

Submittee: Colin Weir

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Title: PIMS Young Researchers Conference

Event Type: Conference-Workshop

Location:

University of Calgary

Dates:

June 25 - June 28, 2012

Topic:

The PIMS Young Researchers Conference (YRC) is primarily a networking and training event for graduate students. A wide variety of topics in mathematics and statistics were presented.

Methodology:

3 Keynote presentations 3 Mini-workshops on mathematical software (R, SAGE, MATLAB) 1 Panel discussion on employability and careers in math and stats. 36 Contributed student presentations; presenters were given guidance and feedback before their talk based upon their abstracts and constructive feedback after their presentation by the sessions chairs.

Objectives Achieved:

The YRC is primarily a networking and training event for graduate students from across the PIMS network of universities; a conference for graduate students, run by graduate students. It was very effective in accomplishing the objectives of such an event. There were 3 inspiring general audience keynote presentations by world class researchers; Rachel Pries, Jeff Achter, and Peter Gibson. All presenters gave accessible talks on their research and spent a great deal of time interacting with the student attendees. The 3 software mini-workshops were designed to target both beginner and advanced users to maximize their value and impact on the graduate students. Each session was broken into 2 parts - an introductory hour highlighting the diversity of problems the software is able to address, and a more advanced hour for people more familiar with the software already. For example the SAGE session began with an overview of the language and the diversity of the abstract algebra it is designed to manipulate, while the second session was devoted to the development of SAGE and how to contribute your work to the SAGE project. The Panel session was an rare and excellent opportunity for the students to talk to industry experts about the types of mathematics they focus on and the skills they look for in a math and stats graduate. In conjunction with the Mathematical Modeling In Industry Workshop, whose student participants were also in attendance, we were able to put together an 'all-star' panel of industrial experts. There were representatives from MITACS, Corning, Boeing, CGG Veritas, CSEC, and Alberta Health, all of whom provided wonderful insight and career advice to the student participants. The conference was centred around the contributed presentations. The aim is to provide attendees with valuable training and experience by strengthening their professional skills and developing their presentation techniques. With this in mind, all presenters were given feedback and guidance upon the submission of their abstract. Again after their talk they were given written feedback by the session

chairs. We found this to be a very effective way to strengthen their professional skills and increase the quality of their presentations. This has added benefits for the audience members as well, providing them with a high quality showcase of the research taking place across the PIMS network of universities. The YRC is a conference run by graduate students, for graduate students. As such, it was also an excellent experience for the organizers - to gain first hand experience fundraising, organizing and running a conference with so many participants. As per usual, the experience gained this year will be passed on to next years organizers, further improving the quality of this conference, and furthering the progress towards its goals.

Scientific Highlights:

While the main focus of the YRC is training and networking for graduate students, the event also provides a unique overview of the diversity of research taking place across the PIMS network of universities. We believe that the breadth and accessibility of this conference give it a unique scientific value; exposing young researchers to the myriad of research techniques across mathematics and statistics.

Organizers:

Hosting Organizers: Weir, Colin, Math & Stats, University of Calgary Chisholm, Sarah, Math & Stats, University of Calgary Jugdev, Tristan, Math & Stats, University of Calgary Trelford, Ryan, Math & Stats, University of Calgary Proofzar, Ghashang, Math & Stats, University of Calgary Local Organizers: Holder, Cody, Math & Stats, University of Alberta Kohler, David, Math & Stats, University of British Columbia Garaschuk, Kseniya, Math & Stats, University of Victoria Ahmadi, Bahman, Math & Stats, University of Regina

Speakers:

Keynote Speakers (no abstracts were required): Pries, Rachel, Department of Mathematics, Colorado State University, Coding Theory and Maximal Curves. Achter, Jeff, Department of Mathematics, Colorado State University, Equidistribution of Curves over Finite Fields. Gibson, Peter, Department of Mathematics, York University, Inverse Theory Based on the Seismic Hypothesis of Minimum Phase. Software Workshop Leaders: Lavasani, Syd; Department of Mathematics and Statistics, University of Calgary, SAGE workshop. Nettle-Aguire, Alberto; Alberta Health, R Workshop. Harrison, Christopher; Department of Geology, University of Calgary, MATLAB workshop. Panelists: Williams, Hugh; Communications and Securities Establishment Canada. Gillies, Christine; MITACS. Nettle, Aguire; Alberta Health. Baharava, Zachi; Corning. Laura, Lurati; Boeing. Russel, Brian; CGG Veritas. Contributed Speakers: See Attached.

Links:

www.math.ucalgary.ca/ycrc

File Uploads:

Additional Upload 1: http://www.pims.math.ca/files/final_report/ycrc2012_abstracts.pdf
