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Prof. Alejandro Àdem and Prof. Mark Gotay
Director of PIMS
University of British Columbia
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Dear Professors Àdem and Gotay:

This is the report on CanaDAM 2013 (Canadian Discrete and Algorithmic Mathematics Conference).

The fourth Canadian Discrete and Algorithmic Mathematics conference (CanaDAM 2013) was held at the Memorial University of Newfoundland during June 10 — June 13, 2013. This conference is held biennially in odd numbered years and alternates with the SIAM Conference on Discrete Mathematics which is held in even numbered years. The CanaDAM conference series has very quickly become an internationally known and respected conference in the general field of Discrete Mathematics. The CanaDAM 2013 meeting had 285 registered participants of which 110 were students. At least 28 different countries were represented on the list of participants as well as all 10 Canadian provinces. A great deal of credit for the success of the conference goes to the Program Committee chaired by Daniel Panario of Carleton University and the Local Arrangements Committee chaired by David Pike of the Memorial University of Newfoundland. More detail on the various organizing committees can be found on the conference web page <http://canadam.math.ca/2013>. The strength of the conference is directly related to its scientific program. The program committee under the leadership of Daniel Panario put together an excellent program consisting of 8 plenary talks, 9 invited minisymposia with a total of 45 talks, 28 contributed minisymposia with a total of 136 talks, and 74 contributed talks which were not part of a minisymposia. The names and affiliations of the plenary speakers, and titles of their talks follow:

- Carla Savage (North Carolina State University), *Generalized inversion sequences*.
- Victor Reiner (University of Minnesota), *Catalan numbers, parking functions*,

and invariant theory.

- Robert Sedgewick (Princeton University), *“If You Can Specify It, You Can Analyze It” — the lasting legacy of Philippe Flajolet.*
- Miguel Anjos (cole Polytechnique, Montral), *Conic optimization: relaxing at the cutting edge.*
- Reinhard Diestel (Universitt Hamburg), *From pretty pictures to infinite matroids via graph homology: a surprising connection.*
- Anne Condon (University of British Columbia), *Programming molecules.*
- Benny Sudakov (University of California Los Angeles), *Induced matchings, arithmetic Progressions and cCommunication.*
- Cheryl Praeger (The University of Western Australia), *Local transitivity properties of graphs and pairwise transitive designs.*

In addition to these plenary talks there was a very well received 1 hour popular lecture on Opt Art (art constructed with the assistance of optimization techniques) given by Robert Bosch from Oberlin College, USA. This lecture was preceded by a reception hosted in part by the publisher Elsevier.

One of the primary goals of these conferences is to encourage the participation of Canadian graduate students and PDFs. The three Canadian Mathematical Institutes (CRM, Fields and PIMS) each pledged \$8300 towards the support of graduate students and PDFs attending the meeting. Additional funding from AARMS in the amount of \$6000 is also gratefully acknowledged. In addition to its monetary contributions, the Fields Institute assisted with the design and distribution of the conference poster for CanaDAM 2011. In order to receive financial support graduate students were encouraged to contribute talks. Furthermore, Brett Stevens from Carleton University hosted a problem session devoted to the presentation of research problems appropriate for graduate students. A reception for graduate students followed the problem session. It was especially gratifying that more than 40% of the attendees were graduate students and post doctoral fellows. This solid participation of students and PDFs could not have happened without the generous support of CRM, Fields, PIMS, AARMS, the CMS, and MUN.

It is worthwhile noting the breadth of mathematics, applications, and theoretical computer science that is represented at this conference. For example, we had talks and minisymposia on finite fields, algebraic combinatorics, geometric graph theory, Galois geometries, analytic combinatorics, graph theory, combinatorial optimization, complexity theory, data structures, probabilistic combinatorics, and computational biology.

The CanaDAM meeting has a permanent ‘home’ with the Canadian Mathematics Society(CMS). The CMS provided all the conference services such as: webpage design and maintenance, abstract submission, and processing of registration fees for CanaDAM 2013. In addition to these services the CMS will also provide ongoing financial services support by maintaining a CanaDAM account into which registration fees prior to the conference are deposited. These funds will be transferred to the host

institution for the processing of all conference expenses. After the conference expenses have been processed, seed funding for the next CanaDAM meeting (in the amount of approximately \$5000) will be deposited into the CanDAM account at the CMS. The CMS's extensive experience in handling conferences and their online facilities were a tremendous asset in the planning of CanaDAM 2013 (and past CanaDAMs). Having a permanent on line home for CanaDAM is particularly beneficial as it will provide continuity to the meeting. Planning for CanaDAM 2015 is underway. The executive committee for the next meeting has been struck. Its members are Gena Hahn (University de Montreal), David Pike (Memorial), Gary MacGillivray (University of Victoria), Brett Stevens (Carleton University), Joy Morris (University of Lethbridge), and myself. The new chair of the committee is Brett Stevens. The host institution for CanaDAM 2015 is yet to be determined, but it will definitely be held to the west of Ontario, as per the CanaDAM bylaws.



Prepared by Prof. Frank Ruskey,
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Chair of CanaDAM 2013 Executive Committee.