



EUROPEAN WOMEN IN MATHEMATICS

Newsletter 14

2008

Edited by
Aasa Feragen and Lorna Gregory

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1. Editorial

Letter from the new convenor

Dear EWM members,

The editors of the EWM newsletter have asked me to write a letter introducing myself to everyone, as I am the new EWM convenor. I would like to start by saying how pleased I was to be asked to be involved with EWM, as I think it is an excellent institution.

My first serious contact with EWM happened when I helped to organise an EWM workshop on moduli spaces in Oxford in 1998, and it was such a refreshing change to be in an audience of mathematicians with women in the majority. Unfortunately I missed the EWM meeting this September, so my most recent experience of being surrounded by women mathematicians was in Princeton in May, when I took part in the Women in Mathematics programme set up by Karen Uhlenbeck, which the Institute for Advanced Study hosts each year. This year the theme was algebraic geometry, where (together with symplectic geometry) my main research interests lie, and it was very enjoyable and stimulating to be there.

So what is my mathematical background? Well, I was an undergraduate in Cambridge, and then a graduate student working with Michael Atiyah in Oxford in the early 1980s. That was a very exciting time ... there was a group of very lively students including Simon Donaldson (my future husband, Michael, was another), and many visitors such as Raoul Bott (who, very sadly, has recently died), Dan Quillen and Cliff Taubes, who all came for long visits. Next I spent a couple of years as a Junior Fellow at Harvard, which was equally exciting, before returning to Oxford where I have been ever since. I was President of the London Mathematical Society from 2003 to 2005 (not, I am pleased to say, the LMS's first woman president ... I followed in the illustrious footsteps of Mary Cartwright, who was LMS President in the 1960s), and for those two years it felt as if I was spending as much time in London as in Oxford, though in fact it averaged at most one day a week.

My research interests are in moduli spaces in algebraic geometry, in geometric invariant theory (GIT), which was developed by David Mumford in the 1960s in order to construct and study moduli spaces, and also in the link between GIT and moment maps in symplectic geometry. At Harvard I was lucky to be able to talk to David Mumford (who at that time was moving away from algebraic geometry towards computer vision, but was still happy to help a postdoc like me) and on the symplectic geometry side to Shlomo Sternberg and Victor Guillemin (at MIT). While I was at Harvard, I was also lucky to receive invitations to visit from two leading women geometers: Karen Uhlenbeck (then in Chicago) and Dusa McDuff (at Stony Brook) ... those visits made big impressions on me. After my first daughter was born in 1988 I did much less travelling, though I did take her to Berkeley for a sabbatical visit when she was about six months old. My children are now aged 19, 17 and 15, so they can more or less look after themselves these days.

I spent two later sabbaticals in Australia, which is where my husband grew up. I found the time difference between Australia and Canada, where my collaborator Lisa Jeffrey is based, very efficient for collaboration by email: I would work on something during the day, email any progress or questions to Lisa in the evening (my time) which was morning for her, and then she would work during her daytime and her response would be waiting for me when I got up the next morning!

The EWM's next get-together will be a half-day meeting on Sunday 12 July, immediately before the European Congress in Amsterdam, organized jointly with the EMS Women in Mathematics Committee. The next general meeting will be in 2009, and Dusanka Perisic (EWM treasurer) has very kindly offered to host it at her university in Novi Sad; it will take place over the four days 25-28 August 2009. So I'll look forward to meeting as many EWM members as possible in Amsterdam in 2008 and/or Novi Sad in 2009.

With best wishes to everyone,

Frances Kirwan
EWM Convenor

2. Contributed articles

The EWM/EMS blog

by Dusanka Perisic

The idea to try and provide European women mathematicians with a meeting point between the two [EWM](#) meetings, was born at [the EWM Cambridge meeting](#). [The European Mathematical Society Committee Women and Mathematics](#) launched the blog on September 12, 2007, with a wish to put this idea into work.

We are doing our best to publish the materials as regularly as possible. Of course, people are more than welcome to leave their comments. (*Unfortunately, this opportunity has not been very much exploited.*) So far we have published various materials : [statistical data, reports on past activities of the Committee](#), [materials about EWM](#); we have also started a [gallery of portraits of living women mathematicians](#).

We believe that the role models are very important. It is important to give people a chance to see that women mathematicians are common human beings, who happen to work on interesting projects, who come from various places (with different backgrounds), speak different languages.

It seems now that the blog will survive (the statistics looks better and better), and that we are making a community.

The first steps have been made, but we are still at the very beginning, and we need all the support we can get.

WE NEED CONTRIBUTORS !!!

There are technical possibilities, which we have not used yet, to have several editors, who can do the editing on line. Contributors can make their contributions on line, as well. The contributions get to be published after the approval of one of the editors. Hopefully, we will use these possibilities in the near future.

[EWM mail network](#) and the [EWM website](#) were of a great help in the first step of our blog. The web page of EWM ([Marjo Lipponen](#) has been taking care of it for six years), [EWM mail network](#) ([Elizabeth Baldwin](#) is in charge of it), and the Committee weblog are complementary ways to keep in touch, and the people behind the projects work as a team.

Why EWM?

by Aasa Feragen

At the General Meeting in Cambridge, one of the questions up for discussion was do we still need EWM? I cannot remember a single person trying to argue that we don't, whilst many argued that we did. Unfortunately, there was not enough time for the whole discussion but we decided to bring it up again by directing the question to the EWM mailing list.

The first opinions were posted by John Bibby, who suggests that the EWM should make an effort with disadvantaged groups among women. *Speaking from the UK I would say the main issue is no longer a gender issue purely, but a gender+class issue.* He also advocates mathematics for non-mathematicians, such as *maths for hairdressers*, and suggests that the EWM might get more support by focusing not solely on professional women in mathematics.

Mr. Bibby's statements may have been provoking; certainly my email inbox came to life after his comment. I think his answer was provocative, because it illustrates very clearly the attitude we sometimes meet from people we expect to be on our side aren't you equal enough now? Aren't there people with worse problems?

The recurring motif in the remaining arguments is that there is a need for encouragement for women in mathematics, both because of the isolation which comes with being a minority, and because of the fact that the drop out rate is too high compared to that of male mathematicians.

Personally, I need EWM to encourage myself, sometimes it is hard to "remember" that I am a good researcher when surrounded by strong and loud males, and that I don't have to compete with and outperform everybody in order to make a good mathematician. These are the words of Camilla Hollanti, who is a PhD student at the University of Turku, Finland, and a member of the EWM standing committee. *I'm happy that I now have female role models that I've been completely lacking (not a single woman in a permanent position at my dep.)* [The role of the EWM should be] *exactly the above: Encourage young women on their careers to avoid them to drop off. Take part in gender and math related discussion, try to make the scientific society realize that women can be and are good leading mathematicians.*

Sarah Hart, who is a mathematics lecturer at Birkbeck college, University of London, writes *We still need EWM because sexism still exists. I had an easy time of it really, but from the time my female maths teacher at my all girls school told me when I was applying to Oxford to read maths that women will never make as good mathematicians as men, I have encountered sexist attitudes. This drip drip probably puts a lot of girls and women off, and although I am lucky enough now to have a permanent job in a great department with a high proportion of women lecturers, that proportion is still less than 20%. [...] I see space for an organisation that encourages women academics, especially over those hurdles from undergrad to postgrad, postgrad to post doc, postdoc to permanent job.*

Nadia S. Larsen, Associate Professor in Mathematics at the University of Oslo, Norway, argues that [the] *EWM can contribute much on problems such as supporting and encouraging girls (from diverse social groups) to choose mathematics as a perfectly feasible direction of study at university level, encouraging and providing guidance to women graduate students who would like to embark on an academic career, and generally continuing to join in the efforts of highlighting mathematics and its importance in many aspects of society. I think that the primary aim of bringing together women mathematicians from across topics, from across Europe, and from different age-groups, thus*

at different levels in their career paths, is still very legitimate.

Like Camilla Hollanti, many have had positive experiences finding female role models through the EWM. Nadia Larsen describes her experiences with the EWM: *The number of women mathematicians in Scandinavia is still low, and generally the research topics of these women mathematicians are spread across different areas of mathematics. Therefore one gets to know other women mathematicians from Scandinavia, or from any European country, primarily through EWM. So yes, for this reason we need EWM. Another aspect is that for a woman graduate student, for example at the Ph.D. level, it is very encouraging to attend EWM meetings and experience talks by established women mathematicians; [this] can provide inspiration and joy at seeing other women successfully involved in mathematical research.*

Not only has the EWM provided role models for these female mathematicians, but also mentors, giving very relevant and personal advice on issues that are particularly important for young women facing an academic career as a scientist. In the words of Sarah Hart: *From my personal experience, meeting with other women mathematicians at the various stages of my career was really helpful. I had some really useful discussions with a woman computer science professor who gave me advice about my career - network, put yourself forward like the men do!, don't agree to do all the boring admin you are asked to do. Lots of women end up not able to get on with research because they make the "mistake" of actually caring about their students and so get asked to be in charge of admissions or similar and sink under the paperwork.[...] We still need EWM because, contrary to what John Bibby seems to think, women can be attracted to maths by other means than linking it to hairdressing!*

Finally, as anyone who has been to an EWM meeting knows, EWM is not all about problems I like what Camilla says; *one [important] thing is of course to have lots of fun and get connections!!!*

VISITING INDIA

by Camilla Hollanti

My first encounter with Sujatha Ramadorai, Ramanujan prize-winner and number theory expert from India, was in the general EWM 2007 meeting in Cambridge. We discussed some topics in number theory and its applications, and inspired by our discussion I visited her at the Chennai Mathematical Institute (CMI) in December 2007.

The purpose of the visit was to initiate collaboration, and I did my best to formulate and describe some of my research problems to her and to John Coates from the University of Cambridge. By a fortunate coincidence, professor Coates was visiting Ramadorai at the same time, and we even happened to stay at the same guesthouse near to the busy center of Chennai.

At the start of my visit I was overwhelmed by the traffic and pollution and the amount of people, but soon I noticed how smoothly everything actually worked despite of the big hassle. People in India are in general very warm-hearted and helpful, though you might want to ask for a second opinion when asking for directions.

In the morning of the second day, after having some typical Indian breakfast, we started our way towards the CMI. After driving for not much less than two hours on a bumpy road and passing numerous cows, we finally arrived at the CMI. The institute is a modern, beautiful and comfortable

place with bright-colored buildings and inviting gardens with green grass fields and flower beds. I was warmly welcomed by the director and secretary of the institute and got to meet Sujatha's colleagues, which made my stay even more enjoyable.

It was a very intense week for all of us, and therefore we agreed to continue the discussion started in the near future. I also invited professors Ramadorai and Coates to take part in the 3rd Nordic EWM Summer School for PhD Students in Mathematics as invited speakers. The summer school takes place at the University of Turku, Finland in June 2009.

I also attended some interesting satellite lectures at the Institute of Mathematical Sciences during my visit, and met the new EWM coordinator of India. During my spare time, I took the chance to see the city a little bit, and together with Ramadorai and Coates we went to an inspiring concert of traditional Indian music and learnt some of the extremely complicated theory behind it. From Chennai I continued to Bangalore to attend the *Applied Algebra, Algebraic Algorithms, and Error Correcting Codes* (AAECC-17) conference and to meet my colleagues. The conference hosts took extremely good care of us, which made a nice conclusion to my trip.

3. Meeting announcements

KM7
Kvinnor och matematik 7=Women and
mathematics 7

Göteborg
13-15 August 2008

4. Future EWM activities

Joint EWM/EMS workshop

In Amsterdam, Netherlands, 13 July 2008
See www.math.helsinki.fi/ewm for more information.

EWM general meeting 2009

The 14th general meeting of European Women in Mathematics ([EWM](#)) will take place in [Novi Sad](#), Serbia during August 25-28, 2009.

Located on the Danube River, [Novi Sad](#) is the urban center of northern Serbia, its second largest city and the capital of the Autonomous Province of Vojvodina. Novi Sad is a hospitable town; we hope that you will enjoy its open-hearted welcome.

The 2009 European Mathematical Society lecturer will be Professor [Ingrid Daubechies](#), of Princeton University, and she will give some of her EMS lectures at the EWM meeting in Novi Sad.

Scientific committee:

Ulrike Tillmann (Germany/UK), chair

Viviane Baladi (France)

Eva Bayer (Hungary/Switzerland)

Christine Bernardi (France)

Christine Bessenrodt (Germany)

Antonella Grassi (Italy/USA)

Ursula Hamenstaedt (Germany)

Dusa McDuff (UK/USA)

Ragni Piene (Norway)

Vera Sos (Hungary)

Nina Uraltseva (Russia)

Michele Vergne (France).

More information on the 14th general meeting of EWM can be found at <http://womenandmath.wordpress.com/>.

3rd Nordic EWM summer school for PhD students in Mathematics

University of Turku, Finland, June 22-27, 2009

<http://www.math.helsinki.fi/EWM/nordic/turku09.html>

PhD students in mathematics are invited to participate in a summer school which is particularly aimed at encouraging female students and researchers in their early careers, but which is open for anyone interested.

The program of the meeting will be broad in order to be of interest for students working in different research areas. Mini-courses given by internationally recognized mathematicians will be aimed at all students with a general mathematical background, yet come to touch questions of current research, and both lecturers and students are invited to contribute to seminars with their own presentations.

Invited speakers so far include (changes possible):

NUMBER THEORY, ALGEBRA, AND APPLICATIONS

SUJATHA RAMADORAI, Chennai Mathematical Institute, India

JOHN COATES, University of Cambridge, UK

EVA BAYER-FLUCKIGER, Ecole Polytechnique Fédérale de Lausanne, Switzerland

KAISA NYBERG, Helsinki University of Technology, Nokia Research Centre, Finland

ANALYSIS

Lecturers to be announced

BIOMATHEMATICS

Lecturers to be announced

GENDER AND MATHEMATICS

Lecturers to be announced

For more information, contact Camilla Hollanti: cajoho@utu.fi

5. Reports from past EWM activities

13th International meeting of EWM by Christin Borge and Camilla Hollanti

September 3-6, 2005

Cambridge, UK

Short Report

The 13th general meeting of European Women in Mathematics, EWM 2007, took place during 3-6 September at the Centre for Mathematical Sciences in the University of Cambridge, England.

An impressive number of 85 women from 25 countries attended the meeting. Accommodation had been arranged at the Fitzwilliam and St. John's colleges in Cambridge.

Talks at EWM07 covered a wide range of mathematical areas, and all the speakers were encouraged to spend a few minutes introducing themselves and their background. Enthusiastic presentations were to be heard on e.g. symplectic geometry and algebraic number theory.

The invited speakers included

Ana Achucarro, Lorenz Institute, Leiden: Theoretical Physics,
Toni Beardon, OBE Cambridge, UK: [Mathematics Education](#),
Natalia Berloff, DAMTP, Cambridge UK: Quantum Fluids,
Lenore Blum, Carnegie Mellon University, USA: Theoretical Computer Science,
Simone Gutt Univ. Libre de Bruxelles: Symplectic Geometry,
Eleny Ionel, Stanford, USA: Symplectic Geometry,
Dusa McDuff, Stonybrook, USA: Symplectic Geometry,
Cheryl Praeger, University of Western Australia: [Group Theory](#),
Vera Sos, Budapest: Combinatorics,
Ramdorai Sujatha, Tata Institute, Mumbai: [Number Theory](#).

In addition to scientific talks, there were reports from regional coordinators, a discussion on the role and future of EWM, a discourse on mathematics in developing countries, splinter sessions devoted to short talks and posters, and short talks on mathematics education. During the General Assembly Meeting, the new Standing Committee was elected for the following two years.

The organisers had arranged a reception at the Master's Lodge in Trinity College, a buffet reception at Newnham College followed by a talk by Toni Beardon on 'The impact of computers and the internet on globalizing mathematics education', a reception at Cambridge University Press and a punting trip on the River Cam. The conference banquet on Wednesday evening took place in the Old Kitchens at Trinity College.

The meeting was a big success, and we look forward to the next meeting in 2009.

6. Useful email addresses and links

EWM webpage	www.math.helsinki.fi/ewm
EWM webpage administrators	Elizabeth Baldwin (UK), baldwin@maths.ox.ac.uk Marjo Lipponen (Finland), marlip@utu.fi
EWM Standing Committee:	
EWM convenor	Frances Kirwan (UK), kirwan@maths.ox.ac.uk
EWM deputy convenor	Marjo Lipponen
Proceedings editors	Sylvie Paycha
EWM email network	Elizabeth Baldwin
EWM newsletter editors	Lorna Gregory (UK), lorna.gregory@gmail.com Aasa Feragen (Norway), aasa.feragen@helsinki.fi
EWM coordinators:	http://www.math.helsinki.fi/ewm/coordinators.html