

## REMARKS

### FROM THE EDITORS

Dear Reader,

We are pleased to present the inaugural issue of *The Waterloo Mathematics Review*. The *Review* originated from a desire to inspire students by exposing them to front-line mathematics. While our graduate advisers were undergraduates here at Waterloo, they noticed a lack of scholarly material written at the undergraduate level. To ameliorate this, they proposed the creation of a new journal that would provide current undergraduates with exposure to mathematics beyond the confines of the standard curriculum. They also felt that a journal run by career academics or graduate students for this purpose would be insufficient; and so in their proposal for this new journal they suggested it be run entirely by current undergraduate students. The *Review* is that journal, and we hope that it will serve the envisioned purposes for years to come. Looking to the future, we intend to publish triennially and distribute the *Review* to universities across Canada.

For the inaugural issue we have selected articles from a wide range of mathematical areas reflecting the breadth of mathematical interest at the University of Waterloo. In this issue, you will find a discussion of diverse disciplines of mathematics from Algebraic Combinatorics to Quantum Theory. The articles vary in complexity from accessible to first year students to topics intended for senior students, though it is our hope that there is something of interest for any student of mathematics on these pages.

We would like to sincerely thank Dr. Frank Zorzitto for his guidance and support from the birth of this project. Additionally we would like to thank Dean Ian Goulden and the Faculty of Mathematics, without whom this journal would not exist, for graciously providing us with the resources to bring this idea to life. We are also grateful to the Mathematics Endowment Fund for early financial support. Finally, we would like to thank our general manager Richard Zsolt for his advice, dedication, and overall help in putting this journal together.

Yours truly,  
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### FROM THE CUMC 2011 ORGANIZING COMMITTEE

Dear mathematics students,

It is our great pleasure to invite you to the 18<sup>TH</sup> Canadian Undergraduate Mathematics Conference. It will be held June 15<sup>TH</sup> to 19<sup>TH</sup> at Laval University, in Québec City. We encourage students who are interested in any math-related field to participate.

The CUMC is an annual gathering of undergraduate students interested in mathematics and related fields, such as physics, statistics, bioinformatics, economics and computer science. It is the largest event of its kind in North America and attracts over one hundred participants each year.

This conference is a unique opportunity to meet fellow students from across the country, encounter new areas of mathematics, hear renowned keynote speakers from a variety of disciplines and even give a talk on a topic of your choice (if you wish to). It is also a chance to explore Laval University and Québec City.

Moreover, most universities can give you funding to attend. Ask your student society or your department as soon as possible.

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Here are the 8 keynote speakers attending:

- Pamela Gorkin (Complex Analysis), Bucknell University
- Aurélie Labbe (Genetic Statistics), McGill University
- Jean-Marie De Koninck (Number Theory), Laval University
- Yves Demay (Finite Element Analysis), University of Nice
- Thomas Brüstle (Algebra), Bishop's University and University of Sherbrooke
- Frédéric Gourdeau (Geometry), Laval University
- Yvan St-Aubin (Mathematical Physics), University of Montréal
- Frederick Rickey (History of Mathematics), United States Military Academy

Visit [cumc.math.ca](http://cumc.math.ca) to learn more about it and to register.

Looking forward to seeing you at the conference,  
The CUMC 2011 organizing committee  
[cumc.2011@gmail.com](mailto:cumc.2011@gmail.com)

## FROM THE FIELDS UNDERGRADUATE NETWORK

An open call for ambassadors;

The Fields Undergraduate Network (FUN) has successfully completed its first trial run of five events. These took place between September 2010 and March 2011. We are currently undergoing a shift in governance and are looking for student ambassadors to provide continuity for the upcoming year.

These student ambassadors will represent their home university at all FUN events. They would serve as the main contacts for the organization of events, represent the interests of the math students at their home institution at meetings, and contribute ideas for the future growth of the our undergraduate mathematical community.

The tasks associated with these positions will require organizational experience. All previous ambassadors have been executives of undergraduate mathematics student societies. Length of term for these positions can be negotiated. Our ambassadors should have strong connections with their local student math societies or mathematics departments.

This call for participation is specific to a series of meetings that are being planned and will be held at the Fields Institute throughout May 2011. The exact dates are still to be decided but if you are interested and would like to receive updates on meeting dates and agenda items then please email me at [richard.cerezo@utoronto.ca](mailto:richard.cerezo@utoronto.ca) to be added to the mailing list.

To view our first set of events, please visit our webpage:  
<http://www.fields.utoronto.ca/programs/outreach/10-11/undergradnet/index.html>

Thank you,  
Richard Cerezo  
FUN, Founder