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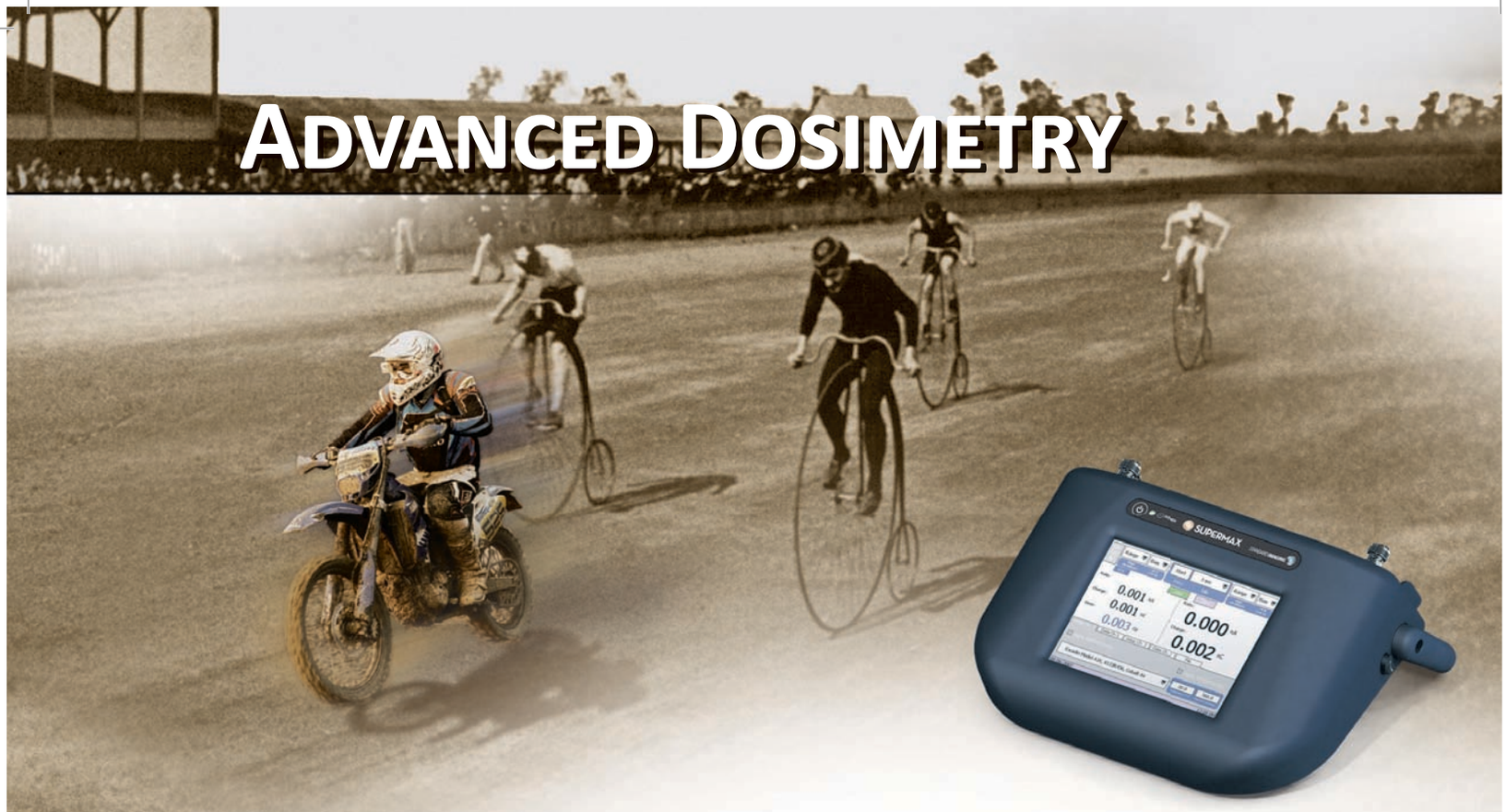

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Message from the COMP President

The time has come for our imaging physicist members to be heard.

Au cours des derniers mois, l'OCPM a reçu un nombre croissant de demandes de divers organismes concernant l'imagerie diagnostique. La variété des demandes, mais aussi leurs provenances (p.ex. Santé Canada) indiquent à la fois la place grandissante de ce sujet dans tous les sphères de notre société et une certaine reconnaissance que les physiciens ont un rôle à jouer pour assurer une utilisation appropriée du rayonnement pour des fins diagnostiques. En résumé, la balle est dans le camp de l'OCPM de répondre promptement et avec professionnalisme à ces demandes.

Since this is an important issue, let me repeat the above in English. COMP is receiving an increase number of communications asking for our opinion or participation in various medical imaging activities across Canada. These demands come from organizations like Health Canada, the Ontario Ministry of Health and others. Clearly this indicates that medical imaging, in particular x-ray based imaging techniques in these cases, is now a mainstream topic with high political and public visibility, and COMP is perceived as a player in that field. This also means that COMP must respond promptly and accurately, i.e. we must demonstrate that we are not only a player but a *key* player where medical imaging is concerned.

COMP thinks that the time is ripe to increase the medical imaging physicists' profile across Canada. As such, during the mid-year COMP Board meeting in Toronto, the immediate creation of a COMP Imaging Task Force was unanimously voted by the Board. Over the last few months COMP has called repeatedly upon a number of its certified medical imaging members to act on behalf of COMP on medical imaging business. Furthermore, we have received communications from some of our imaging members that were ready to participate in COMP related efforts to further the medical physicists profession in Canada. We have therefore called upon these individuals to form the core group of the Imaging Task Force. Their expertise covers the entire field of medical imaging, not just x-ray imaging. It is our sincere hope that others will join the effort. The time is now for medical imaging physicists to be seen and heard!

La création d'un groupe de travail dédié au domaine de l'imagerie médicale, incluant des experts en radiologie diagnostique, médecine nucléaire, imagerie par résonance magnétique et mammographie permettra à l'OCPM d'augmenter la visibilité de la profession du physicien médical dans ces domaines auprès du publique. Cela constitue aussi une opportunité unique pour nos membres du domaine de l'imagerie de prendre la place qui leur revient au sein de l'OCPM.

I would like to conclude by pointing out that medical imaging is used in numerous areas of medicine. Diagnosis

Luc Beaulieu

of diseases is one of them. Increasing use of imaging modalities in radiation therapy (for planning, treatment guidance and treatment efficiency monitoring) is another one. Furthermore, the field of image-guided intervention is flourishing and the arrival of robotic medical procedures relies heavily on advanced imaging techniques. All necessitate accurate and precise quantitative imaging (or imaging chain), which can only happen if the proper QC/QA procedures are in place.

Imaging physicists, now is the time to get involved in COMP…J'invite tous les physiciennes et physiciens médicaux oeuvrant en imagerie médicale à saisir cette occasion. Impliquez-vous dès maintenant.

À la prochaine!

Message from the CCPM President

If you think back to your very first days on the job as a medical physicist, was there someone you worked with who was considered to be such a giant of medical physics that you were both awed and honoured to be in their presence? For me, that person was Sylvia Fedoruk.

It was Sylvia Fedoruk, then Provincial Director of Physics Services for the Saskatchewan Cancer Foundation, who offered me my first job as a Medical Physicist. Since her office was located in Saskatoon and I worked in Regina, we didn't often work side by side, but some of the earliest dosimetric measurements I was involved with were done in the Regina Cobalt-60 bunker with Sylvia. At that time, the Saskatchewan Cancer Foundation maintained only one traceable dosimetry standard for the province which was shared between the two cancer centres in Saskatoon and Regina. For many years after Sylvia left the SCF, this was still fondly referred to as "Sylvia's" electrometer, and I was always very careful with it, as I didn't want to be the guy responsible for its demise.

It was always a real pleasure to work with Sylvia, as not only was she a very personable colleague, but she also had the greatest stories to tell about the "old days"! Of course, by the time I joined the SCF, she was in a very senior position and spent much of her time dealing with administrative matters. Although she is nationally and internationally recognized for her physics work, it is really her astute political and leadership skills that I remember most about her.

I'm sure most of you are aware that Sylvia was one of the founding board members of the CCPM. Our careers only overlapped for a few years, but in that short time, she instilled in me a sense of the importance of certification for members of our profession. It was under her direction that I and a number of other young physicists in Regina sat the CCPM membership exam, and thus began my association with the College. She was a firm believer in the value of certification for our profession and the establishment of the College is certainly part of her legacy.

The timing of this report finds me having just returned from the mid-year board meetings in Toronto. There are a few very significant items to report on.

First, the CCPM and COMP have decided to renew our contract with AMCES for another three years. AMCES has provided services to the CCPM for a number of years now and without these services the amount of work required to carry on the business of the College would simply be overwhelming for the volunteer board members. The services are provided by two people, Nancy Barrett, who acts as the Executive Director of the College, and Gisele Kite, our Administrator. I am very pleased to have this contract in place as AMCES consistently provides timely, high quality services to CCPM. I look forward to working with Nancy and Gisele in the upcoming years.

The board also made the decision to proceed immediately to bring our organization in line with the new Canadian Not-For-Profit Corporations Act. This act was recently passed by Industry Canada, and all corporations such as the College must comply with the act by October 17 of 2014. This act establishes a new set of rules for federal not-for-profit organizations. Complying with the new act will require changes to our bylaws. Over the past few years, the board has been making efforts to streamline our existing bylaws by moving many operational details to our policies and procedures. This will make the transition easier, but there is still much work to be done. The following is a quote from the transition guide published by Industry Canada:

*"Because the rules under the NFP Act are di*f *erent, what needs to be set out in the articles and by-laws is also di*f *erent. For that reason, the transition process is not simply a matter of transposing the provisions of the letters patent and supplementary letters patent into the articles and using the same by-laws." (www.ic.gc.ca)*

Matthew G. Schmid

According to our present bylaws, any changes to them must be voted on and passed by our membership. In order to ensure that we can complete the required process prior to the 2014 deadline, the board has decided to attempt to present the new bylaws to our members for approval at next year's AGM. This puts us on a very ambitious timeline. We realize that we will need some help to guide us through this process and have contracted with AMCES to provide us with professional advice from persons who have helped other organizations such as ours get through this process. We plan to start immediately.

Although some changes to our bylaws will be mandatory to bring them into compliance with the new act, the board does not intend to make any substantive changes to how the College operates or is governed. The exact scope of the required changes will become more clear after we receive professional

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Executive Director Report January 2013

Associations have traditionally had a reputation of being slow to change and afraid to take risks. Those that are adaptable, innovative and creative are the organizations that flourish. I would describe COMP as an organization that is flourishing. Why? Here are some very good reasons:

- Many new initiatives are in the works:
  - o A Website Redevelopment Project
  - o A Student Exchange Program
  - o An Imaging Physics Taskforce
  - o Expanded Continuing Education and Sponsorship of Regional Programs
  - o A Technical Survey
- Our existing science and education programs are continuously being improved. Planning Committees for the Winter School and Annual Scientific Meeting are always working to incorporate new and innovative ways of sharing knowledge into the programs.
- COMP's profile is increasing as we are receiving an increased number of requests from other organizations who are looking for input from medical physicists. As well, we are successfully collaborating with other organizations on initiatives that not only help members be more effective in their work but improve healthcare delivery. Examples of these initiatives include the Canadian Partnership for Quality Radiotherapy and the Winter School, both of which have medical physicists, radiation oncologists and radiation therapists working together to improve quality and safety.
- We have an active and engaged membership. I am always amazed at how positively our members respond when we need support. For example, this past October, COMP had a booth at the Career Fair at the Undergraduate Physics Conference in Vancouver. I would like to thank ***Yingli Zhao, Robert Corns, Tania Karan, Maryam Afsari Golshan and Marcus Sonier*** for volunteering their time on a Sunday to staff the booth. In the 2012 Professional Survey, 58% of the respondents indicated that they would be interesting in volunteering with COMP. This is very exciting and bodes well for the future.
- The Board is committed to governing the organization with excellence. At the recent midyear meeting in Toronto, the Board members of both CCPM and COMP participated in an orientation session. Regular orientation is considered to be a "best practice" of successful organizations and this session has been part of the midyear meeting for three years now. In an effort to be forward-thinking and avoid re-visiting issues, the Board is regularly developing policies to support decision-making. A key task for the Board of both COMP and CCPM this year will be to ensure a successful transition to the new Canada Not-for-Profit Act. This is a big undertaking and the Board has agreed to invest funds in engaging resources with expertise in this area to provide advice and guide the transition. Both COMP and CCPM are in good hands.

Ms Nancy Barrett

I am looking forward to this year's Winter School that will be taking place in Mont Tremblant, QC. The organizing committee should be commended for its commitment to building on and improving the program each year. The 2013 program is sure to be an excellent continuing education opportunity.

As well, the 2013 CARO/COMP Joint ASM will be here before we know it. Montreal is a vibrant city and we look forward to welcoming you there. Again the joint conference committee is working hard on your behalf.

As always, please feel free to contact me or Gisele or at any time with your feedback and suggestions.

CNSC Feedback Forum
When to Request an Amendment to a Class II Licence

Mark Broeders, Program Officer,
Accelerators and Class II Facilities Division |
Division des installations de catégorie II et des accélerateurs
Canadian Nuclear Safety Commission |
Commission canadienne de sûreté nucléaire

Most licensees have experience requesting amendments to their licences. Some reasons for requiring an amendment are well understood, such as the need to request an amendment to permit the transition from commissioning of a facility to routine operation. However, other potential triggers, such as whether or not an amendment is required for upgrades to prescribed equipment operating software, are not so clear-cut. This article provides some guidelines to clarify what triggers the need to request licence amendments.

Regulatory requirements related to licence amendments are contained both in the Nuclear Safety and Control Act (NSCA) and in two licence conditions that are present in all Class II operating licences. These requirements are:

> Section 26 of the NSCA:
> *Subject to the regulations, no person shall, except in accordance with a licence, (a) possess, transfer, import, export, use or abandon a nuclear substance, prescribed equipment or prescribed information;*
>
> Licence condition 2917:
> *Subject to any other condition of this licence and unless otherwise permitted by the prior written approval of the Commission or a person authorized by the Commission, the licensee shall carry out the licensed activities in accordance with the documents or parts thereof referred to in the Appendix: Licence Document(s).*
>
> Licence condition 2920:
> T *e licensee shall report to the Commission or a person authorized by the Commission, as soon as is practicable, the discovery of any inaccuracy or incompleteness in the documents.*

At a high level, changes affecting the following parts of a licence may trigger an amendment:

1. Changes to the body of the licence.
2. Changes to the licence appendices.

1. Changes to the body of the licence:

Triggers which may necessitate an amendment to the body of the licence are typically those which relate to changes to the "legal entity" or to the scope of the licensed activity. For example, any change to a licensee's legal name requires a corresponding amendment of their licences. Such a change may even require that an entirely new licence be issued, if there has been a change in the corporation which results in a new business number. In these situations, it is best to contact your project officer for further advice.

Similarly, any desired change to the scope or nature of the activities permitted under a licence will also require a licence amendment. For example, commencing with routine operation following commissioning of a facility requires a licence amendment. So too do changes to the scope of activities performed in conjunction with any nuclear substance encompassed by the licence (e.g., possess, use, import, export). Such amendments must be requested and approved ***prior*** to proceeding with the proposed change.

Finally, a request to change the annual compliance report due date or other changes to the licence conditions will require an amendment.

2. Change to licence appendices

The appendices of a licence contain detailed information which defines and limits the specific facilities and activities which are permitted under the licence. The appendix *Nuclear Substances and Class II Prescribed Equipment* indicates the makes and models of equipment which may be operated or serviced, including details such as the radioisotopes the equipment may contain or the maximum beam energy. The locations where the equipment or nuclear substances are allowed to be used or stored are listed in the appendix *Location of Licensed Activities.* Any desired change to these parameters will require amendment of the Appendices. For example, upgrading a medical linac to a different model of prescribed equipment requires an amendment.

Changes to the information contained in the appendix of *Licence Documents* also require amendment of the licence. However, some changes in operation may not, at first, appear to relate to this appendix. To understand the types of changes which trigger the need to amend the licence to update the appendix of *Licence Documents,* it is worthwhile revisiting the purpose of this appendix.

At the time of licence application, the licence applicant submits the measures they propose to use to ensure the requested licensed activities will be conducted safely. The proposed program is reviewed by CNSC staff and, if acceptable, the key policies, procedures and facility design details are incorporated into the

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2012 COMP Professional Survey

The 2012 edition of the COMP professional survey provides comprehensive documentation of compensation and benefits currently provided to members. The survey was sent out to all members in June 2012 concerning their 2010 and 2011 salary information. This survey was sent to 511 members of COMP.

There were 252 Respondents to the survey. This is a 4 percent decrease in response rate from the 2010 Survey which had 263 Respondents.

1. Age (n=252).

Age	21 - 30	31 – 40	41 – 50	51 – 60	61+	Average
Men (n=195)	10	59	60	46	20	45.7
	5.1%	30.3%	30.8%	23.6%	10.3%	
Women (n=57)	3	33	16	3	2	39.3
	5.3%	57.9%	28.1%	5.3%	3.5%	

Since 2010, the average age of both male and female respondents has increased by 1 year.

2. Gender (n=252).

In total 195 men (77%) and 57 women (23%) responded to the survey.

3. Location (n=252).

BC	AB	SK	MB	ON	QC	NB	NS	NL	PEI	World
26	25	5	14	102	32	11	7	3	5	22
10.3%	9.9%	2.0%	5.5%	40.5%	12.7%	4.4%	2.8%	1.2%	2.0%	8.7%

The distribution of the respondents has varied somewhat since 2010. Most notably, the number of international respondents has dropped from 11.8% (31 respondents) in 2010 to 8.7% (22 respondents). Within Canada, the only province to see a significant change was Quebec. The response rate in Quebec increased from 9.1% (24 respondents) in 2010 to 12.7% (32 respondents) in 2012.

4. Please indicate the highest level of education that you have attained (n=252).

Of those who responded to the question, 70.2% (177 respondents) had earned their Doctorate as their highest level of education, 28.2% (71 respondents) had earned a Master's Degree and 1.2% (3 respondents) had earned a Bachelor's Degree. The distribution between each of the levels of education has not varied significantly since the 2010 survey, and has in fact remained relatively static since 2008.

5. Please indicate your certification (n=252).

Since the 2006 Survey, the number of respondents that indicated they have a CCPM certification has grown from 64% to 73%, an increase of 14%. A professional certification of some form is held by 83% of respondents, which is up from 76% in 2010. Of those who had a certification other than the CCPM, the majority (15 of 24) held the ABR certification.

6. Who is your primary employer (n=252)?

The primary employer for 135 of the 252 respondents was a Hospital (54%). 71 were employed by a Cancer Institute (28%), 32 were employed by a University, Government or Research Institute (13%), while 14 were employed by another organization (6%). Of those that responded "Other", the majority (8 of 14) were employed in Industry.

7. Please indicate the percentage of time that you engaged in each of these activities within your workplace (n=252)?

Workplace Activity	Percentage of time engaged in activity
Administration	12.2%
Clinical Service	50.7%
Radiation Safety	4.9%
Research and Development	15.5%
Teaching	9.3%
Physics Resident	4.5%
Physics Support	1.3%
Other	1.6%

8. How many years of experience do you have within your field (n=252)?

Since 2010, the most statistically significant trend is in the 5 to 10 years of experience range, which went from 29% in 2010 to 22% in 2012.

- 55 (22%) had worked in the field for less than 5 years, an increase from 21% of the 2010 respondents,
- 56 (22%) had worked in the field for a period between 5 to 10 years,
- 52 respondents (21%) had worked in the field for a period between 11 to 15 years, which is the same percentage as in 2010,
- 30 respondents (12%) had worked in the field for 16 to 20 years, up from 8% in 2010, and
- 59 respondents (23%) had worked in the field for more than 20 years, up from 22% in 2010.

9. What is your specialty (n=252)?

208 of the 252 respondents (83%) were specialists in Radiation Oncology Physics, the same percentage as 2010. 27 were specialists in Diagnostic Radiological Physics (11%, up from 6% in 2010), 12 were specialists in Nuclear Medicine Physics (5%, up slightly from 4% two years ago), 7 were specialists in Medical Resonance Imaging (3%, down from 4% in 2010 and significantly down from the 6% in 2008), with the remainder (6 or 2%) having a specialty in another field. Please note that 7 respondents (3%) identified that they had multiple specialties.

10, 11 Income by Category (note that incomes have been normalized to 1.0 FTE)

Please indicate your level of employment in 2010 as a component of an FTE (n=241)[1].

FTE	1.0	0.9	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0
For 2010 salary period (n=241)	229	0	3	0	0	2	0	2	0	0	5
For 2011 salary period (n=234)	228	0	2	0	0	1	0	0	0	0	3

2010 Income by Gender (n=234)

Income ($CDN)	Less than 50,000	50,000 – 75,000	75,001 – 100,000	100,001 – 125,000	125,001 – 150,000	150,001 – 175,000	175,000+	Average
Men (n=185)	2	19	25	35	44	34	26	132,800
	1.1%	10.3%	13.5%	18.9%	23.8%	18.4%	14.1%	
Women (n=49)	0	6	10	12	14	5	2	118,748
	0%	12.2%	20.4%	24.5%	28.6%	10.2%	4.1%	

Between 2009 and 2010 the income for women increased 7.6% from $110,344 to $118,748. During that same timeframe the income for men increased 2.0% from $130,136 to $132,800. The gender based rates of increase calculated here are not adjusted for age, years of experience or other factors.

[1] Please note those respondents who indicated a level of employment of FTE 0 did not factor into any of the income calculations

2011 Income by Gender (n=231)

Income ($CDN)	Less than 50,000	50,000 – 75,000	75,001 – 100,000	100,001 – 125,000	125,001 – 150,000	150,001 – 175,000	175,000+	**Average**
Men (n=181)	2	6	34	28	46	33	32	137,485
	1.1%	3.3%	18.8%	15.5%	25.4%	18.2%	17.7%	
Women (n=50)	0	2	13	13	12	8	2	123,464
	0%	4.0%	26.0%	26.0%	24.0%	16.0%	4.0%	

Between 2010 and 2011 the income for women increased 4.0% from $118,748 to $123,464. During that same timeframe the income for men increased 3.5% from $132,800 to $137,485. While the pace slackened somewhat from the previous reporting period, the income for women was still increasing at a greater pace than that of men.

10, 11 Income by Category (note that incomes have been normalized to 1.0 FTE)

2010 Income by Location (n=234)

	BC (n=22)	AB (n=24)	SK (n=5)	MB (n=14)	ON (n=93)	QC (n=31)	Atlantic Canada (n=24)	World (n=21)
Income ($CDN)	126,604	134,577	124,494	131,599	134,268	89,635	138,661	168,492
Change from 2009	-6.7%	+11.6%	+9.8%	+6.6%	+5.8%	-13.7%	+21.6%	+11.4%

Notably, the income for British Columbia and Quebec decreased significantly between 2009 and 2010, decreasing 6.7% and 13.7% respectively. On the flip side, Atlantic Canada and Alberta increased by 21.6% and 11.6% respectively.

2011 Income by Location (n=231)

	BC (n=23)	AB (n=24)	SK (n=5)	MB (n=13)	ON (n=93)	QC (n=30)	Atlantic Canada (n=24)	World (n=19)
Income ($CDN)	127,496	139,500	137,707	137,616	136,476	91,914	142,726	173,159
Change from 2010	+0.7%	+3.6%	+9.6%	+4.4%	+1.7%	+2.5%	+2.8%	+2.7%

Given that Saskatchewan had such a small sample set it is difficult to use those numbers as accurate predictors of income growth. However, both Alberta and Manitoba had strong growth at 3.6% and 4.4% respectively.

10, 11 Income by Category (note that incomes have been normalized to 1.0 FTE)

Income by Specialty (n=235 in 2010, n=231 in 2011)

Specialty	2010 Income ($CDN)	Change from 2009	2011 Income ($CDN)	Change from 2010
Radiation Oncology Physics (n=192 in 2010, n=189 in 2011)	132,877	+2.1%	137,242	+3.2%
Diagnostic Radiological Physics (n=26 in 2010, n=25 in 2011)	128,955	+19.7%	131,154	+1.7%
Nuclear Medicine Physics (n=8)	125,288	+5.3%	125,246	-0.003%
Magnetic Resonance Imaging (n=6)	128,534	+26.4%	132,744	+3.2%

The most statistically significant trend for income by specialty is the increase in income for Radiation Oncology Physics. It has steadily increased from 130,128 in 2009 to 137,242 in 2011

Income by Level of Education (n=234 in 2010, n=231 in 2011)

Level of Education	2010 Income ($CDN)	Change from 2009	2011 Income ($CDN)	Change from 2010
Bachelor's Degree (n=2 in 2010 and 2011)	103,000	+20.4%	108,500	+5.1%
Master's Degree (n=68 in 2010, n=67 in 2011)	117,001	+1.5%	122,805	+4.8%
Doctorate (n=163 in 2010, n=161 in 2011)	135,980	+2.0%	139,243	+2.4%

Given the small sample set for respondents with a Bachelor's degree, the increase from 2009 to 2010 is statistically unreliable.

12(a). Did you perform any consulting work?

38 of 239 (15.9%) respondents performed consulting work in 2010, down slightly from 16% in 2009. In 2011 there were 39 of 234 (or 16.7%) respondents that performed consulting work.

12(b). Please indicate your total income from consulting fees.

Income ($CDN)	1 – 5,000	5,001 – 10,000	10,001 – 15,000	15,001 – 20,000	20,001 – 25,000	25,000+	Average
2010 (n=32)	20	5	1	4	0	2	10,051
2011 (n=34)	18	6	2	6	0	2	9,414

Please note that the numbers shown exclude respondents whose income was solely derived from consulting fees. Including them would bias the overall average income from consulting. It should be noted that total income from consulting fees decreased from the last survey, going from 12,731 to 10,051 in 2010 and 9,414 in 2011. This appears to be a trend, as the income from consulting fees decreased between 2008 and 2009 as well.

12(c). Please indicate your nominal consulting hourly rate.

Hourly Rate ($CDN)	0 - 50	51 – 100	101 – 150	151 – 200	200+	Average
2010 (n=30)	2	7	11	6	4	151.77
2011 (n=32)	3	8	9	7	4	160.00

The hourly rate for consulting went up from $150.34 in 2009 to $151.77 in 2010 and $160.00 in 2011. It appears, then, that while the hourly rate continues to increase, the amount of consulting work available has decreased, leading to a drop in the income garnered from consulting.

13. What was your Annual Professional Allowance for (including all travel allowances)?

Year	Annual Professional Allowance	Change from Previous Year
2010 (n=183)	$3,832	+0.9%
2011 (n=177)	$3,464	-10.6%

Whereas growth in the annual professional allowance was quite consistent from 2006 to 2010, it decreased in the past year. This may be a significant trend if it continues in the future.

14. What are you permitted to spend your professional allowance on (check any that apply) (n=215)?

Item	Responses	Percentage of Respondents*
Books	35	16.3%
Conference Travel	93	43.3%
Memberships	27	12.6%
Electronic Devices	36	16.7%
Other (please specify)	116	54.0%

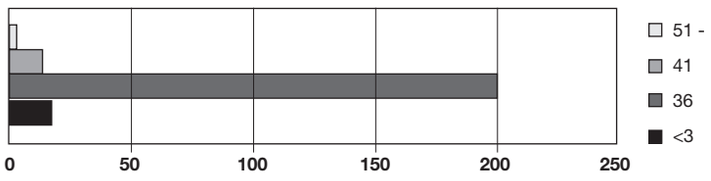
**Please note that the responses do not total 100% given that respondents could choose both an option and the 'Other' category*

Of note, the majority of respondents (66 of 116 or 56.9%) who chose 'Other' identified that their professional allowance allowed them to purchase all of the items listed.

15. Do you foresee your income increasing, decreasing, or remaining the same for the next year (n=235)?

127 of the 235 Respondents (54%) felt that their income would increase over the next year. This is up slightly from the 50% of respondents who felt that way in 2009. 101 respondents (43%) felt their income would remain the same, as compared to 46% who felt that way in 2008. Only 7 of the 235 respondents (3%) felt that their income would decrease.

16. How many hours are you paid to work in a week (n=235)?



The vast majority of respondents (201 of 235, or 86%) were paid to work a 36-40 hour work week. This number corresponds with the previous survey, where 82% of respondents noted that they paid to work between 35 and 40 hours per week.

17. Please indicate which benefits are covered (in part or in whole) by your employer (n=234).

	Yes	No	Unknown
Medical Coverage	93.2% (218)	3.4% (8)	3.4% (8)
Dental Coverage	91.9% (215)	6.0% (14)	2.1% (5)
Term Life Insurance	85.9% (201)	6.8% (16)	7.3% (17)
Disability Insurance	86.8% (203)	7.7% (18)	5.6% (13)
Retirement Pension Plan*	95.3% (223)	0.9% (2)	3.8% (9)
Sabbatical Leave	29.1% (68)	48.7% (114)	22.2% (52)
Tuition Benefits (self)	14.5% (34)	63.7% (149)	21.8% (51)
Tuition Benefits (dependents)	9.4% (22)	69.2% (162)	21.4% (50)
Parking	13.2% (31)	78.6% (184)	8.1% (19)

**Exclusive of CPP or QPP*

18. How many vacation days do you get during a year exclusive of statutory holidays (n=231)?

Vacation time	Percentage Response
15 or less Vacation Days	6.1%
16-20 Vacation Days	50.2%
21-25 Vacation Days	27.3%
26-30 Vacation Days	10.8%
>31 Vacation Days	5.6%

19. Do you hold a faculty position (n=234)?

122 of the 234 respondents (52.1%) acknowledged that they currently hold a faculty position.

20. Which of the following teaching activities do you participate in (n=169)?

Teaching activities	Percentage of Respondents
Lecture radiology or oncology residents	65.7%
Deliver all or part of a graduate-level course	58.6%
Deliver all or part of an undergraduate-level course	23.7%
Supervise graduate students	52.1%
Other	21.3%

Please note that respondents were able to select more than one response for this question. For those respondents that chose "Other", 25% (9 of 36) were involved in teaching residents.

21. Do you expect to retire from full-time practice of medical physics within the next 10 years (n=233)?

46 of 233 respondents (19.8%) identified that they will retire in the next ten years. This number is identical to the previous survey's finding of 20%. Of note, 20 (8.6%) of the respondents were unsure.

22. Please list any voluntary medical physics-related activities in which you participate (n=83).

The most frequent response was a reviewer of some form of medical physics journal, with 23 of the 83 respondents (or 27.8%). The next most frequent response was a committee member, with 16 of 83 respondents (or 19.3%).

23 (a). Are you willing to volunteer time in support of COMP (n=233)?

136 of 233 respondents (58.4%) of respondents were willing to volunteer their time in support of COMP.

23 (b). If so, what would be your preference (n=224)?

Preferred Volunteer Activity Type	Percentage of Respondents
Member of the Professional Affairs Committee (PAC)	15.2%
Member of the Communications Committee	8.0%
Member of the Science and Education Committee	22.3%
Member of the Quality Assurance and Radiation Safety Advisory Committee	19.2%
Member of the Board of Directors	8.0%
Expert Resource	18.8%
Other (please specify)	8.5%

Of those that responded "Other", the primary vein was that they were willing to help in whatever capacity

24. On a scale of 1 to 5, with 5 being most useful, please rank how useful you found the information published from past COMP professional surveys (n=234)?

Preferred Volunteer Activity Type	Percentage of Respondents
Not useful at all	1.3%
Somewhat useful	26.5%
Neither useful nor useless	7.7%
Useful	41.9%
Most useful	22.6%

CNSC Feedback Forum *continued from page 8*

appendix of *Licence Documents*. The two licence conditions, 2917 and 2920, then require a licensee to abide by these procedures and to inform the CNSC if any inaccuracies are discovered.

Some changes to the documents and information referenced in the appendix, such as a change to a radiation safety procedure or a change in applicant authority or RSO, will clearly result in the need for a licence amendment. Similarly, a facility design change, such as modifications to the safety systems, is another clear example of a change which requires amendment of the licence. Again, such amendments must be requested and approved ***prior*** to proceeding with the proposed change.

Other scenarios requiring a licence amendment may not be immediately obvious. For example, when a linac decommissioning licence is revoked, the treatment room is released from regulatory control. If there is an operational linac in an immediately adjacent bunker, the impact of the change in occupancy in the empty vault must be assessed to ensure it is adequately shielded for its new purpose, and the facility design information for the adjacent linac must be updated accordingly.

Another example is when hardware or software upgrades or "software patches" are performed on existing equipment. In these cases it can be much more difficult to determine whether an amendment is required. Changes that will typically require approval and amendment of the licence include those which:

- result in a change in the model (i.e., in the CNSC prescribed equipment certificate number);
- may affect the behaviour of the safety systems, or;
- may alter the radiation characteristics of the machine (e.g. output, maximum energy).

If the licensee decides that a particular change does not warrant a request to amend the licence, they should document this decision and the supporting rationale. Acceptable forms of documentation include meeting minutes and "notes to file." This documentation should be maintained for the life of the prescribed equipment and be made available to the CNSC or other regulatory body as needed.

How to request an amendment

Amendment requests must be made in writing. An email to your project officer indicating the nature of the proposed change, the licence(s) affected, and any supporting documentation is normally acceptable. Note that the service standard for amendment of a licence is two weeks from the date of the request provided all necessary supporting documents (if applicable) are provided with the request.

Not sure if an amendment is required? Ask your project officer.

Promoting COMP to Canadian Undergraduates

Yingli Zhao, MCCPM
B.C. Cancer Agency - Fraser Valley Centre

The Canadian Undergraduate Physics Conference (CUPC) is an annual conference organized by students for undergraduates in physics from across Canada to present oral or poster contributions on various topics related to physics. The CUPC 2012 was hosted by University of British Columbia in Vancouver from October 25~29. To promote awareness of Medical Physics as a career possibility to these talented undergraduate students, COMP representatives including local Medical Physicist members from BCCA-Fraser Valley Centre: Robert Corns, Yingli Zhao and student members from BCCA-Vancouver Centre: Tania Karan, Maryam Afsari Golshan and Marcus Sonier, attended the CUPC half-day Grad and Career Fair. We provided information on the medical physicist's healthcare-related tasks, on working in multiple-disciplinary environments and answered questions from interested undergraduates. Interested students were directed to Canadian Universities offering graduate programs in Medical Physics and the information resources at COMP's website. Importantly, the COMP student members promoted our profession to these undergraduates by describing their firsthand experiences.

This five-member COMP team participated with about 20 other institutions at this career fair. Medical Physicists from Carleton University, McGill University and McMaster University also attended this fair representing their university's program. This combination with local volunteers and conference participants is an effective and cost efficient way to promote Medical Physics as a career. We hope more and more gifted students will devote themselves to this choice.

*Front le*f *:* Maryam A. Golshan, Marcus Sonier, Robert Corns, Tania Karan and Yingli Zhao

The New Canada Not-for-Profit Corporations Act – What Does it Mean for COMP and CCPM?

Nancy Barrett, Executive Director

The new Canada Not-for-profit Corporations Act (NFP Act) establishes a new set of rules for federally incorporated not-for-profit corporations in Canada, such as COMP and CCPM. These new rules will replace Part II of the Canada Corporations Act (old Act), the law that has governed federal corporations for nearly a century.

What are the Benefits of the New Legislation?

- A clear and modern set of rules that better suit the needs of federal not-for-profit corporations.
- Less red tape with simplified processes.
- More flexibility to make fundamental changes.
- A more objective standard for directors in carrying out their duties and responsibilities.

When Do these New Rules Apply?

The NFP Act does not automatically apply to existing corporations. Instead, COMP and CCPM will have to take action to make the transition to the NFP Act by the deadline of **October 17, 2014.** Corporations that do not make the transition by the deadline will be assumed to be inactive and will be dissolved.

What is the Transition Process?

COMP and CCPM must replace their letters patent and bylaws with new articles of continuance and new bylaws that comply with the NFP Act. Because the rules under the NFP Act are different, the transition process is not simply a matter of transposing our existing letters patent and bylaws. This is a big undertaking and while the Boards will be engaging support from consultants with expertise in governance and the new Act, time and effort will be required by Board members to ensure a smooth transition. There are five steps in the transition process:

Step One – A Review of the Letters Patent and Bylaws

Step Two - Prepare Articles of Continuance

Step Three – Create New Bylaws

Step Four - Get Members' Approval

Step Five - Submit the Required Documents to Industry Canada

A lengthy and comprehensive set of bylaws was required under the old Act to govern an organization's internal affairs. This is not the case with the NFP Act since the Act already contains many rules. It specifies which by-law provisions are mandatory and provides default rules that apply if the corporation's bylaws do not address certain matters. If there are no other provisions in the bylaws, the default rules will apply. Both COMP and CCPM will have to decide if the default rules meet the needs of the organization and if they don't, they will have to create bylaws that meet the needs and follow the rules of the new Act.

As COMP and CCPM are two separate not-for-profit corporations, each organization will have to review its corporation's letters patent and bylaws separately to determine what should be kept and what needs to be changed for the new legislation. However, given that there is a strong link between the two organizations as CCPM members are required to maintain a membership in COMP, it is expected that the new articles and bylaws for each organization won't be developed in isolation.

It is hoped that both COMP and CCPM's new articles of continuance and the new bylaws will be ready to present at the 2013 AGM of each organization. The new NFP Act requires that the articles of continuance and bylaws be approved by two-thirds of the votes cast by members of the corporation who are entitled to vote. Efforts will be made to ensure that ample time is provided for members to review the proposed bylaw changes in advance so that they can ask questions and provide feedback. It is critical that members are engaged in this important process. If you have any questions, please don't hesitate to contact me at nancy@medphys.ca.

In Memoriam - Sylvia Fedoruk (1927-2012)

Doug Cormack, Jack Cunningham
and Jerry Battista

With the passing of Sylvia Fedoruk, Canada and the world have lost one of the pioneers in applying the principles and experimental techniques of physics to improve patient care. After outstanding achievements in both the academic field and on the sports field, she joined Harold Johns' medical physics group at the University of Saskatchewan in 1951. A 23-MeV betatron had recently been installed for research in nuclear physics and for a limited clinical trial in the treatment of patients with deep-seated tumours. Sylvia's responsibilities went far beyond checking the calibration of the monitor chamber to see if the machine was delivering the prescribed "dose". The betatron ran at a frequency of 180 Hz and when the magnet was 'run up' it made a deafening howling sound. During the treatments the patients would be left unattended in the room with the 'monster'. In order to give them a little reassurance, Sylvia stayed in the betatron vault during a 'dummy run' in which the magnet was turned but with the radiation beam turned "off"; Sylvia's compassion was particularly appreciated by Ukrainian-speaking patients. She went on to contribute to nuclear medicine developments, still while in Saskatoon – the birthplace of medical physics in Canada. She was Canada's first female medical physicist!

Note: Doug Cormack, Jack Cunningham and Sylvia Fedoruk are COMP's first Gold Medal recipients in 2006.

In 1986, Sylvia became chancellor of the University of Saskatchewan, was inducted into the Canadian Curling Hall of Fame, and was awarded the Saskatchewan Order of Merit. It was a good year! Soon after, she was made an Officer of the Order of Canada, and became Lieutenant Governor of Saskatchewan with a telephone invitation from Canada's Prime Minister Mulroney.

Sylvia has kindly left us an autobiographical account of different phases of her career in physics in the form of an address she gave to the Canadian Nuclear Association in 1989. (http://media.cns-snc.ca/history/fifty_years/fedoruk.html). In 1990, Sylvia received the honourary degree of D.Sc. from Western University, with a nomination led by Trevor Cradduck who had developed a gamma camera during his Ph.D. project in Saskatoon. Sylvia visited the Robarts Research Institute on that occasion and a memorable BBQ was held at the home of Dr. A. Fenster. Carloads of colleagues arrived from Toronto to congratulate her. In the same year, Fedoruk Drive was added to the map of Saskatoon.

Additional biographical material has appeared in our newsletter in an article by Pat Cadman entitled "SOF: A woman of many firsts" (***InterACTIONS*** April 2001) and later in January 2007 to mark the awarding of the COMP gold medal in Saskatoon – a fitting tribute and location (see photo on the left). In 2009, she was inducted into the Canadian Medical Hall of Fame. For newcomers to our field, you may wish to see an excellent summary of lifelong contributions and a video of Sylvia (http://cdnmedhall.org/dr-sylvia-o-fedoruk).

She also played a leading role in setting up the exhibit "Cobalt-60 at 60" in the Western Development Museum in Saskatoon and was featured in the opening ceremonies in 2011 (http://www.wdm.ca/stoon/cobalt.html). In October 2012, the Saskatchewan Government re-named the Canadian Centre for Nuclear Innovation in her honour (http://news.usask.ca/2012/10/03/canadian-centre-for-nuclear-innovation-named-after-sylvia-fedoruk).

We Canadian physicists working in the medical field have indeed been fortunate in having Sylvia with us in our formative years. We pay tribute to her legacy through the Sylvia Fedoruk Award given annually for the best publication in Canadian medical physics. Her contributions to medical diagnostics and therapeutics and her outstanding positive attitude and warm personality have given us a shining example for the future of medical physics and humanity.

Doug Cormack, Jack Cunningham and Jerry Battista
November 2012

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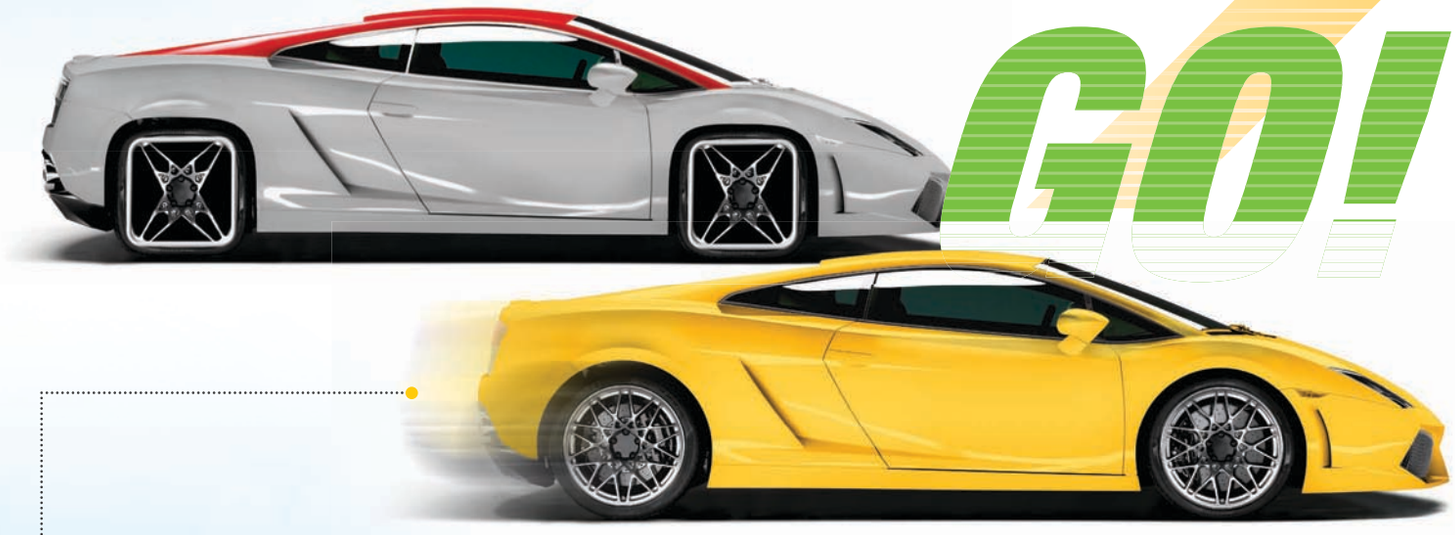

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Sylvia Olga Fedoruk Obituary

by Vera Pezer, Chancellor of the
University of Saskatchewan
(reprinted from the Saskatoon Star-Phoenix)

Photo provided by the University of Saskatchewan. Photo by Josh Schaefer/Huskie Athletics.

Sylvia (Syl) Olga Fedoruk, age 85, died on September 26th at Saskatoon. Her life, marked by achievements in science, athletics and public service earned her significant recognition. She was a proud Canadian with her roots firmly planted in Saskatchewan. She leaves to mourn two aunts: Annie (John) Romaniuk, Yorkton; and Mary (Fred) Romaniuk, Parksville, BC as well as cousins: Dolores (Tom) Murphy, Vancouver; Garry Vann (Carol Walker), Saskatoon; Michael (Margaret) Vann, Calgary; Alvina Romaniuk, Spruce Grove, AB; Eugene (Coby) Romaniuk, Errington, BC; Sharon (Steve) Sobkow, Calder, SK; Lawrence (Susan) Romaniuk, Kelowna; Metro (Adelaine) Romaniuk, Yorkton; Ivan & Regina Sobkow (Nicholas & Vincent), Calder, SK; Andrea Sobkow, Saskatoon; Charlotte & Bill Patterson (Jennifer), Qualicum Beach, BC; Douglas & Christine Heshka-Wolf (Ciera & Kira), Spruce Grove, AB; Sandra & Dwayne Yaciuk (Samanda & Amanda), Saskatoon. Also left to mourn are many friends, especially Irene Bell and her best friend Max C. Sylvia was predeceased by her parents Theodore and Annie and her special cousin, Merylyn Vann.

Sylvia was born in Canora, Saskatchewan on May 5, 1927 to Annie Romaniuk and Theodore Fedoruk. A spring blizzard struck just as Mrs. Fedoruk went into labour forcing the shorter trip to Canora hospital rather than Yorkton as they planned. The circumstances surrounding Sylvia's birth became a metaphor for managing adversity that defined the Fedoruks who, like many at the time, overcame significant hardship to become firmly established first-generation Canadians.

Sylvia's early school experiences, where circumstances frequently compromised the curriculum, were balanced by personal lessons that would serve her well in her later academic pursuits. Her formal education began in a one room rural school, near Wroxton in the Yorkton area, where her father taught seventy students in grades one to eight while supervising those completing grades nine and ten by correspondence. Older students helped teach the younger ones so that by the time she was in grade five, Sylvia was helping "tutor" her younger classmates. Her father, determined to show that his daughter was not the teacher's pet, used Sylvia to set the academic and disciplinary standards for the school. Pursuing the best grades and pleasing supervisors would define her career with impressive results.

In 1941 the Fedoruks moved to Windsor, Ontario where both parents found work. Canada was at war and factory wages were much higher than Theodore could earn as a rural school teacher. Here, Sylvia completed grades nine through thirteen, graduating in 1946 as the top female student at Walkerville Collegiate, earning the Ernest J. Creed Memorial Medal and a University entrance scholarship.

The family returned to Saskatchewan after the war where Theodore resumed his teaching career and Sylvia enrolled at the University of Saskatchewan. She never forgot her mother's message that she complete a University education, find a satisfactory job and stick with it to earn a good pension, opportunities that had eluded the ambitious, hard-working Annie. Supported by scholarships and her parents' hard-earned savings, Sylvia obtained her B.A. with great distinction in 1949, earning the Governor General's Gold Medal as the University's most outstanding graduate. This was followed by a four-year degree with high honours in Physics and a Masters degree in 1951.

By this time, she had caught the attention of Dr. Harold Johns who recruited her to be the radiation physicist at the Saskatoon Cancer Clinic. Her work with Johns, teaching medical physics

and pioneering the world's first cobalt unit to treat cancer, earned her an international reputation. By the time Sylvia retired in 1986, she was Director of Physics Services for the Saskatchewan Cancer Commission, had published 38 refereed papers and had participated in scientific presentations world-wide.

She was the first female member of the Atomic Energy Control Board of Canada (1973-83) and the Science Council, Canada (1973-76), was appointed an Honourary Member of the Canadian Association of Radiologists, a Fellow of the Canadian College of Physicists in Medicine and Honourary Consultant to the medical staff of Royal University Hospital where she spent her career. Her work in medical radiology earned her four honourary degrees from the University of Windsor (1987), Western Ontario (1990), Regina (1991) and Mount Saint Vincent (1993). A fifth, recognizing her career and public service contributions was awarded in 2006 by her alma mater, the University of Saskatchewan. In 1986, Sylvia was appointed an Officer of the Order of Canada and received the Saskatchewan Order of Merit. Her career was captured best in 1988 when she was selected to the Order of St. John, an international organization whose mission is to prevent illness and enhance the health and well-being of people throughout the world. In 2009, she was inducted into the Canadian Medical Hall of Fame and was awarded the Queen's Jubilee Medal in 2012. Not bad for a girl who began her education in a one room school near Wroxton, Saskatchewan.

Sylvia's public service record is as impressive as her career. Her name is found on an assortment of fifty-one directorships ranging from University of Saskatchewan contributions on the Board of Governors, the Senate and a term as Chancellor to participation in the wider community. She was a member of The Meewasin Foundation, Ronald McDonald House, and the Centennial Auditorium (TCU Place) Boards and the planning committee for the 1989 Brier. Provincially, she served on the Board of Sask. Sport and was a member of the Advisory Committee for Judicial Appointments. A term as President of the Canadian Ladies' Curling Association and on the Board of the Canadian Nurses Association enhanced her national reputation. Her varied public service contributions culminated in her appointment as Saskatchewan's seventeenth and first woman Lieutenant Governor. Like anything else she did, her 1988-1994 term was completed with dignity, warmth and distinction. She was one of Saskatchewan's most popular Lieutenant Governors.

Accomplishments in science and public service were complemented by Sylvia's long-term involvement in sports. In her academic and public services roles, she was "Professor" or "Your Honour". When she arrived at the curling rink, arena, gymnasium or golf course, she became "Syl".

In the days before specialization, Sylvia was an outstanding University athlete. Including four track and field championships highlighted by a 1947 Canadian record in women's javelin, she won a total of twelve intervarsity championships. In 1949, she was awarded the Spirit of Youth Trophy for outstanding accomplishments in academics and athletics. Following graduation, she turned to softball and curling with similar success. In the days before national championships, she was an infielder on the Regina Govins and the Saskatoon Ramblers 1954 and 1955 Western Canadian Championship teams. She was on curling teams skipped by Joyce McKee that won three Provincial championships and the first Canadian Championship in 1961. Golf remained an interest from her early university days through her various "retirements" where she maintained a membership at Riverside Country Club. At the University level, she remained a life-long passionate supporter of the basketball Huskies, an early arrival for games and never shy about scolding the referees.

Helen Keller, author, lecturer, activist and first deaf and blind person to graduate from college more than a century ago said "I long to accomplish great and noble tasks but it is my duty to accomplish small tasks as though they were great and noble". Sylvia Fedoruk's life was marked by tasks large and small and accomplishments great and noble. We mourn her passing and celebrate her life.

Photo provided by the University of Saskatchewan and the U of S Archives.

Photo provided by the University of Saskatchewan and the Green & White.

A Note of Thanks

Silvia Neuteboom
Chair, MPAC

This summer, COMP was instrumental in helping to organize two key meetings for MPAC, Medical Physics Associates of Canada. The first meeting was held at the COMP ASM in Halifax and was the forum for some great discussion by attendees. On behalf of the Board of MPAC, I'd like to thank Jim Allan and Jason Schella of the Halifax LAC for accomodating a last-minute meeting request and helping us out. Thanks also to Craig Beckett, Professional Committee chair, for showing his support and attending the meeting, and thank you very much to Peter McGhee for the encouragement and outreach he provided during his time as COMP President.

The following weekend, the first-ever MPAC Regional Meeting was held in Toronto. Seven intrepid physics associates from four different cancer centers gave up a sunny Saturday afternoon for a lively and wide-ranging discussion about various issues PAs face on a day-to-day basis. MPAC (and I) would like to extend great thanks to David Jaffray for offering us meeting space at PMH and for his support. Bern Norlinger and Julia Publicover are also owed thanks for organising the details of the day.

It is hoped that these meetings will be the start of two continuing and parallel trends - greater Physics Associate involvement in COMP, and better professional development for PAs. MPAC is the only professional organization for physics associates in Canada. It arose from an initiative started in 2004 by Lisa Gamble of Juravinski RCC and a handful of fellow PAs in Ontario, and has been helped along the way by Joe Howard. The original goal is still a worthwhile one: to create opportunities for PAs to share knowledge, improve practice and in time, and if possible, develop an accreditation process for the role. This goal, if achieved, will be beneficial to the field as a whole and especially to the medical physicists we work alongside.

This cannot be achieved without COMP, and for the support PAs have received until now, I wish to extend our thanks. I urge all PAs to get involved in this effort, either by joining the discussion at MPAC (find us on the web at http://www.medpac.ca) or by taking out membership in COMP.

Message from the CCPM President

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guidance on these matters, and the progress will be communicated to our members primarily through this column.

Following on from one of my themes in the last newsletter, presenting our new bylaws to the membership and voting on them will be a very significant event for the College, and so I encourage everyone to make an effort to attend the next AGM in Montreal. The COMP ASM will be a joint meeting with CARO, so there will be lots of activity and people's schedules will undoubtedly be very full, but please make the CCPM AGM a priority.

I have one final note for this issue. A number of years ago now, the CCPM adopted a policy that as of January 2016, applicants for certification in Radiation Oncology Physics will be required to have completed either a CAMPEP accredited graduate degree or a CAMPEP accredited residency. The board is already receiving a number of enquiries about this requirement and how it will be implemented. Although three years might seem like a long time, we intend to raise awareness of this issue for prospective candidates now to try to ensure that it doesn't catch anyone by surprise.

Beginning in the next issue of InterACTIONS, we will be publishing selected frequently asked questions (FAQs) from our website. Although these are available on our website, we want them to gain a wider audience among members and prospective members. Over the next few issues of InterACTIONS, some of the FAQs will relate directly to the CAMPEP requirement and the exact details of how it will be implemented, but the published FAQs will cover a wide range of topics. Hopefully this will prove to be useful in clarifying many of the College's policies.

AQPMC 2012 : Recent Events in Gatineau/ *Événements AQPMC 2012: Direction Gatineau*

François DeBlois

AQPMC President/
président de l'AQPMC

AQPMC 2012 Workshop

The 9th edition of the AQPMC (Association québécoise des physicien(ne)s médicaux cliniques) annual workshop was held on November 10th 2012 at the Clarion Hotel in Gatineau. This year our highlight was "Workflows and Processes in Radiation Oncology." This is a hot topic in Radiation Oncology these days as many Quebec health centres are reviewing the way they work or are creating processes from scratch.

The organizing committee, directed by Philippe Després, AQPMC's Science and Education advisor, and Annie Doiron, chief physicist at the CSSSG- Gatineau hospital cancer centre, brought together more that 50 medical physicists and students from many Quebec centres. Our master of ceremonies was Mr. Fadi Hobeila. Speakers covered a variety of subjects: "Lean healthcare" projects, the development and implementation of new clinical integration software and dashboards, planning and optimization of appointments and care paths.

A COMP/OCPM financial contribution enabled us to invite a keynote speaker: Mr Jean-Yves Fiset of Systèmes Humains-Machines Inc. Mr Jean-Yves Fiset, a regular contributor to the COMP Winter School, presented the Importance of Software Selection and Evaluation Methods.

AQPMC 2012 Student day

Preceding the Saturday workshop and under the auspices of the same organizing committee, a Student Day took place on Friday November 9. This event brought together over 30 students and researchers from three Quebec universities (Montreal, Laval and McGill) who presented their work. This annual event is also a forum that favors sharing and exchange in order to stimulate research in medical physics in Quebec.

Under the direction of Jean-François Carrier, 18 students contributed very interesting presentations, which culminated at the end of the day by a highly effective dissertation by our excellent keynote speaker, Mr. Fiset, on Myths and Realities of Human Performance in the workplace. A $200 prize for the best student presentation was awarded to Mr. Jonathan Boivin, a Laval university student, for his work *on Dose monitoring during interventional radiology procedures.*

AQPMC wishes to thank our generous sponsors: COMP/OCPM, Elekta, Varian, Harpell Associates, PTW and ScandiDos for the workshop, and COMP/OCPM for the student day.

Presentations for the two events are available in PDF format for registered members of the association at http://aqpmc.org.

Atelier de l'AQPMC 2012 – Processus et flux de travaux en radio-oncologie

Le 10 novembre dernier l'AQPMC (Association québécoise des physicien(ne)s médicaux cliniques) tenait la 9ième édition de son atelier annuel à l'hôtel Clarion de Gatineau. Les processus et flux de travaux en radio-oncologie étaient à l'honneur cette année. Ce thème est plus que jamais d'actualité en radio-oncologie alors que de nombreux centres québécois ont revu leur façon de travailler ou ont construit leurs processus à partir de zéro.

Le comité organisateur, dirigé par Philippe Després, conseiller en sciences et éducation de l'AQPMC et Annie Doiron, chef physicienne du centre de cancérologie du CSSSG-Hôpital de Gatineau, a réuni plus de 50 physicien(ne)s médicaux et étudiants en provenance des quatre coins du Québec. M. Fadi Hobeila animait la journée. Les présentateurs ont couvert un large éventail de sujets : divers projets « Lean healthcare », implémentation et développement de nouveaux logiciels d'intégration clinique et tableaux de bord, planification et optimisation des rendez-vous et des trajectoires de soins, etc.

La contribution financière du COMP/OCPM a permis d'inviter un conférencier de marque : M. Jean-Yves Fiset de Systèmes Humains-Machines Inc. M. Fiset, un habitué de l'école d'hiver du COMP, a présenté à l'auditoire l'importance des méthodes de sélection et d'évaluation des logiciels.

Journée étudiante AQPMC 2012

L'atelier du samedi était précédé, le vendredi 9 novembre par la journée étudiante de l'AQPMC orchestrée, encore une fois, par le même comité organisateur.

L'évènement a rassemblé plus de 30 étudiants et chercheurs en physique médicale des trois universités québécoises (de Montréal, Laval et McGill) qui sont venus y présenter leurs travaux. Cet évènement annuel se veut un forum de partage et d'échange qui a

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Union for International Cancer Control 2012

Peter McGhee, PhD, FCCPM
Past COMP President

This past August in Montreal, Canada was host to the Union for International Cancer Control (UICC) World Cancer Congress. Based out of Geneva, the UICC is comprised of a membership of over 760 organizations located in 155 countries and is committed to delivering the targets of the World Cancer Declaration through strategic partnerships involving members and other institutions interested in fighting cancer. The Declaration outlines 11 targets to be achieved by 2020 including: significant drops in global tobacco consumption, obesity and alcohol intake; universal vaccination programmes for hepatitis B and human papilloma virus (HPV) to prevent liver and cervical cancer; dramatic reductions in the emigration of health workers with specialist cancer training; universal availability of effective pain medication; and dispelling myths and misconceptions about cancer. In support of the 2012 Congress, COMP became a member of the UICC and I had the opportunity to represent COMP on the Canadian Advisory Committee responsible for oversight of the organization of the Congress. As a member organization, COMP was also invited to have a representative participate in the UICC General Assembly and in a day-long World Cancer Leaders' Summit held immediately before the Congress. I had the privilege of attending both and the following provides a brief report on these events.

The General Assembly was the more mundane of the two sessions, essentially being a business meeting. The primary achievements for the evening were the election of new members for the UICC Board of Directors and voting on a few constitutional amendments. Interestingly, although the UICC has been in existence since 1933, one of the constitutional changes was to clarify the definition of "UICC". Until the amendment, UICC had meanings in English, French, Spanish, and Latin, a situation which apparently had legal ramifications. The formal definition is now explicitly the English version. (Yes, the evening was indeed full of the usual excitement associated with a business meeting.) Particularly noteworthy from the proceedings was the introduction of the new President of the UICC: Dr. Mary Gospodarowicz. Certainly no stranger on the Canadian scene, she is assuming the reigns from Dr. Eduardo Cazap, an enthusiastic and dynamic individual who clearly has a passion for advancing cancer control on a global basis. Dr. Cazap was impressive in his focused approach to the business of the UICC, citing the initial goals established at the beginning of his term as President and then outlining the successes resulting from their achievement. There are a number of global initiatives that the UICC sponsors (including maintenance of the TNM classification of malignant tumours), but perhaps the most significant recent achievement was the strategic alignment with other non-communicable disease (NCD) non-governmental organizations in an effort to realize synergies and efficiencies through coordination of activities and resources. In large part due to the efforts of this NCD Alliance, the United Nations has issued a Political Declaration that targets a 25% world-wide reduction in premature mortality from NCDs by 2025. Establishing such political will is essential if the UICC is to achieve its stated goals. With Dr. Gospodarowicz at the helm, the building momentum is sure to only continue to grow, as will the potential role and contribution of Canada.

The day following the General Assembly was dedicated to the World Cancer Leaders' Summit. There were approximately 250 people in the room with representation spanning the globe. To provide an idea of the cross section of attendees, dignitaries and speakers included representatives from the World Health Organization, the Pan American Health Organization, the US National Cancer Institute, and the federal and Quebec Ministries of Health. Participants included Minsters of Health from a number of countries, including Tanzania, Mexico, and Jamaica. There was a video message from Mr. Luiz Inacio Lula da Silva, former President of Brazil. The First Lady of the Republic of Zambia, Dr. Christine Kaseba Sata, and Her Royal Highness Princess Dina Mired of Jordan were both very engaged participants in the panel sessions. Suffice to say the session lived up to its title.

While the Agenda was quite full and highly structured, the Summit was formatted to encourage audience engagement. A keynote presentation, entitled *The Global Cancer Burden: From Descriptive Epidemiology to Cancer Control,* was provided by Dr. Chris Wild, Director of the International Agency for Research on Cancer. Three panel discussions then followed in succession. The first of these was entitled *Improving National Health Systems Through Cancer Control Planning, Implementation and Metrics.* Case studies were presented for three countries: Brazil, Tanzania, and Canada (a presentation in which the Canadian Partnership Against Cancer played a

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Harold E. Johns Travel Grant Report

Emilie Soisson, PhD.
McGill University Health Centre

I am writing to share my experience at the 2012 Paul Sherrer Intitut (PSI) Proton Therapy Winter School as the 2011 recipient of the H.E. Johns Travel Award.

With added support from the McGill University Health Centre, I was given the opportunity to travel to Bad Zurzach, Switzerland (near Zurich) for this excellent introduction to proton therapy. It was an eye opening and intellectually stimulating trip that involved a very high quality school followed by a visit to PSI, a well-known leader in proton therapy that has been treating patients since 1984, developed the Spot-Scanning technique in the 1990s, and was the first center in the world to clinically implement intensity modulated proton therapy (IMPT).

I had originally applied for the H.E. Johns Travel Award due to a growing interest in proton therapy as a result of McGill being awarded a grant from the Fonds de recherche santé en Quebec (FRSQ) to investigate the value of proton therapy for pediatric patients in our province. In addition, since the majority of all pediatric radiotherapy patients in Quebec are treated in Montreal, I felt that McGill would be an appropriate location for the first proton therapy centre in Canada. In an effort to start justifying our potential venture into proton therapy, I had recently configured the proton planning algorithm in our Eclipse research station using borrowed beam data to allow us to start performing plan comparisons. When I attempted to help our first funded student generate treatment plans, I realized that, after years of treatment planning with photons, I had no idea what a typical proton plan would look like or how to evaluate it in terms of quality or deliverability. If this is a direction we are going in Canadian oncology, I felt that, as physicists, we need to be able to make educated decisions about the value of proton therapy and, eventually, be able to make smart purchasing decisions. Since proton therapy is of very limited availability in Canada, travel was necessary to get a firsthand look and I thought this course would be an excellent way to learn the state-of-the-art in proton therapy (while also allowing for a quick European ski trip!).

The course, organized by Gundren Goitein and Tony Lomax, was held over four days and taught by mainly physicist and physician lecturers from PSI and around Europe. Lectures covered a comprehensive curriculum including treatment planning, quality assurance, proton beam line and gantry design, building a new facility, carbon ion therapy, radiobiology, site–by-site indications, etc. On the third day, at PSI, participants were broken into small groups and visits to their first gantry and the OPTIS2 dedicated ocular beam line were mixed in with a series of in-depth workshops. The first workshop I attended was taught by Tony Lomax and covered the do's and don't s of treatment planning by walking us through some typical plans covering beam angle selection and forward and inverse planned scanned beam approaches. Another, taught by Eros Pedroni and David Meer, discussed the development of the newest gantry at PSI, which was designed for fast repainting to be more robust against organ motion and includes in-room CT guidance. Other workshops covered the management of challenging clinical cases and physics QA. Overall, the workshops and tour were entertaining and helped to bring clinical context to the lecture material.

Figure 1: Skiing in Switzerland!

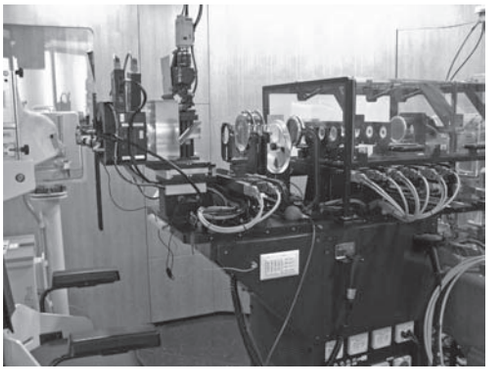

Figure 2: OPTIS2 dedicated ocular beam line.

Figure 3: Newest gantry at PSI designed for fast scanning and includes in-room CT guidance.

Although I went over to Switzerland feeling that it is fairly obvious that we need proton therapy in Canada, I left with my confidence slightly shaken. I expected that I would go to PSI and learn that, like watches and knives, the Swiss would have everything figured out and tell us exactly how and when to implement proton therapy in a step-by-step fashion. However, I quickly found out that this was not the case. The proton therapy world appears to still be riddled with questions concerning the benefit of treatment and the certainty of dose delivery. Uncertainty, in fact, was an overriding theme for the entire week. And many faculty, despite their many years in the field, had just as many words of caution as encouragement.

Physics lectures focused on dose calculation and delivery uncertainties, range uncertainties, heterogeneity corrections, motion management, etc., which increase considerably when venturing into extracranial targets in non-anesthetized patients. The concept of robust optimization, where uncertainties are explicitly handled in plan optimization, was brought up on several occasions and this concept is extremely important when considering comparing proton plans to photon plans. Which then made us all ask ourselves: what about all the uncertainty in photon therapy? How do you even compare these plans? In addition, there is still a disparity between target localization techniques in proton therapy and photon therapy. Although impressive in size and stature, the modern technology in proton therapy still seems clunky in terms of precision, lacking in fancy stereoscopic or on-board volumetric imaging systems. This still seems like a step back from where we have come in image-guided localization, especially since we are the verge of real time MRI guided therapy here in Canada.

Clinical talks focused on the challenges in treating rare diseases and uncertainties in approach when moving into new clinical sites. While there are some patients (mainly children and patients with relatively rare tumors) that will clearly benefit from the reduced integral dose provided by proton therapy, I was hoping the physicians would reveal new data showing outcome improvements in other sites. Unfortunately, this data was not presented. This means that as the number of centers increase, centers serving smaller populations, unlike PSI, which carefully selects patients from all over Europe "on the basis of the added medical value that might be expected from proton therapy from experience", will be treating local patients in situations where proton therapy is unlikely to provide a benefit. According to one lecturer, already 50% of proton patient treated worldwide are prostate patients. However, there is promise in some sites, and many of the faculty voiced the opinion that the lack of improved clinical results with proton therapy might be due to the fact that proton therapy practitioners are afraid to use protons to challenge conventional treatment paradigms, feeling like they operate under heavy scrutiny and would not want to chance a negative outcome propelling global scrutiny about the value of proton therapy.

Slightly jaded, I scheduled an interview with Dr. Carolyn Freeman here at the McGill University Health Centre upon my return from Europe to learn more about the need for proton therapy in Quebec. Dr. Freeman is an expert in pediatric oncology and is responsible for the treatment of most of our young patients. She has also been active in applying for financial support for proton therapy in Canada and is heavily involved in research aimed at assessing the benefits of proton therapy for patients less than 30 years old. As a reminder, it is these patients that are most likely to benefit from protons because they now have a greater than 80% chance of long term survival and thus would benefit most from the reduced risk of long term effects of radiotherapy. As shown in the often cited study by Oeffinger et al.[1], looking at over 10,000 survivors of childhood cancer that were treated between 1970 and 1986, children are heavily impacted by photon radiotherapy. The study found that 62% of patients had at least one chronic health condition, with 28% having a life threatening condition, and 24% having three or more deficits. The conclusion of this study states that "long-term survivors of pediatric cancer are more likely to have diminished health status and to die prematurely than are adults who never had childhood cancer". These cancer survivors were compared to their siblings and found to be eight times more likely to have a severe or life-threatening chronic health condition than their siblings. The types of complications these patients experience include myocardial infarction, congestive heart failure, premature gonadal failure, secondary cancer, and cognitive dysfunction, among others. It is thought that proton therapy could improve the quality of life in these patients.

Due to the fact that it can take a long time to prove any given advance in radiation therapy delivery is actually improving outcome, we have adopted several radiotherapy technologies with minimal clinical evidence to back it up, IMRT and IGRT being the classic examples. Due to its high cost, we can't be so nonchalant about the implementation of protons in a not-for-profit heath care system. Every modeling study looking at this group of patients would probably predict that the risk of treatment-related morbidity would be reduced with proton therapy. Lower integral dose would result in lower normal tissue dose and thus fewer complications. However, there is scant clinical evidence to show these models are correct and they are less relevant in older patients. So it is here where it becomes difficult to prove to whoever is paying the bills, here the RAMQ, that we need to invest hundreds of millions of dollars into proton therapy.

Based on the American presence at the proton therapy course (about 25% of all participants), there are many proton therapy centers that are just opening or are under construction in the States. In the relatively few cases where proton therapy is indicated, maybe it makes more sense to send our patients to one of these centers. The price tag is high, but even at upwards of $250,000 you still would have to send a lot of patients to equal the

[1]Oeffinger et al. Chronic Health Conditions in Adult Survivors of Childhood Cancer. N Eng J Med. 2007; 356:191-194.

cost of one proton therapy facility.

I asked Dr. Freeman what is involved with sending a patient to the States for treatment. Currently, there are two indications for which proton therapy is covered by RAMQ, chordomas and chondrosarcomas, of which we see only a few per year and patients tend to be young adult as opposed to pediatric. For these patients, referral to the states first involves a letter written by Dr. Freeman to the government. This letter then has to be supported by a colleague radiation oncologist, usually from another centre such at the CHUM. Once accepted, the patient can make an appointment in the States (for us, usually at the Massachusetts General Hospital). The patient must then provide whatever treatment-related information they require and, within a few weeks, the patient can be treated. For other indications, however, the procedure is not as simple and the likelihood of having the RAMQ deny the request is very high. For pediatric patients, there are many other logistical issues that would make it complicated to go to the US for treatment. Referral would involve uprooting the child from their home, possibly impacting their siblings, to get treated in an unfamiliar (Anglophone) hospital while their parents would not be able to work or care for other children, versus getting treated right here in Montreal. If we go to a centralized proton therapy solution here in Canada, this would still be an issue but not as big an issue. According to Dr. Freeman, proton therapy almost always comes up when treating pediatric patients. In some patients, she can honestly say the benefits of proton therapy are small or unknown, but in other cases small benefits can only be assumed. Without support by the RAMQ, it then becomes up to the parents if the small assumed improvement in outcome is worth over $200,000 plus travel expenses (think about what you would do … and it is this image that sells protons). One development at the McGill University Health Centre that has allowed for a more objective evaluation of the potential benefits of proton therapy was the implementation of proton planning in our clinic. In this way a proton plan, both passive scattering and spot scanning, can be generated and compared to the photon IMRT plan that would be used for treatment before making any predictions about the likelihood of the proton treatment improving outcomes.

So I am now in the camp, as I assume are many of you based on the fact that I don't see anyone else around here buying proton machines either, that believes proton therapy is just too expensive for the number of patients that will really benefit. I found it interesting that this sentiment was now being strongly echoed at this year's ASTRO meeting in Boston. Despite the massive investments down south, it is clear that proton therapy is not doing anything to solve the US health care "crisis". I had a friend of mine that works in a hospital in U.S. mid-west tell me that they "had to buy" a proton system because their hospital is now surrounded by proton machines and they wouldn't be able to compete for patients without them. As an American who has worked in the States for most of the last decade, I can relate to this mentality. However, this seems to be exactly how NOT to be fiscally responsible about the implementation of protons: build proton centers because there are too many other proton centers nearby? Fortunately, the rest of the world appears to be taking a more need-based approach. For the centers in the States, the philosophy appears to be more if-you-build-it-they-will-come; as opposed to first evaluating the need and creating centralized proton therapy services to service a large area that has motivated the more centralized European constructions.

So the question now is will proton therapy get cheaper? I found myself at the Mevion Medical Systems booth at ASTRO and talked to them about their compact proton machine. At a price tag of roughly $35 million, this seems like a steal compared to other proton options. However, the cost is still many multiples of that of a photon machine and the promise that it fits inside a "normal" vault is only partially true. Also, $35 million adds up fast when you start talking about having more than one treatment room. So will they get cheaper? I was sort of inspired by a talk given by fellow Badger Rock Mackie in which he talked about the cost to develop new more compact proton technologies. As we all know, Rock is involved in the development of one such system himself. According to him, about $50 million has been spent on the development of the dielectric wall accelerator (DWA) under development of the Lawrence Liverpool National Laboratory. He estimates it will take $70 million more to finish developing the technology. This is much less than the investment required for one typical proton installation in the states and it opens the possibility that affordable protons could be made available to everybody. It seems like if we can send patients to the States in the short term and wait for cheaper protons and more clinical results, we might all be better off.

My newfound skepticism notwithstanding, I am so grateful to have been able to participate in this course at PSI. For those that might be interested in attending, I will provide a short review. Overall, the course was excellent and one of the best educational opportunities I have had in this field. The lecturers were engaging and the faculty knowledgeable, providing content that was comprehensive and appropriate for audiences of varying backgrounds. I enjoyed the site visit to PSI, which very much looks more like a multi-disciplinary research centre for natural sciences and technology than a hospital, and was interested to learn about the other projects that take place there in an effort to "pave the way to sustainable development of society and economy" by transferring new scientific discoveries into industry. The venue in Bad Zurzach, although not the most exciting Swiss town, is famous for its thermal baths. At first, it seemed odd to hold a radiotherapy course at a thermal bath, but one trip to these massive therapeutic pools and I was convinced, especially since my legs were still sore from all the skiing the week before! The food and night out including classic Swiss fondue also did not disappoint. Overall, I'd highly recommend this course to anybody venturing into the world of proton therapy.

More information about the school can be found at http:\\winterschool.web.psi.ch.

A New Tool for Quality Assurance: QATrack+

Ryan Studinski*, Randle Taylor*, Dan La Russa*,
Crystal Angers*, and Darcy Mason†

*The Ottawa Hospital Cancer Centre and
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Quality control (QC) of radiation therapy accelerators is an increasingly daunting task for medical physics departments in radiation therapy programmes. The number of QC tasks to be performed on linear accelerators has blossomed with the development of VMAT, IGRT and SBRT techniques. To put it into perspective, AAPM TG-142 lists over a hundred tests for a fully equipped linear accelerator. That by itself is potentially overwhelming, but, in addition, medical physicists must maintain QC programmes for their simulators and other stand alone imaging equipment, as well as for less traditional techniques like brachytherapy, orthovoltage, TomoTherapy and Cyberknife. Then there is the quality control of the dosimetry equipment being used for quality assurance of radiation treatment devices. You get the point.

The challenges of a good QC programme aren't limited to just doing the tests. At the TOHCC, we recognized that simply collecting the QC data and examining each individual result in isolation is poor use of this information. Being able to trend data over time, compare matched machines, and perform side-by-side analysis of related tests has allowed us to better oversee the health of our machines which, in turn, has led to reduced downtimes and better-quality deliveries. Unfortunately our QC data has been scattered over multiple spreadsheets (each with their own formatting and macros) and proprietary software designed to work with a specific vendor's device. As an example, our workhorse linacs each had data stored in over a dozen files. Doing analysis with such a system was almost as time consuming as doing the QC itself.

Clearly we needed a better solution for handling our QC results. We developed a wish list of what we wanted, and investigated what options were currently available. After failing to find a commercial solution that met all our requirements, we undertook designing our own system. From the start, we recognized the risks involved with such an undertaking, including the initial development effort, the work involved with keeping up with the latest technologies, potential shortcomings with software testing, the possibility that the developers will leave the clinic, etc. To that end, we decided that whatever we were going to make would be open source and freely available in the hopes that a community would develop around this software, sharing in the efforts of its improvement, and making it sustainable even if we no longer had the resources to aggressively push it forward.

QAtrack+ is the result of this effort. It is a tool designed for entering, trending, and reviewing QC data, and it aids in ensuring the compliance of our QC programme. Written with the Python programming language using the Django web framework, it is capable of running on multiple server platforms and is accessible from any modern web browser. Highlights of the software include:

- Easy interface for entering data: being browser based, anyone with basic web browsing experience can operate the system. The order and structure of the web pages can be customized to the workflow of the clinic. An example of what we have configured is illustrated in figure 1. QATrack+ also allows data from incomplete tests to be saved and resumed at a later point.
- Basic and advanced configuration: QATrack+ can be used to configure most basic tests allowing physicists with no programming experience to set-up the majority of their QC programs. Scripting is available for advanced users who wish to build advanced analysis tools directly into the software.
- Configuration of tests: tests can be defined by input type (Boolean, multiple choice, numeric value, etc), frequency (user defined, daily, weekly, monthly, etc), category (safety, dosimetry, MLC, etc). Tests can be associated with one or more pieces of equipment.
- Oversight of QC compliance: as shown in figure 2, QATrack+ can be set-up to give an "at a glance" summary of a centre's QC programme, showing what tests are outstanding based on their assigned frequency and if the most recent readings gave passing, tolerance or action level results.
- Reviewing Data: data that is input may be automatically defaulted to an unreviewed status. Any unreviewed results are clearly highlighted by QATrack+ to get a physicist's attention and prompt review. A user can apply customized review labels to the data such as accepted, rejected, scratched, test, etc. QATrack+ also allows data to be sorted by the review status, making it easy to notice data that hasn't been scrutinized yet.
- Trending Data: trending of results can be quickly achieved. Comparisons between similar tests can be easily plotted against each other, as shown in figure 3. Statistical process control charts are also integrated into the analysis to better monitor trends in the data as shown in figure 4.
- Multiple Users with Multiple Classifications: QATrack+ can be setup to have a log in for each user and each user can be assigned specific work groups, which can be used to control what tests they can view and what user privileges they have.

- Integration of test procedures: instructions for each test can be entered via embedded html or external links saving time otherwise wasted by searching for procedures.

Our centre has already successfully moved our daily QA programme to this software and is in the process of migrating tests performed on a weekly, monthly and annual basis. Currently we have ~100 registered users on the system recording 50 or more instances of QC daily. Just the day before this article was submitted we had recorded over 2000 total QC instances (representing over 30 000 test results) in QAtrack+. The Durham Regional Cancer Centre has also been involved with the implementation of QAtrack+, and are now starting a pilot with some of their QC tests.

We certainly haven't been unique with this thinking. I've heard several other physicists from other centres speak for the need of such a tool and some of those centres (and some vendors) have been working on their own solutions. We're happy with QAtrack+ and are confident it holds up against anything else we've seen. Hopefully QAtrack+ provides a sufficient framework within which physicists can manage their QC programs. We will be presenting more information about this software at the COMP winter school. QATrack+ is freely available at https://bitbucket.org/tohccmedphys/qatrackplus/, screen shots are available at https://bitbucket.org/tohccmedphys/qatrackplus/wiki/screenshots/ and you may join our mailing list at https://groups.google.com/forum/?fromgroups#!forum/qatrack .

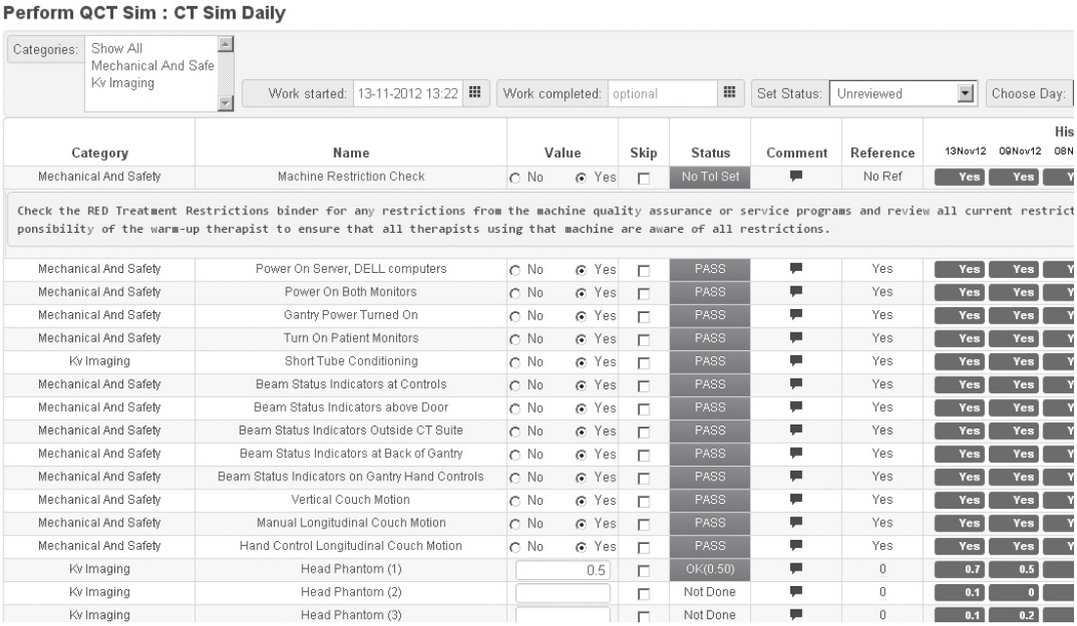


Figure 1: A screen capture of QATrack+ showing the interface used to record daily QC data for one of our CT simulator units.

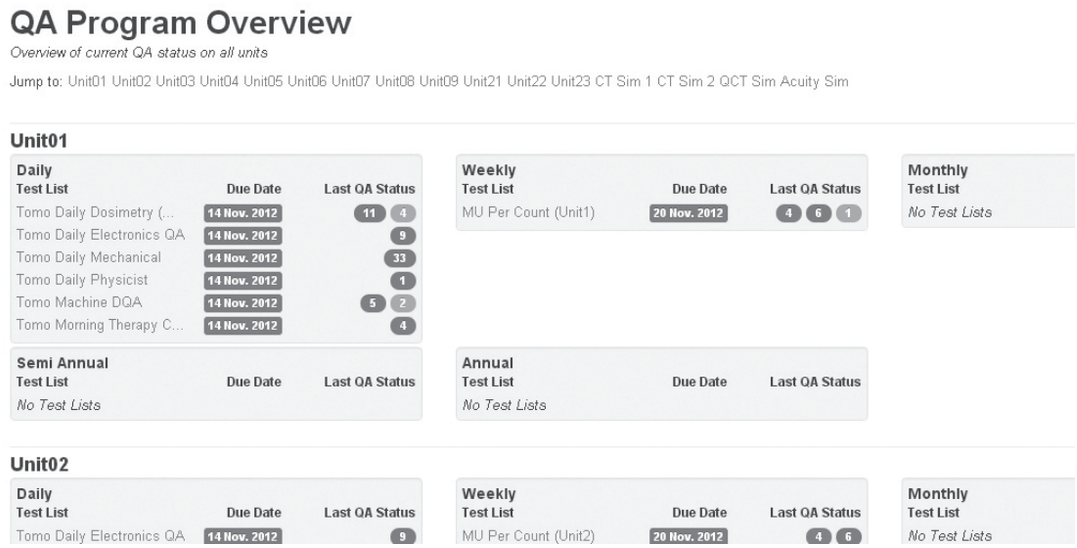


Figure 2: A QC data review page within QATrack+. With QATrack+, one has the ability quickly see a summary of tests and their status.

Figure 3: An example of basic trending functionality in QATrack+. The user can select any test to trend, over any date range, and display results along with the reference, tolerance, and action values.

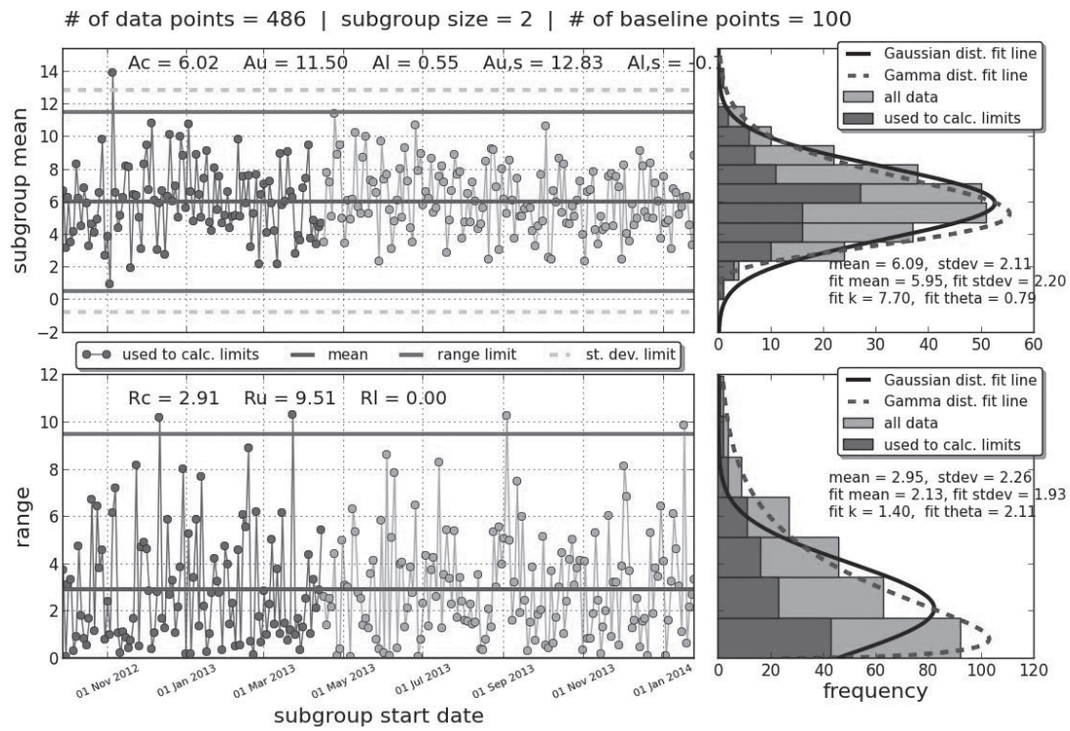


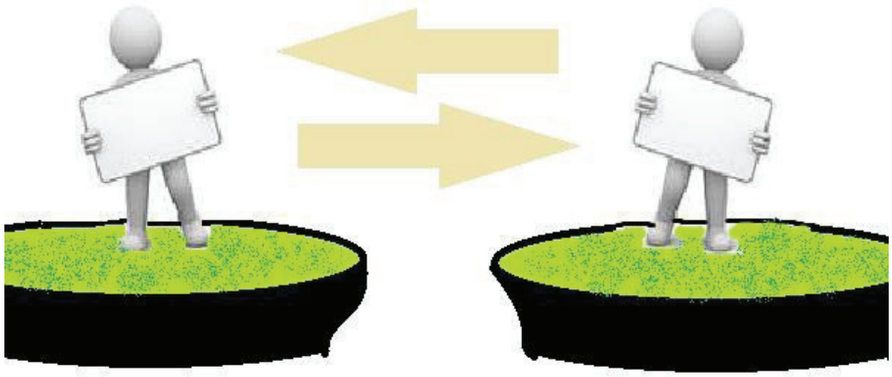
Figure 4: Example of range/control charts generated within QATrack+. Histograms of the total and baseline data are provided to help visually assess the distribution of the values. Mean, upper, and lower limits of the control and range charts are included in the display, as well as fits of the histograms. The user also has the ability to control the subgroup size, and the number of subgroups used to generate reference values.

New COMP Members

Please welcome the following new members who have joined COMP since our last issue:

Last Name	First Name	Institute/Employer	Membership Type
Burton	Christiane	University of Western Ontario	Student
Chugh	Brige Paul	Tom Baker Cancer Centre	Student
Glass	Lisa	Tom Baker Cancer Centre	Student
Golshan	Maryam	BC Cancer Agency - Vancouver	Student
Grimes	Joshua	University of British Columbia	Student
Karan	Tania	BC Cancer Agency - Vancouver	Student
Sonier	Marcus	BC Cancer Agency - Vancouver	Student
Stewart	James	Princess Margaret Hospital	Student

2013 COMP Student Summer Exchange Program – Call for Applications



The Student Council (SC) of the Canadian Organization of Medical Physicists (COMP) is pleased to announce the launch of the first Medical Physics Summer Exchange Program. This program will provide an ideal environment for the exchange of new ideas, confirmation of strengths and recognition of work opportunities among cancer centres in Canada. It will also allow medical physics departments nationwide to meet medical physics students in Canada for future references in residency or working positions.

APPLICATION AND DEADLINE

* Applications must be submitted by email to a**dmin@medphys.ca**

* The deadline for applications is **January 31st, 2013.** Late applications will not be considered

CALENDAR OF ACTIONS

* Application Deadline	→	January 31st, 2013
* Notification of Decisions	→	March 15th, 2013
* Beginning of the Exchange Program	→	July, 2013
* Report Submission	→	September 31st, 2013

Further details regarding the content of the application, eligibility criteria and selection procedure can be found at **www.medphys.ca** or find us on Facebook-**COMP Student Council.**

This program is funded by COMP for travel expenses up to $2000 for 2 applicants.

THE CANADIAN COLLEGE OF PHYSICISTS IN MEDICINE

LE COLLÈGE CANADIEN DES PHYSICIENS EN MÉDECINE

Harold E. Johns Travel Award

The Board of the Canadian College of Physicists in Medicine is pleased to honour the Founding President of the College by means of the Harold Johns Travel Award for Young Investigators. The award is given annually by the Canadian College of Physicists in Medicine to an outstanding CCPM Member proposing to visit one or more medical physics centres or to attend specialized training courses such as an AAPM summer school.

Applicants must have passed the CCPM membership exam within the previous three years, be working in Canada, be less than 35 years of age and not have previously taken a similar course or have spent a significant amount of time at the proposed institution(s). The award is for $2,000.

Please visit the CCPM web site (www.ccpm.ca) for application instructions and further details.

Applications for the 2013 award can be sent to the Registrar of the Canadian College of Physicists in Medicine up until April 12th, 2013 at:

Mr. Horacio Patrocinio

McGill University Health Centre,Medical Physics Department,1650 Ave Cedar, Montreal, QC H3G1A4

horacio.patrocinio@mcgill.ca

The 2012 HEJ Award winner was Nicolas Ploquin, of Ottawa, ON with a proposal to visit a leading European Cyberknife site.

2012 Contributors to the Harold E. Johns Fund

CCPM wishes to recognize and thank the following members for their 2012 donations to the Harold Johns Travel Award. The list below has been updated to reflect all contributors this year. With the economic downturn, investment return is minimal. Donations to the fund have to sustain the annual expenditure in the current economic environment. Please consider donating to the fund this year so that we may continue this legacy of education. Further details on the award can be found on the CCPM website.

John Andrew
Crystal Anger
Will Ansbacher
Louis Archambault
Clement Arsenault
Parminder Basran
Craig L Beckett
Wayne Beckham
Kenneth Chu
Claudiu Cojocaru
Daria Comsa
Leszek Hahn
Michelle Hilts
Dimitre Hristov
Hans Sonke Jans
Paul Johns
Andrew Kerr
Martin King
RenéeLarouche
Kyle Malkoske
Darcy Mason
George Mawko
Abdel Salam Mesbah
Tyler Meyer
Randall P Miller
Vitali Moiseenko
Maryse Mondat
Michel Moreau
Catherine Neath
Ian Nygren
Peter O'Brien
Horacio Patrocinio
Ervin Podgorsak
Tamie Poepping
Tony Popescu
Marija Popovic
Terence Riauka
David W Rogers
Jason Schella
Matthew Schmid
John Schreiner
Daryl Scora
Jan Seuntjens
Peter Shragge
Narinder Sidhu
Katharina Sixel
Wendy Lani Smith
Mazen Soubra
David P. Spencer
Alasdair Syme
Michael Tassotto
Christopher Thompson
Jacob Van Dyk
Shuying Wan
Glenn Wells
Ellen Wilcox
David Wilkins
Conrad Yuen

Gold Medal Award
Call for Nominations

The COMP Gold Medal is awarded to a member of COMP (or retired former member) who has made an outstanding contribution to the field of medical physics in Canada. An outstanding contribution is defined as one or more of the following:

1. A body of work that has added to the knowledge base of medical physics in such a way as to fundamentally alter the practice of medical physics.
2. Leadership positions in medical physics organizations that have led to improvements in the status and public image of medical physicists in Canada.
3. Significant influence on the professional development of the careers of medical physicists in Canada through educational activities or mentorship.

The Gold Medal is the highest award given by the Canadian Organization of Medical Physicists to recognize the outstanding career of an active or retired medical physicist who has worked mainly in Canada. As these candidates are deemed truly exceptional, and therefore presumably in relatively rare supply, the Gold Medal will not necessarily be given every year.

Nominations for the 2013 medal are hereby solicited. Nominations are due by **February 28th, 2013** and must be submitted by a Full Member of COMP. Nominations must include:

1. The nominator's letter summarizing the contributions of the candidate in one or more of the areas listed above;
2. The candidate's CV;
3. The candidate's publication list (excluding abstracts) highlighting the most significant 10 papers; and,
4. Letters of support for the nomination (not more than two pages in length) from three or more members of COMP in good standing.

Please forward nominations electronically to Nancy Barrett at the COMP office (preferably in pdf format) at nancy@medphys.ca.

A committee of COMP members appointed by the COMP Board will consider the nominations and submit recommendations to the Board by April 30th, 2013. The COMP Board will make the final decision and the recipient will be notified by May 31st, 2013, with the intent of providing sufficient time, as an invitation will be extended, to arrange attendance at the COMP Annual Scientific meeting in Montreal. Associated travel expenses will be paid for the medal winner. In addition to a short acceptance speech when the medal is presented at the meeting by the COMP President, the medal winner may also be asked to give a 30 minute scientific presentation.

Board Secretary
Call for Nominations

The COMP Nominations Committee is responsible for presenting nominees for positions that are opening on the COMP Board with the objective of ensuring that the organization continues to be governed with excellence and vision. There will be one opening on the Board of Directors for the 2013-2014 year. We are seeking a committed individual to serve as Secretary of the Board. The Secretary is responsible for attending and recording the minutes of the Board and Executive committee meetings, chairing the by-law sub-committee, and coordinating with the COMP office as required to review applications for membership. The Secretary may also be asked to oversee task forces and other projects as designated by the President. Nominations must be accompanied by a duly signed Expression of Interest and Nomination Form endorsed by no fewer than two(2) voting members of COMP. To access the nomination form, please visit www.medphys.ca or contact the COMP office at admin@medphys.ca. Mail, e-mail, or fax these documents and any supporting information, such as a résumé, by **April 30, 2013**, to:

Chair, Nominations Committee
c/o COMP Office
PO Box 72024 Kanata North RPO
Kanata, ON K2K 2P4
nancy@medphys.ca
fax: 613.435.7257

Union for International Cancer Control 2012

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pivotal role). Particularly revealing, although perhaps not surprising, were the differences in the priorities and challenges identified in each study. The second panel was comprised of experts from Mexico, Jamaica, Canada, and Zambia addressing the topic *The Economic Case for Action.* Panel members clearly had substantial experience in the delivery of health care in their respective countries. As could be anticipated, there was again a broad disparity with regard to what each identified as the optimal allocation of resources. The third panel dealt with the topic *Major Global Health Initiatives Moving the Cancer Agenda Forward.* Likely the strongest message arising from the ensuing dialogue was the desire to move from a discussion stage to actually engaging an action plan. It was apparent that many participating in the Summit knew each other well and had been working together for some time, and there was an undertow of frustration that some of the conversation may be becoming all too familiar.

Initially my impression was that the UICC and its mandate are a bit far removed from the mission and vision of COMP; however, over the course of these two meetings that perception evolved. While there were not many familiar faces, there were other medical physicists in the crowd. Interestingly, during one of the panel discussions, an audience member from Africa spent some time underscoring the challenges, from his perspective, of securing appropriate medical physics support for the delivery of radiation treatments. His concerns, in turn, reminded me of the "physicists without borders" concept proposed by our 2011 Gold Medal winner, Jake Van Dyk, during our Annual Scientific Meeting in Halifax. Perusing the list of UICC members, while certain sister organizations such as the Canadian Association of Radiation Oncology (CARO), the Canadian Association of Nurses in Oncology (CANO), and the American Society for Radiation Oncology (AStRO) were present, COMP was the only medical physics organization that I could find on the list. Given the current UICC agenda and the initiatives being undertaken, this appears to have been a most opportune time for COMP to have become involved. Moreover, such an affiliation is very much aligned with our new organizational vision, mission, and goals. While evaluation of the appropriateness of COMP membership should be ongoing, I would certainly recommend that for now COMP invest in maintaining its affiliation with the UICC. I would also encourage anyone with interest to find out more about the UICC (http://www.uicc.org).

AQPMC 2012 : Recent Events in Gatineau

continued from page 25

pour but de stimuler la recherche en physique médicale au Québec.

Sous l'animation de M. Jean-François Carrier, 18 présentations étudiantes des plus intéressantes furent livrées durant la journée qui se termina en force par notre excellent présentateur invité, M. Jean-Yves Fiset, qui disserta sur les mythes et réalités de la performance humaine au travail. Un prix de 200$ pour la meilleure présentation étudiante fut remis à M. Jonathan Boivin, étudiant de l'Université Laval, pour ses travaux portant sur la surveillance de la dose au cours de procédures de radiologie interventionnelle.

L'AQPMC tient encore une fois à remercier les généreux commanditaires des événements : COMP/OCPM, Elekta, Varian, Harpell Associates, PTW et ScandiDos pour l'atelier et COMP/OCPM pour la journée étudiante.

Les présentations des deux évènements sont disponibles en format PDF pour les membres en règle de l'association à aqpmc.org.

2013 Sylvia Fedoruk Prize in Medical Physics

The Saskatchewan Cancer Agency is pleased to sponsor a competition for the 2013 Sylvia Fedoruk Prize in Medical Physics. This award is offered annually to honour the distinguished career of Sylvia Fedoruk, former Lieutenant-Governor of Saskatchewan and previously a medical physicist with the Saskatoon Cancer Centre.

The prize is comprised of a cash award of five hundred dollars ($500), an engraved plaque, and travel expenses to enable the winner to attend the Annual Scientific Meeting of the Canadian Organization of Medical Physicists (COMP), which will be held jointly with the Canadian Association of Radiation Oncology (CARO) from September 18th to 21st, 2013, in Montreal, Quebec.

The 2013 Prize is awarded for the best paper (i) on a subject falling within the field of medical physics, (ii) relating to work carried out wholly or mainly within a Canadian institution, and (iii) published during the 2012 calendar year. The selection of the award-winning paper is performed by a panel of judges appointed by COMP.

Papers published in P*hysics in Medicine and Biology and Medical Physics,* which conform to the conditions of the preceding paragraph, will automatically be entered in the competition and no further action by the author(s) is required. All other papers should be submitted electronically to:

Nancy Barrett
Executive Director
Canadian Organization of Medical Physics
E-mail: nancy@medphys.ca.

Each paper must be clearly marked: "Entry for 2013 Sylvia Fedoruk Prize" and must arrive at the above address no later than the end of the business day on **Monday, February 28, 2013.**

The award winners from the last five years were:

Andreyev A. and Celler A., "Dual-isotope PET using positron-gamma emitters", Physics in Medicine and Biology, 56, Vol. 14, 4539-4556 (2011).

Frédéric Tessier and Iwan Kawrakow, "Effective point of measurement of thimble ion chambers in megavoltage photon beams", *Medical Physics, 37(1), 96-107 (2010).*

B. Gino Fallone, "First MR images obtained during megavoltage photon irradiation from a prototype integrated linac-MR system", *Medical Physics 36 (6), 2084-2088 (2009).*

Magdalena Bazalova, Luc Beaulieu, Steven Palefsky, Frank Verhaegen, "Correction of CT artifacts and its influence on Monte Carlo dose calculations", *Medical Physics 34, 2119-2132 (2007).*

Brian Nieman, Ann Flenniken, S. Lee Admanson, R. Mark Henkelman, John G. Sled, "Anatomical Phenotyping in the Brain and Skull of a Mutant Mouse by Magnetic Resonance Imaging and Computed Tomography", Physiol Genomics 24:154-162 (2006).

Dates to Remember

InterACTIONS Spring Issue deadline is March 1, 2013!

COMP Student Exchange Program application deadline
January 31, 2013

COMP Gold Medal Award
Call for nominations deadline
February 28, 2013

Sylvia Fedoruk Prize in Medical Physics
Call for nominations deadline
February 28, 2013

Symposium on Small Animal RadioTherapy
March 3 – March 5, 2013
Maastricht, the Netherlands

Harold E. Johns Travel Award
Application deadline
April 12, 2013

International Conference on the Use of Computers in Radiation Therapy
May 6 – May 9, 2013
Melbourne, Australia

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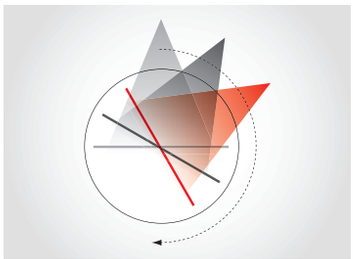

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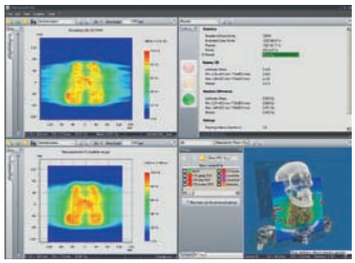

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