

# CELEBRATING 50 YEARS OF CONNECTING SCIENCE EDUCATION AND RESEARCH IN ATLANTIC CANADA

BY LOIS WHITEHEAD



## Science Atlantic connecting science education and research



The community dates back to 1961, when a handful of university administrators met to discuss how to strengthen research in the Maritimes. They believed that linking scientists in universities and government labs and fostering communication among science students would enhance the post-secondary environment. As a result, the first meeting of the Atlantic Provinces inter-University Committee on the Sciences (APICS) was held in 1962, with the physics division established at that first gathering.

Renamed ‘Science Atlantic’ in 2011, the association’s member institutions continue to work together to improve post-secondary science education and research. The streamlined name and puzzle-piece imagery reflect what members are passionate about: discovery, problem solving, cooperation, networking, and linking many disciplines and institutions in Atlantic Canada with a united vision.

The most important connection fostered by the organization is between science education and research. Dr. Keith De’Bell, former Chair of Science Atlantic’s governing council and now Associate Vice-President Research for St. Francis Xavier University, states:

### SUMMARY

**The Physics community in Atlantic Canada is both diverse and tightly knit. Eight universities in the region offer undergraduate degrees, while others provide first and second year courses to whet the student appetite. The Science Atlantic Physics & Astronomy Committee ties these schools together, overseeing an annual student conference and coordinating a speaker tour in partnership with the Canadian Association of Physicists.**

### The Mission of Science Atlantic

Science Atlantic is dedicated to advancing post-secondary science education and research in Atlantic Canada by:

- providing opportunities that foster and enrich students;
- supporting and inspiring researchers and educators; and,
- using its collective voice to address important regional science issues.

“The intertwined nature of research and education is, in my view, absolutely key. One of the reasons I have been proud to be associated with this organization is that it supports and promotes this perspective. In particular, through its conferences and other activities, we emphasize the importance of research for undergraduates as part of their learning experience.”

### AUPAC (THE ATLANTIC UNDER-GRADUATE PHYSICS AND ASTRONOMY CONFERENCE)

In 1977, after working for a decade on a common high school physics curriculum with the Maritime Departments of Education, the Physics Committee turned its hand to coordinating a regional undergraduate physics conference (later including astronomy). Atlantic faculty were keen to provide the benefits of an academic conference to students like those made possible through the Canadian Undergraduate Physics Conference (CUPC) which was founded 12 years earlier.

Today, the two-day event hosts approximately 150 students and faculty each year, giving undergraduates a platform to present their research, with research and

Lois Whitehead  
<lois.whitehead@scienceatlantic.ca>  
is the Executive Director of Science Atlantic.



Bob Hawkes and Kyle Hill, Mount Allison University (© Mount Allison University, 2006)

science communication awards for top presenters. The event is complemented by a keynote lecture and a grad fair attended by schools from across Canada who hope to recruit some of the best senior Canadian undergraduate students.

In an interview, Dr. David Tindall, a recently retired physics professor at Dalhousie University and Dalhousie representative to the Science Atlantic Physics & Astronomy Committee for 32 years, commented:

“By having a forum to present their work at the AUPAC, our students have developed considerably over the years, particularly in their presentation skills. Without the guiding hand of Science Atlantic, there would have been no AUPAC and our undergraduate experience would have been much poorer for it.”<sup>1</sup>

### AN EXAMPLE: AUPAC’S IMPACT ON ONE STUDENT

Kyle Hill (BSc Honours, Physics, Mount Allison University, 2006; MSc, Medical Imaging, University of Oxford, 2007; PhD, Surgery, University of Oxford, 2011; Sauvé Scholar, Education, McGill University, 2011) presented at AUPAC in three years of his undergraduate career, including winning the top research prize in 2004 and going on to win at CUPC.

As a first year observer at AUPAC, Kyle recognized the need for a presentation venue for young scientists at Mount Allison, and the Science Undergraduate Research Fair (SURF) was born. Quoted in University Affairs (September 2011), Mr. Hill commented that he benefited from his experience at AUPAC by contrasting its friendly atmosphere with the intimidating experience of many scientific gatherings.<sup>2</sup> Now 10 years strong, SURF is ensconced in Mount Allison’s undergraduate science program.



Physics professors Michael Steinitz and David Tindall receive Science Atlantic Outstanding Contributing Member Awards, April 27, 2012 (© Heidi Steinitz, 2012)

### THE PEOPLE WHO MAKE IT POSSIBLE

Science Atlantic members are the driving force for the organization’s achievements. In particular, the Physics & Astronomy Committee has had numerous champions, and five of the 14 outstanding members recognized by the association over the last 50 years are physicists. Each has contributed more than 25 years to the organization: Dr. Merrill Edwards (University of New Brunswick), Dr. Cyrus MacLachy (Acadia University), Dr. Michael Steinitz (St. Francis Xavier University, also recognized nationally in 2006 with the CAP-COMP Peter Kirkby Memorial Medal for Outstanding Service to Canadian Physics), Dr. David Tindall (Dalhousie University), and Dr. Francis Weil (Université de Moncton).

### OUTSTANDING UNDERGRADUATE TEACHING, BAR NONE

These distinguished members are not the only faculty in the region to contribute to enhancing the undergraduate physics education experience. Dr. Robert Hawkes (Mount Allison University), a 3M teaching award winner, has been recognized numerous times for his teaching skills, including receiving the CAP Medal for Excellence in Teaching Undergraduate Physics in 2000 and being the first recipient of the APICS/Science Atlantic Science Communication Award in 2001. Three more CAP Excellence in Physics Teaching winners hail from Atlantic Canada: Dr. Peter Williams (Acadia University) in 2006, Dr. Adam Sarty (Saint Mary’s University) in 2008, and Dr. Jeffrey Dahn (Dalhousie University) in 2009.

1 Katherine Wooler, Dal News, May 18, 2012: Scientific honours: Science Atlantic’s Hall of Fame inductees (<http://www.dal.ca/news/2012/05/18/scientific-honours.html>)

2 Tim Loughheed, University Affairs, November 7, 2011; After 50 Years, Introducing Science Atlantic, (<http://www.universityaffairs.ca/after-50-years-introducing-science-atlantic.aspx>)



Science Atlantic 50th anniversary member recommitment, April 27, 2012 (© Rick Mehta, 2012)

### AND WE DO IT ALL AGAIN ...

There are nine standing discipline committees in Science Atlantic: Aquaculture & Fisheries, Biology, Chemistry, Computer Science, Earth Science, Environment, Mathematics & Statistics, Physics & Astronomy, and Psychology. Issue-based committees include the Animal Care Committee and a Working Group on Research.

Each discipline committee facilitates an annual academic student conference like AUPAC, drawing approximately 1000 students, faculty and researchers in total. The conferences and committees of Science Atlantic provide rich opportunities for networking and sharing research interests and best practices in teaching. In addition, several committees coordinate speaker tours. As needed, specific projects, such as the Mathematics & Statistics Committee's Preparing for University Calculus handbook and the Environment Committee's Thinking Green brochure, are coordinated by the committees.

### THE NEXT 50 YEARS

At the 50th Anniversary celebration in April 2012, the representatives for Science Atlantic's 18 member institutions signed a pledge renewing commitment to the association's original principles: to promote communication and cooperation, to help students and scientists participate in scientific endeavours, to increase awareness and encourage solution of problems that require scientific research, and to help coordinate the development of science research and teaching in the region.

The faculty, scientists, and students that comprise Science Atlantic will continue to advance collaboration, science education and research in the region in the coming decades.

Follow @ScienceAtlantic on Twitter and join the biweekly newsletter *The Science Atlantic Minute* for news relevant to scientists, researchers and students in the region and nationally: <http://bit.ly/SAMinute>.



Science  Atlantique  
le lien entre l'enseignement des sciences et la recherche

