

NEWSLETTER / BULLETIN

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The NEWSLETTER is a publication of the Canadian Mathematics Education Study Group

Ce BULLETIN est une publication du Groupe canadien d'étude en didactique des mathématiques

CMESG is a group of mathematicians and mathematics educators who meet annually to discuss mathematics education issues at all levels of learning. The aims of the Study Group are:

Le GCEDM est composé de personnes oeuvrant en mathématiques et en didactique des mathématiques et qui se réunissent une fois par année pour étudier diverses questions relatives à l'enseignement des mathématiques à tous les niveaux. Les buts du Groupe sont les suivants:

- 1) to study the theories and practices of the teaching of mathematics
- 2) to promote research in mathematics education
- 3) to exchange ideas and information about all aspects of mathematics education in Canada
- 4) to disseminate the results of its work.

- 1) susciter une réflexion critique sur la théorie et la pratique de l'enseignement des mathématiques
- 2) encourager la recherche en didactique des mathématiques
- 3) faciliter l'échange d'idées et d'information sur tous les aspects de l'éducation mathématique au Canada
- 4) faire connaître les résultats de ses travaux.

IN THIS ISSUE / DANS CE NUMÉRO

(in order of appearance / en ordre d'apparition)

- President's message du président 2
- Notices / Avis 3
 - CMESG 2011 at Memorial Blog
 - Book release
- Members' activities / Activités des members 4
 - Report of the 3rd Annual Conference of the MEGA
 - Fields Mathematics Education Forum and (new!) Journal
- A Member's Musings 5
- News from the Executive / des Nouvelles de l'Exécutif 7
 - Report of the Nominations/Elections Committee 2011
 - Rapport du comité de nomination/sélection du GCEDM 2011
- CMESG Editors / Les éditeurs du GCEDM 7
- CMESG Executive / L'exécutif du GCEDM 8

PRESIDENT'S MESSAGE DU PRÉSIDENT

Elaine Simmt

Spring has arrived in Edmonton, but given the amount of snow we had in the area over the winter it might be fall before it all melts. I hope that wherever you are reading this note it is fresh and green. Our colleagues at Memorial University have assured me that by June we will be enjoying the climate in Newfoundland. If you haven't already browsed through our program and sent your registration you will find all the relevant details on our website <http://publish.edu.uwo.ca/cmescg/>. Thank you to George Gadanidis who has been looking after the website for some ten years. It is people like George who work quietly behind the scenes who make CMESG such a good organization.

As you will read in our program announcement we have a number of very interesting working groups to choose from this year. As well, we are making space for more of our members to be able to share their works (and works in progress) at our meeting. Each and every one of you is invited to contribute to our newest program feature, the **CMESG Gallery Walk**. The CMESG Gallery Walk is intended to provide a forum for members to contribute to our meeting and in doing so enhance our awareness of each other's work. We hope this session will provide enhanced opportunities for showcasing members' work and building networks among members. It is not too late to bring something for the gallery walk, even if you have already registered. If you would like more information about this session or if you have already registered but did not indicate on the form that you would participate but now would like to please contact me at esimmt@ualberta.ca.

At this time I would like to thank Dave Wagner who has been the CMESG newsletter editor for a number of years. Under Dave's editorship the newsletter has provided a space for CMESG members to share news that is of interest to the Canadian mathematics education community and for members to "stay connected" between meetings. Thank you Dave and best wishes on your next challenge!

Le printemps est arrivé à Edmonton, mais avec la quantité de neige qui est tombée cet hiver le tout ne sera peut-être pas fondu avant l'automne prochain. J'espère toutefois, où que vous soyez à la lecture de ces lignes, que la température est clémente et que les bourgeons sont sortis. Nos collègues à l'Université Memorial m'ont assuré qu'en juin nous apprécierons la température Terre-Neuvienne. Si vous n'avez pas déjà regardé le programme de notre rencontre annuelle ou envoyé votre inscription, vous trouverez les informations sur notre site web au <http://publish.edu.uwo.ca/cmescg/>. J'en profite pour remercier George Gadanidis, qui s'occupe du site web depuis plus de dix ans. C'est grâce à des gens comme George, qui travaillent dans les coulisses, que le GCEDM est une si bonne organisation.

Tel que vous allez le lire dans le programme de la rencontre, nous avons plusieurs groupes de travail très intéressants parmi lesquels choisir. De plus, nous avons emménagé plus d'espace dans le programme pour permettre aux membres de partager leurs travaux. Vous êtes ainsi tous et chacun invités à contribuer au nouveau **GCEDM Galerie mathématique**. La GCEDM Galerie mathématique a pour but d'offrir un espace aux membres pour contribuer à la rencontre annuelle en présentant leurs travaux et permettant d'approfondir la connaissance des membres des travaux des uns et des autres. Nous espérons que cette initiative créera de meilleures occasions pour la présentation des travaux des membres et le développement de collaborations. Il est encore possible de proposer quelque chose pour la galerie mathématique. Si vous voulez obtenir plus d'informations concernant cette activité ou si vous êtes déjà inscrits mais n'avez pas indiqué votre intérêt à participer à cette activité et voulez vous inscrire, contactez moi à esimmt@ualberta.ca.

Je voudrais remercier Dave Wagner qui a agit comme rédacteur du bulletin du GCEDM durant plusieurs années. Avec son travail, le bulletin a offert un espace de partage d'informations pertinentes pour les membres de la communauté

Finally, I would like to express our gratitude to Ami Mamolo, our new newsletter editor. Welcome Ami.

See all of you in St. John's.

du GCEDM et nous a permis de « rester en contact » entre les rencontres. Merci Dave et mes meilleurs vœux dans tes prochains défis!

Enfin, je voudrais exprimer notre gratitude à Ami Mamolo, notre nouvel éditeur du bulletin. Bienvenue Ami.

Voir l'ensemble d'entre vous à St. John's.

NOTICES / AVIS

CMESG 2011 at Memorial – Blog

For CMESG members who will be making the journey to St. John's in June, please visit the *CMESG 2011 at Memorial* blog at <http://cmesg.blogspot.com> details about the conference, for information about Memorial University, about the city of St. John's, and about the province of Newfoundland and Labrador.

The kinds of posts you will find on the blog include information about the unique Newfoundland time zone, information on icebergs and whales, where to eat breakfast while on campus, where you can go for a run near campus, and any last minute information about the conference itself. If you have any specific requests for local information you would like to see on the blog, please contact me (Mary) at mstordy@mun.ca and I'll do my best to respond. Currently the blog is only available in English but I will attempt to post some information in French if possible. Looking forward to seeing you in June!

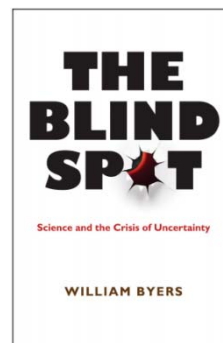
Mary Stordy

Book Release

Princeton University Press has published a new book by William Byers. *The Blind Spot* is an extension of the material and approach Bill described in last year's CMESG plenary and in his book *How Mathematician's Think: Using Ambiguity, Contradiction, and Paradox to Create Mathematics*.

To view the announcement and read more, including a sample chapter, please visit:

<http://press.princeton.edu/titles/9406.html>



MEMBERS' ACTIVITIES / ACTIVITÉS DES MEMBERS

Report of the 3rd Annual Conference of the Mathematics Education Graduate Students Association (MEGA 2011)

February 5 - 6, 2011

Co-Hosted by University of British Columbia & Simon Fraser University

Convened at UBC & Sponsored by PIMS, UBC, & SFU

The Mathematics Education Graduate Students Association's (MEGA) 3rd annual conference, held the weekend of February 5 & 6, 2011, at the University of British Columbia, was a resounding success. A conference for and by students, MEGA conferences are intended to build community and move thoughts both in terms of research and connections with people and ideas.

This year's theme, "Networking experiences in mathematics education and (mathematics education) graduate research", did indeed capture the tone and essence of the proceedings. We were thrilled to receive and engage with guest speakers, Sen Campbell (SFU), Cynthia Nicol (UBC) with Jennifer Thom (UVic), recently retired David Pimm (UAlberta), and Egan Chernoff (USask), whose presentations (respectively) around radical embodiment and neurophenomenology; ecology, mind and consciousness; language, symbols, and meaning; and networking online and otherwise, anchored our discussions and served as springboards for thinking differently and beyond ourselves. Joining our small band of seven student presenters from SFU and UBC, we welcomed contributors from Ottawa U, OISE, Queen's U, and as far away as Cinvestav, IPN, Mexico. Finally, and rounding out the synergistic group of 43 participants, the UBC Mathematics for Teaching [M4T] Masters cohort joined us, contributing their thoughts and perspectives from the practicing field.

From the perspective of the organizing committee, undertaking such a project brought us closer to each other and to the community of researchers in mathematics education in general. Owing to the small size, this sort of conference necessarily moves everyone through the same experience together, and it afforded an opportunity for collective growth in community with participants sharing common but differently expressed interests.

Pivotal to the conference's success, we point to our generous sponsors: the UBC Faculty of Education, the Pacific Institute for the Mathematical Sciences (PIMS), and SFU's Faculty of Education, Graduate Student Society, and Education Graduate Student Association.

Recognizing the unmatched value both to participants and organizers of graduate student conferences, totally conceived and carried out by students, we urge others to consider similar projects within their own communities. Anyone interested in organizing MEGA 2012 is encouraged to contact us about the conference process as it unfolded here in Vancouver.

We look forward to future MEGA conferences as the tradition of student networking in mathematics education continues.

For more details please see <http://m1.cust.educ.ubc.ca/mega2011/index.html>

Submitted by the MEGA 2011 Organizing Committee: Lissa D'Amour, Armando Paulino Precadio Babb, Steven Khan, Christian Berneche, and Alayne Armstrong

The Fields Mathematics Education Forum and (new!) Journal

For almost two decades now, teachers, curriculum consultants, mathematics education researchers, mathematicians, graduate students, pre-service teachers, ministry and policy consultants, and members of the general public with an interest in mathematics education have been gathering monthly at the Fields Institute for the *Fields Mathematics Education Forum* to explore a variety of issues in mathematics education. Themes of this year's meetings included Equity in Mathematics Education, Humanistic Mathematics, and Cultural Differences in Ways of Doing (and Teaching) Mathematics.

Emerging from the Fields Mathematics Education Forum, we are pleased to announce the launch of the *Fields Mathematics Education Journal* (FMEJ). This international peer-reviewed online journal aims to provide open access to the range of themes that attract attention of the mathematics education community in Canada and internationally. The focus of this periodical is to stimulate discussions, reflections, research, and commentaries about mathematics education within and between different interest groups. The FMEJ particularly encourages submissions of manuscripts related to presentations at the Fields Mathematics Education Forum.

As it is the case with the Fields Mathematics Education Forum, the FMEJ is open to a variety of viewpoints and submissions in the areas of: education research, teaching practice, and public forum.

More details about the Fields Institute for Research in Mathematical Sciences, the MathEd Forum meetings and the FMEJ can be found at: <http://www.fields.utoronto.ca>.

Dragana Martinovic
University of Windsor

and

Donna Kotsopoulos
Wilfrid Laurier University

Editors of the FMEJ

A MEMBER'S MUSINGS

Who should be teaching college mathematics ?

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What a great question. Let's ask it again: "Who should be teaching college mathematics?" Suppose by "college" we mean post-secondary educational institutions that are not universities. Although this description does not serve well to understand what happens at a college, we can say that the employment requirements for instructors at these colleges are generally similar. Varying currents of preference include: teachers should have a master's degree; teachers should have teaching experience, or at the very least a teaching certificate. These preferences generally align with two contrasting perspectives on the role of a college education. (Perhaps extreme, I include these to provoke your Socratic position):

- *The point of education is to teach people how to be independent thinkers, how to find and use information wisely, and to contribute positively to society. This is the same for college education. Mathematics can be used to understand money matters, but it is also a language of logic and some proficiency in mathematical thinking leads to a proficiency in critical thinking in general, thus creating efficient and thoughtful workers.*
- *The point of a college education is to be able to enter an occupation with enough skills and knowledge to work efficiently while discovering, from more experienced workers, what really goes on in the*

workplace. Mathematics is a service course in college, thus the mathematics taught in colleges should be the specific mathematical skills and procedures that are used in the discipline being serviced.

Although provincially diverse, a common theme for many colleges in Canada and elsewhere is to prepare students for the workforce. From the perspective of the Government of Canada, the preparation for the workforce includes, in addition to those skills that are particular to each subject, nine Essential Skills: Reading Text, Use of Documents, Writing, Numeracy, Oral Communication, Thinking Skills (Problem Solving, Decision Making, Critical Thinking, Job Task Planning and Organizing, Significant Use of Memory, Finding Information), Working with Others, Computer Use, and Continuous Learning. Human Resources and Skills Development Canada (<http://www.hrsdc.gc.ca/eng/workplaceskills/LES/definitions/definitions.shtml>) describes these skills as necessary for “nearly every occupation and throughout daily life” and as the “foundation for learning all other skills”.

It seems that at the college, mathematics instructors are expected to not only teach the mathematical skills required of the appropriate discipline, but to improve students’ numeracy, oral communication, some thinking skills (problem solving, critical thinking), working with others, and continuous learning. This is a significant task, not to be taken lightly. According to *Skilled Trades*, a Government of Canada’s Sector Council Program, “[b]y 2007, more than one-third of jobs created in Canada will require trade certification or a college diploma” (<http://www.careersintrades.ca/all/EducatorsGuide-English.pdf>, p.2), and *all* skilled trades require mathematical and analytical skills, and problem solving skills (p.14). It is clear that colleges are in a position of great influence, and shoulder a heavy burden, if students are indeed to be ‘prepared’ thus for employment. And college mathematics instructors are the gatekeepers who decide whether or not a student’s mathematical performance is sufficient to meet the multitude of needs outlined above.

Now, consider the saturation of laments from many instructors and employers that students’ mathematics skills are getting worse. Students’ inefficacy in mathematics courses in Ontario has been recently identified by the College Math Project (2010), which notes that, of all students in first-semester mathematics in college, “33% received grades of D or F or withdrew from the course, placing them at risk of not completing their chosen program” (http://collegemathproject.senecac.on.ca/cmp/en/pdf/FinalReport/2009/CMP_2009_Annual_Report_Final%20-%2009Mar10%20pmh.pdf, p.5).

Here is the difficulty as I see it. The standard measures used to hire college instructors does not seem to connect to student success.

So I wonder: how might these measures be reconceived? What hiring criteria, specific to the college environment, ought to be considered in order to improve student understanding and success? Colleges in Canada are in a unique position to redefine their hiring criteria: there is no governing position on hiring, as exists for elementary and secondary (teaching certificate) or university (doctoral degree) instructors. Thus the colleges have the opportunity to show their commitment to quality teaching by hiring instructors with characteristics that promote student success. I am interested in discussing what these characteristics are or could be over email (see above) or during our up-coming CMESG meeting.



NEWS FROM THE EXECUTIVE / DES NOUVELLES DE L'EXÉCUTIF

Report of the Nominations / Elections Committee 2011

154 regular members were invited to participate in the election for the CMESG/GCEDM Executive. 61% of the regular members voted in the 2011 Elections.

Here are the results and the terms of office of our elected members:

Viktor Freiman, Treasurer CMESG/GCEDM, 2011-2013

Peter Liljedahl, Member-at-Large CMESG/GCEDM, 2011-2013

Congratulations to the newly elected CMESG/GCEDM Executive members. Sincere thanks to those members who let their names stand for election. Our organization was very fortunate to have a strong list of nominees for the elections this year.

The members of the CMESG/GCEDM Nominations & Election Committee are Julie Long (julie.long@ualberta.ca) and Florence Glanfield (florence.glanfield@ualberta.ca).

Rapport du comité de nomination / sélection du GCEDM 2011

154 membres réguliers ont été invités à participer aux élections pour le comité exécutif du GCEDM/CMESG. 61% de nos membres réguliers ont marqué leur bulletin de vote.

Voici les résultats du scrutin et les mandats de nos membres élus:

Viktor Freiman, Trésorier GCEDM/CMESG, 2011-2013

Peter Liljedahl, Membre adjoint GCEDM/CMESG, 2011-2013

Félicitations à nos membres élus. Nous remercions sincèrement tous ceux et celles qui ont bien voulu briguer les suffrages. Nous sommes très heureux de compter autant de membres qui veulent participer au sein de notre organisation.

Les membres du comité de nomination/sélection du GCEDM/CMESG sont Julie Long (julie.long@ualberta.ca) et Florence Glanfield (florence.glanfield@ualberta.ca).

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CMESG EXECUTIVE / L'EXÉCUTIF DU GCEDM

The members of the executive extend an invitation to you to contact us about any item of interest. If you have something you want to suggest, if you have a concern you wish to raise, if you want more information, etc., please let one of us know. In order to be of service to the membership, we need to be aware of what your interests are.

Les membres du Comité exécutif vous invitent à leur faire part de votre point de vue concernant n'importe quel aspect de la vie du GCEDM. Que ce soit pour transmettre suggestions ou commentaires, ou encore pour être mieux informé, n'hésitez pas à entrer en contact avec l'un d'entre nous. En nous faisant connaître vos intérêts, vous nous aidez à mieux vous servir.

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