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COLLEGE  
OF PHYSICISTS  
IN MEDICINE



LE COLLÈGE  
CANADIEN  
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## COMP WINTER SCHOOL 2012

A detailed view of the Lucy 3D QA Phantom, a spherical device with multiple ports and a large circular scale on its side, mounted on a base with adjustment knobs.

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### Cover Image

COMP Winter School 2012. See article on page 61.

*Winter School photos courtesy of George Hajdok and Alan Wassying.*



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Please submit stories MS Word or ASCII text format. Images in Tiff format at 300 dpi resolution are preferred.

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OPTION 3 (\$400): Job posting is immediately e-mailed to COMP/CCPM members (no website or **InterACTIONS** posting)





# Message from the COMP President

While the past few months have mostly been filled with more behind the scenes activity, the one event that was front and centre was the third annual COMP Winter School, entitled *Quality and Safety in Radiation Oncology*. Held in Whistler, British Columbia, at the end of January, the school was once again a great success, which is in no small measure attributable to the leadership of the dynamic duo of Stephen Breen, Chair of the Organizing Committee, and Marco Carlone, Councillor for the Science and Education Committee. Both are to be commended for their efforts (so much so that perhaps we may have to come up with COMP's very first lifetime appointments). The event has only improved year over year, and plans are already underway for organizing the 2013 edition.

As for what has been transpiring in the background, probably the most significant investment has been in the development of the new COMP strategic plan. A draft document has been prepared and the Board has had opportunity to perform an initial review. Fundamentals, such as the Vision and Mission of COMP, are being reworked and the process is underway to establish an action plan based upon the prioritized objectives contained within the strategic plan. You will certainly be hearing more about this (see the article on the Strategic Plan in this issue of *InterACTIONS*). The current intent is to have a final version of the strategic plan in place by time of the Annual General Meeting (AGM) in July.

Speaking of the AGM, Jason Schella and the Local Arrangements Committee (LAC) are embroiled in preparations for the 58<sup>th</sup>

Annual Scientific Meeting, which will be held in Halifax, July 11-14, 2012. Note that the abstract submission deadline is April 1 (no fooling). Also coming up August 27-30, 2012, in Montreal is the World Congress of the Union for International Cancer Control (UICC). The call for abstracts has been issued and, in part because COMP is a member of the UICC, I encourage you to consider attending or, even better, presenting. The proposed "Canada Imaging Day" is once again back on the radar for May of this year. You may recall that I had mentioned this initiative about the same time last year. The event did not take place then as the federal election did prove to be a bit of a disruptive influence but, as such a conflict seems to be relatively unlikely to recur this year (at least as of the time of writing this message), the initiative has been reinvigorated. The intent is for a number of relevant national organizations, such as the Canadian Association of Medical Radiation Technologists (CAMRT), the Canadian Association of Radiologists (CAR), the Canadian Association of Nuclear Medicine (CANM), and the Canadian Society of Diagnostic Medical Sonography (CSDMS), to band together and draw political attention to medical imaging in Canada. Representatives from these organizations will partake in a media event to be held in Ottawa. The event is to include meeting with relevant individuals within the federal government. While the organization of the event remains in flux, a background document nominally entitled "Appropriate use of Medical Imaging in Canada" is in preparation. While the title may indeed change, it does reflect the core purpose of the event. I would also note



*Dr. Peter McGhee*

that the participation of COMP is well aligned with the new strategic plan, which does identify the need for an improved profile for imaging physics in Canada.

On the topic of imaging physics, while progress, shall we say, has been very "deliberate" (a.k.a., slow), a statement will be forthcoming from COMP with regard to Health Canada Safety Code 35, *Radiation Protection in Radiology—Large Facilities: Safety Procedures for the Installation, Use and Control of X-ray Equipment in Large Medical Radiological Facilities*. Interestingly, this has stimulated discussion as to why similar documents are not available for other arenas, such as Nuclear Medicine. I would be very interested in hearing from anyone who has thoughts in this respect as it would obviously be ideal if COMP could be more comprehensive in its position regarding the physics associated with the safe use of medical devices. An associated undertaking, to which I have

*continued on page 60*



# Message from the CCPM President

The bylaws of any organization should define its purpose, structure, function and methods of operation. Bylaws can be very dull reading – descriptive adjectives and clever turns of phrase are sorely lacking. It would be a stretch to describe the CCPM Bylaws as a page-turner, but they are complete and well-written, and have served as an excellent guide for running the operations of the College. Our sage forefathers did a great job of crafting these bylaws way back in the 1970s, in the days when physicists had to shovel coal into the linac in the hope of getting out a few sooty photons.

Subsequent generations of Board members, with the approval of members at an Annual General Meeting, have tweaked those original bylaws, either to respond to required changes in the operation of the College, or to clarify things that were not spelled out quite right in the original effort. The mechanism of changing the bylaws is described in Article VIII (Enactment, Repeal and Amendment of Bylaws), and it is important. Such an article must allow bylaws to be changed when required, but must provide appropriate notification and membership approval mechanisms to act as a check on Board authority or arbitrary measures.

At the upcoming AGM in Halifax in July, the Board will be asking the membership to approve changes to Article VIII – in effect it is request for approval of an amendment to the bylaw for amendment of the bylaws. This initiative is being driven by experience at AGMs in recent years – the difficulty of obtaining quorum.

Currently, quorum is defined in Article V as 15% of the total number of Members and Fellows. This means that for a bylaw amendment to be approved at an AGM, we currently need almost 60 College members or fellows to show up at the AGM, and

according to Article VIII, two-thirds of them must be in favour of the proposed amendment. At some recent AGMs, we have struggled to meet this quorum, and have resorted to texting members, sweeping the poster hall, or trolling the hotel pub in order to scrounge up quorum.

Article VIII allows the possibility of accepting postal votes, but this has rarely been used, and seems a bit quaint in this era of enhanced electronic communication.

While we have always been able to meet quorum when required, there is reason to be concerned that the business of the College could be jeopardized by lack of attendance at the AGM. The requirement of quorum at the AGM effectively links the operation of the College to attendance at the COMP Annual Scientific Meeting. This could be seen as risky. The COMP ASM is an excellent meeting and continues to enjoy increasing attendance. However, attendance can vary with meeting time and location, and is potentially vulnerable to external factors such as airline operations, shrinking travel budgets, or local calamities (natural disasters, disease outbreaks, civil unrest or zombie uprisings). In addition, increasing numbers of competing research conferences, as well as more opportunities for medical physics continuing education, could result in competition for scarce travel dollars. While CCPM is committed to supporting the ASM and working with COMP to ensure its continued success, the requirement for quorum as physical attendance at the AGM seems ill-advised, when other methods of achieving membership approval of bylaw amendments are readily available.

The proposed amendments, which will be circulated to College Members and



*Dr. David Wilkins*

Fellows by e-mail in advance of the Halifax meeting, will emphasize the AGM as a forum for discussion of bylaw amendments, but not for approval. Instead, a vote would be conducted by electronic means no more than 90 days following the AGM. The bylaw would be non-specific about the method of the vote, requiring only that it be secure and allow one and only one vote per member or fellow. This would leave future CCPM Boards free to use whatever technology is available or appropriate for these votes.

The Annual General Meeting is important, and we hope that this bylaw amendment, if passed, would not give leave to CCPM members to skip the AGM and head for the pub. The AGM is the one opportunity during the year for members to convene to discuss the business of the College, to receive updates about how the Board is spending scarce resources, and to welcome new Members and Fellows to the College. Attendance at the AGM remains important, especially in Halifax – if we don't reach quorum, then we will not be able to adopt this new approach, which would simply reinforce the importance of adopting this  
*continued on page 66*



# Executive Director Report April 2012

## ***Celebrating COMP Volunteers***

April is the month in Canada where we celebrate the contribution of volunteers (April 15 – 21 is National Volunteer Week). COMP, like most professional associations, is dependent on the contribution of volunteers to meet its objectives. Volunteers dedicate many hours supporting educational programs such as the Winter School and the Annual Scientific Meeting, publishing the newsletter, serving on the Board and Committees, representing COMP to other organizations, reviewing abstracts and award submissions etc. COMP is very fortunate to have so many dedicated volunteers and on behalf of the medical physics community in Canada, I would like to take this opportunity to say thank you!

## ***Strategic Plan 2012 – 2015***

The COMP Board and invited stakeholders met this past November to engage in a strategy formulation session. This is the second time the COMP Board has developed a strategic plan and the process built on the success of the last session and was both creative and energizing. Prior to this session, an information gathering process was undertaken using a strategic information questionnaire, a membership survey and other information on current and future issues relating to COMP.

Information was gathering in the following areas:

- The external environment (political, social, economic, information/technology, health sector and association trends and issues)

- Opportunities and threats arising from the external environment trends and issues
- Strengths and weaknesses
- Issues relating to COMP's business areas
- Membership expectations

Four key priorities were established and related strategies to address the priorities were developed. The next step in the process is to build an action plan to ensure that COMP stays focused on its priorities and achieves its objectives. We will be more reliant than ever on the input and support of our members. A summary of the strategic plan can be found in this issue of InterACTIONS.

## ***Imaging Team Day 2012***

COMP will be collaborating with the Canadian Association of Medical Radiation Technologists, the Canadian Association of Nuclear Medicine, the Canadian Association of Radiologists and the Canadian Society of Diagnostic and Medical Sonography to host Imaging Team Day on May 17, 2012. This day was supposed to take place in May of 2011 but was postponed because of the Federal election. The purpose of the day is to increase the awareness of governments, the public and other healthcare professionals on how appropriate imaging enables effective health care. Participation in Imaging Day also provides COMP with an opportunity to increase the profile of the medical physics profession in Canada and the role it plays in the delivery of health care services. Stay tuned for further updates!



*Ms Nancy Barrett*

## ***Join us in Halifax – July 11<sup>th</sup> – 14<sup>th</sup>***

The 2012 ASM will be held at the historic Westin Nova Scotian. Located near the downtown core, the hotel is within walking distance of all the harbour front has to offer. The Awards Banquet will feature a traditional lobster supper and will be held at the Canadian Museum of Immigration – Pier 21 with full access to the museum during the event.

The theme of this year's meeting is: *Advancing Knowledge through Science and Education* and the meeting will feature new continuing education sessions on Thursday, Friday and Saturday. Please consult the website for more information. Mark your calendars! **If you haven't already done so, register today!**

As always, please feel free to contact me at [nancy@medphys.ca](mailto:nancy@medphys.ca) or Gisele Kite at [admin@medphys.ca](mailto:admin@medphys.ca) at any time with your feedback and suggestions.



# Comp Strategic Plan 2012 - 2015

In November of 2011, the COMP Board and invited stakeholders met to engage in a strategy formulation session. Prior to this session, an information gathering process was undertaken using a strategic information gathering questionnaire, a membership survey and other information on current and future issues relating to COMP.

Information was gathered in the following areas:

- The external environment with a scan that looked at political, social, economic, information/technology, health sector and association trends and issues
- Opportunities and threats arising from the external environment trends and issues;
- Strengths and weaknesses
- Issues relating to COMP's business areas
- Membership expectations

Based on the information gathered and the discussions held at the planning session, the Board is pleased to confirm new strategic statements for COMP. These statements include a new vision, mission and goals.

## **NEW VISION STATEMENT:**

***The Canadian Organization of Medical Physicists is the recognized leader and primary resource for medical physics in Canada.***

This new vision reflects the desired position for COMP and is based on future and anticipated needs of stakeholders as well as trends and issues in the environment.

## **MISSION STATEMENT**

***The Canadian Organization of Medical Physicists champions medical physicists' efforts for patient care excellence through education, knowledge transfer, advocacy and partnerships.***

The mission defines the purpose of COMP, recognizes its stakeholders, the products and services offered and the image the organization seeks to project.

## **NEW GOAL STATEMENTS**

1. To promote the development of standards, policies, guidelines and research related to physics in medicine.
2. To provide members with timely, accessible and relevant products and services to support their roles in medical physics.
3. To be the national and international voice for medical physics in Canada.
4. To attract a wide breadth of members committed to patient care excellence through medical physics.
5. To develop strategic alliances and engage in image and awareness activities to build credibility.
6. To pursue the vision and mission in an innovative, effective and financially responsible manner.

## **KEY PRIORITIES**

At the planning session, four priorities were set and specific strategies to address the priorities were identified:

<b>Priority 1: How can COMP support accessible continuing education on a broad range of subjects?</b>
<b>Strategies:</b> <ul style="list-style-type: none"><li>A. Develop and implement a continuing education development plan</li><li>B. Identify a website redevelopment plan</li></ul>





**Priority 2: How can COMP increase the profile of medical physicists in Canada?**

**Strategies:**

- A. Create strategic alliances/affiliations to enhance COMP's value and services to its members
- B. Embrace provincial associations to identify respective roles and responsibilities and to facilitate cooperative efforts (i.e. administrative support, supporting professional regulation efforts, etc.)
- C. Leverage media attention on patient safety to position COMP as an authority
- D. Develop a public relations campaign and management plan to raise the profile of medical physicists
- E. Launch speaker tours and presentations by subject matter experts across the country to build profile and awareness of expertise of medical physicists.

**Priority 3: How can COMP become recognized as the authoritative resource on medical physics in Canada?**

**Strategies:**

- A. Adopt a position statement on COMP's areas of influence
- B. Develop a public relations management plan
- C. Create a document management strategy

**Priority 4: How can COMP improve communication and knowledge sharing?**

**Strategies:**

- A. Identify communities of practice to link members by subject area
- B. Develop a communication strategy for building communities, COMP influence, and knowledge transfer
- C. Build social media strategy for using social media to build communities and COMP's profile in the area of medical physics.

The next step is to build an Action Plan for the strategies that outlines the supportive activities (related assumptions, who, what, when, how, resources and measures) necessary to implement the strategy.

This Strategic Plan identifies the association's priorities for the next three years. COMP has a significant opportunity to further develop its position as the resource and voice for medical physics and medical physicists in Canada and to provide the leadership necessary to advance quality standards and services.

This opportunity will require a focus of priorities and resources on addressing the issues identified. Many of the strategies identified pertain to communications, public relations, and building partnerships and resources. These are high value activities and can position COMP very well in a leadership capacity for medical physics in Canada.

If you have any comments or concerns with regard to the planning exercise to date, please provide your feedback to Nancy Barrett, COMP Executive Director or Peter McGhee, COMP President.

# Dates to Remember

COMP 2012 Winter School



End of Early Bird COMP ASM Registration

April 30<sup>th</sup>



Hotel Block ends at Westin Nova Scotian Hotel  
Halifax, NS

June 8<sup>th</sup>



COMP/CCPM 58th Annual Scientific Meeting  
Halifax, NS

July 11 – 14<sup>th</sup>



# Harold Johns Travel Award Announcement

## Deadline for Application: 13<sup>th</sup> April 2012

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. This award, which is in the amount of \$2000, is made to a College Member under the age of 35 who became a member within the previous three years. The award is intended to assist the individual to extend his or her knowledge by travelling to another centre or institution with the intent of gaining further experience in his or her chosen field, or, alternately, to embark on a new field of endeavour in medical physics.

The H. E. Johns Travel Award is awarded annually by the Canadian College of Physicists in Medicine to outstanding CCPM Members or Fellows proposing to visit one or more medical physics centres or to attend specialized training courses such as the AAPM summer school. The applicant should not have previously taken a similar course or have spent a significant amount of time at proposed institutions. The award is for \$2,000 and will be paid upon receipt of a satisfactory expense claim. The deadline for application this year is April 13, 2012.

All applicants must have passed the CCPM membership exam within the previous three years. Applicants may travel either inside Canada or elsewhere.

Applicants must supply a one page proposal indicating the course they wish to attend or the name(s) of the institutions they would visit and the reasons for their choice. They should also supply an estimate of the costs involved and letters from their present employer indicating that they are in agreement with the proposal. . If their proposed expenses exceed the value of the award, then they should also indicate the source for the additional funds required. For a visit to an institution the candidate must have the institution write to the Registrar in support of the visit. The candidate should also provide their curriculum vitae and the names and phone numbers of two references whom the Awards Committee can contact. No reference letters are required. The awards Committee reserves the right to contact additional individuals or institutions.

The award is intended both to assist the individual in their medical physics career and to enhance medical physics practice in Canada. Recipients are therefore expected to remain in Canada for at least one year following their travel. Applicants should be working in Canada but need not be Canadian citizens.

Successful candidates will have two years after their application deadline to complete their travel. They will be required to submit a short report to the *InterACTIONS* newsletter. The award recipient will be chosen by a committee consisting of the Chairman of the Examining Board, The Registrar and the President of the College. Their choice will be based upon 1) the written proposal submitted by the candidate, 2) references obtained by the committee and 3) membership exam results. The award will be announced at the Annual General Meeting of the College.

Unsuccessful candidates in any one year who are still eligible in subsequent years may have their applications considered again by writing to the Registrar and providing any necessary updated information.

### **Applications should be sent to:**

**Mr. Darcy Mason**  
**Registrar, Canadian College of Physicists in Medicine**  
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Contact: Jenny Meyers  
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### Sun Nuclear

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### TomoTherapy Inc.

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### Varian Medical Systems

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Contact: Lucy Huerta  
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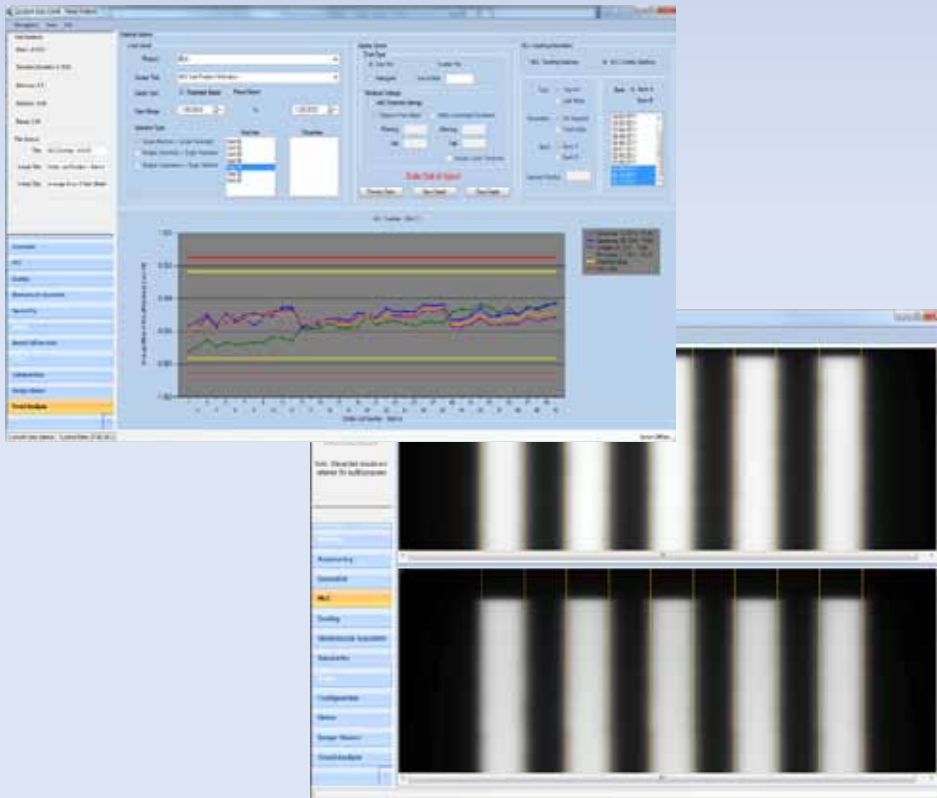
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London Regional Cancer Program



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# CNSC Feedback Forum

## Everything you Wanted to Know About Licence Conditions

Kavita Murthy

Director

Accelerators and Class II Facilities Division  
Canadian Nuclear Safety Commission

### Introduction

Every licence issued by the CNSC has conditions associated with it. You will find them at the bottom of the very first page of your centre's Class II Facility licence in the section aptly named Section (v): Conditions. A typical licence for the operation of a radiotherapy facility contains between three and six licence conditions. Each licence condition has a four-digit identification number followed by a dash and then the version number. Here is a licence condition that appears in every Class II Nuclear Facility licence:

*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). (2917-7)*

Generally, this licence condition states the licensee will conduct its operations in accordance with the documents it submitted to the CNSC that are identified in the appendix to the facility licence, unless we (the CNSC) have told you otherwise, in writing.

### Why does the CNSC need licence conditions?

Licence Conditions impose legal requirements on the licensee beyond those set out in regulations. Licence conditions are important – non-compliance with a licence condition has the same ramifications as a regulatory non-compliance. As such, they should not repeat anything that is already provided for in the regulations.

Generally, regulations are drafted broadly and are not intended to address individual licensee circumstances. This allows the regulator to evenly apply a given set of regulations to a broad variety of activities.

Licence conditions allow the regulator to impose requirements for specific types of activities in a more focussed way and offer precision that is not provided in the regulations. A good example is licence condition LC 2520 (Radiation Warning System: *The*

*licensee shall test the radiation monitoring system referenced in Section 15(6) of the Class II regulations at least once every day on which the operations using the equipment are to be started, prior to the first use*), which appears in all licenses for source-based devices such as HDR, cobalt teletherapy etc. This condition spells out the specific expectations for licensees with these devices, which has been deemed reasonable to ensure the safety of workers and the public.

Licence conditions are also a means to address one-off situations that call for a special restriction or authorization to address requirements that are unique to a given licensed activity or facility. An example of this is licence condition LC 2914 (*Annual Compliance Report The licensee shall, by <<SUBMITAL\_DATE>> of each year, submit to the Commission a written annual compliance report in the form specified in the Appendix: Annual Compliance Reporting Form to this licence.*), which the CNSC customizes based on the licensee's preferred reporting dates.

In other cases, licence conditions serve as an interim measure to address a situation or an issue of concern while the regulations themselves are in the process of being amended. An example is the now obsolete licence condition requiring a designated radiation safety officer for Class II facilities (LC 2995: *(a) the licensee shall designate, in writing, as radiation safety officer (RSO) with respect to the licensed activities, the person currently performing the duties of RSO; ..*) This licence condition became obsolete when the regulations related to RSO certification were made in 2008.

### How are licence conditions created and implemented?

The authority to impose licence conditions is set out in S. 24(5) of the *Nuclear Safety and Control Act* which states that "a licence may contain any term or condition that the Commission considers necessary for the purposes of this Act, including a condition that the applicant provide a financial guarantee in a form that is acceptable to the Commission." When a new licence is granted by the Commission (or the Designated Officer, in the case of Class II licences), conditions may be imposed as appropriate. If you have



questions or concerns about why certain conditions are included in the CNSC licence for your facility, contact your CNSC project officer for clarification.

Adding a new licence condition to an existing licence is not trivial. The Commission, on its own motion has the authority to add a licence condition to an existing licence or groups of licences. The process for introduction of a new condition requires that the affected licensee(s) be informed and provided with an opportunity to be heard in accordance with the Part 3 of the *Canadian Nuclear Safety Commission Rules of Procedure*. The CNSC followed this process when we introduced the licence conditions related to sealed-source tracking in 2006. The authority to introduce licence conditions unilaterally is a power given only to the Commission. It is not an authority delegated to the designated officer.

A second pathway for introducing a new licence condition requires the licensee's written consent. When the CNSC chooses to use this method, staff will discuss the condition with the licensee, provide the full text of the condition along with any other pertinent details or clarifications and obtain the licensee's agreement to the inclusion of the condition. Thereafter, the CNSC formally amends the licence. If a licensee does not agree, then the CNSC has the option of modifying the change, leaving it out altogether, or proceeding with the change. In the latter case, CNSC staff would refer the matter to the Commission and the process described in the previous paragraph would apply.

From time to time, licence conditions are revised to improve clarity – this is allowed so long as the intent of the requirement does not change.

In summary: be aware of the licence conditions in your licence! These are just as important as the regulations with which you must comply. If you note that a condition on your licence has changed, ask your project officer for an explanation.

### **REDUCE RED TAPE – CONSOLIDATE YOUR RADIOTHERAPY LICENCES!**

Did you know you could consolidate into one licence, all of your Class II Radiotherapy Facility licences into one single licence? We piloted the program in 2007 and this initiative was featured in our very first submission to the “CNSC Feedback Forum” feature of *InterACTIONS* as a work in progress. Today nine centres hold a consolidated Class II Nuclear facility licence to operate and service medical accelerator and other radiotherapy facilities. These centres range from the smallest to the largest centres in Canada. With a licence term of 10 years, and only one annual compliance report to submit instead of several, consolidated licences are a great way of reducing your red tape. To find out more about how to consolidate your licences, talk to your Class II project officer.

As always, you can send any questions or comments on this or any other articles that we have published to me: [kavita.murthy@cnsccsn.gc.ca](mailto:kavita.murthy@cnsccsn.gc.ca). In addition, if there are, other topics you would like discussed in future editions of this column, please let me know.

## Message from the COMP President

*continued from page 49*

also alluded in the past, is the pursuit of more formal representation, or at least position, with the International Electrotechnical Commission (IEC). Medical physicists that currently participate on various subcommittees of the IEC are contributing to the development of international standards for the manufacture of medical devices. Clearly such activity has far-reaching implications for overall safety. The Standards Council of Canada (SCC) is the recognized national authority that liaises with the IEC. The SCC itself is a crown corporation that reports to Parliament through the Minister of Industry and oversees Canada's National

Standards System. Currently we are exploring possibilities as to how COMP can best engage both the SCC and those medical physicists already involved with the IEC.

Finally, there are a number of positions on the Board that are being vacated and, in case you have not yet heard the noises emanating from the search party, we are beating the bushes for new blood. Available positions include President-Elect, which is a six year sentence (er...I mean “term”), and Councillors for each of Communication (three years), Science and Education (four years), and Quality Assurance and Radiation Safety (four years). In my first message in

*InterACTIONS* I had promoted the idea of more engagement and actually having elections rather than appointments by acclamation. Unfortunately I do not believe we have advanced much since then and we may have to once again loose the gorillas to identify those to be “volunteered”. I still think it would be better if we could find a way to motivate participation rather than picking on individuals who simply have not refined the art of ducking to the same degree as their colleagues. If you have any thoughts, please pass them along. And, regardless of deadlines, if you believe that you could at all be enticed into getting involved, take the plunge and let us know.





# 2012 COMP Winter School

Stephen Sawchuk, Ph.D., D.ABR, F.CCPM

London Regional Cancer Program  
London, Ontario

The third annual COMP Winter School was held between January 29 – February 2, 2012 in Whistler, British Columbia. The workshop continued with the theme, “Quality and Safety in Radiation Oncology”.

This meeting was informative, thought provoking and very useful for first time attendees and veterans alike. Attendance continued to grow from past meetings to over 100 participants and the multidisciplinary spectrum was dominated in proportion by radiation therapists and physicists, but also included a number of radiation oncologists and other health care professionals. For the first time, proffered papers were included at the meeting which highlighted the approaches and practices in safety at many centres across Canada.

The workshop was organized into 6 main sessions. Topics included the following: Quality and Safety in Radiation Therapy, Process Design for Improved Performance, Teamwork, Law and Ethics, Quality in Clinical Practice, and the Faculty Fishbowl. Some sessions were enhanced with facilitated workshops and project galleries which allowed for closer and more hands on demonstrations. These also promoted more discussion among both participants and demonstrators.

One of the underlying themes of this workshop was that of the adaptation of “hard” analytic scientists from the radiotherapy community to the application of “soft” less precise methodologies incorporating humans both individually and collectively to a culture of safety.

Dr. Stephen Breen introduced the workshop and the keynote speaker, Mr. Hugh McLeod, CEO of the Canadian Patient Safety Institute. Mr. McLeod delivered a captivating lecture in which he related a significant personal experience as a patient and an inspiring First Nations tale about hope and fear. Some of the main take-home messages regarding the safety of patients from his talk include: context is everything, denial is our greatest threat, it is all about relationships, and the patient voice must be listened to and acted upon. Another important message was to borrow strategies and good ideas that work well from other organizations and to not reinvent the wheel. Also, importantly, do not continue with strategies that do not work!

An initial electronic poll of the audience was performed to get a snapshot of opinions relating to safety culture. This was followed by an interactive group discussion chaired by Dr. Marco Carlone in which 2 radiotherapy patient case studies





where medical errors had occurred were presented. These were revisited near the end of the workshop for follow-up with everyone at the “Faculty Fishbowl” where there was excellent sharing of ideas and discussion.

Dr. Bill McKillop, presented on the decision making process in the context of a trans-professional radiation oncology program. The importance of evidence based decisions, clinical trials, and consideration of all options for treatment were stressed. Further to that, an optimal decision making process should include the patient’s values and preferences as fully as possible within a shared decision making environment.

Detailed presentations were delivered regarding human performance, software/device performance and procedures/checklists. Issues of human fatigue, the importance of software design, and the quality of procedures and procedure writing were focused upon as well as many other factors. Some of the questions raised by the speakers include the following: Are all possibilities realized in computer programming and design? Are experts in the field necessarily experts in writing procedures? Is writing a procedure enough to make the process error free?

Attendees divided into subgroups to participate in demonstrations of existing quality assurance (QA) projects from various cancer centres within Canada. Topics ranged from the QA of drawn GTV and CTV contours to using control charts to evaluate the quality of head and neck treatment plans. This was a great opportunity to discuss, share, and get updated to excellent work within our community.

The next morning, before skiing, human performance was revisited but geared towards team performance where it was highlighted that communication and interaction needed to be context explicit to work optimally. The topic of incident investigation focused on event analysis. In order to assess situations and observe details a multidisciplinary team approach is key and visuals are important. Simply going to look at a situation can be very enlightening. Then one can create and analyze XmR charts and utilize statistical process control.

In the evening after skiing or relaxing the focus was shifted to the law and ethics. Ms. Robin Grant delivered a popular talk entitled, “The Legal Aspects of Medical Errors.” The processes surrounding an actual radiotherapy lawsuit was presented and much discussion centered on the moral and legal obligations of disclosure to patients’ and patient supporters. If we are not legally bound to disclose, should we disclose on moral grounds was a question posed to the audience. Interestingly, it was reported that health care providers in the province of Ontario can apologize to patients that may have been mistreated and not have to

worry about that apology being used legally against them as an admission of guilt.

Wednesday was an interesting day filled with equations, workshops, and more project demonstrations. Dr Todd Pawlicki started us off with statistical process control talking about the theory and citing many examples highlighting the nuances. One of the important items to take away is that process control charts are used to monitor the times when regularity strays off course and not catastrophic events. A description of a practical and multidisciplinary approach to improve clinical practice by Dr. Tom McGowan was presented. An enlightening failure mode and effects analysis (FMEA) study that was used at another centre was described by the CAMRT speaker Ms Carrie Schultz. The role of the Canadian Partnership for Quality Radiotherapy (CPQR) was presented by Dr. Michael Milosevic.

Facilitated workshops followed with presenters describing their in-house experience for quality research methodology, common taxonomy for radiotherapy errors and more. Many centres are making important strides towards multidisciplinary approaches to safety and trying to create a culture of safety. It was emphasized many times that not only are radiotherapy process maps important, but that act of collaboration and communication involved in creating them centre-wide is an even more useful process. Creating a safety committee and having a safety officer was another common theme that was discussed and that fact that it is essential to have support from local senior leadership.

The second project gallery involved 9 stations for smaller groups to visit. These were CPQR technical quality control guidelines that apply to the QA of tools for the practical radiotherapy process from simulation to treatment delivery to verification. These involve CT-simulators, LDR and HDR brachytherapy, kilo-voltage X-ray radiotherapy machines, major dosimetry equipment, treatment planning systems, conventional linear accelerators, physics plan review and linac integrated cone beam systems. Many updates and improvements in recommended guidelines have been made.

That evening, the banquet was at the Squamish Lil’wat Cultural Centre which began with a wonderful tour of the museum depicting the local aboriginal culture. We each had a chance to create necklaces or bookmarks from wet cedar strips led by our guide.

I believe the workshop to have been a resounding success for all of the informative presentations and fruitful discussions. From the presentations of the many safety projects from centres across the country, it appears that our safety culture around radiotherapy is further evolving and improving. I believe that these winter schools have been a significant aid in this evolution. It’s not just about skiing or scenery!

# COMP 58<sup>TH</sup> ANNUAL SCIENTIFIC MEETING AND CCPM SYMPOSIUM

JULY 11 – 14, 2012  
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This year's meeting will be held at the historic Westin Nova Scotian Hotel. Located near the downtown core, you are within walking distance of all our harbourfront has to offer. The Awards Banquet will be held at the Canadian Museum of Immigration – Pier 21 with full access to the museum during the event. Look under Social Program for more information and events like the Fun Run.

**NEW THIS YEAR:** We are pleased and excited to announce that, in lieu of the traditional CCPM Symposium, we will be providing a number of CCPM sponsored continuing education (CE) activities. Please refer to the Scientific & Education Program guide for updated details.

Besides our conference and regular Halifax "touristy" things there are a number of exciting events happening around same time.

We hope that you will come for the conference and stay awhile to enjoy our wonderful city and province.

Looking forward to seeing you,

Jason Schella (LAC Chair)

Conference Website: [www.comp2012.ca](http://www.comp2012.ca)



# COMP Professional Affairs Committee Update

Craig Beckett

Allan Blair Cancer Centre  
Regina, SK

I've been chairing the professional affairs committee for about 7 months now. There has been a little bit of activity and I'd like to provide the membership with an update.

Firstly, there have been some changes in our committee membership. Leaving the committee after many years of service are Cupido Daniels, Konrad Leszczynski, Narayan Kulkarni. On behalf of the membership, I'd like to express our thanks for their service. As demonstrated in the recent point/counterpoint, while medical physics professional affairs issues are of national interest to our membership, the details are specific to each province. Following Joe's lead, I'd like to see good geographic representation as well as representation by discipline. Currently serving on the committee are:

- Will Ansbacher (B.C., Radiation Oncology)
- Colin Field (Alberta, Radiation Oncology)
- Craig Beckett (Sask, Radiation Oncology)
- Daniel Rickey (Man, Diagnostic Radiology)
- Peter McGhee (Ontario, Radiation Oncology)
- Allan Cottrell (Ontario, Diagnostic Radiology)
- Joe Hayward (Ontario, Radiation Oncology)
- Horacio Patrocinio (Quebec, Radiation Oncology)
- Jason Schella (Nova Scotia, Radiation Oncology)
- Nancy Barrett (Ontario, administration)

I'll be looking to add a few names, hopefully from the diagnostic and MRI community as we face pressures on that front....

Late last year, we were asked to review new standards documents under development by the Canadian Association of Radiologists (CAR). Recently, this group has been keen to work with us and has identified a deficiency of physicists on their established working groups. We met with CAR executive early in 2012 to clarify the services required and plan our participation.

COMP executive and others met last fall to develop a strategic plan for the organization. Recently, we received a draft of the strategic plan report. I've identified a few areas in which the professional affairs group is likely to be active in the coming years.

- Building relationships and potentially alliances with key groups. These may include CARO, CIHI, CAMRT and CAR.
- Encourage the establishment of provincial associations with a mandate towards professional regulation. Work more formally with these groups where they exist.
- Play a role in the identification of a list of subject matter experts within COMP membership. This would have been a great help in recruiting committee members for the CAR working groups.

This year we will be conducting a professional survey. Look for that in late spring or early summer.

Also, the group will work this year towards the design of a technical survey. This survey will solicit equipment and demographic information from Canadian cancer centres and potentially other institutions. The concept is to create a structured database and associated web platform enabling continuous data entry, retention of a complete history and the publishing of results. We have engaged a web design firm to identify the appropriate technology platform, define the form in which database and functional requirements might be communicated to the programmer and to estimate the cost of development. Should the project prove feasible, I will be soliciting input from the membership regarding the content.

Thanks to Joe for putting so much of this on a platter for me. Thanks to the committee members and the general membership for your help. I look forward to seeing some of you in Halifax.





# Citation Award 2011

Michael S. Patterson

Juravinski Cancer Centre and  
McMaster University,  
Hamilton, Ontario

Once upon a time I wrote an article for *InterACTIONS* (Vol. 50, pp. 29-32) in which I suggested that the ground rules for the Sylvia Fedoruk Award should be changed. I argued that it is laborious and inevitably subjective to try to identify the “best” paper published in our field each year. Many papers are never even considered because the range of journals in which medical physicists publish is so broad. I proposed a simple, objective solution that would recognize the paper published in a given year that was cited most often over the next ten years. This is the eighth year that I have announced a winner in *InterACTIONS*. The rules (invented by the author) are simple and similar to those established for the Sylvia Fedoruk Award: the work must have been performed mainly at a Canadian institution, only papers in peer-reviewed journals are considered, review or popular articles are not eligible, and the paper must be “medical physics” – for example, articles dealing with clinical application of a mature imaging technology are not included, even if medical physicists are co-authors. The winner is determined from data in the Web of Science maintained by the Institute of Scientific Information (ISI) including citations in their conference data base except as noted in the table below.

For 2011, we return to the field of magnetic resonance imaging but finally leave the province of Ontario with the following winner, cited 121 times from its publication to the end of 2011:

J. G. Sled and G. B. Pyke, Quantitative imaging of magnetization transfer exchange and relaxation properties in vivo using MRI, *Magnetic Resonance in Medicine* 46: 923-931 (2001).

**Abstract:** We describe a novel imaging technique that yields all of the observable properties of the binary spin-bath model for magnetization transfer (MT) and demonstrate this method for in vivo studies of the human head. Based on a new model of the steady-state behavior of the magnetization during a pulsed MT-weighted imaging sequence, this approach yields parametric images of the fractional size of the restricted pool, the magnetization exchange rate, the T-2 of the restricted pool, as well as the relaxation times in the free pool. Validated experimentally on agar gels and samples of uncooked beef, we demonstrate the method's application on two normal subjects and a patient with multiple sclerosis.

For the record, here are the winners from previous years:

Year of publication	Winner	Citations in 10 years	Current total
1994	R. M. Henkelman, G. J. Stanisz, J. K. Kim and M. J. Bronskill, Anisotropy of NMR properties of tissues, <i>Magnetic Resonance in Medicine</i> 32: 592-601.	129*	223
1995	D. W. O. Rogers, B. A. Faddegon, G. X. Ding, C.-M. Ma and J. Wei, BEAM: A Monte Carlo code to simulate radiotherapy treatment units, <i>Medical Physics</i> 22: 503-524.	310*	700
1996	A. Kienle, L. Lilje, M. S. Patterson, R. Hibst, R. Steiner and B. C. Wilson, Spatially resolved absolute diffuse reflectance measurements for noninvasive determination of the optical scattering and absorption coefficients of biological tissue, <i>Applied Optics</i> 35: 2304-2314.	125*	246
1997	J. S. Gati, R. S. Menon, K. Ugurbil and B. K. Rutt, Experimental determination of the BOLD field strength dependence in vessels and tissue, <i>Magnetic Resonance in Medicine</i> 38: 296 – 302.	196*	264
1998 (Tie)	J. H. Siewerdsen, L. E. Antonuk, Y. El-Mohri, J. Yorkston, W. Huang and I. A. Cunningham, Signal, noise power spectrum, and detective quantum efficiency of indirect-detection flat-panel imagers for diagnostic radiology, <i>Medical Physics</i> 25: 614 – 628.	121	145
	A. Kienle, M. S. Patterson, N. Dognitz, R. Bays, G. Wagnieres and H. van den Bergh, Noninvasive determination of the optical properties of two-layered turbid media, <i>Applied Optics</i> 37: 779 – 791.	121	158
1999	D. H. Simpson, C. T. Chin and P. N. Burns, Pulse inversion Doppler: a new method for detecting nonlinear echoes from microbubble contrast agents, <i>IEEE Transactions on Ultrasonics Ferroelectrics and Frequency Control</i> 46: 372-382 (1999).	201	237
2000	I. Kawrakow, Accurate condensed history Monte Carlo simulation of electron transport. I. EGSnrc, the new EGS4 version, <i>Medical Physics</i> 27: 485-498.	333	369

\* Does not include citations in conference proceedings.



# 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
Asgharizadeh	Saeid	McGill University	Student
Cui	Congwu	Tom Baker Cancer Centre	Student
Dona Lemus	Olga Maria	Juravinski Cancer Centre	Student
Ecclestone	Gillian	Ryerson University	Student
McGeachy	Philip	University of Calgary	Student
Peca	Stefano	University of Calgary	Student
Shojaii	Rushin	University of Toronto	Student

## Message from the CCPM President

*continued from page 50*

amendment to the bylaw for amendment of the bylaws to avoid requiring the quorum which we could not achieve. It would be ironic if it weren't so confusing.

One reason that the Board wants a smoother bylaw amendment mechanism in place is to facilitate a reworking of the bylaws which we feel is required. The current bylaws, while complete and well-written, are heavy on details which really should be in policies and procedures. Most organizations use bylaws to define their overall structure and function, and the bylaws authorize the board to form committees and write policies and procedures for the details of day-to-day operations. A good analogy familiar to many medical physicists is the Canadian Nuclear Safety Commission. The Nuclear Safety and Control Act is comparable to bylaws – the act describes the structure and authority of the CNSC, but it does not contain details such as dose limits or technical requirements for nuclear facilities. Those details are contained in the regulations, which the Act authorizes the CNSC to write. The CCPM Board would like to do a significant revision

of the bylaws to move details into policies and procedures. This work will likely take place over the next year or two.

Another bylaw amendment to be proposed this summer deals with the current recertification requirement for a minimum of 60% full time employment over the past five years. The Board feels that this is too restrictive, and could result in a failure to recertify competent members in alternate employment arrangements. Job-sharing, part-time work, easing into retirement, accommodation following illness or injury, or other situations could result in the inability to meet this 60% FTE requirement. The proposal would amend Appendix IV (Requirements for Recertification) to remove these details to policies and procedures. The P&P would then state that 40% FTE is required for recertification. However, if applicants were employed less than 40% FTE, they could compensate for a shortage of recent work experience by showing extra recertification credits, particularly in the continuing education category. All cases with less than 40% FTE would be considered

by the Board on an individual basis, and those with less than 20% FTE would be approved only in exceptional circumstances. In addition, we would maintain the current provision of allowing members who have been temporarily absent from employment at some time during the previous 5 years, to claim recertification credits based on any 5 of the preceding 7 years.

The goal of the recertification program is to ensure the continued competence of certified clinical medical physicists. Provided that this competence can be demonstrated through the established mechanisms, competent individuals should not have their certification jeopardized due to alternate employment arrangements, maternity leaves, decisions about work-life balance, illness, or other factors beyond their control.

Congratulations to any readers who have reached the end of this discussion of bylaws without falling asleep or turning the page. If you actually found this interesting, then perhaps there is a future for you on the Board of either CCPM or COMP.

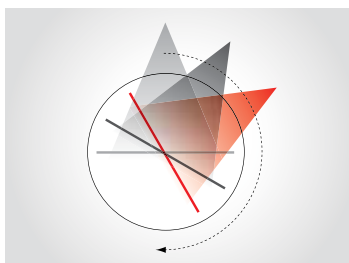
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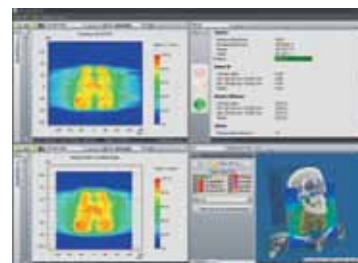
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