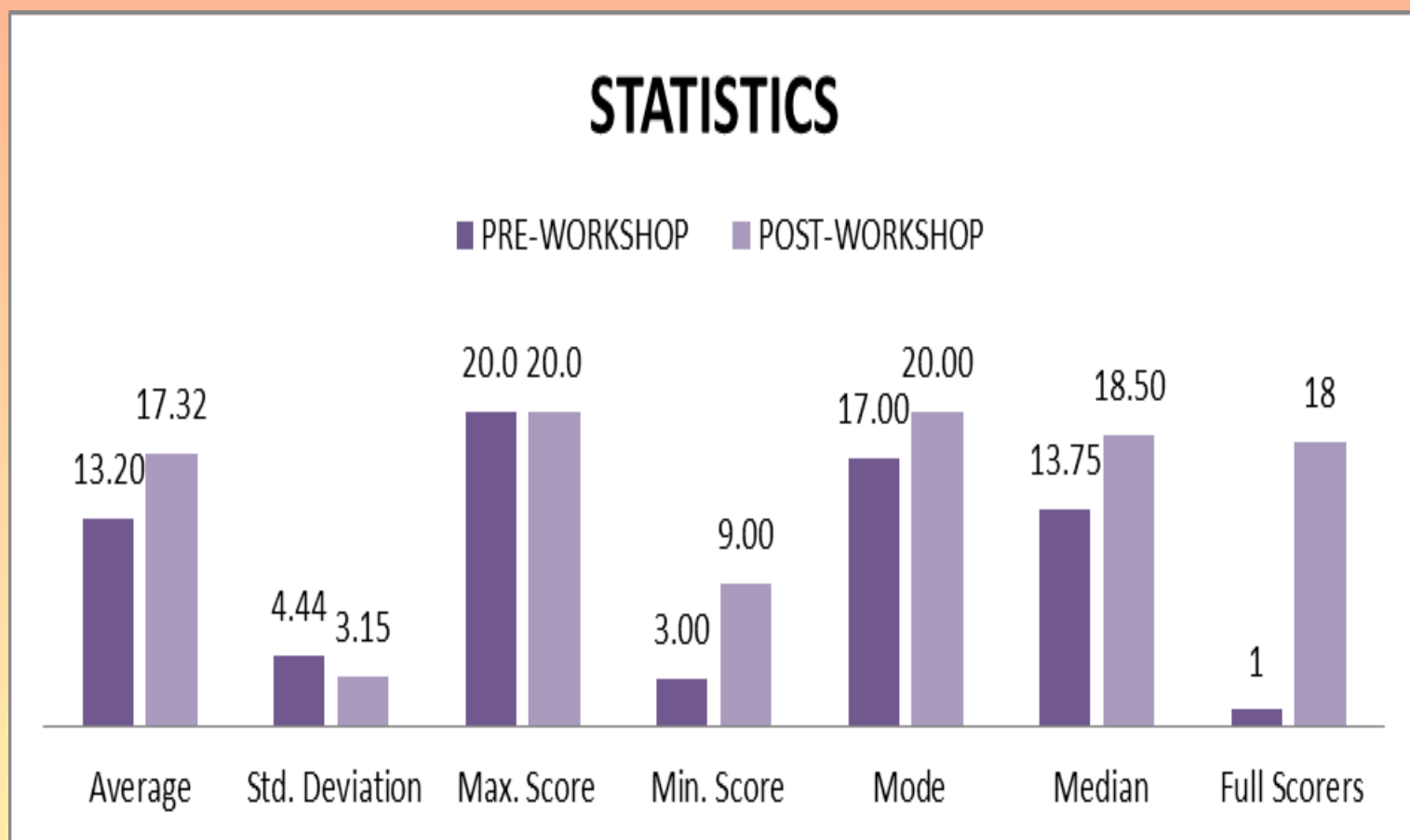
## -CONTD-

The discussions continued till the breaks as well and the delegates got ample opportunity to interact with the expert faculty.

The workshop concluded with the valedictory session in which feedback was taken from the delegates and the invited faculty. The delegates were satisfied with the workshop and asked for more such training sessions and workshops to be held in future. The faculty was happy with the arrangements too and looked forward to teach more in future through such programs. The invited faculty was given token of appreciation by Dr. Ashok Kumar Sharma, NAMS representative, on the first day of the workshop. The certificate distribution was done for all the delegates.

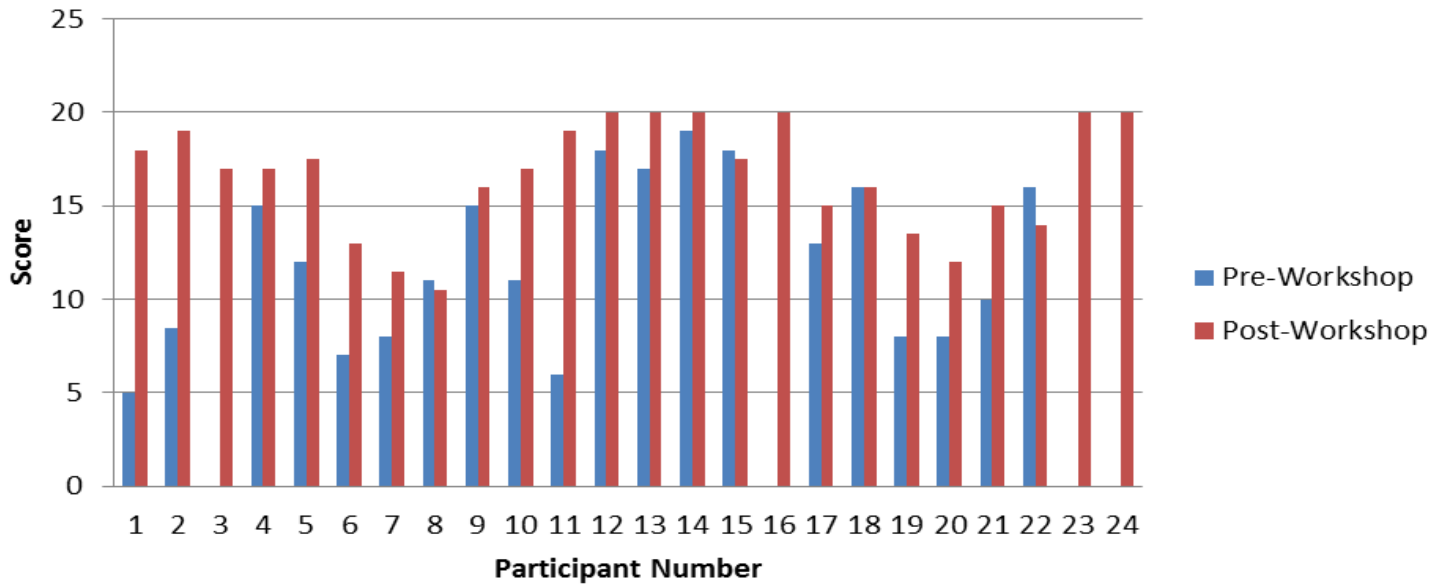
One integral part of the workshop was the evaluation sheet that the organizers had prepared to assess the effectiveness of the workshop and seek the feedback from the delegates. A Pre-Workshop questionnaire was circulated before the workshop started and a similar Post-Workshop questionnaire was distributed at the end of the workshop. The questions were marked and checked and a comparison was done to find the overall improvement in the knowledge of the delegates as a result of the teaching sessions.

The evaluation showed an improvement in the performance of most of the delegates after the workshop. The statistical analysis showed that the average score of the participants increased from 66% (score of 13.2) to 86.6% (score of 17.32) with the deviation in score decreasing from 4.44 to 3.15. While only one delegate scored full marks pre-workshop, 18 delegates scored full marks in the post-workshop evaluation which is almost 50% of the delegates. The median value increased from 13.75 to 18.5 which means that 50% of the delegates scored above 92.5% in the post workshop evaluation (18.5 is 92.5% of 20). These figures and statistics show the effectiveness of the workshop in imparting knowledge to the delegates and highlight the importance of such programs in academic institutions.

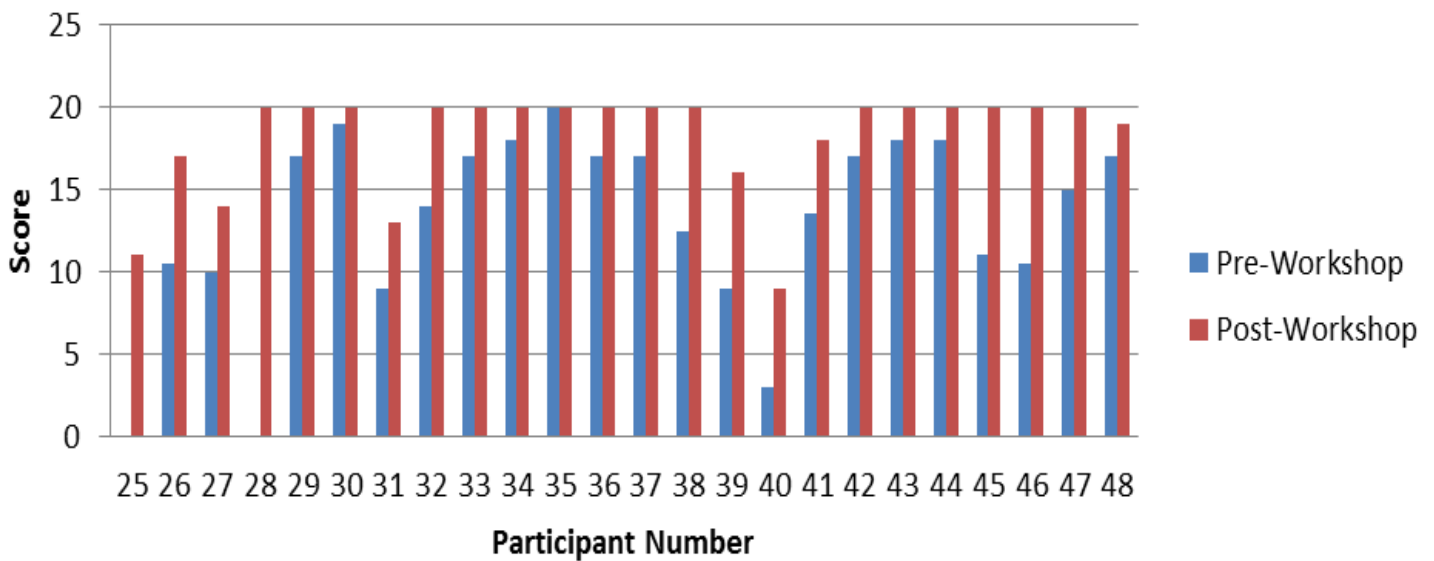


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### Participant-Wise Comparison



### Participant-Wise Comparison



The 2-day workshop on 'Brachytherapy with special emphasis on Gynecological Brachytherapy Procedures' organized by the Department of Radiological Physics and Department of Radiotherapy, SMS Medical College & Hospital, Jaipur thus concluded on a successful note.

# AFOMP- 2018

## Travel Grant Post Conference Report

P.Mohandass, India

I thank Asia Oceania Federation of Organizations for Medical Physics (AFOMP) for giving me the travel grant support to participate and present my oral paper entitled **“Comparison of different registration methods on patient setup error in cone beam computed tomography during volumetric modulated arc therapy for lung cancer”** at 18th Asia - Oceania Congress of Medical Physics (AOCMP) in conjunction with the 16th South East Asia Congress of Medical Physics (SEACOMP), Kuala Lumpur, Malaysia from 11th to 14th November 2018.

The theme of the conference was “A Sustainable Future for Medical Physics” which itself gave a motivation to participate in this conference. The conference was very insightful with many stimulating presentations and tutorials. In first day conference comprised of many interesting topics under AAPM symposium: Advancement in Radiotherapy. There were two lectures which I found intriguing, first one was New Technologies in Radiotherapy by Dr. Eugene Lief and the second one on Heavy Ion / Particle Therapy by Dr. Shigekazu Fukuda which were very informative and knowledge-based approaches in all aspects.

The second day of the conference titled “IAEA Symposium on Radiotherapy safety” was very useful and informative topics of “Radiation safety learning and safety management to prevent radiotherapy incidents and “Experiences with QUATRO Audits” from IAEA experts were presented. The third day of the conference had SEAFOMP symposium on small field radiotherapy dosimetry based on TRS- 483 which was very interesting to learn the about practice approaches.

I attended all oral paper presentation and poster sessions where I could able to gain more knowledge and ideas from different research topics and clinical practices. Throughout the conference, there were numerous opportunities for networking and I met individuals from various hospitals, academic and research institutes from all over the world. In addition, I also got the opportunity to meet Prof. Thomas Kron, Professor, Peter Mac Hospital, Australia and discuss my current research topic which is based on Monte Carlo (MC) clinical applications. We had a very good discussion on MC dose calculation and I got more inputs from him. Also, I had the opportunity to attend the symposiums, panel discussion, and pre congress workshop.

Various lectures from invited speakers (international) on advanced radiotherapy techniques were highly knowledgeable part of this conference. My presentation was well received by the audience with a few interesting questions that sparked a lively discussion.

Overall, it was a great conference for Sharing of knowledge, expertise, scientific discussions, research experience, medical technologies updates and discussion with international experts. I would like to take the opportunity to thank Asia Oceania Federation of Organizations for Medical Physics (AFOMP) once again supporting me in attending this conference.

### Conference Photos:



## SHORT REPORT

### A Sustainable Future For Medical Physics

Luong Thi Oanh Lecture Nguyen Tat Thanh University, Ho Chi Minh, Viet Nam

I have Attended the 18th Asia-Oceania Congress of Medical Physics (AOCMP) and the 16th South-East Asia Congress of Medical Physics (SEACOMP). I have an oral report and a scientific poster on the field of Monte Carlo application in radiotherapy: Monte Carlo evaluation of dose calculations accuracy of Prowess Panther system Monte Carlo evaluation of air cavity effects in JO - IMRT dose distributions The objective of the Congress is to gather the medical physics and allied health professionals in the region for the sharing of knowledge, expertise, scientific discussions, cultural exchange, and medical technologies updates. This is a best opportunity to broaden my understanding, knowledge and connect with medical physicist worldwide.

The congress includes participants from the professions of medical physics, biomedical engineering, radiology, radiotherapy, nuclear medicine, radiation protection, biophysics, radiobiology, and related fields from many different countries. The conference was organized by the Asia-Oceania Congress of Medical Physics and the South-East Asia Congress of Medical Physics with the aim of A Sustainable Future For Medical Physics . Talks by eminent speakers, oral presentations workshops that cover most of the disciplines in medical physics, i.e. diagnostic and interventional radiology, nuclear medicine, radiotherapy, radiation protection, radiobiology and new emerging techniques.

There are three main sessions:

- ◆ Therapy
- ◆ Imaging
- ◆ Radiobiology, Radiation Protection

In that session I was interested in Therapy. Nearly 70 studies of the authors on various fields of radiotherapy: Studies on phantom, influence of irradiation time, Monte Carlo. The optimal conditions for treatment plans for each type of cancer Evaluate, analyze and compare dosages with different tools Correlation of change in CT, Confirmed from Varans How to operate and handle some kind of quality assessment equipment in radiotherapy

The 3 orals presentations workshops of eminent speakers from AAPM and IAEA very best include:

- Development of high spatial and temporal resolution dosimeter in Radiotherapy and Radiodiagnosis
- TRS-483 about small field
- The characteristics and Challenges of radiation dosimetry with Gafchromic film.

I attended almost all of the reports at Therapy sessions, all of which provided me with useful information. In addition to the reports I intended to see from home, there are very new ones that I have never known about. I have been and will teach and lecture students in the field of Physics or Medicine where I work. I will research and develop wider in the field I am interested in. Initially, I and my colleagues have applied TRS-483 on phantom and other materials in similar cases.

I very grateful The AFOMP & SEAFOMP Travel Awards not only cover the registration fee and travel expenses to attend The AFOMP & SEAFOMP 2018 but also give me a best opportunity to broaden my understanding, knowledge and connect with medical physicist worldwide.

Thanks a lot for support from the organization.

## WELCOME MESSAGE

It is with great pleasure that we invite you to join us at the 19th Asia-Oceania Congress of Medical Physics (AOCMP) in association with Middle East Federation of Organizations of Medical Physics (MEFOMP) and Kuwait Association of Medical Physics (KAMP), which will be held at Kuwait Foundation of Scientific Research Auditorium (KFAS) Headquarter, Ahmad Al Jaber St., Sharq State of Kuwait from 10 to 12 November 2018.

AOCMP is important annual event in medical physics. The objective of the congress is to gather the medical physics and allied health professionals in the region for the sharing of knowledge, expertise, scientific discussions, cultural exchange and medical technologies updates.

This is the first time Kuwait is given the honour to host this event. The congress is expected to attract more than 500 participants from the professions of medical physics, biomedical engineering, radiology, radiotherapy, nuclear medicine, radiation protection, biophysics, radiobiology and the related fields. The theme for this conference is "Uplifting the profession of Medical Physics in the Region".

We have put forward a comprehensive scientific programme including orations, talks by eminent speakers, oral paper presentations, poster presentations, lunch symposiums, panel discussions and some pre-congress workshops that cover most of the disciplines in medical physics, i.e. diagnostic and interventional radiology, nuclear medicine, radiotherapy and radiation protection.

We also look forward to promote collaboration between the various disciplines and our regional partners.

Kuwait is a constitutional state with a high-income economy backed by the world's sixth largest oil reserves. The country enjoys multicultural diversity, a multitude of venue and accommodation options, as

well as an exceptional range of travel experiences for visitors attending business and leisure events.

The congress will take place at the Kuwait Foundation of Scientific Research Auditorium KFAS Headquarter, Ahmad Al Jaber St., Sharq State of Kuwait.

We suggest you to spend some time before or after the congress to explore the beauty of this city.

Thank you.  
Yours faithfully

Dr. Meshari Al-Nuaim  
Organizing Chairperson

## CONGRESS HIGHLIGHT

<b>TITLE</b>	AOCMP Congress of Medical Physics 2019
<b>DATES</b>	10 to 12 November 2019
<b>VENUE</b>	Kuwait Foundation of Scientific Research Auditorium
<b>ORGANIZERS</b>	Asia-Oceania Federation of Medical Physics (AOFOMP) Kuwait Association of Medical Physics (KAMP) Middle East Federation of Medical Physics (MEFOMP)
<b>Supporting Organizations</b>	Kuwait Foundation of Scientific Research (KFAS) + To be announced
<b>TARGET AUDIENCE</b>	Medical physicists, biomedical engineers, radiologists, oncologists, nuclear medicine physicians, radiographers, medical lab technologists, medical scientists, researchers, trainees and students

## Tentative Agenda at Glance

### Day 1

10 November 2018

Time	
08:00 - 07:00	Opening Ceremony
10:00 - 09:00	Plenary Session 1
10:30 - 10:00	Poster Session & Tea Refreshment
11:30 - 10:30	Invited Lecture Radiotherapy 1.1
11:30 - 12:00	Invited Lecture Medical Imaging 1.2
12:45 - 12:00	Lunch & Exhibition
13:15 - 12:45	Invited Lecture Radiobiology, Radiation Protection & Others 1.3
13:45 - 13:15	Poster Session & Tea Refreshment
14:15 - 13:45	Vendor's Talk
14:45 - 14:15	AFOMP ExCO Meeting
21:00 - 18:00	Gala Dinner

### Day 2

11 November 2018

Time	
08:00 - 07:00	AFOMP Symposium
10:00 - 09:00	Plenary Session 2
10:30 - 10:00	Poster Session & Tea Refreshment
11:30 - 10:30	Invited Lecture Radiotherapy 2.1
11:30 - 12:00	Invited Lecture Medical Imaging 2.2
12:45 - 12:00	Lunch & Exhibition
13:15 - 12:45	Invited Lecture Radiobiology, Radiation Protection & Others 2.3
13:45 - 13:15	Poster Session & Tea Refreshment
14:15 - 13:45	Vendor's Talk
14:45 - 14:15	MEFOMP ExCO Meeting

### Day 3

11 November 2018

Time	
08:00 - 07:00	AFOMP Symposium
10:00 - 09:00	Plenary Session 3
10:30 - 10:00	Poster Session & Tea Refreshment
11:30 - 10:30	:Update lecture Molecular Biology for Physicists
11:30 - 12:00	:Update lecture ICRP Proposals for Use of Effective Dose in Medicine
12:45 - 12:00	Lunch & Exhibition
13:15 - 12:45	Awards Presentation & Closing Ceremony
13:45 - 13:15	
14:15 - 13:45	

### Keynote Speakers

To Be Announced .....

### Registration information

To Be Announced .....

### Congress Venue



Address  
Kuwait Foundation of Scientific Research Auditorium (KFAS) Headquarter, Ahmad Al Jaber St., Sharq STATE OF KUWAIT.

## ACCOMMODATION

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## KUWAIT IN BRIEF

The State of Kuwait has served as the gateway to the Middle East because of its geographical location. Kuwait is the most socially progressive country in the Gulf region. It has a small and rich economy and it is situated on the Arabian Peninsula, bordering the northwestern corner of the Persian Gulf (Arabian Gulf). Countries with international borders to Kuwait are Iraq and Saudi Arabia and the country shares maritime borders with Iran. Kuwait has an area of 17,818 km<sup>2</sup> and a population of 3.7 million inhabitants, about one-third are Kuwaiti nationals, the rest are expatriates and foreigners. Capital city of the emirate is Kuwait (City). Spoken language is Arabic, official language of Kuwait is Arabic and the second language, in common use, English.



# Asia-Oceania Congress of Medical Physics 2019

Uplifting the profession of Medical Physics in the Region

10 to 12 November 2019  
Kuwait Foundation of Scientific Research Auditorium  
Kuwait City





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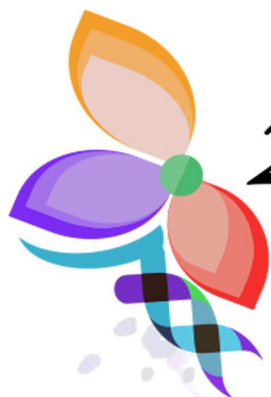


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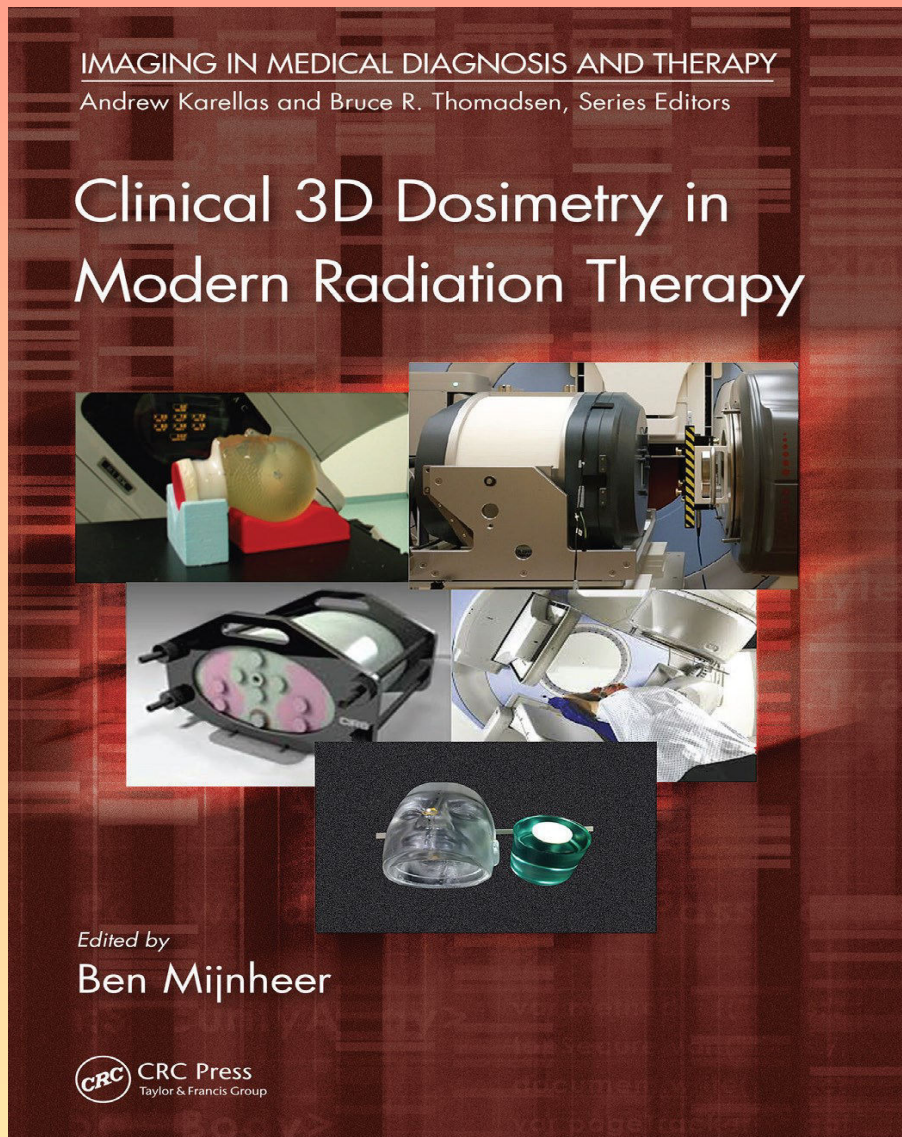
## Book Review

### Clinical 3D Dosimetry in Modern Radiation Therapy By Ben Mijnheer (Editor)

Dr LN McDermott

A book on your desk is only more useful than a Google search when it is both well structured and strikes the balance between being all encompassing and going beyond relevance. I've found that "Clinical 3D Dosimetry in Modern Radiotherapy" edited by Ben Mijnheer achieves this balance nicely.

The evolution of 3D dosimetry in radiotherapy over the past 20 years is far more a tumbleweed of innovation mixed with pragmatism, than a neat, uniformly organized fabric of knowledge. Yet the opportunity to sit and browse through a book which has all the necessary ideas sorted and clearly explained is a blessing for anyone with an interest in radiotherapy physics. Mijnheer has collected the best minds from around the world to cover the various sub-categories falling under the 3D dosimetry umbrella. The book has over 650 pages and a host of figures, formulas and tables which are instructive and illustrative. There are 26 chapters, divided into 5 sections: Introduction, Instrumentation, Measurement and Computation, Clinical Applications and Emerging Technological Developments. Each chapter begins with an outline and introduction, and concludes with a summary and comprehensive bibliography.



The goal is not to have the last word on various subjects of debate, but to present the issues alongside the facts. Do we need to check every patient plan? What tolerances should we accept? Is 4D always better than 0D? The goal is to help the reader understand the unique characteristics of clinical radiotherapy detectors, which is vital when approaching these issues. There are very few recent books today that collect this information and place it in the context of 3D dosimetry for Radiotherapy. Anything else more than 5 years old does not address the recent advances in VMAT, semi-3D and 4D dosimeters, pre-clinical developments (small animal irradiators) and magnetic field dosimetry. It is not intended to replace the large number of text books on medical physics, rather it provides an overview with the necessary depth for tackling clinical QA problems today.

I found that the book successfully fills the gap in teaching material for this specialty of medical physics. From students getting a grip on basic concepts, to mid-career physicists needing a brush-up to experts looking for a reference for overview lectures, this is an ideal resource. In summary, "Clinical 3D Dosimetry in Modern Radiotherapy" by Ben Mijnheer is an excellent resource for any medical physicist. It provides a compilation of facts, issues, arguments, theory and practical

clinical examples, from a wide cross-section of the international expert dosimetry community.

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## Calendar of Events 2019

7 – 8 Feb 2019	PPRIG Proton Physics Workshop 5 National Physical Laboratory, Teddington, UK <a href="http://www.pprig.co.uk/pprig/meetings/">http://www.pprig.co.uk/pprig/meetings/</a>
9 – 11 Feb 2019	International Conference on Radiological Emergency and Management, 'ICONRADEM2019' Jaipur, India <a href="http://iconradem.org/">http://iconradem.org/</a>
1- 3 March , 2019	IOMPS 2019: AMDI's Second International Oncology & Medical Physics Symposium 2019 Penang, Malaysia <a href="http://iomps2019.com/">http://iomps2019.com/</a>
26-30 April, 2019	ESTRO 38 Milan, Italy
27 – 31May 2019	3rd International Conference on Dosimetry and Applications (ICDA-3) Lisbon, Portugal <a href="http://www.ctn.tecnico.ulisboa.pt/icda-3/">http://www.ctn.tecnico.ulisboa.pt/icda-3/</a>
17 – 21 Jun 2019	19th ICCR & 2nd MCMA Montreal, QC, Canada <a href="http://www.iccr2019.org">http://www.iccr2019.org</a>
18 – 21 Jun 2019	CARS 2019 Computer Assisted Radiology and Surgery 33rd International Congress and Exhibition Rennes, France <a href="https://www.cars-int.org">https://www.cars-int.org</a>
18 – 21 Jun 2019	International Symposium on Standards, Applications and Quality Assurance in Medical Radiation Dosimetry (IDOS2019) Vienna , Austria <a href="https://www.iaea.org/events/idos2019">https://www.iaea.org/events/idos2019</a>
19-22 June, 2019	PROS congress Bangkok, Thailand <a href="http://intpros.org/congress/next-pros-congress/">http://intpros.org/congress/next-pros-congress/</a>
8-11 September 2019	24 <sup>th</sup> ICMP 8 <sup>th</sup> ALFIM Santiago, Chile <a href="http://www.icmp2019.org/">http://www.icmp2019.org/</a>
25-26 October, 2019	3rd ESTRO Physics Workshop - Science in Development TBC
26 Oct -2 Nov, 2019	NSS/MIC – 2019 IEEE Nuclear Science Symposium and Medical Imaging Conference Manchester, United Kingdom
10- 13 November, 2019	AFOMP-MEFOMP Joint Conference of Medical Physics Kuwait <a href="http://www.nss-mic.org/">http://www.nss-mic.org/</a>
14-16 November, 2019	<b>International Consensus Conference for Advanced Breast Cancer</b> Lisbon, Portugal <a href="http://www.abc-lisbon.org/#">http://www.abc-lisbon.org/#</a>
21-22 November, 2019	7th GEC-ESTRO workshop Budapest, Hungary <a href="https://www.estro.org/congresses-meetings/items/7th-gec-estro-workshop">https://www.estro.org/congresses-meetings/items/7th-gec-estro-workshop</a>

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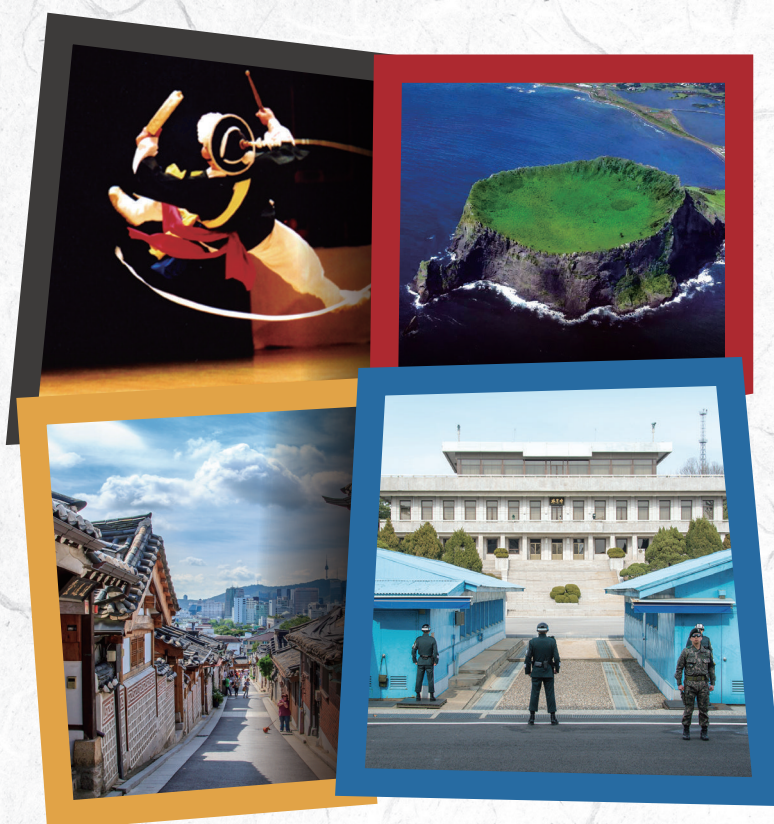


# IRPA 15

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■ Important Dates :	Abstract Submission Open	01 Jun 19	Poster Presentation Acceptance Notification	31 Jan 20
	Oral Presentation Abstract Submission Deadline	30 Sep 19	Full Papers(Oral/Poster) Submission Deadline	31 Mar 20
	Oral Presentation Acceptance Notification	31 Dec 19	Early Registration Deadline	14 Feb 20
	Poster Presentation Abstract Submission Deadline	31 Dec 19	Standard Registration Deadline	26 Apr 20

■ **Programme** : Opening/Closing Ceremony, Plenary Session, Oral Session, Poster Session, Refresher Course, Press Conference, Exhibition, Welcome Reception, Gala Dinner, Tour

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—*Medical Physics International*, Vol. 3, 2015

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