BULLETIN

April 2018

SGSMP
SSRPM
SSRFM

Schweizerische Gesellschaft für Strahlenbiologie und Medizinische Physik
Société Suisse de Radiobiologie et de Physique Médicale
Società Svizzera di Radiobiologia e di Fisica Medica
Swiss Society of Radiobiology and Medical Physics

No 91 www.ssrpm.ch

Editorial

Letter from the Editors

Dear SSRMP members,

At the risk of repeating myself, I have to thank many of you for the great help received filling this issue of the Bulletin with wonderful contributions. They come more and more often spontaneously and unexpected, like small nice surprises of the day. Please don't stop doing that!

As reported in the two previous Bulletins, some members of SSRMP have offered to represent our society within external associations. As a result, you will find fresh information coming from EFOMP's representative Stefano Gianolini regarding the new European Diploma of Medical Physics, whereas Yvonne Käser clarifies the role of the newly defined steering committee for clinical audits in Switzerland. Also in the SSRMP News section, there is a summary of the Salary Survey conducted in 2017 by the Professional Affairs committee, the results of the Scientific Committee's survey on the usage of Deformable Image Registration software in Swiss institutions, and a report from the MIP working group. In other words, we shine some light on the important effort that many SSRMP board (and non board) members have been putting in "behind the scenes".

The Issues of interest section is enriched with many of your lively and enthusiast conference reports, but my main excitement goes to the interview with Professor (yes! You have read it correctly, Professor!) Michael Fix and to the new PhD Platform section. These two interactive articles are real dialogues through which we can get a flavor of the human and scientific experience of two colleagues who have just achieved an important step in their career. If lately you have felt tired, bored, stressed, lacking in motivation when getting up in the morning for going to work, you might find that these two interviews contain the hints and refreshments to re-question the sense of why we do what we do and why we once chose to do what we do as medical physicists (whether we're working in research or in the clinic)! As the late Stephen Hawking taught us, a black hole can turn out to be a new beginning.

The Personalia section sees only people on the move for this issue, a testament to the fact that our profession remains dynamic even after many years spent in the same clinic and even if most of us are not researchers. Thank Vera and Tino for sharing with us your enthusiasm and your choices.
Finally, many announcements of the upcoming conferences and SSRMP appointments for this year 2018 are reported both in the SSRMP News and in the Conference Calendar. Don't miss the deadlines!

Francesca Belosi,
On behalf of the Editorial Team.

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Cover Image: radiotherapy masks made for young patient (Lobke Marsden/St James' Hospital)
https://www.belfasttelegraph.co.uk/news/Viral/these-painted-masks-are-helping-children-to-get-through-their-radiotherapy-

PRESIDENT'S LETTER

Dear colleagues,

No, it's not done automatically – writing the president's letter. Yet, instead, it's always challenging to get started with it and try to focus on issues of interest. While I am setting up these letters, it's always a mixture of different aspects, which accompany the writing: there is some kind of relaxed mood while there is music in the air and quite often, the guitar solos like to second one in Pink Floyd's 'Comfortably Numb' help texting the president's letter. But in addition, there is also the well-known necessity to write these letters in due time and quite often this is fostered by guilty feelings since the editors of the bulletin are waiting for my stuff for quite a while (sorry guys!).

Maybe this demanding situation could be solved by using machine learning approaches: What if there would be an algorithm available, which - on the basis of the history of all my president's letters in the past and based on the different topics addressed in a certain SSRMP Bulletin – would automatically create a president's letter? So, like a ghostwriter, the computer would take over the control of generating all my letters. The algorithm would be able to implement my personal style when compiling the texts. Certainly, this would be more comfortable for me and potentially also for the editors. Perhaps, this would also be a win-win situation for you as readers since the letters could be more relevant for you. And of course, the subsequent president's letter would be based on the previous ones (partly written in an automatic way already). And yes, after some time, the algorithm would have resulted in many automatically written letters, now all based on automatically generated predecessors and explicitly learning from them continuously. We would end up in never-ending stories, all of which fully relevant and maximally important for you... Now, it's calling "welcome my son, welcome to the machine!" from my sound system. Wonderful!

You might wonder what I am talking about here. You might think that these are just "crazy ideas" and that there is no relevance for you as medical physicists. You might guess that writing letters is associated with imagination and creativity, which never can be replaced by machines. Well, not sure. Just recently, I had an article about artificial intelligence on my desk. In this article, basics about machine learning were described. And in order to illustrate these essentials, there was a series of bird-pictures shown on one of the figures. The birds on these pictures all looked very nice and definitely very real. However, none of them exists in reality. It was just a construction by the computer algorithm: based on machine learning methods, the birds were created "on the

PRESIDENT'S LETTER

fly" by the machine. It's hard to realize that this is possible. It is astonishing and somewhat unbelievable. But isn't that creativity as well?

Surely, automation, big data, artificial intelligence, machine learning, etc. are all the big key words of today. They are now intensely approached in scientific works and many of the developed algorithms are even already applied in clinical practice. Unquestionably, this raises a lot of questions and serious concerns for medical physics. The physicist in charge has to judge about the quality and the safe use of such kind of methods. And it is our duty as a medical physics society to not only develop these methods but also to establish appropriate safety procedures. I am sure we are ready to tackle this. That's what we are educated and trained for. That's what our brains are able to do. We are well known as persons who think thoroughly about the underlying procedures and it is our well-established skepticism and our analytical strategies, which help understanding the constraints and the possibilities of new modalities.

In the current Bulletin, you find many contributions from our society's members with different flavors. To my best knowledge, none of them was compiled automatically. And altogether, you find it hopefully as attractive as I do. None of the individual works is "just another brick in the wall" but each of them "shines on as a crazy diamond".

Peter Manser,
SSRMP president

PROFESSIONAL AFFAIRS

Summary of salary survey 2017

In July 2017, SSRMP conducted a web-based salary survey following the 2014 inquiry. The committee for professional affairs presents hereafter a brief summary of the detailed report that each participant who contributed to this survey received in December 2017.

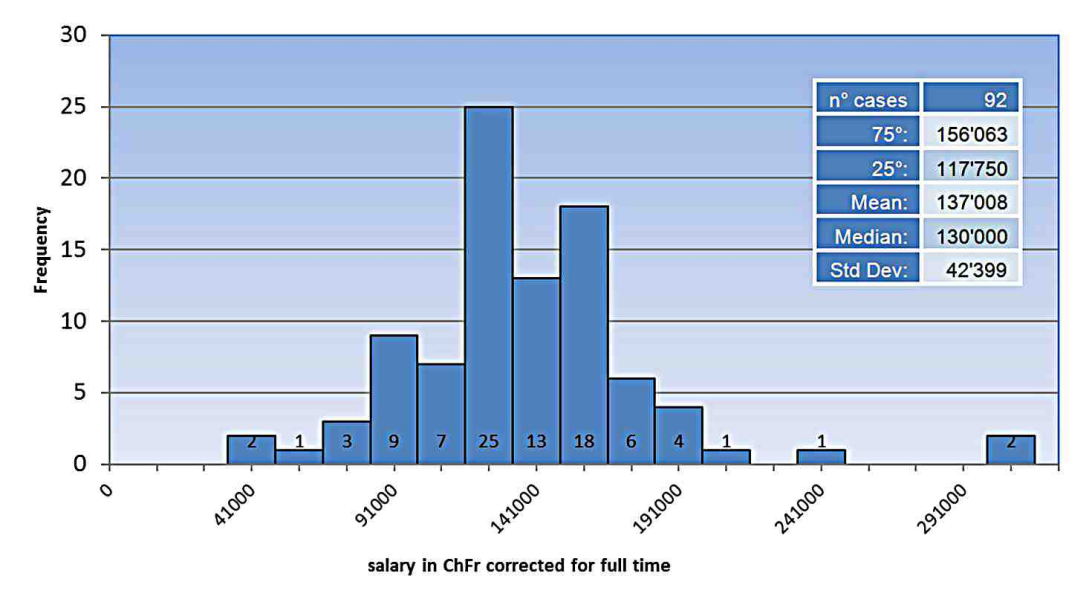
The survey was conducted using a web-based system that allows anonymous and encrypted filling out of the survey by all participants.
The period of concern was 01.01.2016 to 31.12.2016. The target group of the survey was known medical physicists with and without SSRMP certification working in Switzerland in the clinical framework: data from colleagues working either as self-employed or in an industry/company are not included in the analysis.

The total number of survey invitations sent was: 189
- completed surveys: 95 (50%)
- incomplete: 14 (7%)
- opted out: 15 (8%)
- no response: 65 (34%)

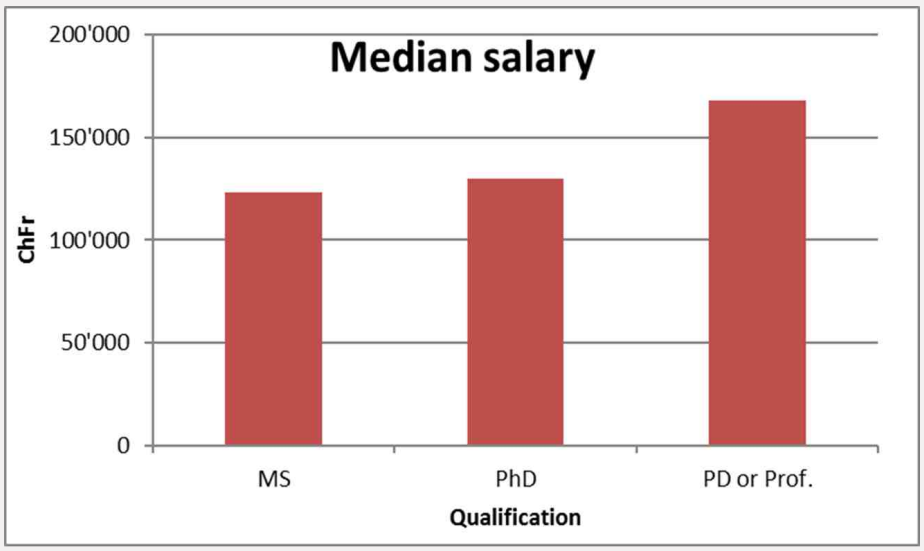
The completion rate is similar to the previous survey conducted during 2014, based on 2013 data (52%). The rate of no response is slightly higher (31% in 2014). Some surveys were partially filled in but most data were missing. Therefore, definitive salary statistics is based on 92 persons' data, two less compared to 2014 (94 persons' data).
To get a higher participation rate, 2017's survey has been considerably simplified (14 questions compared to the previous 29), the survey was announced in April in the Bulletin 88, and the questionnaire was attached to the email invitation to let colleagues know what to expect before starting answering the questions. It seems that these strategies did not influence the response rate.
For each item of the questionnaire, the distribution of answers is described and analyzed by applying descriptive statistics, like frequency, mean, standard deviation and so on.
The full report provides an assessment of the salary of medical physicists in relation to descriptive criteria of the profession. The goal was to isolate interesting facts using descriptive statistics.

Salary statistics is presented here on a yearly basis, without bonus and extra income, without extra pays e.g. for family. In case of partial employment degree, the salary (brutto) is recalculated on a full time basis. In the histogram underneath showing the salary, corrected for full time, means: for 100 % working rate, whatever weekly working hours this corresponds to.

PROFESSIONAL AFFAIRS



All medical physicists have a MS degree or higher. The actual distribution of academic qualification does not differ significantly from that of 2013: MS 47% - PhD 46% (2017); MS 45% - PhD 47% (2013).
Having a habilitation to teach at university level results in a higher salary with respect to other titles. There is a slight salary difference between PhD and MS.

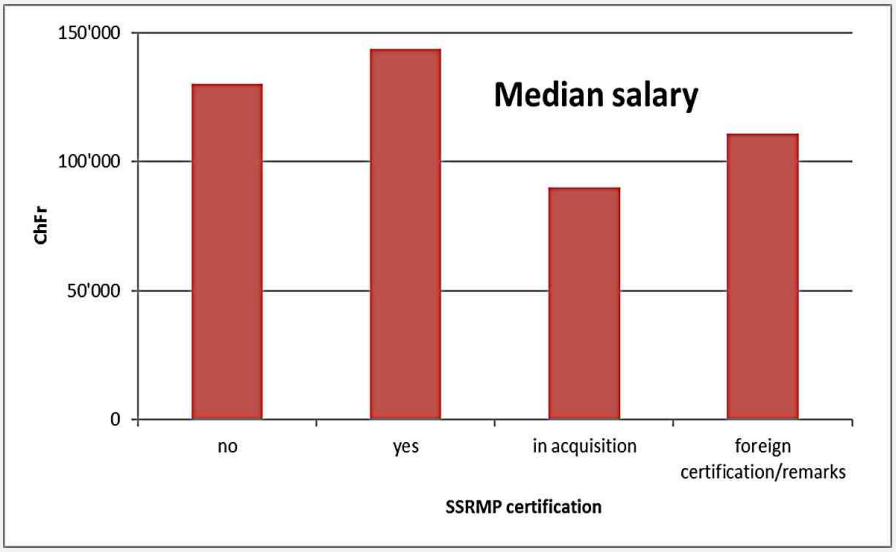


Annual Salary vs. academic qualification

Having the SSRMP certification results only in a slightly higher salary for colleagues that are not going under education. This fact is not proved by a robust statistics: the group of colleagues not having certification and not going under education is small (only 3 colleagues).

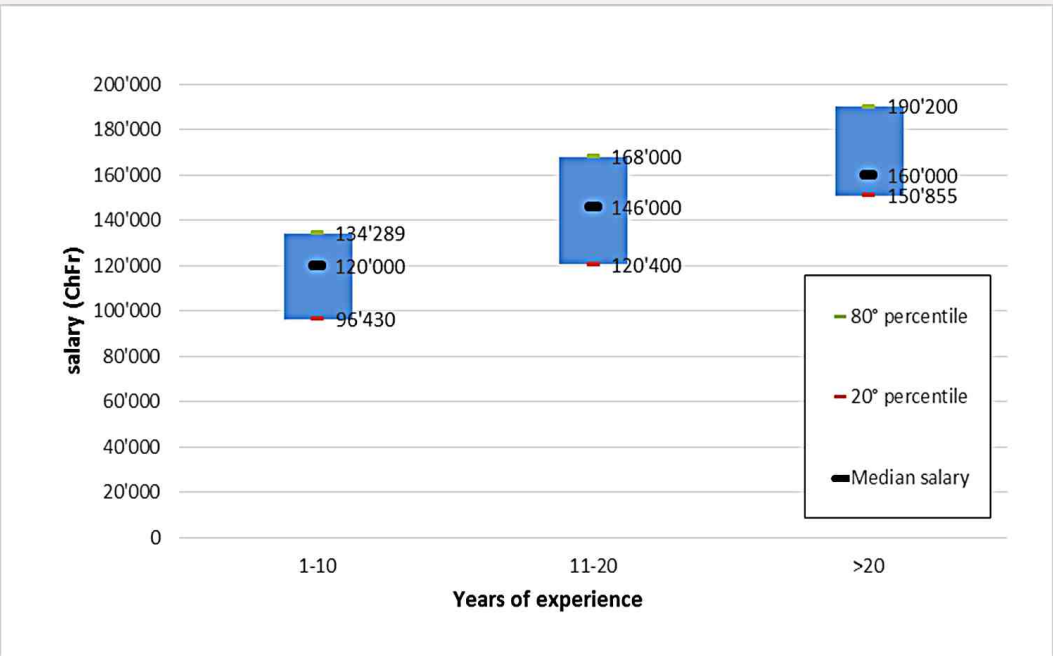
PROFESSIONAL AFFAIRS

The actual distribution differs slightly to that of 2013: SSRMP certification 84% - in acquisition 10% (2017); SSRMP certification 69% - in acquisition 15% (2013). Nine colleagues are acquiring certification: 5 of them at a university hospital, 3 at a public hospital, 1 at a private hospital. Two of these 9 colleagues have a professional experience longer than 3 years.



Annual Salary vs. SSRMP certification

About 50 % of the surveyed persons have less than 10 years of professional experience.
The salary increases with years of professional experience as expected.



Annual Salary vs. years of experience

Stefano Presilla,
on behalf of the committee for Professional Affairs

PROFESSIONAL AFFAIRS

SSRMP delegate in the clinical audit steering committee

Clinical audits are a powerful tool in continuous quality improvement.
According to the Euratom Basic Safety Standards (Euratom BSS) clinical audits are to be mandatory in all EU member states. Adhering to this, based on the new radiation protection ordinance, clinical audits will also be implemented in Switzerland, where they will be required for radio-oncology, nuclear medicine, interventional radiology and CT (*Dr. Michael Gasser, SSRMP-Bulletin 88 p.21*).
Responsible for the organisational concept and the strategy of clinical audits in Switzerland will be a steering committee consisting of delegates from the different professional organisations involved in the audits, namely SGR, SGNM, SSRMP, SVMTRA, SRO, FMH as well as the swiss federation, represented by FOHP. The steering committee will have the following responsibilities:

Strategy

- Organisational concept of clinical audits
- Definition of the selection process of auditors
- Writing of a strategy paper for each clinical audit cycle
- Formation of expert panels who will work out the specific contents and criteria for the audit round
- Definition of measures to be taken for serious deviations from regulations found during clinical audits

Approval

- Contents and criteria proposed by the expert panels
- Proposed auditors

Answer to complaints

My role as a delegate of SSRMP in the clinical audit steering committee is to promote the views and interests of medical physics in the tasks mentioned above.

Yvonne Käser

Do you know your delegate?

Although the SSRMP president is the first representative of the society, the executive board may require the support of additional delegates.
The board shall formally appoints a delegate as representative to another society or an authority's body to act on behalf of the SSRMP.
This article describes the tasks of one of your delegates.

http://ssrpm.ch/the-society/board/ -> Section "Delegates to other societies"

PROFESSIONAL AFFAIRS

EFOMP's Examination Board

Currently in many of EFOMP's National Member Organisations (NMO) a local examination board has not been established and medical physicists from such countries face difficulties in providing the necessary qualification evidence when they seek employment in other EU Member States or other countries.
In order to facilitate the harmonization of medical physics standards throughout Europe, so facilitating the mobility of medical physicists, the EFOMP's Examination Board (EEB) has been established in 2017 introducing the European Diploma of Medical Physics (EDMP) and the European Attestation Certificate to those medical physicists that have reached the Medical Physics Expert level (EACMPE).

The EEB examinations are voluntary and EEB diplomas will not replace any national certificates. However, they will be a common European qualification for medical physicists and they will help to standardise training and expertise in medical physics across Europe.
All medical physicists certified by a national competent authority in one or more sub-disciplines of medical physics (diagnostic and interventional radiology, nuclear medicine and/or radiation oncology) are eligible to sit for the EDMP exams. The examination is also open to medical physics residents/trainees after their second year of clinical training as specified in the "Guidelines on Medical Physics Expert" (*European Commission, Radiation Protection (RP) 174, 2014, Page 16, "Qualification framework for the Medical Physics Expert"*). The knowledge base for the examination is as laid out in the EFOMP training curriculum for the respective discipline for which the candidate wishes to sit his/her examination and the form of the assessment will be decided by the EEB.
Additionally, the EEB will provide an attestation certificate to those medical physicists that have reached the Medical Physics Expert (MPE) level to be recognised by the relevant competent authorities of the EU Member States, according to the EU Directive 2013/59/EURATOM. To reach MPE status (Level 8) in the specialty area requires a minimum total of four years equivalent clinical training: two years equivalent of foundation training in the specialty area to clinical certification and a further two years equivalent of advanced, structured experience and CPD in the specialty. The oral interview by a pair of examiners will normally last for at least one hour.

Both EDMP and EACMPE are awarded for 5 years in the first instance, after which they can be renewed upon proof of CPD credits in Medical Physics.

The EEB is also dedicated to improving and expanding its Diploma and Certificate to other disciplines of medical physics such as MRI and non-ionising radiation.

Information about EDMP and EACMPE, examination dates, venue, application forms, training curricula, and other documents can be found in the Education section on the EFOMP webpage: www.efomp.org.

Stefano Gianolini
SSRMP-EFOMP Delegate

http://ssrpm.ch/the-society/board/
-> Section "Delegates to other societies"

EDUCATION

Invitation to SSRMP Education Course on "Medical physics in Nuclear Medicine"

Dear Colleagues,
SSRMP is going to offer a 2 days course for medical physicists being involved or getting involved soon in medical physics in the field of nuclear medicine.
The aim of the course is to review the physics of nuclear medicine to ensure that the education of the SSRPM certified medical physicists complies with the Swiss Radiological Protection Ordinance requirements. It will define the scope of tasks, duties and responsibilities that should be performed by a SSRPM certified medical physicist to give the required support in nuclear medicine applications.

Please take notes that only a limited number of places (12) will be available.

Subject: Nuclear Medicine

- Quality assurance relating to patient dose of a gamma camera and PET systems:
  - Level of image quality produced for a given activity
  - Correlation between algorithms and image quality
  - Adequacy of the imaging protocols with DRLs
- Patient dose estimation and verification:
  - Phantom measurements
  - Dose modeling
  - Analyzing individual patient dose protocols and comparison to DRLs
- Patient and staff dose optimization
- Legal aspect of radioprotection.
- Task of medical physicists in nuclear medicine.
- Practical exercises.

Venue: Kantonsspital Aarau
Date and Time: 27th – 28th of September 2018
Fee: 500 CHF
Registration: register online from the SSRMP website calendar of events before **1st September 2018** (http://ssrpm.ch/event/ssrmp-education-course-2018)

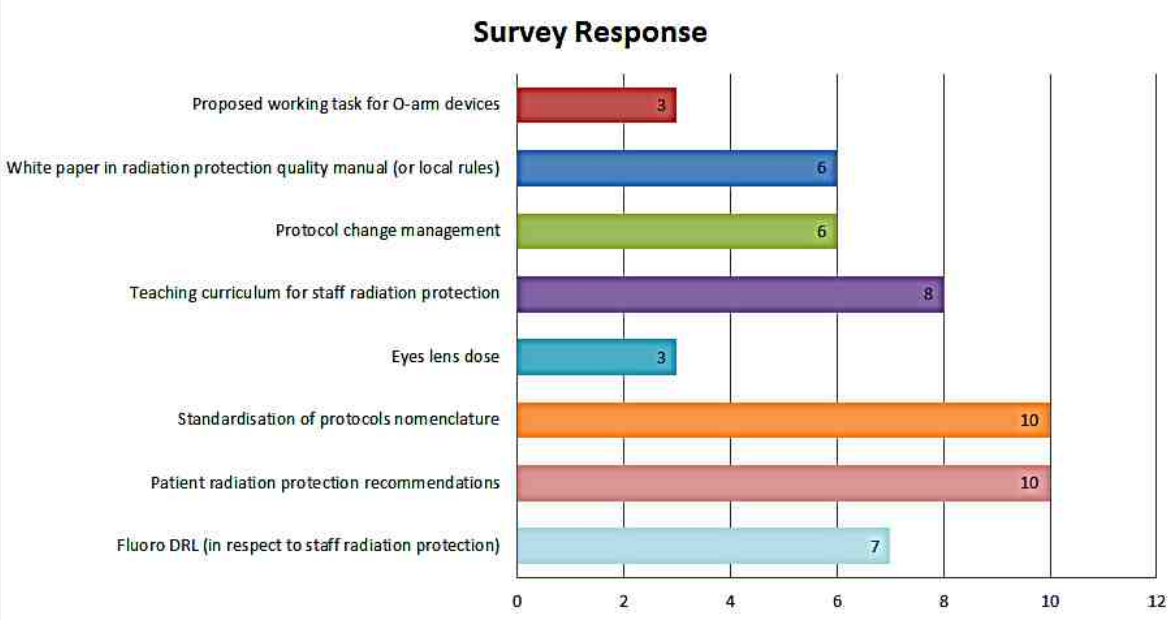
We are looking forward to seeing you in Aarau.

Frédéric Corminboeuf,
on behalf of the Education committee

SCIENCE

MIP Activities for 2018 - 2019

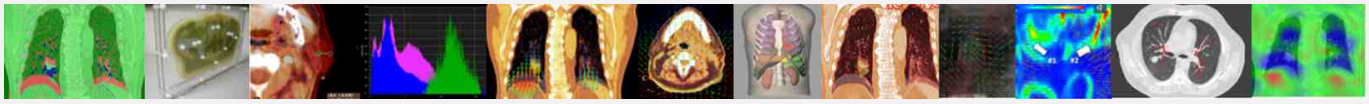
With the restructuration of SSRMP working groups and to become more dynamic and efficient, the MIP group decided, during its last meeting, to clearly define some topics (within its core modalities: CT, Nuclear Medicine and Fluoroscopy) to be covered during the meetings.
A survey was proposed and submitted to all MIP members to vote. Based on the most voted topics and required timeline, the MIP group would then select the number of topics or goals for the coming two years. At the end of these two years (2018/19) MIP aims to create statements (or if possible, recommendations) on common issues faced by medical physicists in Switzerland.
A survey on possible topics ran from November 2017 until February 2018. The results obtained are displayed in the figure below.



In the coming meeting a decision will be made based on these results.
In addition to the structure and topics of the MIP, the group discussed important topics concerning continuing education. As part of this, a dedicated education day for CT was held at USZ (organized by Dr. Saltybaeva) with topics covering dose monitoring software and optimization of CT procedures. The idea is that on these dedicated days, experts of the field will get together to share their experiences on a common topic. The next topics should be fluoroscopy (organized by Dr. Simmler).

Thiago Lima and Gerd Lutters
KSA, Aarau

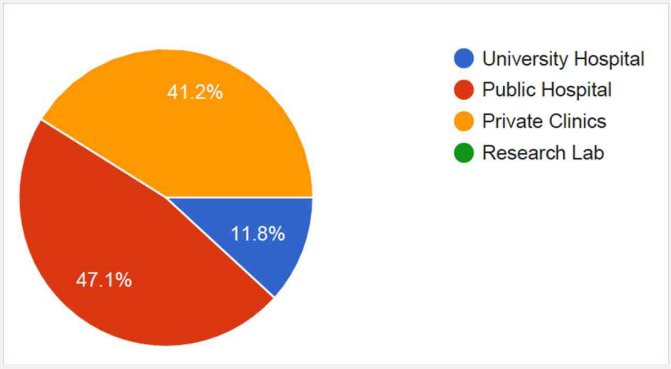
Survey of Deformable Image Registration usage by the Swiss Radio-oncology Institutions in 2017



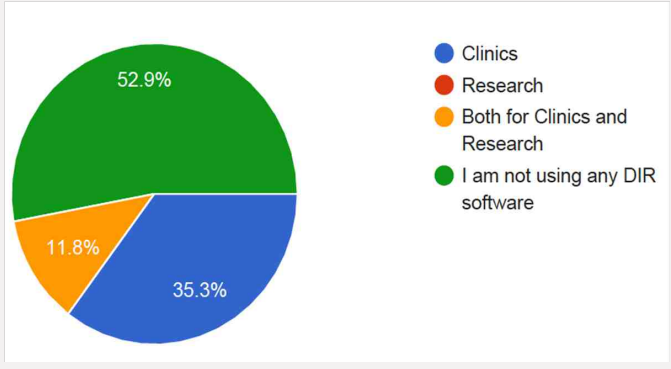
This anonymous survey was aimed at giving the 2017 snapshot of the usage of Deformable Image Registration (DIR) software in the Swiss Radio-oncology Institutions. The questionnaire consisted in 9 questions about the specific usages of DIR in clinics and research, the type of software in use with the actors involved and the type of QA performed with the tools employed. In order to avoid duplication bias, it was only sent by email to the 29 medical physicists responsible of the Swiss radio-oncology institutions. Answers from 17 (59%) of the institutions were received between September 25th and October 16th. A brief summary of the results was presented in the introductory talk of SSRMP Continuous Education Day in Solothurn (October 27th). This report provides the results in extenso with some tentative interpretation. Each graphics shows the question with the statistics in percent relatively to the total number of institutions having answered as well as in parenthesis the corresponding absolute numbers.

From the administrative section, we see that the answers received reflect the dominance in Switzerland of public hospital and private clinics over university hospitals. The majority of the institutions having answered (53%) are not yet using deformation image registration software. They are equally distributed between private clinics (29%) and public hospital (24%).

Question:
"Specify the type of Institution you are working"

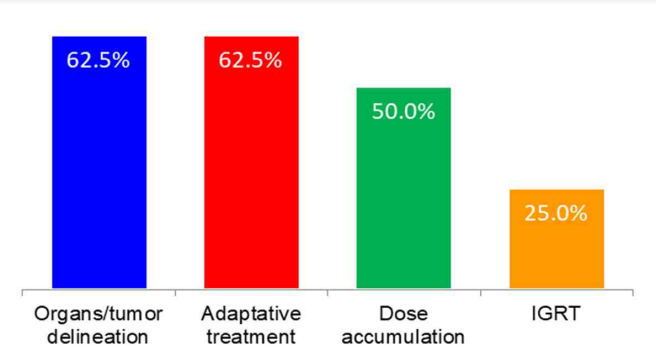


Question:
"Do you use your DIR software for"

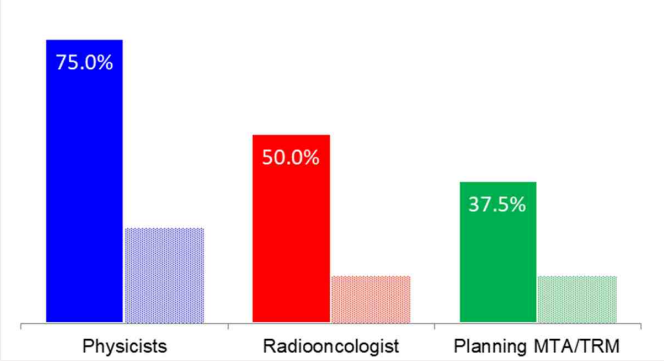


Concerning the clinical applications of DIR, the delineation of organs or tumor and adaptive treatment dominate. Inspection of the statistics shows that 50% of the institutions declare more than one usage of DIR, dose accumulation being used in 75% of the answers in addition to adaptive treatment. Note the absence of the use of DIR for 4D and response assessment. Statistically all professions are involved in these clinical applications, but 25% of the physicists are doing it not in cooperation with other professions (in solo in the graphs) compared to 12.5% for the radio-oncologists or the MTRA/TRM.

Question:
"Check your different usage of DIR in use at your institution"



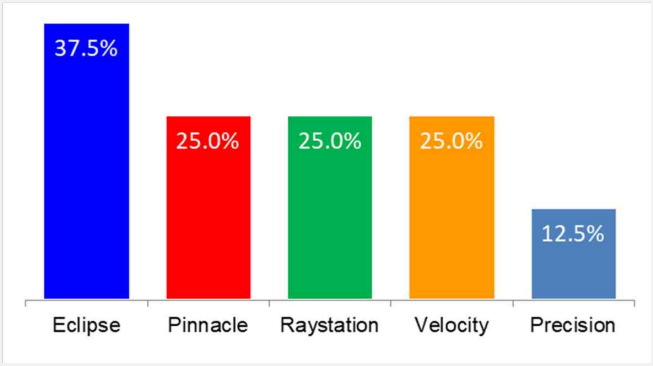
Question:
"Who is performing image registration in your Institution"



All institutions are using software from the major manufacturers, 75% of them as module inside their TPS and only 1 institution has more than one software in operation.

Concerning quality assurance, the survey reveals that only 2 (25%) of the institutions are performing specific QA of DIR. Both these institutions are performing QA for each patient treatment requiring DIR by visual inspection, completed in one of the institutions by voxel tracking. Only one institution announces performing QA for software commissioning and update. None of the advanced tools such as target registration error, dice similarity index, mean distance to agreement, jacobian determinant or specific phantoms were ticked.
Finally as part of their research, two institutions are evaluating commercial software for clinical suitability as well as testing commercial software performance.

Question:
"Which commercial DIR software is in use in your institution"



In conclusion this survey reveals that, as expected, usage of deformable image registration is still in Switzerland in its initial phase of introduction although already in use for some clinical decision. This becomes particularly clear if we assume that the 41% of the institutions have decided to not answer because they are not using DIR. However by their remarks to the survey, physicists are showing their interest to the subject as also supported by the large attendance to the SSRMP 2017 Continuous Education Day on DIR. Besides, the authors of this survey strongly believe that DIR and related automation processes will soon become a corner stone in the radiotherapy workflow. So they encourage the actors involved in radio-oncology including SSRMP to invest in acquiring the necessary competences in this field and develop protocols and recommendations specific to their clinical usage.

Jean-François Germond and Raphaël Moeckli
Scientific organizers of the SSRMP Continuous Education Day

SCIENCE

Swiss Congress of Radiology Announcement

Congress venue

SwissTech Convention Center, EPFL, 1024 Ecublens

Registration

Reduced fees for SSRMP members

Congress Presidents

SGR-SSR	Pr. Dr. D. Weishaupt, Zürich
SGNM-SSMN	Prof. Dr. Schaefer, Lausanne
SVMTRA-ASTRM	Mrs. Isabelle Gremion, Epalinges

SCIENCE

SASRO Annual Meeting Announcement

SASRO MEETING 2018

22nd Annual SASRO Meeting
30th August to 1th September 2018 in Zurich

Congress venue
Universität Zürich Irchel, 8057 Zürich

Registration
www.sasro.ch/sasro-2018/registration

Congress President
Prof. Dr. Matthias Guckenberger, UniversitätsSpital Zürich

Next Applied Medical Physics (AMP) Meeting

It is my pleasure to announce the next AMP meeting. This meeting is a general platform for all interested persons in medical physicists.

Traditionally, the AMP meeting is split up into two parts. In the first part, a dedicated topic is discussed while in the second part we concentrate on the current state of the different working groups of SSRMP.

Thus, please mark your calendar:

June 21st 2018, 09.15-12.30h, Bern

Raphaël Moeckli,
Chair of SSRMP Science Committee and Chair of AMP

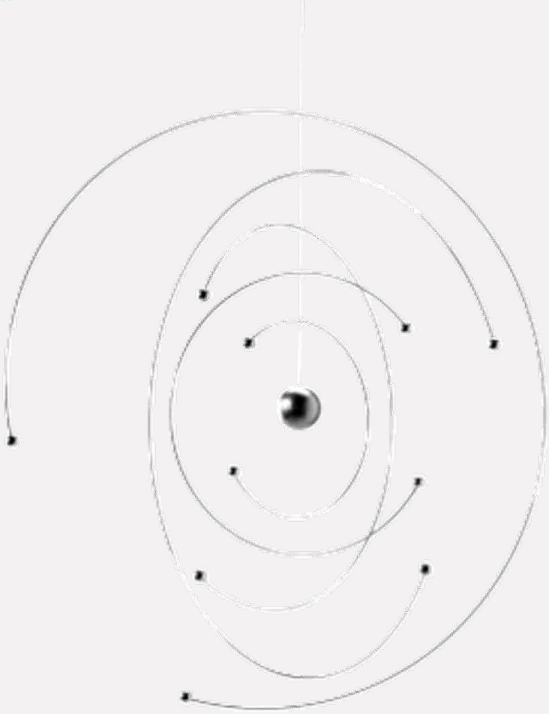
AMP

European Congress of Medical Physics Announcement

European Congress of Medical Physics 2018

Bridging knowledge across specialties

www.ecmp2018.org



SCIENCE

SSRMP Annual Scientific Meeting Announcement
22nd - 23rd November 2018

Congress President
Raphaël Moeckli

Venue
CHUV - Lausanne

Website for registration and information available soon in **www.ssrmp.ch**

Interview with the newly appointed Professor of Medical Physics

When the editorial team of the bulletin asked me to interview Michael Fix, I thought it would have been a difficult task to get in contact with the famous guitarist, composer and producer (http://www.michaelfix.com/) and, honestly, a quite bizarre request on their part. When I realized they were (more reasonably!) referring to the brilliant scientist Michael Fix, recently appointed Professor of Medical Physics (Faculty of Medicine) at the University of Bern, I thought it was an impossible task, Michael being such a discreet person. But I had the secret weapon of friendship, so I relied on that to convince him to accept this interview.

We thus met informally in a café, where he quickly answered my first questions, starting from **what had been the path leading him to this professorship**. *"It was not really planned, but a posteriori one can interpret it as a natural outcome — he said — of many years of interest and involvement in the research and in the dynamical world of medical physics, going back at least to my PhD at ETH, Zurich."*

When I asked him to tell us about **the most important ingredients of this achievement** (a little hint for interested ones?) the answer was a candid: *"Focus on top-level research, do not forget a dose of luck… and be always open to seize opportunities as they serendipitously arise along your path"*. This has been a constant in his career, from ETH to postdoctoral stints in Bern and as a faculty at the Virginia Commonwealth University, in the USA, until his appointment at University Hospital Bern, where he is Deputy Head of the Division of Medical Radiation Physics since 2011.

He then anticipated my obvious follow-up question: *"It is important for the medical physicists to keep a healthy relation with Academia and a sizable representation within it. First, in our day-to-day job, lots of medical physicists struggle to acquire a more egalitarian status with their medical counterparts within the hospital structures.*

Academicals positions give our job more visibility and recognition. Second, I believe that this increases the appreciation for the research aspects of our work, outlining the added value of knowledge and skills that our profession brings into the medical environment, not reducing our presence to the mere "rules of the law". Third, it is important vis-à-vis of young and excellent physicists entering into the field, to convincingly show them there are credible and viable job options both in the clinical path and in academics."

When asked on **his research lines**: *"I focused quite early in my career on the field of treatment planning, starting with MC simulations in dose calculations and moving into optimization of treatment planning, exploring additional degrees of freedom to improve the quality and robustness of treatment plans, while always aiming at keeping the process simple and suitable for clinical use."*

Some keywords for the future of medical physics to the benefit of all of us and in particular for young bright students? *"**Automation**, going along with **efficiency**, e.g. I see a growing role of machine learning tools and techniques. **Imaging**, because there is a necessity to see more and know more even before starting the radiotherapy treatment.*

***Interdisciplinarity**, going together with biology, oncology, clinical studies and evidence-based medicine.*"

At this point a break with lighter and more personal questions seemed appropriate: "**Do you still like your job?**" The answer was immediate, no reflection needed: "*Yes, I still do!*". Michael elaborated further: "*Teaching and interacting with students, as well as collaborations and exchanges in national and international networks created all along my career, make for a very diversified job, with projects and new ideas arising from the mutual exchange with students and colleagues … and a lot of fun! On the other hand, the price to pay is that the longer you go on, the lesser you do research by yourself. It becomes more a question of shaping and leading research projects, providing opportunities to guide young, interested and good physicists to enter the field of medical physics and develop their career. And that is worth doing, without doubts!*"

In the light of the success of my previous question, I seized the opportunity to insist: "**Have you always wanted to be a physicist?**" The answer was a bit unexpected: "*I had sort of an unusual path. I dropped out of school at the age of 16 to start an education as tool-maker in a metal-forming industry*." We might have missed the opportunity to get to know Michael, but luckily he went back to school. "*But I did not know what I really wanted to become. Eventually, a path leading to university studies in physics had the reassuring feeling of offering a solid formation with a broad spectrum of possibilities. Becoming a physicist does not lead to a single profession, but is versatile enough to open the doors to hundreds of them.*"

Stimulated by this unexpected answer, I continued: "**If you were a student now, what would you choose to study?**" "*Physics would be my choice again — he said — because it matches my genes, my nature, and because physicists are a bit strange. In particular, medical physics is a fascinating subject, which gets you in contact with other fields like biology, chemistry, medicine, easier than the other way round. It is also an opportunity of applying your skills as a physicist while doing something immediately meaningful to people and the society as a whole.*"

At the beginning, I was mentioning the artistic skills of the "other" Michael Fix, the guitarist. But just invite "our" Michael Fix for a tango, cha cha cha, walzer, rumba, and you will discover something you would not have imagined about him (well, at least I did not): he is a skilled dancer! But remember to let him lead the dance…

And if the dance is not really your passion, do not worry: you can always join in for skiing, or borrow a good book from him, or go camping with him. But be ready: be it on lakes, on some remote island, on a tour by a rented car or a camper, it will be of preference in cold temperatures and northern latitudes typical of Canadian or Scandinavian landscapes!

A final personal comment: listening at your answers, Michael, you made me feel the passion for what you do. If I were not already a medical physicist, I would have been convinced to become one!

As former student, colleague, and friend of him, and on behalf of all Swiss medical physicists, I would like to warmly congratulate Michael for his personal achievements and for having added another piece to the foundations of our community.

Vera Magaddino

AAPM - ISEP Therapy Physics Workshop

Durban (South Africa), 27th – 30th September 2017

The first AAMP-ISEP Therapy Physics Workshop was held on 27th-30th September 2017 in Durban (South Africa) in conjunction with the 55th National Congress of the South African Association of Physicists in Medicine and Biology (SAAPMB) under the slogan "Radiating Medical Physics through Africa". This workshop was sponsored by the American Association of Physicists in Medicine (AAPM) under the International Scientific Exchange Program (ISEP), with additional financial support provided by the International Organization of Medical Physics (IOMP) and a number of local companies.

This is the first time the AAPM-ISEP workshop takes place in South Africa (SA), identified as a unique country having the facilities and the resources enabling attendance from other nearby African countries. Medical Physics is well advanced in SA. The first group of Medical Physicists started working in SA during the 1950s and has been self-sufficient since the 1970s with regards to training and education of medical physicists, satisfying international standards. The profession is regulated by the Health Professions Council of South Africa (HPCSA) with the practice being regulated by the Department of Health Directorate of Radiation Control. There are 6 academic institutions actively involved in the training of Medical Physicists. There are currently about 120 registered Medical Physicists in the country actively involved in the profession. Approximately 80% of these physicists are involved in Radiation Therapy. The country boasts 23 MSc and 13 PhD students at present. The attendance at the workshop consisted mainly of professional medical physicists involved in therapeutic medical physics, radiation oncologists and a number of post-graduate students.

The workshop was intended for professionals where renewed faculty specialized in therapeutic physics, imaging and radiation oncology presented their experience in didactic settings, so as to maximize the learning experience for the participants of the workshop, to inspire further collaborative research and development efforts within South Africa and regionally, and to improve the quality of patient care through closer involvement of clinical medical physicists. This 3-days workshop included advanced lectures and practical sessions, organized with generous support provided by Elekta, covering various aspects of the applications of physics in medicine, emphasizing imaging and radiation treatment of cancer. The AAPM faculty were involved and participated actively in the SAAMBP conference by giving keynote lectures prior to the ISEP meeting that were very well received.

The invited AAPM faculty included Profs. Habib Zaidi (Geneva University Hospital, Switzerland, workshop director), Jacob Van Dyk (Western University, Canada), Charles Shang (Florida Atlantic University, USA), Moyed Miften (University of Colorado, USA), Cheng Saw (Northeast Radiation Oncology Centers, USA), and Yakov Pipman (AAPM/IOMP, USA). The co-directors for the workshop were Prof. Habib Zaidi, representing AAPM-ISEP and Dr Graeme Lazarus, President of the SAAPMB.

The first day was very well attended, with over 100 participants including invited guests representing different bodies involved in medical physics and radiation oncology activities in the country. Unfortunately, contrary to the envisaged plans, participants were mainly from South Africa owing to the lack of financial support, but also from other neighboring countries (Nigeria and Namibia). More than 100 certificates were delivered to participants at the end of the workshop.

A small but energetic industrial exhibition took place in the adjacent main auditorium. After the opening of the meeting by Dr. Rory Callaghan, (a local Radiation Oncologist in charge of the busiest private practice in the province), the conference started with an opening lecture by Prof. William Rae (one of the pioneers in the field running an active academic medical physics program in the country) on the history

of medical physics in South Africa. This was followed by series of basic and advanced lectures dealing with various aspects of therapeutic medical physics and clinical applications in radiation oncology. The official program included more than 18 hours of classroom lectures on various therapeutic medical physics topics. The full scientific program can be consulted on the workshop web site. In addition to didactic lectures, one afternoon (3 h) was dedicated to practical sessions that were highly appreciated by the attendees.

After 3 inspiring days, the workshop came to a close on Saturday 30 September 2017; leaving behind some remarkable teachings and countless wonderful memories … This was followed by a short visit to the Medical physics department of the University of Bloemfontein where all AAPM speakers accepted the invitation of Prof. William Rae to give additional lectures to his graduate students and junior faculty on October 2nd - 3rd, 2017. The interactive sessions with the PhD students organized in different groups according to their research topics and background of AAPM faculty were very beneficial and enabled fruitful brainstorming sessions. I personally take this opportunity for thanking Prof. Rae for his contributions to the advancement of medical physics in South Africa and regret that he will be moving to Australia at the end of the year.

The local organizing committee did an excellent job from looking after accommodation for AAPM faculty and participants coming from outside Durban, to lunches, gala dinners … etc. The educational program was remarkably executed, as witnessed by all participants and reported in the evaluation forms. The conference drew some of the widely known experts in diagnostic and therapeutic medical physics and it was no surprise that the lectures were of great quality. All invited speakers delivered brilliant lectures and provided plenty of valuable handouts that were made available to the participants on USB drives.

AAPM-ISEP'2017 would not have been a reality if it weren't for all individual participants and representatives of the involved organizations, with special thanks extended to the main promoters of ISEP workshops (AAPM and IOMP) and the local host (SAAPMB) in addition to all local sponsors.

http://www.saapmb2017.co.za/

Prof. Habib Zaidi,
Head of PET Instrumentation & Neuroimaging Laboratory (PINLab)
Geneva University Hospital

Report on the International Conference on Monte Carlo Techniques for Medical Applications (MCMA 2017)

Napoli (Italy), 15th - 18th October 2017

Between the 15th and the 18th of October 2017 the MCMA2017 took place in Napoli, following a series of previous MC related meetings in Canada and Europe under EWGMCTP, McGill Medical Physics and Université Laval, setting a new record in the number of participants and the number of abstracts. The conference venue was located on the coast in a quiet district of Napoli close to the Castel dell'Ovo.

Although the main focus of the conference was medical applications of Monte Carlo (MC) techniques, a wide range of related topics was discussed ranging from physics changes to algorithmic optimization of MC code and from particle therapy to imaging applications of MC. The range of presented topics included:

- Updates to MC code physics
- MC physics and geometric input
- MC models for radiation sources and beams
- MC approaches in brachytherapy
- GPU/parallel implementations and deterministic methods
- MC applications in imaging and nuclear medicine
- MC in particle therapy
- MC treatment planning and evaluation
- MC applications in micro-dosimetry
- MC applications in IGRT and dosimetry
- MC in radiobiology

After an introduction and a MC code physics part in the morning of the first day, the conference was split up into two parallel sessions. Because of the relatively large amount of submitted posters there was a bit of an alternative approach for the poster sessions: for 2 days the morning and afternoon coffee breaks were extended in order to give time to visit the posters. This schedule allowed to look at certain posters in more detail and avoided big crowds in front of individual posters. I personally appreciated this approach.

After the Italian conference dinner on the evening of the 17th, which mainly consisted of excellent seafood, the conference was concluded with the last session of talks on the morning of the 18th about dosimetry and MC applications in nuclear imaging.

Abstracts accepted either as talks or posters are published in the supplement to the January 2018 issue of Physica Medica. In addition, the scientific committee (see picture) of the conference invited a few contributors to publish their presented work in a special issue of Physica Medica. These opportunities, the conference itself and several dedicated invited talks were organized by Paolo Russo and his local team. I already look forward to the next MCMA, which will take place together with the ICCR in Montreal in 2019.

Stefan Tessarini,
PSI

Report on the V International Geant4 School

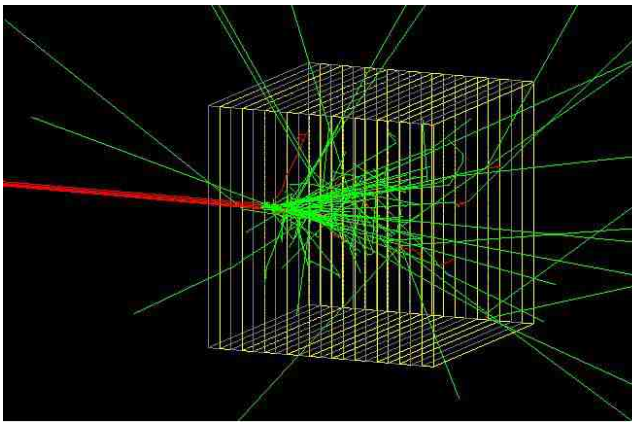
LNS-INFN, Catania (Italy), 23rd - 27th October 2017

Group picture taken on the roof of the guesthouse

The V International Geant4 School was organized by the Instituto Nazionale di Fisica Nucleare (INFN) and took place at Laboratori Nationali del Sud (LNS, www.lns.infn.it) in Catania (Sicily). More than 60 PhD students, young researchers and medical physicists working at universities, research institutes or hospitals coming from 17 nations attended the five days hands-on course.

Geant4 is a well-established Monte Carlo simulation platform, which is developed and maintained by the international Geant4 collaboration (geant4.org). The software toolkit uses object oriented programming in C++ to simulate the passage of particles through matter. Geant4 is applied in different research areas such as high energy physics, astrophysics, nuclear physics and medical physics.

The course was structured in theoretical and practical modules. All participants were asked to bring their own laptop equipped with an installation of the simulation software in order to run simulations during the practical sessions. However, a convenient alternative was to use a pre-configured virtual machine with a Linux operating system (CentOS) and ready-to-use Geant4 installation, which was provided prior to the course.



Snapshot of an example Geant4 simulation of five electrons (100 MeV) entering a lead absorber and generating photons (Bremsstrahlung)

The 1st and the 2nd day's lessons mainly focused on the introduction on the Monte Carlo method, the proper installation of the simulation software and all main aspects of the C++ programming language.
During the 3rd and 4th day we were trained how to define simulation geometries and primary particle sources, how to run and control the simulation via the user interface and how to extract information from the simulation (e.g. dose scoring). Many hands-on sessions gave us the opportunity to practice the coding ourselves. Provided with a code skeleton we were able to complete clearly structured simulation tasks that build upon one another. Thus we gradually proceeded towards more and more complex applications.
On the last day a special lesson was given on the Geant4-DNA project, an extension of the Geant4 toolkit dedicated to the simulations of biological damage induced by ionizing radiation at the nanometer scale.
A final exam tested and confirmed our learning achievements.

Personal remarks:

- The school was very well structured and organized. It is tailored to Geant4 beginners. All practical sessions were supervised by experts that guided us through the installation and helped us completing the simulation tasks. During these sessions we even had the opportunity to discuss some individual, research specific issues of implementation.
- In order to follow the C++ lessons, it is advantageous to bring along a basic knowledge of C++ programming.
- LNS is located on a hill approximately 3 km inland. During the breaks we enjoyed a fantastic view overlooking Catania and the sea shore.
- I had a very convenient stay at the on-campus guesthouse of LNS, right in the same building where the lessons took place.
- There were numerous refreshing breaks where Italian espresso, soft drinks and Sicilian snacks were provided.
- On Thursday evening a social dinner was organized in a Sicilian restaurant near the city center. A wonderful experience, especially for fish enthusiasts.

Sebastian Höfel
Medical Physicist, PhD student
Department of Chemistry
University of Konstanz

International conference on radiation protection in medicine: Achieving change in practice

Wien, 11th - 15th December 2017

The IAEA organized the first international conference on radiation protection of patients in March 2001 in Malaga, Spain, in order to guide international efforts in patient protection. Considering trends and developments, the IAEA decided to hold a second conference on radiation protection in medicine in 2012 in Bonn, Germany, which resulted in a list of ten necessary actions for radiation protection, known as the Bonn Call for Action. This last conference in Vienna five years after the Bonn conference aimed to assess the progress of implementation of the Bonn Call for Action. Topics included optimization and justification in medical exposure; safety in medical use of ionizing radiation; and radiation protection of medical staff and public, when ionizing radiation is used for diagnosis, intervention, therapy or research.
Different organizations and societies presented their efforts and evaluated how they satisfied the Bonn Call for Action. A big effort is being made for the radiation protection worldwide. The number of publications has been increased; campaigns such as WHO global initiative, ImageGently and ImageWisely provide useful information to both patients and healthcare providers, while other campaigns on radiation protection such as Eurosafe have further inspired actions such as Arabsafe and Afrosafe to promote radiation protection in other regions of the world. There is still room for improvement.

Radiation protection issues were addressed in many different presentations. The one that summarized thoroughly the situation was given by E. Vano who reported the conclusions of the Ibero-American Conference on Radiation Protection in Medicine (CIPRaM) held in 2016. The main conclusions of the CIPRaM conference were:

- Need to improve the training – initial and continuous- in radiation protection in medicine and the culture of radiation safety
- Need to improve and update regulations and guidelines
- Need to improve the training of inspectors
- Insufficient number of medical physicists in imaging
- Promote the use of DRL
- Efforts to avoid incidents and accidents in medical exposure
- Efforts for the safe use of new technology in medicine

Different radiation protection stakeholders were asked to identify their needs during the CIPRAM conference (Table 1). Although this conference was addressed to Spanish-speaking healthcare professionals and authorities, it concerned more than 600 million people so these conclusions may be used in other countries giving different priorities according to the needs of each country.

A fascinating talk on optimization of dose and image quality was given by E.Samei. He highlighted that optimization is a multifactorial process and should take into account radiation risks, clinical risks and thus clinical indications and image quality.

A vivid discussion took place during the roundtable on “Communication of the risks”. Patients are interested to learn about radiation risks, however, there is no systematic method to explain the risks to them and often no one among the healthcare providers (referee physician, radiologist, technologist or

medical physicist) explains the risks. Much information is found in the internet and other sources, which may confuse and frighten the patient. The demand of patients being informed is increasing, thus healthcare providers need to get prepared. A more difficult case is the communication of risks regarding pediatric patients. WHO published recently the "Communicating radiation risks in pediatric imaging", which contains information about benefits and risks to support healthcare discussions. You may download the WHO publication here:
http://www.who.int/ionizing_radiation/pub_meet/radiation-risks-paediatric-imaging/en/
Although children would not understand radiation risks and benefits, their cooperation during the radiological study will influence its results. Inselspital made a big effort to communicate effectively radiation through paintings to children undergoing examinations in Bern (Image 1).

Image 1: Efficient communication for patients: we need to take into account patient's age and level of comprehension

Three ICRP documents will be soon given for public consultation:

1. Occupational radiation protection in Interventional procedures
2. The use of effective dose as a radiological protection quantity
3. Radiological protection in therapy with radiopharmaceuticals.

Other ICRP task groups are working on:

- radiation protection of patient from radiopharmaceutical (update of publication 128)
- occupational radiation protection in brachytherapy
- radiological protection in medicine in relation to individual responses to ionizing radiation, an increasingly hot topic on radio-susceptibility
- daily imaging in radiotherapy, etc.

ICRP realized that access to its recommendations needs to be broaden, so free access is given to the first 60 publications (which is not very useful as it includes publications to 1988) as well as ICRP 103 (which is very useful). The difficulty to give free access to all recommendations is of course due to economic reasons.

Communication of ICRP needs to be improved. Information should be easily accessible through modern media and social platforms, otherwise new generations will not access it. So, a new website is coming early this year. It has also launched *ICRPaedia*, which is still in its infancy, but hopefully it will soon provide plain-language information to healthcare providers and maybe to the public with more in-depth information for people who require for it.

An international group (De la Heras Gala et al.) presented a poster on incident air-kerma in CT and CBCT. Incident air-kerma at the skin is useful for quality assurance and the definition of DRLs. IAEA, ICRU and ICRP recommend its use due to its simplicity and ease of measurement. This certainly requires a standard method for tomography applications including CT and CBCT. The authors developed a free website (**https://quart.shinyapps.io/PAKT/**) to provide reference levels and values for specific patient size and tube current-time product (mAs). What the user needs to have is a solid-state dosimeter to measure air-kerma. The results allow comparisons among x-ray modalities as well as information on patient risks.

The conference records can be found online:
https://www.iaea.org/events/radiation-protection-in-medicine-conference-2017
Samei's, ICRP and the presentation on risk communication are really worth watching.

Special thanks to Dr. Rainer Wolf (Inselspital, Bern) for the interesting discussions in Vienna and providing Image 1 for the needs of this article.

Samara Eleni-Theano,
medical physicist at Hôpital de Sion

Table 1: Radiation protection issues according to different radiation protection stakeholders

Diagnostic radiology (dental radiology included)

- Significant number of diagnostic examinations not justified
- Insufficient optimization actions and lack of diagnostic reference levels (DRLs)
- Insufficient education and training programs in radiation protection including lack of continuous education for health professionals
- Insufficient radiation protection culture in the health sector (including the lack of dialog cost-benefit) and the and the need to work as a team of different professionals
- Insufficient effective and updated regulation in RP for diagnostic and dental radiology

Interventional radiology

- Insufficient RP culture, misuse of RP tools, lack of knowledge of RP strategies for patients and staff
- Insufficient personal occupational dosimetry
- Insufficient number of professionals, especially physicians, trained in RP for interventional procedures and insufficient number of medical physicists supporting these practices
- Insufficient recommendations and guidelines on RP in interventional practice
- Scarce number of scientific papers on RP during interventional practices

Nuclear medicine

- Need to ensure that the correct dose is delivered to the patient
- Need to avoid contamination and irradiation of the hands and eyes (rest of the body, too)
- Need to optimization of doses in diagnosis and treatments
- Need to promote justification of the examinations in NM
- Need to prevent incidents and accidents

Radiation therapy

- Insufficient human resources (radiation oncologists, medical physicists and technologists) and need to update their training
- Insufficient quality and safety in use of new technologies and lack of standards for the prescription, registry and reporting
- Buying new equipment without proper technical advice
- Inappropriate and unsafe use of radiation therapy in critical population groups (pediatric and adolescent)

Health and regulatory nuclear authorities

- Insufficient effective coordination between regulatory authorities at national level
- Regulatory problems of different nature, such as inconsistency between different regulations, need of update and lack of implementation guidelines
- Insufficient effective control over purchase-sale of equipment, QC and maintenance of radiological technology
- Deficiencies in the education and training programs in RP for health professionals and regulators especially for new technologies
- Limited information for decision making and prioritization of actions by the regulatory authorities

Professional associations of technologists and nurses

- Lack of lifelong learning and mandatory education and training in RP
- Lack of proper use of RP methods and tools
- Difficulties in the optimization of procedures due to the lack of knowledge of exposure parameters and their impact on patient dose
- Insufficient well-established national and international guidance to establish DRLs
- Limitations to audit procedures exposure and the QC of the equipment

Professional associations of medical physicists and radiation protection

- Lack of knowledge of the tasks and responsibilities of the medical physicist and radiation protection specialist, especially in radiology, interventional radiology and nuclear medicine
- Insufficient human resources properly trained in medical physics and RP
- National authorities responsible for licensing and control of medical exposures do not generally have adequately trained personnel
- Lack of quality management programs for medical exposures, including specifications for radiological equipment, acceptance and commissioning tests, as well as the initial and periodic training of operators
- Lack of recognition of the medical physicist as a health professional

Universities and research

- Lack of sufficient education and training in radiological protection and physics of ionizing radiation for graduates in medicine and other health specialties
- Scarcity and lack of regional coordination in the delivery of continuing training courses in RP for health professionals using ionizing radiation
- Difficulty to perform QCs in diagnostic radiology due to the general shortage of medical physicists dedicated to this area
- Difficult access to metrology services and calibration laboratories, which also have poor coordination between them
- Lack of coordinated research programs between universities and hospitals on RP in medicine. The fast introduction of new technology is a challenge for many RP aspects

PhD platform: Gorgisyan Jenny

Evaluation of the breath-hold approach in proton therapy of lung tumors

Proton therapy has the potential to improve the local control rates and reduce the risk of toxicity for lung cancer patients. However, the delivery of proton therapy is prone to uncertainties caused by anatomical changes and motion during the treatment and between the treatment fractions which may compromise its effectiveness. The dosimetric uncertainty of lung cancer proton therapy can be minimized through the use of motion mitigation techniques: increased margins, beam gating and breath-hold, tumor tracking and rescanning. Most of these techniques have been extensively investigated in the literature showing good results, but the breath-hold technique has remained relatively unexplored. The breath-hold technique has shown promising stability and reproducibility, together with good patient compliance, from photon radiation therapy treatment. The aim of this thesis was to investigate the robustness of the breath-hold approach for pencil beam scanned (PBS) proton therapy. More specifically, the residual motion as seen on repeated breath-hold computed tomography (CT) scans and fluoroscopy acquisitions was investigated using simulation and experimental studies.

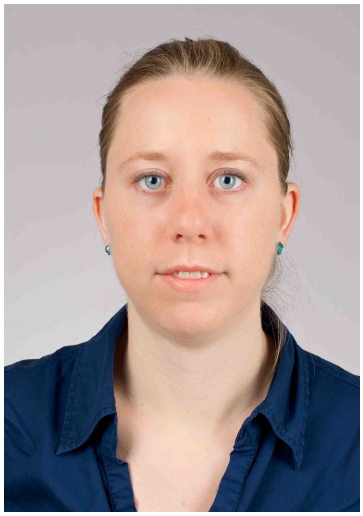
The work was carried out at Paul Scherrer Institute (PSI), Switzerland with clinical data from the Rigshospitalet, Copenhagen University Hospital, Denmark. All treatment plans were constructed in the in-house treatment planning system (TPS) PSIplan at PSI. Four-dimensional (4D) dose simulations have been carried out using our in-house developed 4D dose calculation software based on the PSIplan and Plastimatch image registration. Experimental studies were performed at PSI using a dynamic anthropomorphic breathing phantom whose artificial lungs can be deflated and inflated according to pre-programmed motion patterns e.g. from patients.
The work included in this thesis was divided into four different studies and the summarized results are as follows:

- **Study 1:** The robustness to inter-fractional breath-hold motion is sufficient for 14/15 single field uniform dose (SFUD) cases for patients diagnosed with early-stage non-small cell lung cancer (NSCLC). Patients with small tumors and large baseline shifts are prone to achieve larger dose deviations.
- **Study 2:** The robustness to intra- and inter-fractional breath-hold motion is sufficient for 12/15 intensity modulated proton therapy (IMPT) cases of patients diagnosed with locally advanced NSCLC. The change in water-equivalent path length (WEPL) is shown to be a good predictor of plan robustness, in addition to baseline shifts of the tumor.
- **Study 3:** Robust beam angles are patient dependent and the change in WEPL is confirmed to be correlated to dose degradation.
- **Study 4:** The robustness to intra-breath-hold motion is sufficient for single field uniform dose (SFUD) plans, but not for IMPT.

Further studies are necessary to identify more parameters important for prediction of plan robustness, through e.g. more extensive image data sets. Incorporating this motion information in the 4D dose calculation software would strengthen the simulation method. Improving the dosimeter for the LuCa phantom could increase the precision of the dose readout for the experimental studies.

Overall, the results of this thesis encourage a clinical implementation of the breath-hold approach.
The clinical benefit of this approach remains to be discovered.

Interview with the Doctor



What did bring you to choose the topic for your PhD?

I was investigating a similar topic already during my Master-project and I found it very interesting. I believe lung cancer treatment of moving targets with proton therapy is challenging and I was determined to find out if breath-hold could be a clinical valid option to minimize the effect of motion.

What did you enjoy the most about the project?

I enjoyed the experimental work the most. You can always repeat simulations if you would like to change something or in case you made an error, but with experiments you need to plan everything carefully as you only have one chance. It gave a certain excitement and I did enjoy these preparations and the following experiments.

Which part of the project was the most challenging for you?

The most challenging part of the project was to interpret the results and to understand what was clinically significant. For example, to what level could we allow the dose to change due the motion during the treatment?

Which impact do you think your results will bring into the clinical radiotherapy workflow or for the medical physicists community?

The conclusion of my thesis was that the breath-hold approach is encouraged to be implemented as a motion management technique to safely treat the moving targets of lung cancer patients with pencil beam scanned (PBS) proton therapy. As these results are based on simulations and experiments, clinical studies should however also be performed to confirm that the breath-hold approach is safe, robust and efficient to use in PBS proton therapy.

Would you do it again?

Absolutely.

What are your prospectives for the future?

To give the radiotherapy patients the best of care through high-quality treatments and state-of-the-art research.

Jenny Gorgisyan
PSI

Münsterlingen

The cantonal hospital of Münsterlingen is located in the canton of Thurgau on the northeastern border of Switzerland, overviewing Lake Constance. The old buildings of the hospital used to be a monastery dedicated to treating the sick. It can trace back its origins to 986 when Angela, the daughter of King Edward and sister to abbot Gregory of Einsiedeln, was saved from a storm on Lake Constance and decided to thank God for her rescue by funding a monastery on the shore, where she set foot on land again.
While a thousand years of experience in treating patients and the old monastery building with its baroque church have their benefits, they don't offer much in terms of "know how" or radioprotection for a modern radiotherapy department. So radio-oncology is housed in one of the newer buildings... Underground... Sadly we can only enjoy the great view during lunch break.

As radiotherapy departments go, we have always been one of the smallest ones in Switzerland. We have one Varian iX linac (called RadiX) that was installed back in 2007 and we use it to treat approximately 500 patients per year with a wide range of tumor sites. To complement the linac, we also treat patients with an HDR afterloader from Varian and the Intrabeam intra-operative radiotherapy device by Zeiss. In addition, the medical physics team is also responsible for the dosimetry of the XStrahl orthovoltage unit of the dermatology department at the cantonal hospital of Frauenfeld.

Speaking of the medical physics team: we are a team of four medical physicists (three with SSRMP certification and one in the second year of his trainee position) and one PTA. Our duties outside the RT department are to provide radiation protection services for the whole Spital Thurgau AG and external clients.

For the future we have plans to expand our department: the whole cantonal hospital of Frauenfeld is in process of being rebuilt and the new building will house a satellite of the RT department in Münsterlingen with a brand new linac. This will allow us to implement new techniques like SRT. On the other hand, it will be a challenge to adapt our processes to a new department spanning two hospitals. If everything goes according to plan, we will be treating patients in Frauenfeld in summer 2019.

David Blumer, SSRMP Medical Physicist
Spital Thurgau, Münsterlingen

“People on the move"

Vera Magaddino

I joined the world of medical physics almost by chance. Initially, I wanted to study astronomy at the university, but I went on with my second choice (switching telescopes with micro-scopes!) and I graduated as Physicist at the University of Naples Federico II with a specialty in biophysics… and a hatred for Monte Carlo simulations.
After that, I seized the opportunity to continue with an European master in radiation biology at the University College of London, which made me travel all over Europe for stages in Leiden, Bruxelles, Salzburg and Munich. In Germany, I had the opportunity to work with a nuclear reactor neutron beam… kind of cool!
Growing cells and looking at the effect of their irradiation, while jumping all over the world, looked a natural and perfectly reasonable career…

Life took a slightly unexpected turn when personal reasons brought me back to my hometown, enrolling (a bit unwillingly) in a 4 years medical physics school in Naples. Surprisingly it revealed to be a good choice: I got more and more passionate about the subject! Those were very rich formative years which, after all, serendipitously also allowed me to pursue experiences abroad: I went for instance to the Fermilab neutron facility near Chicago for a stage, then in Bern where I completed my final project for the specialization in medical physics. There, as in happy-ending movies, I could reconcile myself with the world of Monte Carlo simulations thanks to my extraordinary colleagues.
Next jump was a minor one, geographically, but a major one professionally: I ended up at the CHUV in Lausanne, where my trajectory of growth received a further boost thanks to great colleagues and the many different advanced radiotherapy techniques I got experienced with. I’ll be always grateful for the opportunity and trust granted to me.

After almost 8 years spent in Lausanne (wow, they could stand me that long!), with a great sorrow for leaving my colleagues and friends, it was time for me to move on and start an exciting adventure at the Hôpital de La Tour in Geneva with new (but not unknown) great colleagues!

Vera Magaddino

“People on the move"

Tino Streller

Seit 2007 war ich Medizinphysiker am Universitätsspital Zürich. In dieser Zeit hatte ich die Möglichkeit, Erfahrungen auf einem sehr breiten Spektrum physikalischer Tätigkeiten rund um die klinische Routine zu sammeln. Eine besondere Herausforderung war die Optimierung der Ganzkörperbestrahlung, die ich in all den Jahren seitens der Physik betreuen durfte. Nach fast 11 Jahren verlasse ich nun das USZ, und freue mich sehr darauf, künftig das Team der Medizinphysik am Luzerner Kantonsspital verstärken zu dürfen.

Since 2007 I have been working as medical physicist at the University Hospital in Zurich. During this time I had the oppartunity to gather experiences in a wide range of physics work in the clinical routine. A special challenge has been the optimization of total body irradiation, for which I was responsible during all those years.
Now, after almost 11 years, I leave the USZ. I am looking forward to become a member of the medical physics team at Kantonsspital of Lucerne.

Tino Streller

Editorial staff and Information

Impressum

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Call for Authors

Also, you are invited to participate in the construction of our bulletins. Of desirability are all contributions that could be of interest to members of our society, such as

- Reports of conferences, working group meetings, seminars, etc.
- Reports on the work of various committees and commissions
- Succinct results of surveys, comparative measurements etc.
- Short portraits of individual institutions (E.g. apparatus equipment, priorities of work, etc.)
- Reports on national and international recommendations
- Short Press Releases
- Photos
- Cartoons & caricatures
- Announcement of publications (E.g. books, magazines)
- Announcement of all kinds of events (E.g. conferences, seminars, etc.)
- Short articles worth reading from newspapers or magazines (if possible in the original)
- Member updates (E.g. appointments, change of jobs, etc.)

The easiest way to send your document is as a MS Word document via email to one of the editor addresses above.

Deadline for submissions to Bulletin No. 92 (02/2018): 07.2018

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Conference Calendar

CALENDAR 2018

April 20 Barcelona, ES	ESTRO 37 Barcelona April 20 - April 24 https://www.estro.org/congresses-meetings/items/estro-37
May 10 Lausanne	SCR'18 Swiss Congress of Radiology May 10 - May 12 http://www.radiologiekongress.ch/congress-2018/
June 3 Prague, CZ	World Congress on Medical physics & Biomedical Engineering June 3 - June 8 http://www.iupesm2018.org/
June 13 Toulouse, FR	57èmes Journées Scientifiques de la SFPM June 13 - June 15 https://sfpm-js2018.sciencesconf.org/resource/page/id/2
June 21 Bern	AMP Meeting http://www.ssrpm.ch
July 29 Nashville, USA	60th Annual Meeting AAPM July 29 - August 2 https://w3.aapm.org/meetings/2018AM/
August 30 Zurich	SASRO Annual Meeting August 30 - September 1 www.sasro.ch
September 27 Aarau	SSRMP Education Course on Medical Physics in Nuclear Medicine September 27 - September 28 http://www.ssrpm.ch
November 22 Lausanne	52nd SSRMP Annual Meeting http://ssrpm.ch

And please, if you participate in any conference or meeting, think of writing a few lines or sending a picture for the Bulletin.

THANK YOU!