

International Organisation of Women and Mathematics Education
Le Mouvement International pour les Femmes et l'Enseignement de la
Mathématique

MOIFEM/ IOWME Canada

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BULLETIN/ NEWSLETTER

National Coordinator

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Message from the National Coordinator

Dear Members,

Fall came and it is already at its end. The International newsletter of IOWME is not out yet but I will send it to you with our next newsletter. You will be pleased to know that there is an e-mail address iowme-canada@sfu.ca for you to use whenever you wish to get in touch with other IOWME members. Among the various items of correspondence are the following announcements:

- **The Canadian Association for Girls In Science (CAGIS)** is looking for a Project Manager for the next 3-4 months (starting on January 12th) to oversee the establishment of CAGIS in nine BC communities. The project is funded by the Government's Partners in Science Awareness program and is administered by the Society for Canadian Women In Science and Technology (SCWIST). For more information please contact Niamh (pronounced Neeve) Kelly at phone (and fax) 879-3573 or E-mail niamh@unixg.ubc.ca.
- The conference "**Together for Healthy Kids**" is going to be held on June 25,26 1998 at the Convention Centre in Hamilton, Ontario. For more information Fax: (416) 408-2122 or e-mail: tfhk98@opc.on.ca www.opc.ca
- *The Information Highway-Is There An On Ramp For Girls?* This is the title of the forum that the Society of Canadian Women in Science and Technology (SCWIST) sponsored in October at SFU. The forum discussed the future role of women in science and technology. Maria Klawe and Linda Harasim spoke on their role in supporting women in information technology. A panel discussion followed featuring Sang Mah and Gail Murphy in addition to Maria Klawe and Linda Harasim, women who are all successfully involved in computer technology.

With thanks and best wishes for the holiday season,

Tasoula Berggren

News

News from Toronto, Toronto was the scene of considerable activity in the area of women's participation in mathematics, science, engineering and technology. In the framework of the Wiegand Lecture Series, two sessions were devoted to "Women in the Scientific World."

Professor Sandra Harding (UCLA) gave a talk on Postcolonial Science and Technology Studies: What are the gender issues? and Professor Monique Frize Carleton/U. of Ottawa) spoke on Gendered Alternative Styles in Engineering.

Both Prof. Harding and Frize gave additional invited lectures and seminars to undergraduate students. Monique Frize lecture was titled: Women in Science and Engineering: Dare we be different?

IBM organized an information day for 500 high-school girls in and around Toronto in the course of which students listened to talks about careers in engineering, computer science and technology in general. IBM has found that there is a shortage of well qualified people to fill technological jobs and is therefore trying to attract women into computer technology. It is nice to see industry joining educators in persuading young women to pursue studies in mathematics, science and technology.

Science is alive ... Don't be surprised if you see throngs of kids in SFU's science labs over the next two weeks. The university's polar Science Alive program has launched a new initiative to turn kids on to science: a series of on-campus science workshops are scheduled between to day (Nov. 27) and Dec. 10 - all intended to give school children from Grades 4-7 a introduction to hands - on science in university labs. The students will meet university researchers, who'll give a presentation or tour of their lab. Topics will include: lasers, bones and muscles, insects, fun with chemistry, fossils, "cell cookies: (biology), and 'pinnochio noses: (engineering)." The idea is to introduce children to the university in a fun, interesting, and non-threatening manner and to dissolve the stereotype of a scientist as a white, wild - haired old man in a dark, dank basement who cooks up chemistry concoctions, say co-organizer Emily Gonzales. The program will run again in January and February, and volunteer faculty and students are always needed, she adds. Information: Emily of Krista at 604 291-5912 or e-mail: yescamps@sfu.ca From an article from the SFU News of November 27 1997.

"Girls Get Connected" is a workshop designed to introduce parents and their daughters (aged 12-18) to some of the interesting and fun software and Webware that is available for use with computers. This is a 'hands-on' event in which the girls, and their parents, actually get to play with a range of software and Webware chosen for its educational value as well as a presentation format that is engaging for females. Computer science graduate students from the University of British Columbia and Simon Fraser University are involved in developing a female-friendly program and working with the participants. About 60 girls and their parents from throughout the Lower Mainland attended the event in October during Science and Technology Week.

"How Hard Can It Be?" is a new publication from the **Ontario Women' Directorate** - an annotated bibliography of background materials and curriculum resources to encourage girls and young women into computer technology, engineering and trades, leadership and entrepreneurship, mathematics and science. This is a good up to date source for your research, and includes web sites, books, and journal articles.

Tom O'Shea, an associate professor and director of field relations and teacher in - service education in SFU's faculty of education, has been awarded honorary life membership in the B.C. Association of Teachers of Mathematics. This is only the third such award for "outstanding service to the mathematics community" in the history of the organization. O'Shea was editor of the association's journal for five years and an executive member for eight years.

UNESCO's series on Innovations in Science and Technology Education Volume VII is edited by Edgar Jenkins and Jayshree Mehta and addresses the theme of "scientific, technical and vocational education for girls". Each overview chapter will identify, and comment upon, programs, initiatives, issues, research, etc., relating to gender and STVE in a range of countries in the region. Input on your own, or another country, in the Asia-Pacific region is valuable.

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Talks and Articles

Mathematics, Computers And Your Daughter's Future was the title of a public lecture given at the CMS 97 Winter meetings in Victoria by **Maria Klawe**, University of British Columbia, Vancouver. The talk discussed various issues, and how both game design and the way computer games are used at home and school affect their ability to enhance children's interest and understanding of mathematical concepts. Liking and learning mathematics in the intermediate grades is very important in preparing children for careers in science and technology. This is especially true for careers in information technology, one of the hottest fields for jobs for at least the next decade. Acquiring skill and confidence in using computers during these years is also key, and for most children this happens primarily through playing computer games. In recent classroom studies, computer games created by E-GEMS, a UBC research project led by Maria Klawe, have helped both girls and boys to like and learn mathematics. E-GEMS research pays particular attention to girls' interactions with computers because of the low female participation in information technology careers and in programs like computer science and engineering.

In the journal *for the learning of mathematics* of November 1997 is an article by our members Roberta Mura and Louise Maurice on "L'infini, un ensemble de nombres? Enquête auprès de futurs enseignants et enseignantes"

In the **CMS Notes** of December 1997 is an article by J. L. Berggren Department of Mathematics and Statistics, Simon Fraser University, on "Teaching Students Who Like Mathematics". Some of the ideas that are used to motivate the students are:

- getting students involved in constructive and/or computer-based projects
- communicating the openness of mathematics to new discoveries
- talking about the research of my colleagues and my own research
- setting theory in the context of activity and interpretation
- making sure students have the logical "tools of the trade" in good working order

In the **Notices of the American Mathematical Society** of December 1997 under Professional Resources among others listed are:

The Math Resource™ **Interactive Math Dictionary** created by **Jonathan Borwein**, Simon Fraser University, Burnaby, B.C. **Carolyn Watters**, Acadia University, Wolfville, NS, Canada, and **Ephraim Borowski**, University of Glasgow, Scotland. The Math Resource™ Interactive Math Dictionary is an interactive database of mathematical topics that combines the attributes of a dictionary with the functionality of a CD-ROM. This powerful tool can work equally well for classroom display or for access to the database. The 4,500 entries include the mathematical examples that can be explored with sample data or by inputting your own. Computation, plotting and graphing are powered by the Maple™ computer algebra system (run time version included on disk). The CD-ROM operates within Windows* 3.1 and Windows* 95.

™Maple is a registered trademark of Waterloo Maple Inc.

™The Math Resource is a registered trademark of MathResources Inc.

* Windows is a registered trademark of Microsoft Corporation.

Preparing for Careers in Mathematics, Video by **Annalisa Crannell**, Franklin & Marshall College, Lancaster, PA, et al. The video presents an edited version of a panel discussion that took place at the Joint Mathematics Meetings in Seattle in August 1996. Among the topics discussed are how to start preparing for a job search while still a graduate student, specific job search strategies, tips on interviewing, and perspectives on what academic and industrial employers are looking for in a job applicant. The video ends with a look at the range of employment resources offered by the AMS.

1997; NTSC format on one-half inch VHS videotape, approximately 30 minutes; ISBN 0-8218-0839; List \$15; Order code VIDEO/99NA

CONFERENCE UPDATE

ED-MEDIA / ED-TELECOM 98 World Conference on Educational Multimedia and Hypermedia and World Conference on Educational Telecommunications, June 20-25, 1998, Freiburg, GERMANY

STLHE June 11 - 14, 1997 University of Regina, 17th Annual Conference, Regina, Saskatchewan.

AMS1 September 26-28 1997 Eastern Section, University, of Montreal, Monreal, Quebec.

AMATYC November 13-16, 1997 Hyatt Regency Atlanta Hotel, 23rd Annual Conference, Atlanta, Georgia. amatyc@stim.tec.tn.us

CMS December 14-16, 1997 CMS Winter Meeting 1997/Réunion

d'hiver 1997 de la SMC University, of Victoria, Victoria, British Columbia.

1998 SITE 9 8 Society For Information Technology And Teacher Education 9th international conference March 10-14, 1998 * Washington, DC

CMESG/GCEDM. Groupe Canadien d'étude en Didactique des Mathématiques/ Canadian Mathematics Education Study Group: May 29th to June 2nd, 1998, University of British Columbia, Vancouver, B.C.

CMS June 7-19, 1998 CMS Summer Meeting 1998/Réunion d'été 1998 de la SMC University of New Brunswick, Saint John, Monique Bouchard: meetings@cms.math.ca.

CMS December 13-15, 1998 CMS Winter Meeting 1998/Réunion d'hiver 1998 de la SMC Queen's University, Kingston.

PME-22: 12-17, July, 1998, University of Stellenbosch, SA.

SOCIETY FOR INFORMATION TECHNOLOGY & TEACHER EDUCATION 9th International Conference March 10-14, 1998, Washington, DC, see <http://www.aace.org/conf/site>

WEBNET WORLD CONFERENCE 98 of the WWW, Internet, & Intranet, 3rd International Conference, Oct. 23-29 1998, Orlando, Florida, USA see <http://www.aace.org/conf/webnet>

2000
• ICME-9. August, 2000, Tokyo/Makuhari.

Reminder: Time to pay your dues for 1998 and 1999.

Many thanks to Dr. Len Berggren for his help in preparing this newsletter.

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The Canadian Section of MOIFEM/IOWME is an association for the promotion of the mathematics education of girls and women. The membership includes women and men working in educational institutions. If you wish to become a member of IOWME and receive the *Newsletter*, please fill in the form below.

Name _____

Address _____

Tel. Fax e-mail

Area of interest: _____ Elementary/Secondary
_____ College/University
_____ Research

Dues \$10.00/year. Please make cheques payable to IOWME/SFU
The date on the address label is the expiration of your membership.

The International Organisation of Women and Mathematics Education is an association for the promotion of the mathematics education of girls and women. Membership in MOIFEM/IOWME Canada is \$10.00 annually and includes a subscription to the *Canadian Bulletin/Newsletter* and the International IOWME NEWSLETTER.

Membership dues for 1998-99 and changes of address should be sent to:

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