

‘Oh no. A woman doing mathematics!’

Cheryl E. Praeger*



The 14th general meeting of the European Women in Mathematics (EWM) took place in Novi Sad, Serbia 25–28 August 2009. I was one of the plenary speakers and am very grateful for partial support from the Australian Embassy in Serbia for my travel expenses. It was such a good feeling for me to see the Australian coat of arms on all the formal conference materials, along with logos of other sponsors such as UNESCO. Too often support seems to go to physical/sporting prowess, by-passing intellectual endeavours. So it was great to see such public support for mathematics from Australia, and public it was.

The Acting Australian Ambassador Melanie Davies attended the conference dinner, and the embassy’s publicity manager Irena Milojkovic attended the opening of a surprise exhibition organised for the conference (*not* in the program) — which I was really thrilled to be asked to open. The exhibition, entitled ‘Oh no. A woman doing mathematics!’ was the ‘brain-child’ of Vanja Barisic-Jokovic, who spear-headed public relations for the conference — more on Vanja’s efforts below.

The enthusiastic and friendly local organisers, headed very effectively, and seemingly tirelessly, by Professor Dušanka Perišić, did their utmost to make everyone feel welcome. A group of (female and male) undergraduate mathematics and physics students had volunteered to be our English-speaking link to Serbia day and night — literally. All participants were accommodated in a comfortable student residence and the volunteers were there around the clock, eager to help and also discuss mathematics.

The branding and publicity for the conference was handled *pro bono* by a professional public relations agency led by Vanja Barisic-Jokovic, and it was impressive. Newspapers, TV-stations, local politicians, everyone was very much aware of the fact that a major mathematics conference was taking place.



Cheryl with the embassy’s publicity manager, Irena Milojkovic

*School of Mathematics and Statistics, The University of Western Australia, WA 6009.
E-mail: praeger@maths.uwa.edu.au

All main talks were filmed by a professional camera crew and some participants were interviewed on various issues about mathematics. The cameras followed us at lunch breaks, on the conference trip to Sremski Karlovci and the delicious conference dinner at a restaurant on the bank of the Danube. A DVD with talks, walks and also interviews with many participants is being produced and will be available for download from the EMS-website¹. The wonderfully designed conference tee-shirts, bags and programs showing the conference logo are true collectors' items.



The volunteers (in their conference T-shirts) are presented with chocolate bars at the closing ceremony

A very efficient branding event took place at the Novi Sad maternity hospital, where all babies born in the month of the conference will be given an all-in-one baby suit decorated with the logo of the conference. Dressed in a green hospital gown, I had the privilege of presenting baby suits personally to three mothers and their one-day-old baby girls. I was accompanied in the hospital ward by Mr Jaques Stokenborg, the Acting Ambassador of the Delegation of the European Community in Serbia, which sponsored the gifts to the newborn children. We were surrounded by TV cameras, the TV crew also decked out in green hospital gowns.



Cheryl presents an all-in-one baby suit to a new mother

¹<http://www.math.helsinki.fi/EWM/>

Needless to say, an EWM meeting is a high-profile mathematics conference — a glance at the list of plenary speakers (see below) will confirm this including in particular the 2009 European Mathematical Society Lecturer Ingrid Daubechies (Princeton) who gave the first three of her EMS-lectures at the Novi Sad meeting. However, an EWM meeting is much more than this. The joy and sense of relief that comes from being among other women who are as passionate about mathematics as oneself is difficult to convey, and actually quite surprising the first time one attends such a meeting. The Novi Sad meeting was no exception to this. The plenary speakers all began their talks by introducing themselves and their background and provided both moving and encouraging tales about the road to becoming a female mathematician.



Left to right: Ingrid Daubechies, Cheryl Praeger and Acting Australian Ambassador Melanie Davies at the conference dinner

Scientific program

In 2008, the European Women in Mathematics and the European Mathematical Society's Women and Mathematics Committee jointly set up the EWM/EMS Scientific Committee². The members of this committee are 12 distinguished women mathematicians, including Dusa McDuff, Nina Uraltseva and Michèle Vergne. Currently chaired by Ulrike Tillmann (Oxford), the main function of this committee is to advise on scientific programs and speakers for EWM and other related events. The committee was consulted on the selection of the nine plenary speakers, at the Novi Sad meeting. Their lectures covered a wide range of mathematical fields including wavelets, stochastic partial differential equations, graph theory, entropy, and applications in biological imaging, functional magnetic resonance imaging, and virology:

- Ingrid Daubechies (Princeton, USA; 2009 EMS-lecturer)
- Nalini Anantharaman (Ecole Polytechnique, France)
- Barbara Lee Keyfitz (University of Ohio, USA)

²<http://womenandmath.wordpress.com/emsewm-scientific-committee/>

- Jelena Kovačević (Carnegie Mellon University, USA)
- Cheryl Praeger (University of Western Australia)
- Marta Sanz-Solé (Barcelona University, Spain)
- Tatiana Suslina (St. Petersburg State University, Russia),
- Reidun Twarock (University of York, UK)
- Brigitte Vallée (Université de Caen, France)



Interview with Ingrid Daubechies

Of the 71 registered participants from 25 countries, 27 gave contributed talks in parallel sessions, and there were two poster sessions. All speakers and almost all registered participants were women.

Conferences for a general audience

A mathematics conference spanning such a wide range of fields is both a challenge and an opportunity. It is very natural for EWM general meetings to be of this kind. Participants come from many different fields, and hence will always comprise a general audience.

To make the most of such a meeting is seen as an interesting and important task for EWM and various ideas have been tested. At some EWM meetings, ‘planted idiots’ have been appointed for each lecture by the organisers. The role of the idiots is to ask ‘dumb’ questions during the lecture in order to ensure that the lecturer explains concepts, which are not understood by a general audience; or perhaps just by the idiot, but no-one will know! At some meetings, the lecturers have even discussed the talks beforehand with the idiots. Some lecturers find this interaction fruitful, while others certainly do not. Some meetings have had a few themes and lectures have been progressive in order to actually teach the participants new mathematics tools.

Another traditional conference event, the poster session, has been discussed and experimented with at EWM meetings over the years. Various strategies which have been adopted in the past include: (i) all participants should present posters; (ii) posters are grouped according to field; (iii) authors of the posters in each

field make an over-arching poster explaining the general field and how the various posters are connected; (iv) all posters have a picture of the author, so she can be found without reading name-tags.

The most long-standing organisation for women in mathematics is the Association for Women in Mathematics (AWM)³, a non-profit organisation founded in 1971 and based in the USA to encourage women and girls to study and have active careers in the mathematical sciences, and to promote equal opportunity and the equal treatment of women and girls in these areas. Its membership is currently 3000 (women and men) representing a broad spectrum of the mathematical community.

AWM is independent from, but has links to, its sister organisation the European Women in Mathematics (EWM) founded in 1986, and with similar aims⁴. EWM has several hundred members in over 30 European countries. It has a standing committee chaired by a convenor (currently Frances Kirwan from the UK, and from January 2010, Marie-Françoise Coste Roy from France). EWM holds a biennial scientific meeting and general conference. Apart from the Novi Sad meeting this year, the 2007 meeting was in Cambridge, UK, and the next meeting will be in Barcelona, Spain in 2011. EWM also sponsors or co-organises various interim meetings and other activities, for example, the satellite meeting ICWM 2010⁵ of the International Congress of Mathematicians to be held in Hyderabad, India, in August 2010.

A second organisation in Europe is the European Mathematical Society's Women and Mathematics Committee⁶ (currently chaired by Sylvie Paycha, France). The function of this committee is to undertake any actions which will help or promote women mathematicians in Europe. Past activities have included gathering statistics on the numbers of women in different countries and setting up a blog for women mathematicians⁷.

Where to for Australian women in mathematics?

Australian women in mathematics comprise a smaller group than our American and European counterparts, and we do not have an equivalent organisation and infrastructure. We do, though, have a growing cohesion, judging from the enthusiasm evident during the Women in Mathematics lunch and presentations at the annual Australian Mathematical Society conference just past.

What would a Women in Mathematics group in Australia (AustWM?) wish to achieve? Hopefully more than just 'feel good' talks at the annual conference combined with a free lunch! Perhaps AustMS could set up an Australian Mathematical Society Women and Mathematics Committee which, in analogy with its European

³<http://www.awm-math.org/>

⁴<http://www.math.helsinki.fi/EWM/>

⁵<http://www.icm2010.org.in/docs/ICWM2010.pdf>

⁶<http://www.euro-math-soc.eu/comm-women.html>

⁷<http://womenandmath.wordpress.com/>

counterpart, would ‘undertake any actions which will help or promote women mathematicians’ in Australia. Just one of its functions might be the selection of the Hanna Neumann Lecturer for the Society’s annual meeting, and arranging for the Hanna Neumann Lecturer to be involved in an AustWM session at the annual meeting in addition to the plenary lecture. There are many possible AustWM initiatives. One of my young woman colleagues suggested:

... perhaps a scholarship for a female student or early career academic — someone for whom this would make a big difference; perhaps a female speaker invited from outside the Australian Mathematical Society to give a presentation at the Women in Maths lunch - not on their research topic, but on women in maths?

Acknowledgement

I wish to thank my colleague Dr Lisbeth Fajstrup from Aalborg University, Denmark, for allowing me to use information from her article about the EWM conference in Novi Sad written for the Newsletter of the European Mathematical Society.



Cheryl Praeger is Winthrop Professor of Mathematics at the University of Western Australia, and in 2007 she became the first pure mathematician to be awarded an Australian Research Council Federation Fellowship. For her achievements and service to mathematics, she was elected a Fellow of the Australian Academy of Science, and appointed a Member of the Order of Australia (AM). She was President of the Australian Mathematical Society from 1992 to 1994, and is currently on the Executive Committee of the International Mathematical Union.