

**Submittee:** Marni Mishna

**Date Submitted:** 2015-07-06 13:54

**Title:** PIMS/USASK Applied Combinatorics Summer School

**Event Type:** Summer-School

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**Location:**

University of Saskatchewan, Saskatoon SK

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**Dates:**

May 18 - 29, 2015

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**Topic:**

Combinatorics and its application to the physical sciences.

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**Methodology:**

The school had the following academic components: //

- Four courses with 8 hours of lecture and 3 x 1 hour each of open exercise sessions //
  - Two related research talks //
  - One pure math seminar //
  - One outreach seminar //
  - Student presentations
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**Objectives Achieved:**

Our first objective was to diffuse knowledge of combinatorial techniques and applications. The first week was more skill based-- programming random generation algorithms in sage, for example, and the second week developed applications, specifically in RNA secondary structure and Quantum Field Theory. ///

Equally important, we want to build a cohort of future combinatorialists. The meeting was held immediately before the major canadian meeting in discrete math, and the students were very good about encouraging each other.

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**Scientific Highlights:**

In the last two days we scheduled student presentations. Globally, they were of exceptional quality, and demonstrated that the students had understood even very complex assignment questions. They were mostly done in groups of students that had never met previously, and we were very pleased to see the level of interaction and progress.

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**Organizers:**

Soteris, Chris, Mathematics USask (Local Arrangements Chair) //  
Mishna, Marni, Math, SFU //  
Rechnitzer, Andrew, Math UBC //  
Yeats, Karen, Math, SFU

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**Speakers:**

Instructors: //

Fusy, Eric, LIX, Polytechnique, France //  
Rechnitzer, Andrew, Math, UBC (Andrew filled in at the last moment for the original instructor, Thomas Prellburg, who could not attend due to a death in his immediate family) //  
Heitsch, Christine, Math, Georgia Tech, USA //  
Panzer, Erik, Institut des Hautes Études Scientifiques, France ///

Talks: //

Adem, Alejandro, Math, UBC //  
Yeats, Karen, Math, SFU //  
Mishna, Marni, Math, SFU //  
Rector, Brian, Saskatchewan Ministry of Justice

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**Links:**

<http://math.usask.ca/~appliedcomb/>

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**File Uploads:**

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

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