Fall Council Sessions
November 25-26, 2011

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Animal Care Committee

No update

Aquaculture & Fisheries Committee (AFC)

The primary role of this committee is to organize an annual conference in March, sharing the same venue as the Biology conference. Both undergraduate and post-graduate students orally present their research findings. There is no poster competition. The best presentations receive cash prizes, made possible by generous industry support. The 2011 conference was hosted by Dalhousie University (see spring report for summary). The 2012 conference will be hosted by Mount Allison University. The AFC committee meets once a year at the annual conference. We discuss whether or not AFC activities should expand, but the general consensus is to focus solely on the annual conference. Hence the brevity of this report.

Committee membership

Jim Duston, NSAC (Chair); Tillmann Benfey, UNBF (Secretary); Cyr Couturier, Marine Institute/MUN; Matt Rise MUN; Mark Fast, AVC/UPEI; Benedikte Vercaemer, DFO-BIO; Rod Beresford, CBU; Thierry Chopin, UNBSJ; Elize Mayrand, UdeM; Jim Williams, StFX; Caroline Graham, NBCC; Trevor Avery, Acadia; Christophe Herbinger, DAL; Matt Litvak, Mount A; Tim Frasier, SMU.

Submitted by J. Duston, Chair
November 13, 2011
Biology Committee

Our principal planned activity since the Spring report was the proposed speakers tour. Unfortunately changes in university Biology representation and consequent lack of personnel has delayed implementation. The Biology Committee discussed this issue thoroughly and still supports the concept. We propose Council approval to delay the program until 2012. In the meantime existing Biology lecture program lists are being exchanged between member institutions. It was proposed that we involve students in operating the program.

The forty second annual Science Atlantic Undergraduate Biology Conference (SAUBC) will be held, 2nd to 4th March 2012, at Mt. Allison University. This will be a joint conference between Biology, Environmental Studies and Fisheries and Aquaculture because the 2011 joint conference in Halifax was such a success. Magi Beaton, the Biology organizer will circulate promotional posters shortly.

The committee reviewed previous Biology undergraduate winners to identify those who have had particularly noteworthy research careers, since participating in the APICS conference. Two impressive names were selected as potential candidates to speak at the 50th Anniversary Gala. They are being contacted to see if they are willing to have their names put forward.

Tamara Franz-Odendaal, the Atlantic Chair for Women in Science, briefed the committee on her mandate to visit all member universities to introduce programs to attract young women towards sciences where they are presently under-represented. Activities include science camps for grade 7 and 8, and the Sea Change Conference www.ccwestt2012.ca.

The positions of chair and vice-chair are to be renewed but no one was appointed at this meeting. Consultation with members who were absent will be continued by email.

The Saturday workshop had wide-ranging discussions regarding the availability of class notes on university servers. Some reservations were expressed by those who value note-taking while others feel that at least partial notes enable students to listen and participate more effectively. Sharing of laboratory exercises was also discussed. Alyre pointed out that laboratory exercises are often extremely out of date, not reflecting recent major advances in biology. Alyre suggested the possibility of a summer camp or workshop of committed and creative people to design new experimental exercises for first year labs.

Bob mentioned the bureaucratic hurdles impeding visiting students from one Atlantic university taking courses at another. These problems could best be solved by a collective agreement between universities at the Dean and administrative level. Models of such agreements include the Western Deans’ Agreement, and the Ontario Field Course Consortium.

Submitted by Bob Hooper, Chair
Chemistry Committee

Most Recent Conference

The 36th annual student undergraduate chemistry conference (ChemCon 2011) was held at University of Prince Edward Island, May 20th-22nd, 2011. It was co-sponsored by APICS (now Science Atlantic) and the Chemical Institute of Canada (CIC). The year 2011 as the International Year of Chemistry was highlighted at this conference. The conference was attended by 136 chemists. Fifty five presentations (oral/poster) were made by undergraduate students from twelve member institutions. Presentations were also made by fourteen graduate students. Nineteen presentations (mostly undergraduate) were awarded in various categories. The detail list of awardees can be found at http://scienceatlantic.ca/committees/chemistry/chemconawards/chemconwinners2011.

Presentations by keynote speakers, Dr. Laurel Schafer from the Department of Chemistry of the University of British Columbia, Dr. Russell Kerr from University of Prince Edward Island, and Dr. Nancy Mathis, Executive Director of Wallace McCain Institute at University of New Brunswick, were well attended.

Notable sponsors of this conference include:
- Genzyme
- GreenCenter Canada
- UPEI Student Union
- UPEI Office of Graduate Studies
- UPEI Chemistry Society
- UPEI Faculty of Education

The 37th ChemCon (2012) will be held at Cape Breton University from May 15th-18th, 2012 where the 50th Anniversary of APICS (now Science Atlantic) will be celebrated.

Speaker Tour, Fall 2011

The APICS/CIC Tour speaker for the Fall of 2011 are Dr. Adam Dyker of the University of New Brunswick and Dr. Bobby Ellis of Acadia University. Dr. Dyker presented a talk entitled "Organic sodium: The most powerful organic reducing agents" at Mt. Allison University (October 14). His scheduled talk at the University of Prince Edward Island was cancelled due to illness and it may be rescheduled in the Winter term. Dr. Ellis spoke on "Main group molecules masquerading as metals" at St. Francis Xavier University (November 3) and Cape Breton University (November 4). He is scheduled to speak at University of New Brunswick on November 25.

Website update: With the metamorphosis of APICS to Science Atlantic in Fall 2011, the new website site of Science Atlantic (http://scienceatlantic.ca) has the link to the Chemistry Committee website. It is currently being managed by Lori Hilchey (Administrative Assistant, Science Atlantic). An up to date membership list for the Chemistry Committee can always be
found at: http://scienceatlantic.ca/committees/chemistry/chemmembers. Dr. Jason Masuda of Saint Mary's University is the Tour Speaker Coordinator and Dr. Ray Syvitsky of NRC Institute of Marine Biosciences is the Vice Chair of the Chemistry Subcommittee.

Submitted by Dr. Amitabh Jha, Chair
Computer Science Committee

The members of the Computer Science committee recently met at the annual Fall Conference, which was held at St. Francis Xavier on October 14-16. Business began with a joint meeting with the Math/Stats Committee, where upcoming conference locations were decided, reports on the previous and current conference were presented, and the change to the Science Atlantic Conference website was discussed. Members discussed conference organization, fees for student competitors, the programming competition and the formation of problems, and news from the participating departments.

Most Recent Conference

174 people attended the conference, including 53 faculty members, 117 students, and 7 invited guests, including invited speakers. An unusually high number of 47 students participated in the mathematics competition, and 51 students participated in the programming competition. Talks were presented by 23 undergraduate Math/Stat students, 6 undergraduate CSci students, and 7 graduate students. A session entitled “Leadership in Math/Stat/CSci Education” was held Saturday afternoon, which saw several presentations and a roundtable discussion.

The programming competition results were as follows:
1<sup>st</sup> Place: Acadia: Jake Bruce, Matthew Penney, Alex Sanford, Coach Jim Diamond
2<sup>nd</sup> Place: Dalhousie: Ross Story, Brian Wolff, Zhimin Yao, Coach Vlado Keselj
3<sup>rd</sup> Place: Memorial: Ken Collingwood, Melissa Reid, Robert Robere, Coach K. Vidyasankar

The Math competition results were as follows:
1<sup>st</sup> Place: StFX: John Austin MacDonald, Christopher van Bommel
2<sup>nd</sup> Place: MtA: Corinne Madsen, Yuting Long
3<sup>rd</sup> Place: MUN: Adam Gardner, Jonny Lomond

The prize for top undergraduate talk in Math was shared by Jonny Lomond, Memorial, with his talk on “Growth and Graphs of Group Actions”, and Ryan Oulton, UNB Fredericton, who spoke on “Selected Uniform Polyhedra, Kaleidoscopes, and Coxeter Diagrams.” The prize for top undergraduate talk in Stats was awarded to Kenneth MacDonald, Acadia, with his talk “Optimization Issues in Gaussian Process Models.” In CSci, the top undergraduate talk was delivered by Matthew Roscoe, UNB Fredericton, on “Determining the Viability of the Kinect as a Research Tool.” The Science Communication Award was presented to Math undergraduate student Neil Spencer, Acadia, for his presentation of “Orthogonal Arrays and Dinner Parties.”

In recognition of the Science Atlantic/APICS 50<sup>th</sup> Anniversary celebration, the computer science talk was officially named the “Arthur Sedgwick Lecture in Computer Science”, after Arthur Sedgwick, Dalhousie, who retired last year and served as a long time member of the CSci Committee, chaired the committee for a number of years, helped organize several of the
conferences at Dalhousie, and was instrumental in organizing the problems for the annual programming competition.

The inaugural Sedgwick Lecture was delivered by Dr. Randy Ellis, Queens, on “Problems and Prospects for Computing in Surgery.” The Blundon Lecture was delivered by Dr. Iain Couzin, Princeton, on “From Democratic Consensus to Cannibalistic Hordes: The Principles of Collective Behavior”. The Field Lecture was delivered by Dr. Christian Genest, McGill, on “Predicting the Unpredictable: Extreme-Value Theory”.

The Conference concluded on Sunday morning with a special AARMS session on high-dimensional data analysis. Dr. Edward Susko, Dalhousie, delivered the keynote lecture on “Properties of Measures of Uncertainty in Phylogenetic Inference.” After three contributed talks, the session concluded with a presentation by Mr. Joey Bernard, ACENet, on “Multidimensional R in Parallel.”

Submitted by Martin van Bommel, Chair
Earth Sciences Committee

The Science Atlantic (Earth Sciences) Committee consists of M Graves (Dalhousie), J Hanley (SMU/industry liaison), S Johnson (NB DNR), S Jollicoeur (Moncton), C LaRoque (Mt A), A Leitch (MUN), B Murphy (St FX), C Shaw (UNB), R Raeside (Acadia), D Utting (NS DNR), D Wedlock (CoGS-NSCC), G Williams (GSC-Atlantic). CBU is represented by the dean, D. McCorquordale in the absence of an appointment in Geology/Earth Science.

Speakers Tour

Science Atlantic (ES) co-sponsors a visiting speaker tour with the Atlantic Geoscience Society, and is coordinated by Jacob Hanley. The 2011-12 speakers are Cliff Shaw, UNB), visiting MUN, Dalhousie and St. FX and Fraser Keppie (NS DNR) visiting UNB, Acadia and St. Mary’s. The tour is scheduled to happen in January and February.

AUGC

The 61st AUGC was held at Memorial University on 20-22 October. Funding was successful, with an estimate of $39,000 raised or paid. Fund-raising was exceptionally successful with $25,000 raised from corporate sponsors, and over $5000 from local fund-raising activities. There were 17 oral presenters and 4 poster presentations.

A member of the AUGC organizing committee has participated in council meetings of the Atlantic Geoscience Society for the past year. This appears to have worked well, and ensured communication lines stayed open with the organizing group at Memorial.

Awards were made as follows:

- APICS-NSERC award ($500) comprised of $400 from the NSERC reps and $100 from the APICS communications award) - Dewey Dunnington, Acadia “Tracking late-Holocene environmental change at Long Lake, New Brunswick-Nova Scotia border region, Canada.”
- Frank Shea award - best paper in economic geology. Awarded by Mining Society of Nova Scotia, value $500 to the winner, and $100 to the student club: Erin Adlakha (St. Mary’s) “Constraining hydrothermal and magmatic processes beneath the Merensky Reef and UG2 Chromitite, Bushveld Complex, RSA”
- CSEG Foundation award - awarded to the best paper in geophysics. Value $300: Andrea Christians (St. Mary’s) “Re-examining Pleistocene tunnel valleys on the Scotian Shelf and their implications for slope sediment delivery.”
• Best Poster award, provided by Imperial Oil, and arranged by the organizing club: Mariella Nalepa (Acadia). “Investigation of the form and age of the Bloody Creek Crater, southwestern Nova Scotia”
• CSEG (Canadian Society of Exploration Geophysicists) Challenge Bowl - a knock-out quiz style, with the winning team awarded a trip to the annual meeting of the CSEG (in Calgary, May 2011) to compete nationally, with the potential for the winning team there to continue to an international competition: University of New Brunswick.
• In addition, the Atlantic Geoscience Society recognises all presenters with a certificate.

Field trips/short courses were organized as follows:
1. Reservoir Core from the Jeanne d'Arc Basin – staff from Canada-Newfoundland & Labrador Offshore Petroleum Board’s Core Storage and Research Centre
3. The Battery-Signal Hill Precambrian Succession – Greg Dunning, Memorial University
4. Sedimentology and ichnology of the Cambro-Ordovician on bell Island, Conception Bay, NL – Duncan McIlroy and Dario Harazim, Memorial University
5. The Avalonian Orogeny at Flat Rock: Sedimentation and erosion during folding and thrusting in the Late Precambrian – Tom Calon, Memorial University

For the presentations, the panel of judges comprised Andy Kerr (Geological Survey of Newfoundland and Labrador), Ian Sinclair (Husky Energy, St. John’s) and Adam Flynn (RPS Boyd Petrosearch, Calgary). Posters were judged by Dorothea Hanchar (Newfoundland and Labrador Department of Environment and Conservation).

At the midday Student-Industry luncheon, a keynote presentation was given by Ali Aksu, Memorial University on “The architecture of a saline density-current channel created by Mediterranean inflow into the Black Sea through the Strait of Bosporus”. The day ended with a banquet where Derek Wilton, Memorial University, gave a talk entitled “Looking for Oscar Lieber’s Journal – How the American Civil War interrupted Labrador history.”

50th Anniversary celebrations: the Earth Sciences committee is organizing its recognition of the 50th anniversary of APICS/Science Atlantic at the 2012 conference at Dalhousie, in October. The organizing committee has indicated its intent to invite to the conference prominent Atlantic region scientists, particularly those who have APICS connections in the past, and to relate their subsequent work. This will be done in place of the keynote speaker.

APICS (ES) committee will meet again at the Atlantic Geoscience Society meeting, 4 February, in Moncton.

Submitted by Rob Raeside, Chair
Environment Committee

Most Recent Conference

March 11-13, 2011, Dalhousie University

- Award winners
  - Undergraduate Oral - Emily Stewart (DAL)
  - Undergraduate Poster - Ellen Boyd (UNB-SJ)
  - Graduate Oral - Heather Elliot (DAL)
  - Graduate Poster - Doug Hiltz (UNB-F)

- Invited Speakers
  - Dr. Boris Worm, Dalhousie University
  - Jeremy Lee, Sustainable Fish Farming Canada Ltd.
  - Dr. John Smol, Queen’s University

Summary of Other Activities

Planning is underway for the next conference to be held at Mount Alison University, March 2-4, 2012. We will be holding our second joint conference with Biology and Aquaculture & Fisheries.

Committee membership

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Submitted by Van Lantz, Chair
Mathematics & Statistics Committee

Most Recent Conference


Invited Speakers:

INAUGURAL ART SEDGEWICK LECTURE: Dr. Randy Ellis (Queen’s University, and Queen’s Research Chair) Problems and Prospects for Computing in Surgery

BLUNDON LECTURE: Prof. Iain D. Couzin (Princeton University, one of Popular Science Magazine's Brilliant 10 in 2010 and a PopTech Science and Public Leadership Fellow in 2011, along with numerous other esteemed awards), From Democratic Consensus to Cannibalistic Hordes: The Principles of Collective Behavior

CHRIS FIELD LECTURE: Dr. Christian Genest (McGill University, Canada Research Chair and winner of the 2011 Gold Medal of the Statistical Society of Canada), Predicting the unpredictable: Extreme-value theory

AARMS KEYNOTE SPEAKER: Dr. Ed Susko, (Dalhousie), Properties of Measures of Uncertainty in Phylogenetic Inference

STUDENT AWARDS (Math & Stats)

- Atlantic NSERC Reps Award/1st Place Stats Paper: Kenneth MacDonald (Acadia), Optimization Issues in Gaussian Process Models
- Atlantic NSERC Reps Award/1st Place Math Paper: Jonny Lomond (MUN), Growth and Graphs of Group Actions
- Atlantic NSERC Reps Award/1st Place Math Paper: Ryan Oulton (UNBF), Selected Uniform Polyhedra, Kaleidoscopes and Coxeter Diagrams
- Science Communication Award: Neil Spencer (Acadia), Orthogonal Arrays, and Dinner Parties
- 3rd Place Math Paper: Christopher van Bommel (St FX), Gamma Graphs of Graphs

Science Atlantic Math Competition

- 1st place: John Austin MacDonald, Christopher van Bommel (St FX)
- 2nd place: Corinne Madsen, Yuting Long (Mt Allison)
- 3rd place: Adam Gardner, Jonny Lomond (MUN)

Submitted by Robert Dawson, Chair
Physics & Astronomy Committee

No new activity since Spring Council meetings.

Psychology Committee

This report was written in June 2011. Since “Science Atlantic” is not our official name at this stage, I will be using APICS for this report.

The Psychology Committee of APICS meets only once a year; these meetings are held at the conference. The 35th APICS Psychology Undergraduate Thesis Conference was held on May 12 and 13, 2011, and was hosted by Dalhousie. Tara Perrot and Simon Sherry organized the conference.

Prior to the commencement of the conference, the Psychology committee met to discuss a number of organizational issues, most of which had to do with the conference (e.g., who was judging which sessions, judging criteria, etc.). One issue worth noting is that Donna Thompson of Mount Saint Vincent University has agreed to continue maintaining the web site for the Psychology division of APICS. The other is that the committee discussed the dates for future conference and has confirmed the following dates for future conferences:

- 2012: Acadia University
- 2013: St. Mary’s University
- 2014: St. Thomas University
- 2015: Memorial University of Newfoundland

After the presentations were completed, the committee met again to discuss who would receive which award. The committee was fortunate to have Lois Whitehead and Danielle Pinkey attend the meeting. Lois provided a number of updates, the majority of which had to do with the rebranding of APICS to Science Atlantic and the 50th Anniversary. Committee members also gave Lois and Danielle feedback about various issues, such as what information to include on the web site.

The conference was an unqualified success. It was well-organized and everything went smoothly. As well, the turnout increased this year and was back to near-record levels of attendance. A total of 118 people attended the conference, which included 79 student presentations (oral and poster presentations combined), 8 students who came out to observe the conference, 16 faculty members and by 14 graduate students from Dalhousie University who attended a luncheon and gave the undergraduate presenters information about graduate school. We were also pleased to see that students from Université de Moncton attended the conference this year; there had been no attendance from this university for the past few years, and we were delighted to members of this community return to the Psychology conferences. The conference ended with a keynote address by Sherry Stewart at the closing banquet.
The award winners from the conference are listed below:

- NSERC Representatives’ Undergraduate Student Award for Best Oral Presentation: Morag Ryan, Memorial University of Newfoundland
- NSERC Representatives’ Undergraduate Student Award for Best Poster Presentation: Danielle Jackson, Memorial University of Newfoundland
- APICS Undergraduate Science Communication Award for Best Oral Presentation: Sacha Nadeau, Mount Allison University
- APICS Undergraduate Science Communication Award for Best Poster Presentation: Misha Leach, Saint Mary’s University
- Karen Nicholson Memorial Award for the Best Neuropsychological Presentation: Sean Rasmussen, Mount Allison University
- McGraw-Hill Book Awards:  
  a. Stephanie Allen, Dalhousie University  
  b. Skye Fitzpatrick, Dalhousie University

Respectfully submitted,
Rick Mehta, Psychology