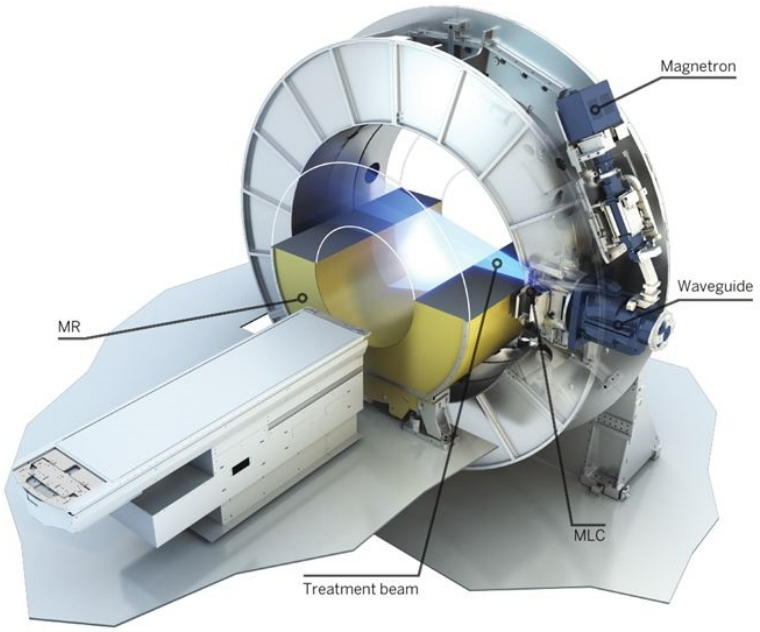
Schweizerische Gesellschaft für Strahlenbiologie und Medizinische Physik
Société Suisse de Radiobiologie et de Physique Médicale
Società Svizzera di Radiobiologia e di Fisica Medica

SGSMP
SSRPM
SSRFM



BULLETIN
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BULLETIN 84

December 2015

Cover images:

Prototype of the MRI-linac being developed at the Universitair Medisch Centrum Utrecht. The Dutch program is one of three international groups who are concurrently developing separate MRI-linac IGRT solutions. The top photo shows an artist rendering of the system while the bottom photos show the prototype with and without treatment covers. Photos provided by Prof. Jan Lagendijk.

Read more on MRI-linac programs:
Australian group: http://sydney.edu.au/medicine/radiation-physics/research-projects/MRI-linac-program.php
Canadian group: http://www.mp.med.ualberta.ca/linac-mr/
Dutch group: http://www.umcutrecht.nl/en/Research/Research-programs/UMC-Utrecht-Center-for-Image-Sciences/Research-programs/MR-Radiotherapy

LETTER FROM THE EDITORS

Dear Colleagues,

We would like to thank all of you who have contributed to this year's last bulletin. It is your contributions that make the bulletin worth reading and that we are able to maintain a community.

Our editorial staff would like to welcome the arrival of Mauricio Leick to our team. Mauricio will be functioning as web-editor of the new SSRMP website. The society's new website is in its early infancy and you can all help it grow by sending our team your medical physics photos! We will be using your photos to embellish the new website. All photos are welcome.

Speaking of photos...we are now accepting submissions for the annual SSRMP Bulletin Competition for Best Photo in Medical Physics! Submissions will be accepted up to the publication date of next bulletin issue, i.e. April 2016. The winning photo submission will be published on the front cover of the April issue.

Happy holidays to everyone and we'll see you next year,

Nathan Corradini, Shelley Bulling, and Francesca Belosi

Last year's photo competition winner, Nick Ryckx, shown here (in striking resemblance to a James Bond villain) holding his prize, i.e. the coffee mug and not the cat.

President's annual report 2015

Dear colleagues,

In the following I am trying to summarize the activities of SSRMP which have been taking place during the last year. By definition, a summary is always just a condensation of information and I try to do my best in order to highlight the most important aspects.

Certainly, my first year as president of SSRMP started with a big highlight: the "birthday party" of our Society in Luzern. In perfect physics related atmosphere – in the Hans Erni auditorium at the Verkehrshaus – we celebrated the 50st anniversary of SSRMP. It was due to the seamless organization of the corresponding committee members, the excellent presentations of the speakers, and the attendees in good temper that this event was so successful and is related to unforgettable impressions.

During the last year, we had five board meetings and we had many challenging discussions and also difficult decisions to take. In my opinion, during all the discussions, we were rigorously aiming to find solutions and to make progress. It was our sincere intention to guide the "SSRMP boat" through both, troubled and untroubled water, by looking at the most relevant and urgent aspects. I appreciate very much the friendly ambiance within the board and hence would like to express my gratitude to all board members for their efforts and their support during the last year.

After the elections on the last year's general assembly, the board has been constituted. According to the elections, Raphaël Moeckli took over the chair of SSRMP science committee. Fréderic Corminboeuf is chairing the education committee and the professional affairs committee is headed by Jean-Yves Ray. More details on the activities within their committees is given by the corresponding reports of these permanent committees. As in the last years, Daniel Vetterli is serving as our secretary and Werner Roser is taking care of finance issues and is thus our treasurer. In the bulletins of winter 2014 and spring 2015 you find additional information and also some short portraits of the board members. Although not board members, I would like to mention the bulletin editors and I would like to thank them for their great work.

In the last year, several SSRMP topics were associated to relationships to other societies or organizations. An important step was the setup of a contract with DGMP and OEGMP in order to solve current formal issues related to the "Winterschule Pichl" and to enable the future development of this commonly executed education program. Our relationship to BAG has a long tradition and in 2015 we had discussed several aspects with representatives of BAG on different occasions. Most urgently was the discussion about the planned revision of the radiation protection ordinance and the potential consequences for medical physics. Just recently, the official "Anhörung" has been launched and the SSRMP board will be getting in touch soon with the SSRMP members in order to collect feedback from the medical physics and radiobiology community. In addition, the issue of bunker shielding for linacs has been evaluated together with BAG and representatives of industry. After discussion at the AMP meeting in Bern, a working group has launched a corresponding survey and it is foreseen that more than half of the radio-oncology institutes in Switzerland will participate in that survey and will provide relevant data with respect to the current practice of bunker shielding.

The SSRMP certification is a key issue of our Society and we all know that the SSRMP certification plays an essential role for our educational strategies and the professional aspects. Historically, the idea of SSRMP certification was developed in the 80's and was continuously adapted over the years and converged to the current version. In 2015, several meetings took place (e.g. at the AMP meeting in Bern) and many more emails were sent and replied to and resulted in a draft of new guidelines which was presented at the general assembly on October 21, 2015 in Fribourg. It was mainly due to the work by

Hans Roser that this draft has been developed. I personally hope that the voting will be successful and that the new guidelines are going to be effective by January 1st 2016.

After a long time of development, thanks to the persistence and efforts of Raphaël Moeckli, the new SSRMP website was launched in summer 2015 and SSRMP is now represented in a more modern style. Appreciatively, Jean-Yves Ray has taken over the task of the web editor but everyone is welcome to support him in the further development and improvement of the website.

Interestingly, the SSRMP annual meeting 2015 coincided with a famous date of one of the "Back to the Future" movies: 21.10.2015. It took place in Fribourg and I would like to thank Pierre-Alain Tercier and his colleagues for their willingness to organize this meeting. I am sure that this meeting has given us another great opportunity to discuss common issues and to develop new ideas on how to improve our field of medical physics and radiobiology.

SSRMP is not only recognized as a national but also as an international society. It has done a great job over the past 50 years to develop the field of medical physics and radiobiology. It has been a great idea of the founders of SSRMP to setup this Society, and it is the merit of our predecessors that SSRMP has such a high level of reputation. In this context, I would like to note that the current impact factor of the SSRMP related journal – Zeitschrift für Medizinische Physik – has increased to a value of 2.963. However, the story is not finished, yet. Our Society is still needed and I would like to motivate all of you to get involved in the aspects of our Society. Your contribution is important and by actively participating in one or more of our working groups you can influence not only your own work but also have impact to others. We have excellent institutes in Switzerland with top-quality equipment where daily clinical practice, research and development as well as educational activities are performed on the highest level. Collaboration between peers has always been easily established within SSRMP. We are sharing ideas, concepts and are open-minded. It has always been no big deal to get in touch with SSRMP members and to attend working group meetings. I hope, and I will do my best, that these qualities and features are still seen to be essential and will continue to be supported in the future.

On occasion of the anniversary meeting in Luzern I was saying already that we have the best profession in the world and I would like to emphasize here, again, that we are involved in the most fascinating physics I can imagine. Medical physics is dealing with questions of all fields of physics: The physics behind it is experimental, theoretical and applicable. It is influenced by particle physics, solid-state physics, statistical mechanics, and quantum mechanics. There is electrodynamics inside as well as mathematics, computing science, and biology. It feels challenging, it feels complicated, and it feels absolutely right.

Peter Manser, Bern, 21.10.2015

Annual general meeting report of the Scientific Committee 2015

The scientific Committee is composed of Shelley Bulling, Marc Pachoud, Stephan Scheib and Raphaël Moeckli.

The committee evaluated the applications for the SSRMP research grant. Unfortunately, it has not been funded this year. The grant is open for 2016.

The winner of the Varian prize is Carles Goma ("Hauptpreis") with an excellent paper published in PMB: "Proton beam monitor chamber calibration". Congratulations!

The scientific committee is supposed to "supervise" the organization of the annual meeting. It was not needed this year because the organizing committee chaired by P.-A. Tercier did an excellent job and provided us with a great meeting in Fribourg on the 21st and 22nd of October. The next annual meeting (50th) will be jointly organized with SASRO (20th meeting) in Sursee from the 25th to the 27th of August 2016.

As usual, the different working groups had different activity levels. I would like to thank all the working group participants for the time that they contributed to our society and to warmly invite anyone who is interested to join a working group to contact the relevant person (the list of working groups and chairpersons is available on our website).

The last AMP meeting took place in Bern on the 30th of March 2015 and was mainly dedicated to the discussion of the new guidelines for medical physics certification. The new guidelines were accepted during last general assembly and we are all grateful to Hans Roser for his work on these new guidelines. He spent a lot of time on that very challenging task – with success! Thank you Hans, and I wish you, by the way, excellent times during your retirement!

Last but not least, the organization of the SSRMP intercomparison has moved from St. Gallen to Lausanne (except for the tomotherapy intercomparison) and I have to express my (and our) gratitude to Hans Schiefer and his team for having organized the intercomparison for so many years. Claude Bailat and Thierry Buchillier are taking over the job. I thank them for having accepted this task and I wish them all the best!

Raphaël Moeckli, chair

Annual general meeting report of the Education Committee 2015

Dear Colleagues,

Since a year, I am in charge of the education committee. Thanks to the work and support of Hans, we can propose you some revised guidelines which I hope you will accept. The main changes are a new definition of the medical physicist in Switzerland. The second, which gave a lot of discussion during our different meetings to prepare them, was the exam procedure. In the new guidelines, a medical physicist having an M.Sc. in medical physics, a MAS in medical physics or a foreign certification will have only to pass an oral exam, however the candidate may take the written exam if they want, they are free to ask.

Also to be clearer about some procedures like equivalence of education, exams, we published new annexes.

Concerning the medical physics specialisation exams, this year we will have 15 candidates, and as past years the exams will take place at the beginning of November.

I want also to advertise our education day which will take place on the 27th of November in Aarau and hosted by Kantonsspital. For any further information please contact Gerd Lutters.

I want also to thank all the colleagues of the education committee and specialisation commission for their support and work.

Frédéric Corminboeuf

Annual general meeting report of the professional affairs committee 2015

You certainly noticed that the SSRMP committees, namely education, science and professional affairs are nowadays composed of numerous persons. For those of you like me who have followed more than a decade of evolution of clinical medical physics, we have seen a decrease in our availability for society duties, maybe this trend has been due to an increase of our time in clinical work environment, as certainly our social environment. Our response has been to involve more colleagues to aide in distribution of the duties. So please don't be shy to commit yourselves to your society; your level of involvement will be useful and well appreciated anyway!

So as of today, the committee for professional affairs is composed of 7 colleagues altogether: Roman Menz, Stefano Presilla and I are involved in the executive matters of SSRMP along with our colleagues of the board, and as chair of the committee, I do support the president and committee's chairs for specific duties like our periodic meetings with BAG. From our past experience with the professional association SBMP/APSPM, we learned that separating professional facets from education and science was incorrect. Today, with a strong representation of the professional affairs committee, the board itself tackles educational and scientific developments within the society with definite professional considerations as well.

High resource demanding, the salary survey is an assigned duty of the professional affairs committee. It is periodically run, with the last one having covered the year 2013. The response rate was 52% that is considered a fair indicator that the salary survey remains one of your expectations. Analysis of the data is delicate, especially where stratified into smaller subcategories. Only qualitative evaluation is possible. We have the feeling that the survey questionnaire should be further simplified by reducing the number of query, focusing on determinant parameters. I invite you to share your thoughts and advices with us or better, be involved yourself. Although the board hasn't decided yet, the next survey will probably be collected in 2017 covering the year 2016.

Part of the committee is also the editor team which was strengthened this year by welcoming Francesca Belosi who joined Shelley Bulling and Nathan Corradini. The bulletin depends on your contributions to maintain three issues per year. Please share your experiences, training courses and meetings by briefly reporting to the whole community. Your ideas for developing the bulletin are welcome.

Earlier this year, I called for an additional enthusiastic volunteer to join the team for making the new SSRMP website living. I'm glad to welcome Mauricio Leick as web-editor who has already taken the task very seriously. Have a look at the newly designed website which was recently launched. This is obviously an early version which we would like to provide the basic needs. A collaborative platform has been set up by the web company for managing routine content updates but also for supporting developments for further improvements. Mauricio and I will ensure your publication requests are implemented by the web company. We are aware that your expectations with regard to the website are high so please be patient, we have limited resources. Of course, your ideas and advice are always welcome. Support us as much as you can!

I close this report with warm thanks to my committee team and wish you all the best for the new coming year.

On behalf of the committee for professional affairs

Jean-Yves Ray December, 4th, 2015

Summary of salary survey results

Report on professional information for medical physicists in Switzerland – May 2015

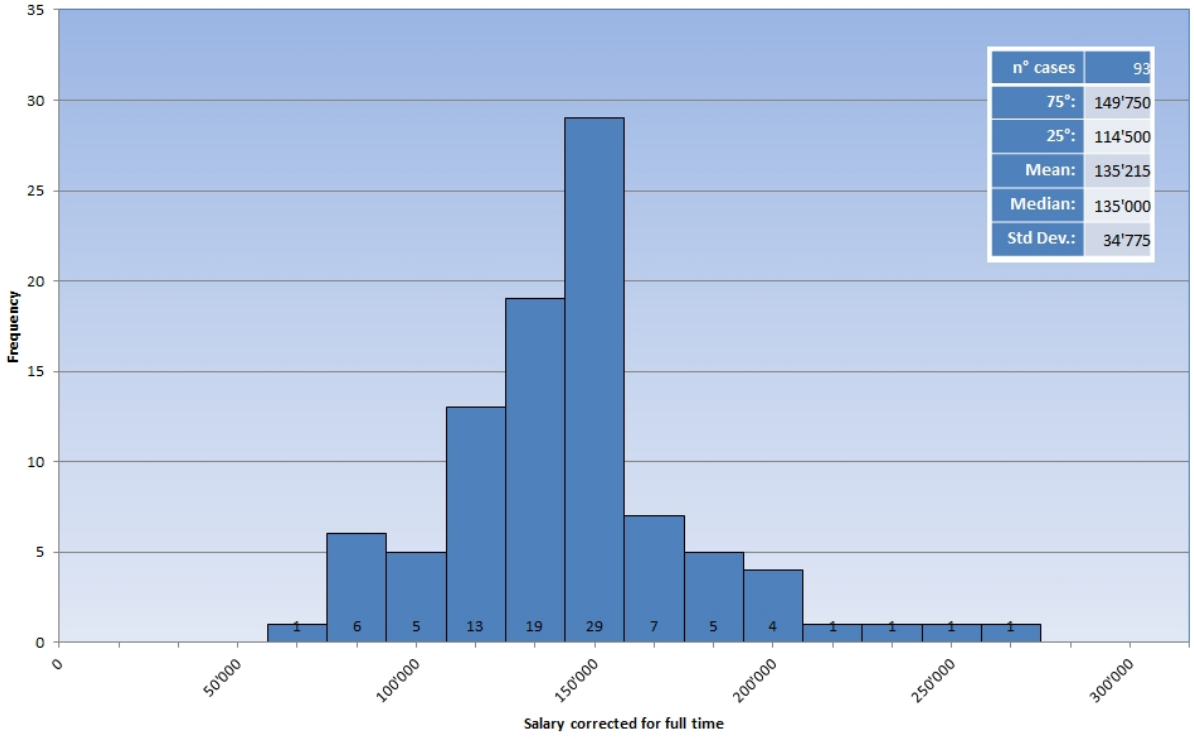
In July 2014 SSRMP conducted its second web-based salary survey following the 2011 inquiry. The committee for professional affairs presents hereafter a brief summary of the detailed report that received each participant who contributed to this survey.

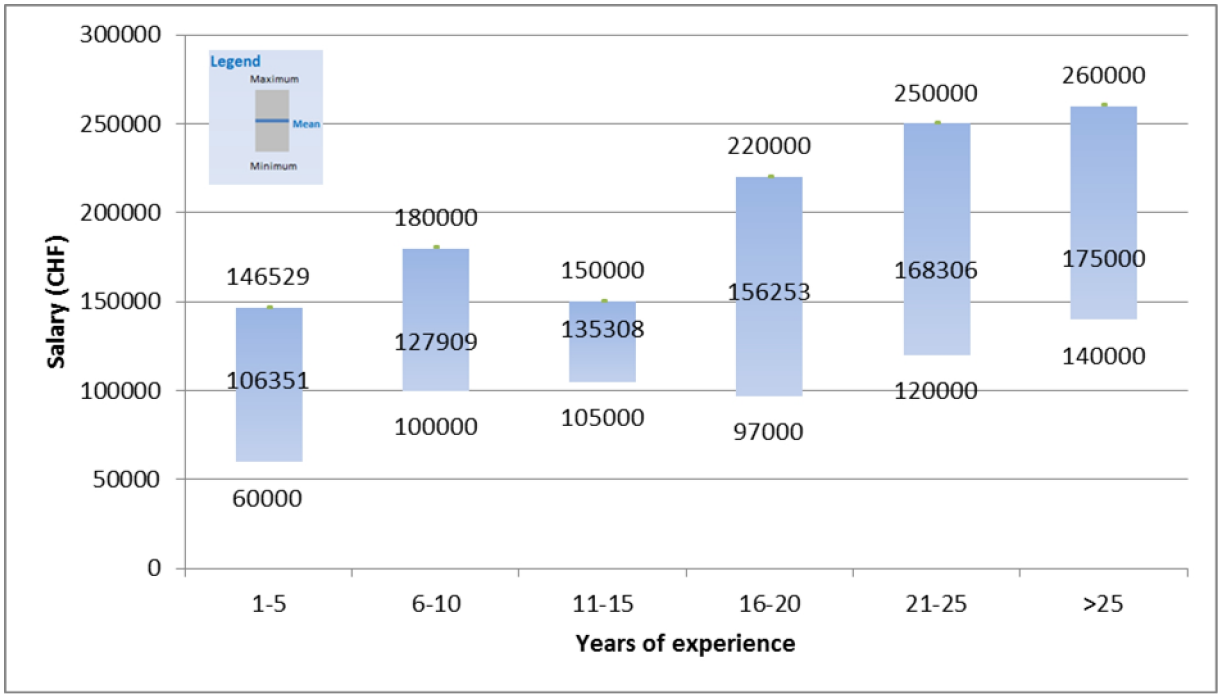
The target group of the survey was known medical physicists with and without SSRMP certification and engineers working in Switzerland. The total number of survey invitations sent out was 189. 98 of 183 valid returned surveys were completed. Although higher in absolute number (98 versus 90), its completion rate in percent is comparable to but slightly less than previous surveys (52% compared to 57%).

The full report provided an assessment of the salary of medical physicists in relation with descriptive criteria of the profession. Analysis, comparisons and correlations were shown wherever statistics showed significant relations. When data were tentatively stratified in smaller groups for finding out such relations, some of the results appeared not statistically significant. However, the goal was to isolate interesting facts using descriptive statistics.

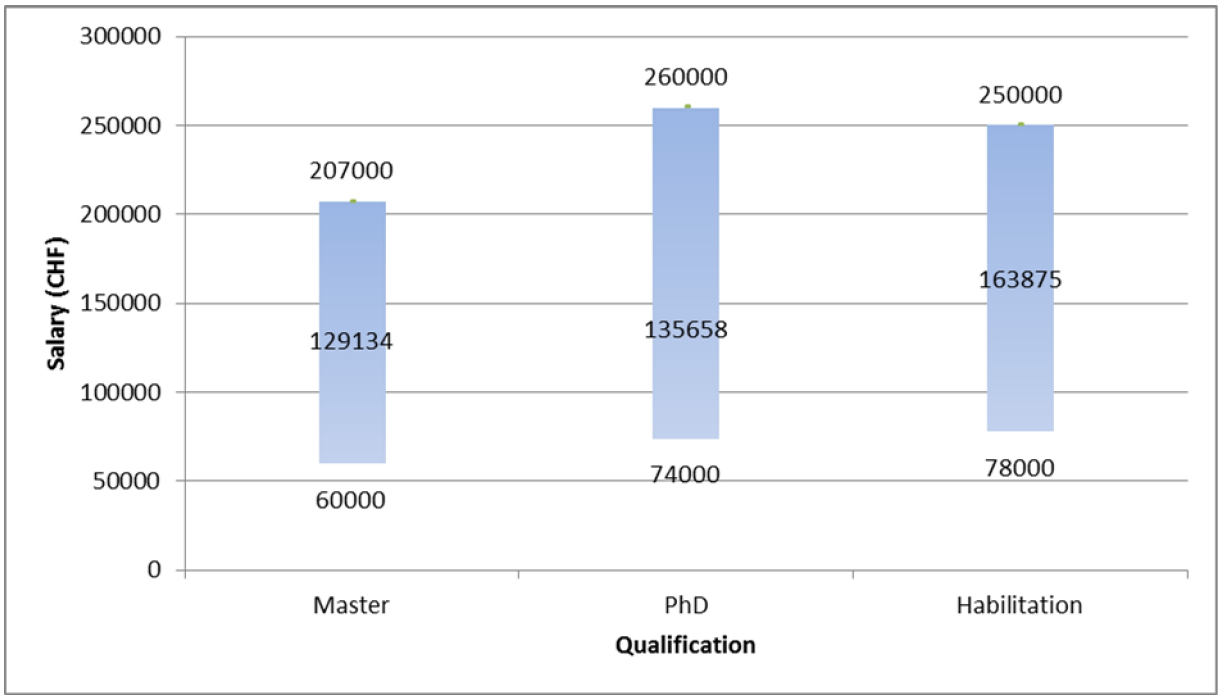
Salary statistics are presented here on a yearly basis, without bonus and extra incomes. In case of partial employment degree, the salary was recalculated on a full time equivalent base.

In the histogram underneath showing the salary, corrected for full time means: for 100% working rate, whatever weekly working hours this corresponds to. The survey shows that the weekly work rate varies quite a lot, but the salary doesn't depend a lot on it, at least for normal co-workers.





About 40% of the surveyed persons have less than 10 years of professional experience. The average salary increases with years of professional experience as expected. Interestingly the group of 11-15 years of experience seems to be the most homogenous



Of note: 75% of our colleagues with habilitation, of those who answered the survey, are head of departments. This may explain mainly the obvious difference in salary compared to the other groups. The group of PhD itself is only slightly higher in salary compared to the Master group

On behalf of the committee for professional affairs

Roman Menz, Stefano Presilla and Jean-Yves Ray

Results of the Certification Exams in Medical Physics (SSRMP)

In the exams for the certification in medical physics SSRMP 2015 (20.10. - 05.11.2015) the following colleagues succeeded:

From left to right:

Marta Mumot (Universitätsspital Basel) in medical radiation physics,

Vincent Fave (Clinique la Source, Lausanne) in medical radiation physics,

Valery Taranenko (Accuray, Morges) in medical radiation physics,

Yvonne Käser (PhysMed Consulting, Uetikon) in medical imaging,

Dominik Henzen (Universitätsspital Bern) in medical radiation physics,

Thiago Viana Miranda Lima (Kantonsspital Aarau) in medical radiation physics,

Nick Ryckx (CHUV, Lausanne) in medical imaging,

Cristina Vite (Clinica Luganese) in medical radiation physics,

Konstantinos Zeimpekis (UniversitätsSpital Zürich) in medical imaging.

Silvano Gnesin (CHUV, Lausanne) in medical imaging,

Frank Emert (PSI Villigen) in medical radiation physics,

Simon Heinze (Kantonsspital St. Gallen) in medical radiation physics,

Francesca Belosi (PSI Villigen) in medical radiation physics,

On behalf of the examination committee and the SSRMP board I want to congratulate the candidates for their certification and the new position in the community connected to that.

Stephan Klöck, Zürich, 05.11.2015

SECOND ANNOUNCEMENT

WELCOME TO THE 2nd

SASRO
Scientific Association of Swiss Radiation Oncology

SGSMP
SSRPM
SSRFM

20th ANNUAL MEETING **50th ANNUAL MEETING**

JOINT MEETING !

WHEN: August 25th-27th, 2016

WHERE: Campus Sursee

SAVE THE DATE!

IMPORTANT INFORMATION

ONLINE REGISTRATION

1st March to 1st August, 2016, via www.sasro.ch/2016

ABSTRACT SUBMISSION

1st March to 1st June, 2016 (final deadline), via www.sasro.ch/2016

MAIN SCIENTIFIC TOPIC

'Hit the target'

LANGUAGE

Oral presentations / Posters: English
No simultaneous translation provided

Varian Award 2015

At the general assembly on October 21, 2015 in Fribourg, one paper was awarded with the Varian Main Prize of Radiation Oncology of SSRMP. We congratulate Carles Goma and thank him for the important work.

Raphaël Moeckli, IRA, Lausanne
President of the Varian Prize Committee

Varian Award for Radiation Oncology of SSRMP

Deadline for submission: March 31st 2016

Award rules:

1. SSRMP can award during the annual general assembly up to three Varian prizes. The maximum amount for a single Varian prize is SFr. 3'000.-. Varian Medical System Inc. donate to SSRMP each year SFr. 3'000.- for the Varian prize.
2. The prizes are given to single persons or to groups, which have made an excellent work in radiobiology or in medical physics. Members of SSRMP or groups with at least one member of SSRMP are legitimate to attend with a manuscript or with a published or unpublished paper of special importance, special originality or special quality. The size of the work should not exceed the normal size of a paper. A thesis normally exceeds this size. The person, who enters a paper written by more than one author, should have contributed the major part to this paper. The consent of the co-authors must be documented.
3. The winner gets the prize amount, as well as a diploma with an appreciation.
4. The invitation for the Varian prize is published in the bulletin of SSRMP. Direct applications or recommendations of other persons can be sent to the President of SSRMP. The documents should be entered in four specimens not later than six month before the annual meeting.
5. A prize committee judges the entered works. It consists at least of three members of SSRMP and is elected or reelected for 2 years by the SSRMP board. At least one member of the prize committee should be member of the SSRMP board.
6. The prize committee constitutes itself. The decision of award together with the appreciation should be sent to the board for approval.
7. Varian Medical Systems Inc. is indebted to announce in written form each change of the prize amount or a termination of the contract to the president of SSRMP at least one year in advance.
8. This regulation was accepted by Varian Medical Systems Inc. (Switzerland) September 27th, 2006 and renewed by the annual assembly of SSRMP September 27th, 2007. It can be changed only with the approval of Varian Medical Systems by a decision of the annual assembly of SSRMP.

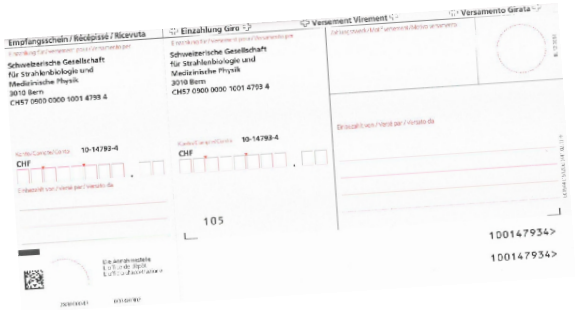
Note that there will be an award ceremony during the general assembly in 2016 and a publication of the Varian prize recipients is then taking place in the SSRMP bulletin and on the SSRMP website.

Raphaël Moeckli, IRA and CHUV - Lausanne
President of the Varian Prize Committee

Message from your Treasurer

Dear members of SSRMP

I am SSRMP's treasurer since 12 years now. A lot of things have changed within this time period. In 2003, about 50% of our membership paid its membership fee as cash at the post office using the well-known payment slips:



Now, more than 10 years later, only a minority of members still uses these slips, but for them they are very important, because not everybody trusts the security of the various e-banking systems.

For me as treasurer, this development induced new challenges. Sometimes SSRMP receives electronic payments like the following:

Kontonummer 10-14793-4
IBAN CH57 0900 0000 1001 4793 4

Datum	Text	Gutschrift
	GIRO AUS KONTO 10-725-4 BANQUE CANTONALE VAUDOISE PLACE SAINT-FRANÇOIS 14 1003 LAUSANNE ABSENDER: ETAT DE VAUD - CENTRE HOSPITALIER UNIVERSITAIRE RUE DU BUGNON 21 1011 LAUSANNE BANKKONTO: 100147934 ENDBEGÜNSTIGTER: SSRPM- STE SUISSE DE RAD DR. WERNER ROSER PAUL SCHERRER INSTITUT 5232 VILLIGEN PSI MITTEILUNGEN: COT. 2015 /DR. WERNER ROSER	50.00

Here, an individual membership fee was paid by CHUV. But it was not my personal membership fee, as one could imagine from the text accompanying the money transfer. Half a year later, I still could not find out for whom CHUV paid these Fr. 50.-.

On the other hand, each year a couple of members need several reminders until they pay the SSRMP membership fee. You might imagine that it is not my personal pleasure to admonish to these candidates. In contrast, these few members always require more efforts than the 250 others altogether who pay their membership fee in due time.
In 2004, I reported in the SSRMP Bulletin No. 54 that frequently the spouses were made responsible for the missing membership fee - this excuse is still state-of-the-art for some of our members.

According to the statutes of our society, the membership fee is payable each beginning of the fiscal year and membership ends automatically after two warnings at the next upcoming membership assembly. In practice, I never asked for the fee so early. But if I send reminders in summer and accordingly the term of payment usually is 6-8 months back in time, it's just unfair to send unfriendly replies meaning that I should not be so hasty…

This will be my last period as treasurer of our society because I will step back from SSRMP's board in 2016 after a total of 15 years on board. Please support the time-consuming voluntary work of the whole board and of my successor by

- informing SSRMP's secretary about your address or email changes;
- paying the membership fee not later than in the first quarter of each year;
- writing the secretary a tiny email if you want to leave our society. It's much more friendly and fair than just waiting for the formal expulsion of SSRMP at the following general assembly.

Thank you very much!

Werner Roser

Zuppinger-Symposium 2015

The Zuppinger-Symposium 2015 organized by the Bernische Radium-Stiftung took place on November 5, 2015 in Berne in remembrance of Prof. Adolf Zuppinger (1904-1991),. The topic of this year was "Next Generation of Radiation Therapy: Imaging is Everywhere". Thus, as for previous Zuppinger-Symposia the organizers succeeded not only in selecting a highly discussed subject of great interest in the radiotherapy community, but also in inviting national and international experts covering a wide variety of different aspects regarding this topic. This internationality was also pointed out by *Peter Manser* in his introduction on behalf of the Bernische Radium-Stiftung, after he gave a warm welcome to the Zuppinger-Symposium 2015.

Sjoerd Crijns

The first presentation was held by *Sjoerd Crijns* from the University Medical Center (UMC) Utrecht providing insights of their project of simultaneous MR imaging and radiation delivery, which was launched at UMC back in 2000. Since then the project has evolved in collaboration with Elekta and Philips along with a wide international consortium. Apart from technical and engineering challenges on the hardware side, also solutions on the software side such as Monte Carlo treatment planning and image registration algorithms are under development. Although MR images are generated during radiation delivery, the motion management still relies on models, since pure image driven procedures are not yet reliable as mentioned by S. Crijns in the discussion followed by his presentation. Nevertheless, currently a system installation at UMC is underway and it will be very exciting to see this technique introduced in clinical operation and its impact in the field of radiotherapy in the near future.

Starting with a clinical example on how adaptive radiotherapy based on imaging information is important in today′s radiation therapy settings, *Alexandra Jensen* from the Department of Radiation Oncology at the Inselspital – University Hospital Bern presented her talk entitled "Images and clinically motivated imaginations of adaptive radiotherapy". In a second part she outlined the different steps of an adaptive radiotherapy workflow, which of course included image acquisition. It was inspiring to follow her imaginations of a single magic button in a software, still to be developed though, invoking a black box, which in virtually no time performs all these outlined steps in order to apply an online adaptive treatment plan per fraction to the patient.

Alexandra Jensen

Roland Wiest

The next presentation was held by *Roland Wiest* from the Institute of Diagnostic and Interventional Neuroradiology at the Inselspital – University Hospital Bern about "Automated imaging analysis and feature extraction in the workup of cerebral gliomas". The engaged presentation and the examples shown from his daily routine work gave the topic "Imaging is Everywhere" just another dimension. Several different imaging techniques and image analysis procedures were shown, which are routinely used in diagnostics with a high potential of automation. Along this line R. Wiest emphasized that current developments in feature extraction and image analysis tools will change the routine work in radiology in the near future. As imaging becomes more and more present in radiotherapy, the collaboration between radio-oncology and radiology will also become more and more important.

Matthias Guckenberger

Talking about "Image-guided radiotherapy beyond CBCT and shifting the couch" *Matthias Guckenberger* from the Clinic of Radio-Oncology at the University Hospital of Zurich initially illustrated the current limits of IGRT in that mostly just one primary tumor or surrogate is observed, which would not even show what is treated when a perfect IGRT system would be used. While many images are produced the analysis of those are still very rudimentary except the rigid registration leading to couch shifts, as M. Guckenberger pointed out. Further questions in terms of guidance based on images were discussed such as the frequency of imaging, their analysis method, the action performed or the event triggering the action as well as the question about the roles of the different professions. Finally, the inspiring presentation elaborated on IGRT for improved outcome and quality assurance aiming to use images for something more clever than shifting the couch.

After the coffee break another highlight followed: the ceremony to present the Zuppinger-Medal, which was awarded to *Ernst Born* for his enormous contribution in medical physics mainly in the field of treatment planning and stereotactic radiotherapy: Congratulations!

The laudation presented by P. Manser started with a brief history of the professional career in 10-year packages, starting with his physics studies at the University of Berne, his early academic research in astrophysics and his contributions to the field of medical physics since he joined this field in 1981. These contributions were outlined by P. Manser on three examples. The first one covered the development of the macro Monte Carlo transport code, which is commercially available in the Eclipse treatment planning system from Varian Medical Systems. The second example was his leadership for the recommendation 7 of the SSRMP about "Qualtiy Control of Treatment Planning Systems for Teletherapy" and finally as a third example his involvement in developing strategies to safely and efficiently perform stereotactic treatments on linacs using IGRT. These aspects were more deeply elaborated in the presentation of E. Born entitled with "Gambling for Radiotherapy: 30 Years of Treatment Planning Developments" demonstrating already the strong link to Monte Carlo. This talk was special in that several video sequences of him were included, where the first one included the gratitude to all co-workers each owning a part of this honor, as emphasized by E. Born. On the other side the huge list of collaborators demonstrates best his outstanding expertise in the field. Already using Monte Carlo methods for modeling cosmic radiation, E. Born introduced this technique to simulate photon energy spectra produced by linear accelerators shortly after joining the Division of Medical Radiation Physics at the Inselspital in Berne. Reviewing treatment planning methods using the first computer based dose calculation algorithms, he was convinced that one can do much better and started to investigate the usage as well as the efficiency of Monte Carlo methods for treatment planning in radiotherapy. However, the accuracy of Monte Carlo simulations is not for free and E. Born mentioned that the accuracy of the simulation result is strongly dependent on the accuracy of the input either the implementation of the linear accelerator head components or the patient data. Interestingly enough his early studies using Monte Carlo simulations for the radiation transport in the magnetic field of the earth are of upmost interest today as shown by the S. Crijns' presentation. In following his presentation one became aware of all the huge improvements that were made in treatment planning and stereotactic radiotherapy during his professional career.

Peter Manser and Ernst Born

Dietmar Georg

Another exciting presentation held by *Dietmar Georg* from the Medical University of Vienna was entitled with "Image Guided & Adaptive Radiotherapy – Challenges from a Medical Physics perspective". As physics and technology improved outcome, the technological evolution in radiation oncology in terms of anatomic conformation vs. technical sophistication focuses on dose conformation. The advancements in the imaging part used in radiotherapy lead to several challenges, four of which were discussed by D. Georg in this presentation. Challenge 1 "Think and act interdisciplinary" focused on the understanding the objectives, processes and results of the high-tech radiotherapy. The second challenge "Better utilize current technology" elaborates in aiming in a more efficient non-measurement based QA. "Solving remaining technical issues" as challenge 3 included automation and validation of image processing software. Finally, challenge 4 "Interdisciplinary Medical Physics" was illustrated by means of the potential role of MR in radiotherapy from treatment planning including MR-based dose calculation to MR-guided radiotherapy. Overall D. Georg concluded, IGRT challenges are multilayered making multidisciplinary teams and collaborations between physics, medicine and biology a necessity.

Anca-Ligia Grosu

Last but not least, *Anca-Ligia Grosu* from the Department of Radiation Oncology at the University Hospital in Freiburg presented the role of image guidance in clinical situations. A.-L. Grosu impressively demonstrated her enormous engagement in the field of biological imaging dealing with hypoxia. She provided a large range of studies and trials in which her team is involved aiming to demonstrate evidence for the radiotherapy procedures applied. In common with the previous speakers imaging played and still plays a major role in these studies, thus, the topic of the Zuppinger-Symposium 2015 "Next Generation of Radiation Therapy: Imaging is Everywhere" was everywhere.

With this talk another exciting Zuppinger-Symposium ended, leaving all participants behind with a lot of interesting thoughts, which I am sure will lead to many more discussions in the future.

Michael K. Fix, Inselspital Bern

A new revision of the RPO: let's start to "digest" it!

Why?

On the basis of the last ICRP recommendation for radioprotection (ICRP 103, 2007), Euratom - in close collaboration with the IAEA - implemented in 2014 the Basic Safety Standards (BSS) Euratom directives. These directives should serve as the basis for national legislation in the matter of radioprotection and each country has until **February 2018** to apply the necessary revisions to their current legislation.

So … it's time to harmonize also our RPO to the new international directives and the rest of Europe.

What?

- Strahlenschutzverordnung (SR 814.501)
- Dosimetrieverordnung (SR 814.501.43)
- Strahlenschutz –Ausbildungsverordnung (SR 814.501.261)
- Strahlenschutz –Anlagenverordnung (SR 814.501.51)
- Medizinische Strahlenquellen-Verordnung (SR 814.501.512)
- Beschleunigerverordnung (SR 814.501.513)
- Röntgenverordnung (SR 814.542.1)
- Verordnung über den Umgang mit offenen radioaktiven Strahlenquellen (SR 814.554)
- Verordnung des EDI über die ablieferungspflichtigen radioaktiven Abfälle (SR 814.557)

How (ORaP)?

What are the most substantial changes and the "new concepts "which have been introduced?

! Definition of different **situations of exposure** (**Expositionssituation**) and **categories of exposure (Expositionkategorie)** with corresponding suitable measures and requests for radioprotection purposes (*Art . 1, 2*)/.

Exposure category → **Exposure situation ↓**	***Occupational exposure***	***Exposure of the general population***	***Medical exposures***
Planned exposure	Dose limit Dose constraint	Dose limit Dose constraint	Diagnostic reference level Dose constraint
Emergency exposure	Reference level (*Art . 146, 147*)	Reference level (*Art. 146, 147*)	-
Existing exposure	-	Reference level (*Art. 158, 164*)	-

!! Concept of a **risk based graduated procedure** (*Art . 21*):

- The rationale for releasing a license is now risk based (rather than "activity" based): Three different licensures corresponding to 3 different levels of risk. In this frame even working areas with certain radon concentration levels need to hold a license (*Art. 25-27*).
- Occupationally exposed workers are now divided into two categories on the basis of a higher or lower risk to be subjected to a certain level of Effective Dose (6mSv/y) (*Art. 64*).
- Working areas are now designated as **Controlled Zones** and **Supervised Zones** (*Art. 91-98*), depending on the different level of risk exposure.

With the intent of giving a more schematic and simplified view of this new risk-based approach in defining zones and categories of exposed workers …

Zones	What's going on there	Who is working there?
Controlled zone	Manipulation of open radioactive sources (subdivision in Type A, B, C areas, following the current criteria)	Exposed workers from Category A (with high risk of accumulating Effective Doses>6mSv/y)
	Procedures involving intensive doses, or with high risk of air or surface contamination (subdivision in Zones I-IV, *Art. 96*)	e.g. nuclear centers, nuclear medicine departments, CT procedures, interventional radiology, manipulation of open radioactive sources)
Supervised zone	Manipulation of closed radioactive sources and type 0 Zones	Exposed workers from Category B (with very little risk of accumulating Effective Doses>6mSv/y) e.g. radiological installations, dentist departments, veterinary departments, flight personnel (with some reserves)

!!! New dose limits:

- Public (*Art. 34*): dose limits for extremities and eye lens are now expressed in terms of **Equivalent Dose**. This is because early tissue reactions haven't been avoided with the actual effective dose limits.
- Activity released into the environment (Immissionsgrenzwerte) (*Art. 36*): is now expressed in terms of "ambient air quality standards" for the air (Immissionsgrwnwerte fur die Luft IG_{Lf}) and for water (Immissionsgrenzwerte fur Gewasser, IG_{Gw}). This rationale is based on the fact that these quantities should serve to monitor the exposure of the public, whereas the current operational quantities (CA for the air and LE for water) were originally defined in the framework of monitoring the exposure for exposed workers. Annex 7 gives an extensive review of the new calculations for these limits.
- Volunteers assisting patients (*Art. 48*): an explicit dose limit is now set for them (5mSv/ y)
- Exposed workers (*Art. 68, 69*): as for the public, the dose limits for eye lens and extremities are expressed in terms of Equivalent Dose; moreover the dose limit to the eye lens is drastically reduced to **20mSv**. **Flight personnel** are also part of the exposed workers category! (*Art. 64, 67*)
- Radon: a stricter dose limit for radon concentration in residential areas (*Art. 164*) has been introduced.

!!!! Implementation of **clinical audits**: up to now the principle of optimization was the only one "regulating" medical application of ionizing radiation. There has been no control that a certain medical procedure is **justified**. With the new ordinance, any patient exposure for diagnostic or therapeutic purposes MUST be justified (*Art . 38, 39, 40*). With the scope of verifying the justification of any diagnostic or therapeutic procedure involving ionizing radiation (CT examinations, nuclear medicine applications, radiation oncology and interventional radiology procedures), clinical audits will be carried out on a 5 yearly basis (*Art. 52-55*). BAG will instruct dedicated experts (*Art. 54*) involved in these audits.

..and.. of course there's a lot more, but don't make an indigestion!

And take your time to have a look at the following links. They are very helpful to extensively go through all the new changes and the rationale behind them.

Viel Spass! ***Francesca Belosi, PSI***

www.bag.admin.ch/de/Rev-StSV
www.bag.admin.ch/fr/Rev-StSV
www.bag.admin.ch/it/Rev-StSV

Notes from 4th MIP Meeting

The 4th MIP meeting in 2015 was held in Bern on the 17th of November.

- It was decided by the group, that the MIP meetings in 2016 shall take place as before, i.e. four times a year. Appointments will be sent.

- In one of the next meetings there will be discussions on the ways to judge CT image quality based on the approach of KSA to use a special phantom (ZHAW) and the model observer investigation performed in CHUV.

- J. Binder reported on his impressions during the pilot Clinical Audit on CT in Kantonsspital Aarau: The results were highly motivating for future processes of improvement and optimization.

- R. Simmler gave a short presentation on his results on staff exposure during Cardiologic interventions. According to his findings, leaded eyeglasses are crucial for a good protection.

- Thiago Lima presented results on dosimetry in nuclear medicine. He pointed out that DRLs come from old devices and can be further reduced to follow the advances of the newer devices.

- There was a lively discussion on current revision of rad. prot. ordinance(s) during the meeting. In the feedback spreadsheet sent around only the German version will be used.

- R. Schöpflin will send a questionnaire via mailing list.

- T. Weitzel is preparing for the SGNM Intercomparison.

Gerd Lutters, KSA

Conference Report: AAPM 2015

July 12-16, Anaheim, CA, USA

http://www.aapm.org/meetings/2015AM/

The 57th annual meeting & exhibition of the American Association of Physicists in Medicine (AAPM) was held this year at the Anaheim Convention Center in Southern California under the meeting theme: "Reinvigorating Scientific Excellence". This meeting theme is meant as an appeal to rejuvenate our enthusiasm for science and to recognize that science is at the core of what every medical physicist does. The conference offered a huge number of presentations about a broad range of imaging and radiotherapy topics. The talks were separated into scientific sessions, symposia and educational courses and were held in parallel, distributed over ten conference rooms. Furthermore, in a separate hall larger than two football fields, dozens of technical exhibitors presented their offers and over one thousand posters of scientific abstracts were exhibited. At lunch time and in the evenings, social events were offered and some of the technical exhibitors held their own symposia. In this report, I would like to share my impressions of this event.

Adaptive radiotherapy, deformable image registration and the usage of MRI in radiation oncology were the hot topics of the conference from my point of view. Accordingly many talks were held about these topics. The handouts of the symposia and the educational courses are mostly accessible already on the conference website. Starting July 2016, the video recordings of these presentations will be available in the AAPM Virtual Library for non-AAPM members too: http://www.aapm.org/education/VL/

A highlight for me was the exciting debate of Joseph Deasy and Charles Mayo whether treatment planning evaluation and optimization should be biologically or dose-volume based. Joseph Deasy believes the time has come to include outcome-validated TCP and NTCP prediction models into treatment planning. He suggested that an increasing integration of such biological models alongside dose-volume constraints will result in non-uniform but therapeutically more efficient dose distributions. On the other side, Charles Mayo argued that the uncertainty of biological models predictions are not known well enough so far. Hence, several decades of experience with dose-volume based treatment planning should not be discarded yet.

Another interesting symposium held by Jeffrey Siebers, Jan Unkelbach and Huijun Xu focused on the concept of probability-based treatment planning in contrast to PTV margin-based treatment planning. As an example, as small shifts of the CTV are more probable than bigger shifts, this information should be considered in probability-based treatment planning. In this symposium, robust optimization techniques were presented which make use of probabilistic dose distribution and probabilistic objective functions in order to generate treatment plans with better robustness against uncertainties of patient setup and organ positions.

Attending this conference was a very stimulating experience. Many talks provided me new inspiration for my own project. In particular the possibility to get in contact with researchers and technical exhibitors from all over the world is unique. Last but not least, the conference gave a good look into future development in the field of Medical Physics.

Silvan Müller, Inselspital Bern

ICR/RMH and UMCU are among the first sides exploring the clinical benefits of a MRL machine

TOWARDS MRI GUIDED RADIOTHERAPY
report on a three-month research stay at UMCU

Since about 2 years, I am a postdoc in the radiotherapy and imaging department of the Institute of Cancer Research (ICR) / the Royal Marsden Hospital (RMH) in London. At ICR/RMH we are very excited to be among the first few clinical sides exploring the benefits of a combined MR-LINAC machine (MRL).

The aim of combining a MR tomograph for medical imaging and a linear accelerator (LINAC) for radiotherapy is to perform magnetic resonance image guided radiation therapy (MRIgRT). MR imaging offers exquisite soft-tissue contrast without the burden of extra imaging dose for the patient. Furthermore, it provides functional information and enables the monitoring of treatment response. A MRL enables the imaging of a patient shortly prior, during and shortly after radiotherapy treatment. The acquired information can be used to adapt the treatment plan in case of anatomical changes, to account for motion during the treatment and to adjust the treatment according the specific treatment response.

When joining the ICR/RMH, MRIgRT meant a big new challenge for me. Especially, it meant that I had to catch up on in-depth knowledge on MR imaging. While not being a MRI expert yet, I am definitely keen to become one some day.

The concept of a hybrid MRL machine (a schematic can be seen on the left of Figure 1) has been pioneered at University Medical Centre Utrecht (UMCU) in the Netherlands. While at ICR/RMH the installation of a MRL is foreseen for 2016, at UMCU a prototype MRL (shown on the right of Figure 1) already exists. Thus, I thought a research stay at UMCU would be a good idea to gain some MR knowledge and to carry out some first experimental research with the existing technology. Cancer research UK (CRUK) agreed with my idea and generously sponsored a three-month research stay.

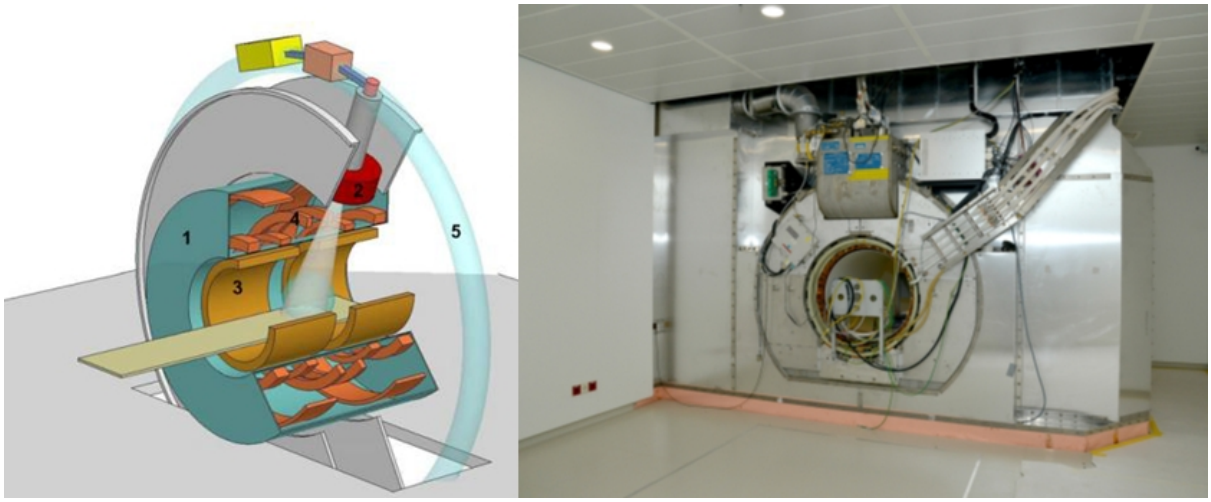


Figure 1: On the left: Schematic of an MRL. The 1.5T MRI is in blue (1), the 6MVaccelerator (2) is in a ring around the MRI. The split gradient coil (3) is in yellow and the superconducting coils (4) are in orange. The light blue ring around the MRI indicates the low magnetic field toroidal region (5) situated in the fringe field. (adapted from [1]). On the right: Picture of the MRL prototype at UMCU.

With my collaborators Sjoerd Crijns and Rob Tijssen from UMCU, I agreed on working on a small project investigating the geometrical accuracy of MR images. Radiotherapy treatment planning relies on patient tissue-specific electron-density-distributions, usually derived from Hounsfield numbers of CT images. MR images do not provide this needed information easily and therefore have to be calibrated accordingly. Automated and fast calibrations of MR images suitable for accurate dose calculations have been developed [2,3] and are currently compared and implemented at RMH/ICR. Patient- and site-specific correlation models between MRI and CT data might be influenced by MR field inhomogeneities. In order to use MR images for treatment planning, the geometrical accuracy of the images has to be ensured for the entire field of view, FOV.

Initial work has been performed by the UMCU group to investigate the impact of gantry position dependent magnetic field inhomogeneity variation on the geometrical accuracy of acquired MR images [4, 5]. Also at RMH/ICR, the removal of system distortions in MR images has been studied [6, 7, 8]. During the three-month stay at UCMU, Sjoerd, Rob and I carried out measurements with a large 3D MR-compatible phantom containing about 2000 equally spaced markers. By imaging this phantom and comparing the measured marker positions to the ground truth maker position, one can investigate the homogeneity of the static magnetic field, the linearity of the gradient fields and induced susceptibility effects. By taking MR images with different phase- and frequency encoding direction and subsequently subtracting these images from each other, one can separate different contributions that affect the MR imaging accuracy. Figure 2 shows exemplary results from measurements with a 2D one-slab-phantom.

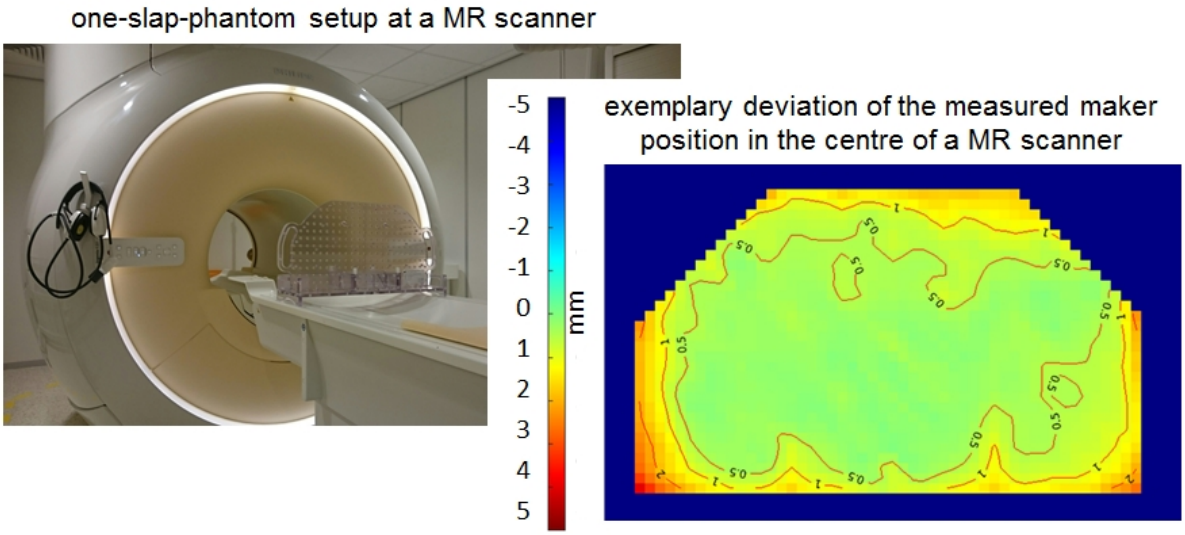


Figure 2: Exemplary geometrical deviations in the centre of a MR scanner, measured with a 2D one-slab-phantom.

While I would still not call myself an MR expert, I certainly came back from Utrecht with much more MR knowledge than I had before and I am even more excited about the soon arrival of the MRL in the UK. Both, ICR/RMH and UMCU, have a long history in state-of-the-art medical physics research and have carried out dedicated studies, investigating the potential of MRIgRT [1, 9, 10]. I feel my stay in Utrecht has further strengthened the connection between the two MRL consortium members. In fact, I am very happy, that my previous master student Filipa Guerreiro just started her PhD in Utrecht. I hope that a close collaboration between the two institutes in the future will facilitate inspiring exchange of complementary expertise and will foster more collaborative projects. I believe by joining forces and carrying out research together, we can quickly translate results into clinical practice and patients benefit.

My visit in Utrecht was my second research stay abroad. Three years ago, I spent three months at NIRS in Chiba, Japan. I find it extremely enriching to join a different research department for a while that addresses similar research questions. It gives me the chance to explore my research from a different perspective. Most importantly however, it lets me meet new colleagues and friends. Next time I get stuck with MR related questions I know that besides asking my colleagues at ICR/RMH, I can also drop an email to experts at UMCU to ask for help.

Antje-Christin Knopf

Acknowledgements:

I would like to greatly thank Cancer Research UK (CRUK) for sponsoring this stay aboard with a research travel award.

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Positive Feedback of the 2015 SSRMP Annual Scientific Meeting

organized in Fribourg

Our society had mentioned very early on its desire to organize an Annual Scientific Meeting in Fribourg. Upon my arrival to the "Hôpital Cantonal de Fribourg" in 2005, I learned that a request had been circulating since 1994. After having withstood a decade, we finally gave in to pressure.

After the first moments I spent deeply understanding (you know, something like "feeling the pain") what it means to organize such a conference, the time to move on to the action had arrived. In such cases, I have a bad habit, among others, to look first for solutions to problems that I know how to solve. So my first action (I have not looked back since) was to buy myself a virtual server hosting the conference website (~ 30€ for one year). Did you see the mistake! (answer: *I was almost happy with that!*)

From that, finding a place for the congress had been a priority and it was not very easy. The *NH-Hotel* (see fig.1) seemed a perfect choice (from one). This was confirmed by several participants who appreciated the centrally situated site that was attainable by walking from the train station. Even having practically a year in advance, only the date had been chosen for such the event. It's also the famous date mentioned in the movie "Back to the future" (as highlighted by Peter Manser), but this circumstance was only one more reason to celebrate.

Figure 1: Site of the Annual Meeting : BTW did you see the Penguin, it's a good restaurant and a discrete wink to my favorite OS!

These coincidences suggest the fact that Nature is favorable to *Medical Physics* because taking into account the fact: *one place and only one possible date*, it seems to indicate a low probability of occurrence. Actually from this, I just kept in mind to seize the opportunity when it arrives.

After all the stress and last minute catching up to do everything works more or less fluid, the

Figure 2: All participants are captivated by the speaker: Julien Ott.

congress smoothly took place and I got positive feedback from the participants. This is the reward of all the work and I thank you for this positive atmosphere and the high quality of most the presentations (see fig. 2).

For my part, I encourage you to accept to organise one of the next meetings, it becomes an experience in unsuspected areas. This can be from creating a website to negotiating prices for the restaurant or through the plan design to setting up exhibition stands for the industry exhibition. On the other hand, the committee remains a valuable aid in getting to around the whole thing. In particular our cashier Werner Roser was particularly effective for us and the president Peter Manser was a real guide, or better a lighthouse, to illuminate the way in the fog around Fribourg. He resisted quite well from the temptation to twist my neck. I think it was heroic of him since his patience had been severely tested. I‘ll refer you to him.

I know that for our SSRMP, Rachid Boucenna takes over the role of organizer for the coming year 2016 (in conjunction with SASRO). I wish him big satisfaction and the reward of a great organization.

A final thank you to my colleagues, Olivier Pisaturo and Frédéric Miéville. They were also of great help in this organization.

For the SSRMP2015 Organizing Committee, Pierre-Alain Tercier (aka Pat).

CALENDAR 2015-2016

28-30th January Prague, Czech Republic	EFOMP School for Medical Physics Experts Computed Tomography Imaging: Dosimetry, Optimization and Advanced Clinical applications *http://www.efomp.org/index.php/efomp-news/358-efomp-school*
15-19 February Geneva, CH	**International Conference on Translational Research in radiation oncology – Physics for Health in Europe (ICTR-PHE)** *http://ictr-phe16.web.cern.ch/*
2-6th March, Vienna, AT	ECR 2016 European Congress of Radiology *http://www.myesr.org/cms/website.php?id=/en/ESR_ECR_news.htm*
6-18th March Pichl, AT	Winterschule Pichl für Medizinische Physik 2016 *http://www.winterschule-pichl.de/*
20-23rd March Ghent, Belgium	3rd Symposium on Small Animal Precision Image-Guided Radiotherapy *http://small-animal-rt-symposium.weebly.com/*
29th April-3rd May, Turin, IT	ESTRO 35 *http://www.estro.org/congresses-meetings/items/estro-35*
1-3rd June Nancy, FR	55èmes Journées Scientifiques de la SFPM *http://sfpm-js2016.sciencesconf.org/*
31st July-4th Aug Washington, USA	AAPM 58th Annual Meeting *http://www.aapm.org/meetings/default.asp*
25th-27th August Sursee, CH	**SSRMP 50th Annual Meeting and SASRO 20th Annual Meeting Joint Meeting 2016**

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!

La Chaux-de-Fonds

Geographical introduction

La Chaux-de-Fonds is situated at an elevation of 1060 meters above sea level, which is significantly higher when compared to the mean altitude of swiss radio-oncology centers, 439m, and the highest Elekta machine in Europe. In standard ICAO atmosphere (International Civil Aviation Organization), the pressure at a given altitude (h) is :

$$p(h) = 1013.25 \cdot \left[1 - \frac{0.0065 \cdot h}{288.15}\right]^{5.255} \quad \text{[mbar]}$$

The pressure is thus 892.2 mbar @ 1060m, which makes the highest correction factor k_{TP}=1.136 (for a given temperature) in Switzerland.

	CDF	mean CH	Sea level
Altitude [m]	1060	439	0
Air density [kg/m^3]	1.105	1.174	1.225
Sound speed [m/s]	336.2	338.6	340.3
Pressure [mbar]	892.2	961.6	1013.25
k_{TP}	1.136	1.054	1.000

Another characteristic is the low humidity rate (<20% during the winter), which has as a side effect an Elekta engineer always grounded, when electronic devices have to be replaced.

HNE Radiation Oncology Center- La-Chaux-de-Fonds

The radiation oncology center of the Hôpital Neuchâtelois (HNE) was the first center to introduce IGRT in Switzerland. With 700-750 new patients per year, it is the only radiation oncology center in the canton of Neuchâtel and serves this canton's population and part of the Jura arc.

The staff is composed of 3 specialized radiation oncologists, 3 medical physicists, 13 technicians, 2 secretaries and 1 engineer.

It is equipped with 2 Elekta Agility machines (160 leaves), with identical settings, installed in 2012. Both linacs have photon energies of 4, 6, 6FFFand 15MV, and electron energies of 4, 6, 8, 10, 12 and 15 MeV.

All patients undergo CT- simulation and treatments involving organ motion are simulated using 4DCT. 3D dosimetries, as well as VMAT treatment plans, are calculated on Pinnacle 9.8. More than 60% of treatments are planned using VMAT with a planned increase within the next years and introduction of the VMAT technique to most disease sites and treatment contexts (curative, as well as palliative). Treatments are delivered using IGRT protocols involving the use of a CBCT and a 4D-CBCT when movement is involved. Patients and treatment documentation is performed using Mosaiq©.

An HDR Oncentra brachytherapy unit and an orthovoltage machine with energies from 20kV to 200kV allow for endovaginal and superficial treatments.

Projects and developments

Clinical protocols and procedures are currently reviewed and updated in a multidisciplinary manner in order to standardize treatments, involving all the collaborators.

The next year will be devoted to the full implementation of lung SBRT; radiosurgery of intracranial lesions will follow. Taking care of the patient as a whole and addressing their concerns remains a priority for the Center and technician driven projects are also underway.

Recent communications

[1] Linac activation of radioisotopes and underground gammaspectroscopic analyses; *P.Weber, J-L. Vuilleumier, G.Guibert, C.Tamburella; SSRMP 2015*

[2] VMAT QA pre-treatments using Elekta i-view GT*; C.Tamburella, G.Guibert, P.Weber; SASRO 2015*

WELCOME

Patrizia Urso

My life's path has been similar to the path of an electron in a medium, surely not of an alpha particle. After classical studies, I graduated at the academy of music. Then my father's passion recalled me…so I graduated in physics. I worked for about ten years at the Università degli studi di Milano as a researcher in occupational medicine and environmental health at the Ospedale L. Sacco in Milan. There I started the study of statistics, focusing my research on radon and particulate matter. During the way, I completed the European Master in Risk Assessment and Risk Analysis and finished my PhD in Environmental Science. Subsequently my adventure in Medical Physics started, my initial principal interests were the hyperthyroidism treatment and radioprotection, at the Ospedale Sant'Anna in Como, then in radiotherapy, at the Ospedale di Circolo Busto Arsizio. The road has now brought me to Switzerland, to the Clinica Luganese, and promises a very stimulating professional growth.

Michael Baumgartl

Dear all! At the end of my bachelor program I discovered my passion for medical physics; I therefore followed that path and graduated in 2014 from the Ludwig-Maximilians-University Munich with a MSc in physics. Along the way I wanted to gain a deeper insight in the fast-moving field of medical technologies. Hence, I did a 12 month internship at the Imagerie et Modélisation en Neurobiologie et Cancérologie group in Orsay, France. The focus of my work was to develop, apply and analyze Monte Carlo simulations (GATE) for nuclear interaction studies in phantoms (PET-based Hadrontherapy Monitoring) and compare the results with existing experimental ones. Since October 2014 I've been a member of the radio-oncology team of the University Hospital Basel as a physicist in training and have been studying in the program Master of Advanced Studies in Medical Physics at the ETH Zurich which I plan to complete. I like to spend my spare time outdoors (hiking and climbing) but if the weather is not the best and my rain gear is not sufficient, I prefer to do indoor sports and meet up with friends. I'm looking forward to meeting you and I am eager to discuss medical physics and other topics with you!

Best regards,
Michael Baumgartl

CONGRATULATIONS

Habib Zaidi Honored with 2015 Sir Godfrey Hounsfield Award given by the British Institute of Radiology

Dr. Habib Zaidi is the recipient of the prestigious 2015 Sir Godfrey Hounsfield Award given by the British Institute of Radiology. The prize was awarded at the BIR annual congress held in London (UK), November 4-5, 2015.

Habib Zaidi is head of the PET Instrumentation & Neuroimaging Laboratory at Geneva University Hospital. He is also a Professor of Medical Physics at the University Medical Center of Groningen (The Netherlands) and Adjunct Professor of Medical Physics and Molecular Imaging at the University of Southern Denmark (Odense, Denmark)

More details about the award are available at:
http://www.bir.org.uk/professional-resources/prizes,-awards-and-bursaries/eponymous-lectures/sir-godfrey-hounsfield-memorial-lecture/

I M P R E S S U M

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C A L L F O R A U T H O R S

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.

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