

**Submittee:** Karen Gunderson  
**Date Submitted:** 2016-06-16 12:34  
**Title:** Prairie Discrete Math Workshop 2016  
**Event Type:** Conference-Workshop

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**Location:**  
University of Manitoba, Winnipeg, Manitoba, Canada

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**Dates:**  
16-17 May 2016

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**Topic:**  
The purpose of this two-day meeting was to bring together researchers in discrete mathematics from across the prairies and neighbouring provinces and states to exchange ideas and provide networking opportunities. The topics of the meeting consisted of areas of discrete mathematics including graph theory, design theory, combinatorial enumeration, and combinatorial algorithms.

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**Methodology:**  
The methodology of the workshop was research lectures. The schedule of talks was also purposefully arranged with long coffee breaks and lunches to encourage discussion and the initiation of new collaborations.

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**Objectives Achieved:**  
The workshop provided an opportunity for researchers with ties across the prairies to come together to exchange ideas on a wide array of topics in discrete mathematics. Speakers from Manitoba, Saskatchewan, Alberta, Ontario, Nebraska, Newfoundland, and Australia gave lectures on new research in extremal set theory, graph theory, algebraic combinatorics, combinatorial matrix theory, design theory, applications of random graphs, and combinatorial algorithms.

Two talks were given by graduate students and one talk was given by a postdoctoral researcher. This workshop allowed these early-career researchers an opportunity to present their work to the community and it is hoped that they have made connections for future collaborations.

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**Scientific Highlights:**  
The first plenary lecture by Jamie Radcliffe was a wide-ranging survey of recent results on enumeration problems for parameters including independent sets and matchings in hypergraphs. His talk included a number of fascinating open problems and conjectures that seemed to stimulate a great deal of interest.

The second plenary lecture was given by Brian Alspach who changed the originally-planned topic of his talk in order to announce the recent solution of a conjecture by Friedlander, Gordon, and Miller

from 1978 about Hamiltonian paths in Cayley graphs of abelian group.

While there was not a lot of time available for collaborative work during a two day conference, the organizer was very pleased to observe many serious mathematical discussions during the breaks. It is hoped that these connections will lead to future collaborations.

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**Organizers:**

Gunderson, Karen, Department of Mathematics, University of Manitoba

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**Speakers:**

Please see attached list.

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**Links:**

Workshop website:

<http://server.math.umanitoba.ca/~kgunderson/workshops/PDMW/PDMW2016.html>

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**Comments / Miscellaneous:**

The support from PIMS was invaluable to the success of this workshop. In addition to providing the means to support students and early-career researchers travelling to the workshop and attracting excellent plenary speakers, the organizer is very grateful for the eye-catching poster produced by the PIMS communications office and for the wide range of advertising provided by both the PIMS website and poster distribution.

In addition to their financial support, the Faculty of Science at the University of Manitoba generously provided tote bags, folders, and pens for the workshop participants.

On the second day of the workshop, we were able to announce that next year's Prairie Discrete Math Workshop will held at the University of Regina and is going to be organized by Prof. Karen Meagher. It is hoped that this workshop will continue to be an annual event.

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**File Uploads:**

Additional Upload 1: [http://www.pims.math.ca/files/final\\_report/PDMW2016schedule.pdf](http://www.pims.math.ca/files/final_report/PDMW2016schedule.pdf)

Additional Upload 2: [http://www.pims.math.ca/files/final\\_report/PDMW2016-abstractsPIMS.pdf](http://www.pims.math.ca/files/final_report/PDMW2016-abstractsPIMS.pdf)

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