

Final Report

The 2016 Atlantic Universities Mathematics, Statistics and Computer Science Conference

October 14-16, 2016

**Cape Breton University
Sydney, Nova Scotia**

CAPE BRETON
UNIVERSITY



Summary

The 2016 Atlantic Universities Mathematics, Statistics and Computer Science Conference was held at Cape Breton University, the weekend of October 14-16. On the afternoon of Friday the 14th the Science Atlantic Math/Stats committee and the Computer Science committee met, and the ACM programming competition and the Mathematics competition were held. The Blundon lecture on Friday evening was given by Dr. Kabe Moen from the University of Alabama whose talk title was “**Hearing the shape of a drum**”. After that the traditional wine and reception took place.

On Saturday Morning, the first activity was a NSERC Scholarship Presentation by Dorette Pronk (Dalhousie) followed by undergraduate math and CS student presentations. Then two special presentations were given by Dr. Daniel Silver from Acadia University (CS) and Dr. Shannon Ezzat from University of Winnipeg (Math) in parallel. After a nutrition break, the Sedgwick Lecture was given by Dr. Anne Condon from the University of British Columbia whose title was “**Models and hardness results for predicting secondary structure and kinetics of interacting DNA strands**”. Then, more undergraduate math and CS student presentations were held.

Saturday afternoon began with mixed graduate and math undergraduate student presentations. Following the afternoon nutrition break, the Field Lecture in Statistics was given by Hugh Chipman of Acadia University whose title was “**An Overview of Statistical Learning**”. After that the ACENET session and the final undergraduate mathematics student presentations were held.

The banquet took place on Saturday evening. The room was crowded, but there was space for everyone and the food was good too. There were plenty of opportunities for renewing old acquaintances and making new ones. Following the meal, announcements were made and certificates were issued to all prize winners (see Competition section for details). Finally, the Science Atlantic representative, Jasmine Golf, conferred a plaque to Dr. Robert Dawson for being inducted into the Science Atlantic Hall of Fame as an Outstanding Member for 2016. She also awarded 13 faculty who had served as Science Atlantic committee members for more than ten years with a commemorative pin.

On Sunday morning, an AARMS session was held. The Title was “**Partial Differential Equations: Regularity, Numerics, and Applications**”. There were 7 presentations (5 professors, 2 Ph. D students and 1 researcher) with nearly 20 researchers in attendance.

Participation

Number of Registered Participants: 149

Students:	102
Faculty:	35
Guest Speakers:	3

Other: 9

There were several attendees of the AARMS session who didn't register and thus are not counted in the above total.

Break Down of Participants by Affiliation:

Acadia University	16	Saint Mary's University	4
Cape Breton University	14	Université de Moncton	13
Dalhousie University	29	University of New Brunswick	12
Mount Allison University	13	UNB St. John	11
Mount St. Vincent University	4	University of Winnipeg	1
Memorial University	6	University of Alabama	1
University of PEI	18	University of British Columbia	1
St. Francis Xavier University	13	Science Atlantic	2

Competitions

ACM Intercollegiate Programming Competition

There were 16 teams of three students who participated in the Programming Competition. The top three teams were:

1. Vlad Marics, Lucas Pond, Caleb Reath (UNB (Fredricton) Red) with a prize of \$75 each
2. William Fiset, Thomas Lidbetter, Micah Stairs (MTA Team Alpha) with a prize of \$50 each
3. Sam Doiron, Orjan Monsen, Mitchell Zinck (Dalhousie Green) with a prize of \$25 each

Mathematics Problem Solving Competition

There were 19 teams of students who wrote the Problem Solving Competition. Most were pairs of students who wrote the test in English but one team used the French version and another contained three singleton students from different universities). The top three teams were:

1. Leah Genge and Noah MacAulay (MUN) with a prize of \$75 each
2. Shael Brown and Jordan Barrett (Dalhousie) with a prize of \$50 each
3. Anton Afanassiev and Kaveh Mozafari (MUN) with a prize of \$25 each

Honourable Mentions:

Jack O'Connor and Courtney Allen (UNB Fredericton)
 Jason D'Leon and Peter Graves-Akerley (Saint Mary's)

Student Research and Communication Presentations

There were four undergraduate computer science student presentations, eleven undergraduate mathematics student presentations, four graduate student presentations (one joined in ACENET session), three ACENET student presentations in the student research sessions. Only one statistics student gave a talk and that was in the ACENET session.

Best Oral Presentation (Computer Science)

First place: Martin Main, Acadia University with a prize of \$100.
 Second place: Sarah Thompson, University of PEI with a prize of \$75

Best Oral Presentation (Mathematics)

First place: Jordan Barrett, Dalhousie University with a prize of \$100.
 Second place: Katie MacEachern, St. Francis Xavier University with a prize of \$75
 Third place: Leah Genge, Memorial University with a prize of \$50

Science Atlantic Communication Award

Undergraduate: Joshua Feldman, Dalhousie University with a prize of \$100
 Graduate: Milton King, UNB Fredericton with a prize of \$100

ACEmat Award in Computational Modeling of Materials

First place: Sarah Walsh, Cape Breton University with a prize of \$100

Financial Report

Revenue

Registration Fee	\$8,620
Banquet Ticket	\$ 850
AARMS	\$4,000
Science Atlantic	\$2,300
ACENET	\$1,200

School of Science & Technology	\$1,000
Department	\$ 500
Subtotal	\$18,470

Expenses

Invited Speakers	\$ 3,499.25
Food	\$11,394.53
Winner Prizes	\$ 1,450.00
Printing, badges and Supplies	\$ 1,041.00
USBs (CS contest)	\$ 586.52
Student Travel Support (Nfld)	\$ 500.00
Subtotal	\$18,471.30

Since there were only 149 participants (102 students and 32 faculty paid their registration fees) our revenue is significantly lower than we expected. We only have \$500 to support students' travel from Memorial University of Newfoundland.

Sponsors

Thanks to the following for their financial support:

- Science Atlantic
- Atlantic Association for Research in the Mathematical Science (AARMS)
- Atlantic Computational Excellence Network (ACENET)
- ACM-ICPC
- School of Science and Technology, CBU
- The Department of Mathematics, Physics and Geology, CBU

Remarks and Recommendations

Since there were only 92 students and 31 faculty (not including CBU students and faculty) who attended the conference, our revenue is far less than expected. This led us to decide to offer the smaller option for the prizes to programming and math competition winners. Also, given that there were fewer speakers than expected, we gave out fewer prizes than the maximum allowed.

This year, there were 8 students who received ACENET scholarships in Atlantic universities. I sent an invitation email to each of them, but only two students gave talks. ACENET provided funding for the conference and would like the students who receive funding to give talks at this conference. Also, there was only one statistics student who gave a talk (joined in ACENET session for competition). I would recommend all committee members encourage their students to give talks and win prizes in the future.

The registration form should have a button to allow a person to cancel the registration before the deadline and refund the fee if they paid already. We had a lot of trouble in counting how many people would attend the banquet. Dietary restrictions were also not handled very clearly and some special meals needed to be ordered at short notice.

This year, 6 programming competition questions were submitted just one day before the conference. This made it very difficult to prepare the contest. I would recommend that each CS committee member remind the person who writes the question to submit at least five days earlier than the conference day and double check the question is clearly stated and the answer is correct.

Respectfully submitted,

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