



Newsletter 26

Edited by Sara Munday (University of Bologna, Italy)
and Jasmin Raissy (University Paul Sabatier – Toulouse III)

2015

In this issue

In this issue, we mainly concentrate on the reports from the 17th EWM general meeting that was held in Cortona in September. We have the minutes of the general meeting, reports from the organisers of the special scientific sessions and plenty of photographs of the event.

There is news of upcoming events, and we also feature an interview with Sylvie Paycha and her co-organisers of a Women in Mathematics photography exhibition that will open next summer in Berlin.

As usual, a series of miscellanea are pointed out at the end of this issue, including information on the Santander Universities programme, which is potentially a useful source of travel funding for our members.

Upcoming Events

The next general meeting of EWM

As decided during the 16th general meeting in Bonn, EWM will co-ordinate its meetings with the European Congress of Mathematics, starting from next summer in Berlin. There will be two parts to the event, one day of mathematical talks followed by the general meeting, and then a social and cultural day.

Invited Speakers (confirmed)

- **Fanny Kassel**, CNRS and Université de Lille, Homogeneous Spaces, Lie Groups, Geometry and Dynamics
- **Hannah Markwig**, Universität des Saarlandes, Tropical Geometry
- **Carola Bibiane Schönlieb**, University of Göttingen, Image segmentation, PDE, Numerical Analysis
- **Britta Späth**, Technische Universität Kaiserslautern, Representation Theory
- **Sarah Zerbes**, University College London, Number Theory

Program

Sunday July 17, 2016

- Five lectures of 50 minutes in a survey/colloquium style from 9:00 until 15:30
- Afterwards the EWM general assembly will be held from 16:00 until 18:00

Wednesday July 20, 2016

Salutes by the EMS President, Pavel Exner and the Chair of the 7ECM Local Organizing Committee, Volker Mehrmann, to the community of European Women in Mathematics

- A public talk with discussion on “Redressing the gender imbalance in mathematics: motivations, strategies and outcomes”.
- Opening of the Exhibition: [Women mathematicians in Europe. A gallery of portraits](#). With a musical introduction and welcome speeches.

More information can be found here: <http://www.7ecm.de/program/ewm.html>

and here: <http://www.europeanwomeninmaths.org/activities/conference/emsewm-survey-lectures-in-7th-ecm-berlin-2016>

18th General meeting of the EWM

Tentative planning for the next independent meeting of EWM is taking place, with the meeting expected to be held in late August or early September of 2018. There is a proposal to hold this meeting in Ankara, Turkey (also see the minutes of the 17th meeting, printed below).

Report from 17th General Meeting

The 17th general meeting of EWM was held in Cortona, Italy, between the 31st August and 4th September, with very generous support from INDAM, which allowed us to hold the meeting in Il Palazzone. As can be seen from the photographs below, this was an idyllic spot to come together to discuss mathematics and our organisation.



The first conference group photo by Noel Matoff

As is usual, the meeting had two functions. The first was to provide interesting and accessible general mathematics talks; the second was to hold the official general meeting of the organisation and to have discussion sessions on issues pertaining to women in mathematics.

Concerning the first strand, we enjoyed a series of three lectures by Nicole Tomczak-Jaegermann from the University of Alberta, Canada, the 2015 EMS lecturer. The topic of these lectures was *Asymptotic Geometric Analysis*: finite-dimensional random matrices, compressive sensing and high-dimensional geometry. We were given a gentle introduction, as this topic was of course new to most of the audience.

Then there were six plenary talks, by Kathryn Hess, Alessandra Iozzi, Barbara Niethammer, Sylvie Corteel, Consuelo Martinez Lopez and Olga Holtz. (The abstracts for these lectures can still be found here:

<http://www.europeanwomeninmaths.org/activities/conference/17th-ewm-general-meeting-cortona-2015>)

For the first time, it was decided to hold special scientific sessions, four in all, during the meeting. Below are reports from the organisers of these sessions:

Alessandra Celletti, University of Rome Tor Vergata, Mathematical Physics

I have always been awed by the magic of numbers and the immensity of the sky. And I was extremely happy when I realized that I could merge Mathematics and Astronomy through 'Celestial Mechanics', which is my field of research. I privileged the more theoretical aspects; in particular, those related to stability, resonances and collisions, especially through KAM theory, Nekhoroshev theorem and Levi-Civita regularization.

Since my research field is Mathematical Physics, I was pleased to organize a session within the 17th EWM General Meeting in Cortona. This was a special occasion to have a high level panorama of different topics of Mathematical Physics. Maria Groppi introduced us to kinetic models for chemically reacting gas mixtures, the stability of gravity-capillary periodic water waves was discussed by Mariana Haragus, while Beatrice Pelloni talked about optimal transport in geophysical fluid dynamics; we learned from Tere Seara about oscillatory motions in the restricted three-body problem and Katrin Wendland illustrated some aspects of conformal field theory. All talks were very interesting and had the right attitude of trying to explain the problems to all participants.

I enjoyed the meeting very much: the scientific level was high, the quality of the talks was good for a broad audience, the atmosphere was special: when I arrived I met just a few friends that I knew over the years, when I came back home I realized that I left many friends. Beside personal feelings, it was a very good occasion to talk about science and, in particular, to start a network project. More about this, in the next EWM meeting...

Lisbeth Fajstrup, Aalborg University, Applied Algebraic Topology

I am an algebraic topologist. I used to work with equivariant stable problems, but in the last decade I have been working in one of the by now many areas of applied algebraic topology, AAT. I suggested to have a session on AAT, since it is a new and growing field, and it may not be so well known to the general mathematical audience, firstly that there are all these new applications and also new mathematical questions coming out of the interaction with the applications.

The speakers in the session were selected to cover different areas of applications and different tools in AAT: Image analysis, Topological reconstruction, Discrete Morse Theory and Directed algebraic topology. And also for their ability to give good talks to a general audience. I chose Claudia Landi, Dominique Attali, Neza Mramor Kosta and myself for this task.

My impression of the meeting in Cortona in general is that the scientific quality was high. There were many excellent talks - both general talks and in the special sessions. And there was a real effort to explain the areas to a general audience. I am really sorry that so many of us had to leave early on Friday because of the train strike.

I enjoyed the meeting as always and told myself once again that I should not miss out on EWM-meetings. One thing that I think should be brought back to these meetings is what Sylvie Corteel actually did, namely to have all speakers spend a few minutes or a few slides to explain what got them to where they are. We have done this before, and it is an important part of the EWM that we tell each other these stories. For young people, it gives a variety of different ways of being a mathematician. Since I was on the organizing committee, I have myself to blame for this of course. But we should bring that back. Also the "planted idiots", the one or two persons designated to ask questions at each talk, should be either brought back or perhaps reinvented.

Sara Munday, University of Bologna, Dynamical Aspects of Number Theory

I usually work on problems that can be described as dynamical systems and ergodic theory applied to number theory, so this was the theme I chose for the special session for Cortona. I feel it is a reasonable one for a wide audience, as dynamics generally is a huge area (related, of course, to the session on PDEs) and number theory questions can be regarded, at least for pure mathematicians, as somehow intrinsically interesting.

I was very lucky that all the speakers that I wanted to invite were both free and happy to come to give a talk. The original four speakers I had in mind were Karma Dajani and Charlene Kalle, both from the Netherlands (Utrecht and Leiden, respectively), Valerie Berthe (CNRS Paris) and Henna Koivusalo (UK). I knew that they would all give very interesting talks. In fact, they managed to give talks that were so well co-ordinated and complementary that suddenly I looked like someone who had done a lot of serious organising - I confess, it was entirely down to them! Then, for the final speaker, Karma suggested a young researcher to me who I didn't already know, Nicola Oswald (Germany). I was extremely happy to make her acquaintance. Nicola's talk was very interesting, touching as it did on her new topic of research: the sociology of mathematics. I would be keen to hear her give a general audience seminar talk sometime about this work, as it could be considered important for pure researchers to consider our place within society as a whole on occasion.



From left to right: Valerie Berthe, Nicola Oswald, Henna Koivusalo, Sara Munday, Karma Dajani and Charlene Kalle.

Our convener, Susanna Terracini, has emphasised repeatedly that if EWM as an organisation wants to be taken seriously, we must put scientific credibility at the very top of our priorities. I think that she need not worry on that front about the meeting in Cortona. I think all of the talks were of a very high standard, and the very wide range of topics was also refreshing. It was good to see how much effort the plenary speakers gave to making their talks as introductory as possible.

I especially liked the idea of having a public lecture. The talk itself was fascinating, I certainly learned a lot about some prominent women in the history of mathematics. The only downside about this is that I'm pretty sure that the only people who attended were already at the conference, I mean, there were no members of the public there. It would be great to do this again at the next meeting, but maybe give it a bit more advertising?

Angela Pistoia, Sapienza Università di Roma & Susanna Terracini, Università di Torino, Nonlinear PDE's

Nonlinear PDEs has always been a subject counting many women mathematicians: not yet the majority, but almost a critical mass. Perhaps it is because of its position at the frontier between pure and applied mathematics, but as a matter of fact, people in the field tend to be warmer, open minded, less conventional and the scientific environment is as a result more inclusive. Well, we have been so happy to be together and to have the opportunity to bring together female mathematicians from different areas who all apply different points of view to the study of PDEs, yet still share one common feature: a taste for the geometrical aspects of the theory. The session featured the following very inspiring talks:

Virginia Agostiniani (SISSA, Trieste) "Monotonicity formulas in potential theory"

Lisa Beck (Universität Augsburg) "Boundary behavior for minimizers to linear growth problems"

Isabeau Birindelli (Sapienza Università di Roma) "Reaction diffusion fully nonlinear equations: qualitative and spectral properties"

Maria del Mar Gonzales (Universitat Politècnica de Catalunya in Barcelona) "ODE solutions for fractional Laplacian equations in conformal geometry"

Gabriella Pinzari (Università di Napoli Federico II) "Perihelia reduction in the planetary problem, and applications"



Second conference group photograph, by Noel Matoff.

As well as the mathematical content of the meeting, there were ample opportunities to socialise, build connections, and enjoy each other's company. Not least on Wednesday afternoon when we had the chance to go on an excursion to the museum in Cortona and around the town with a very knowledgeable guide.



On Tuesday evening we were treated to an extremely interesting public lecture by Elisabetta Strickland, who talked about the lives and work of several historically important female mathematicians, in a lecture entitled "The impact of women on mathematical thought". Some of the women she talked about are very famous, but she also introduced us to a few less well known, but no less accomplished, Italian women who worked in the last century.

On Thursday afternoon the general meeting itself was held, and the minutes can be found below, then a round table discussion on excellence schemes was held. This followed up on the same topic from the meeting in Bonn. It does not appear that much has changed for the better in the last two years; but neither has the situation got much worse. It seems to be difficult to say very much with certainty about the effect of these schemes on women in particular, as the numbers of grants awarded altogether are really very small.

Minutes of the EWM General Assembly, Cortona 2015

1. Welcome from the EWM convenor, Susanna Terracini, who remarked that the meeting has been wonderful and pointed out especially the novelty of having special scientific sessions.

Next General Assembly : Berlin, July 17th, 2016, when there will be a full day of survey lectures given by five prominent women (already selected).

Social event : July 20th, 2016. There will be a general audience talk on celestial mechanics given by Alessandra Celletti, and the official opening of a photography exhibit.

2018. Next general meeting. Candidate: Turkey.

Susanna Terracini agrees to stand as convenor for one more year.

Joint EWM-Institute Mittag Leffler -Committee EMS Women in Math: one highly successful summer school on Apollonian circle packings, held at the Institut Mittag-Leffler (Sweden). It is intended that these become a series of events. The next is proposed for 2016, to be on the topic of nonlinear PDE's and geometry.

2.
 - i Appointed to take minutes: Colette Guillopé, France, and Sara Munday, Great Britain.
 - ii Appointed to check the minutes: Marie-Françoise Roy, France, and Susanna Terracini, Italy.
 - iii Appointed to count the votes: Jasmin Raissy, France.
3. There are 35 participants, 28 of them are EWM members.
4. Financial reports: Marie-Françoise presented the EWM Financial Report for the period September 2013-August 2015, in the absence of the Treasurer, Camilla Hollanti, who was not able to attend (see appendix). The financial report was approved by the Assembly. Germany collects the fees of German members, many by direct collection from their bank accounts. It is also mentioned that a country can keep EWM fees, or part of them, to organise a local EWM meeting. In the future we could spend a little more money for the general meeting. There are now around 1500 euros in the account.

Vote of the financial report. Approved.

5. Situation of membership: 360 members (registered via the website), 160 of whom have paid their fees in 2013 or 2014 or 2015 + around 50 in Germany. In 2011 and 2012, there were only 90 who paid their fees in 2013 (+ 40 German members), so this year the situation is better (due to payment being made easier on the website, and the new website).
6. Categories of fees : 5, 20 and 50 euros.

Vote on keeping the same level of fees. Approved.

There was a discussion about having arrangements with national mathematical associations to bundle fees together. It was agreed that this will be trialled in Italy, with the level of fee set at €15 to be collected by the Italian national mathematical society along with their own fees.

7. Minutes of the previous General Assembly: the minutes of the General Assembly, held during the 15th General Meeting of EWM in Bonn in September 2013, were approved.
8. Report of the convenor on past activities since the last General Meeting. A complete report (see appendix) has been given to the participants at the beginning of the present General Meeting. Susanna Terracini gives the list of the different events of the 2013-2015 period. The report was approved by the General Assembly.

More information given by Susanna about modes of communication. Firstly, there is the mailing list EWM-ALL, which can be posted to by anyone. This is useful for discussion (for instance, recently, the discussion on conferences where there are very few women invited).

There is also the list EWM-member, which can only be used by certain administrators, but is in reality never used. Finally, there is a Facebook group.

9. Election of members of the standing committee for the next 3 years: There must, legally, be from 8 to 12 members of the committee.

Continuing members, elected in Bonn until 2017 (but it is decided to contract this to 2016) :

Angela Pistoia (Italy)
Sylvie Paycha (Germany)
Sanja Rapajic (Serbia)
Chiara Simeoni (Italy)
Lisbeth Fajstrup (Denmark)

Members elected in Barcelona, finishing their term at this meeting :

Susanna Terracini (Italy)
Camilla Hollanti (Finland)
Daniela Velikova (Slovakia)
Elena Resmerita (Austria)
Sara Munday (UK)
Corinna Ulcigrai (UK – not standing for re-election)
Olga Lukina (moved to USA – not standing for re-election)

Sara Munday has stood down from the committee, and will join as an “EWM volunteer”, joining Marie-Françoise Roy (France) and Anca Croitoru (Romania).

New candidates : Jasmin Raissy (France), Nazife Erkursun Ozcan (Turkey) and Katrin Leschke (UK).

All new candidates, as well as ST, CH, DV and ER are unanimously elected to the committee. The total number of members is then 12.

Susanna Terracini is candidate for convenor until 2016, and there is no other candidate. She is elected by the General Assembly by an unanimous vote (29 favorable votes).

Unanimous Vote for the Deputy Convenor: Angela Pistoia.

Susanna and Angela are enthusiastically congratulated by the General Assembly for continuing on this responsibility.

10. Regional coordinators: 32 countries have coordinators, 20 are active (see their report in the annex). It is a topic for further discussion to see how more coordinators could be active: How to recruit them? How to get answers from them? Their role is
- to disseminate information about the existence of EWM and publicise its activities.
 - to establish more connections with national mathematical associations.
 - to collect data about women mathematicians, and disseminate the data, in particular with the help of national mathematical associations.
11. Links with international associations or committees, Newsletter, mailing list, website.
- i. Link with EMS: Caroline Series is the chair of the Women in Math committee of EMS. Very good contact with EWM. Official route to the EMS. The Mittag-Leffler workshops exist because of our contact.
 - ii. The joint scientific committee of EWM and EMS is chaired by Cornelia Drutu, United Kingdom. Its role is to select the speakers for the General Meeting, make suggestions for the EMS Lectures, and for the ICM Noether Lecture.
 - iii. IMU created a Committee for Women in Mathematics (CWM). Marie-Françoise is chair, Caroline Series co-chair.
 - iv. Magnhild Lien is present and represents AWM.
 - v. The Association for African Women mathematicians, created in 2013, is mentioned also, its president, Marie-Françoise Ouedraogo, is in attendance.

A discussion develops about the role that EWM or the scientific EWM-EMS committee might have in terms of funding meetings. Susanna points out that there are many committees for women mathematicians, but it is very difficult to find funds for these women mathematicians conferences. Could it become the way to fund our EWM meetings? Possibly one or two people for far away countries?

12. Marie-Françoise agreed to continue her responsibility for the website.
13. Newsletter : Jasmin Raissy and Sara Munday agreed to continue as editors of the EWM newsletter. Sara Munday and Elena Resmerita were thanked for the quality of their work as editors.
14. Katrin Leschke, United Kingdom, agreed to take over responsibility for the mailing list EWM-ALL (about 400 members).

Discussion about the candidature of Ankara, Turkey. Fantastic for the women in Turkey. But, what about the socio-political situation in Turkey in 2018? The outcome of the discussion was most agreeing that it is not reasonable to try to guess so far ahead what the political situation will be in Turkey (or Europe generally) so far in advance, and that Turkey should indeed make a proposal. The first and most important step is to secure funding.

Other possibilities : Meeting in Poland (Banach center), St Petersburg (Steklov center).

15. Thanks and conclusions.

The IMU Committee for Women in Mathematics (CWM) and its first meeting

The IMU Committee for Women in Mathematics (CWM) was created by the IMU Executive in March 2015 and held its first meeting in the beautiful location of Cortona, Italy, September 4-5, 2015, immediately following the 17th General Meeting of European Women in Mathematics (EWM) which was held in the same location.

With a few exceptions, all members of the new committee were able to come. Present were Carolina Araujo (IMPA, Rio de Janeiro); Bill Barton (Auckland); Sunsook Noh (Seoul); Marie Françoise Ouedraogo (Ouagadougou, Burkina Faso); Marie-Françoise Roy (Rennes; Chair); Caroline Series (Warwick; Vice-Chair) and Betül Tanbay (Istanbul). In addition, there were replacements for those who were not able to attend: Magnhild Lien (California State Univ. and AWM Executive Director) in place of Kristin Lauter (Microsoft and U. of Washington, current AWM President); Neela Nataraj (IIT Bombay) in place of Sujatha Ramdorai (University of British Columbia) ; and Alicia Dickenstein (Buenos Aires, IMU Vice-President) in place of John Toland (Director, Newton Institute, UK) as IMU EC liaison. Ari Laptev (London and Institut Mittag-Leffler, Sweden) was represented by Marie-Françoise Roy and Caroline Series. For the full remit of CWM and details of its members see Home/about on the CWM website www.mathunion.org/cwm



Participants in the first meeting of the CWM: Sunsook Noh, Neela Nataraj, Carolina Araujo, Magnhild Lien, Caroline Series, Marie-Françoise Ouedraogo, Marie-Françoise Roy, Bill Barton, Betül Tanbay, and picture taken by Alicia Dickenstein.

CWM website

The CWM website <http://www.mathunion.org/cwm/> is integral to our work. Launched in August 2014 by the IMU following an initiative of the then President Ingrid Daubechies, its aim is to provide an internationally based resource for women mathematicians. The website is a crucial means of communication and is now being kept updated and enriched by CWM. The web editor Caroline Series has been invited to take part in the forthcoming revision of the whole IMU website and we hope the result will be a more dynamic site which is easier to edit.

CWM Cortona meeting

The committee meeting took place over two days, allowing time for members to meet informally and exchange ideas outside the long formal sessions. Preparatory work had been done with a detailed agenda and preliminary Skype discussions, especially with those committee members not able to attend in person.

Following introductions, we began with reports from the various parts of the world.

Africa

Of particular interest was the formation in 2013 of the African Women in Mathematics Association (AWMA), with Marie Françoise Ouedraogo as its President. AWMA held its first general meeting in June 2015 in Kenya, at the same time launching its new website africanwomeninmath.org. Based on the same model and with the same professional designer as the EWM site europeanwomeninmaths.org, this was achieved with advice and help from Marie-Françoise Roy and financial support from CWM. It was noted that following the same format as that of EWM saved much cost and time and the outcome has been very successful. In addition, a number of individual African countries (Congo, Ivory Coast, Kenya, Nigeria, Tunisia ...) have in the last two years formed their own organizations.

America and Europe

As reported by Magnhild Lien and Caroline Series respectively, the American and European organizations, Association for Women in Mathematics (AWM) and European Women in Mathematics (EWM), are long established with many activities; there is a wealth of information on their respective websites.

Founded in 1971, AWM has achieved recognition as a mainstream professional mathematical organization in the USA, having a good working relationships with AMS, NSF and so on. We congratulated AWM on the recent award of \$US 750,000 from the NSF for 'advancement of women through research-focussed networks'. AWM has an active Facebook and Twitter presence with about 3500 followers and is enthusiastic about fostering more social media connections. This is a topic which the CWM should be considering further in future. AWM also has affiliated membership (e.g. with Korean Women in Mathematics Society), and a Developing Countries membership.

EWM has an email network, coordinators who serve as contacts in most European countries, and recently set up a Facebook page. It maintains contact with the European Maths Society through the EMS Women in Maths Committee of which Caroline Series is Chair. Individual countries sport a variety of different types of organizations, such as the membership organization *femmes et maths* in France and the LMS Women in Maths Committee in the UK. This EWM model could be useful for other parts of the world.

Asia

From Asia we had two reports, from Sunsook Noh and Neela Nataraj. In India, after ICWM 2010 in Hyderabad, there have been a number of recent events aimed at female mathematicians and Neela reported that an Executive Committee for Women related activities in Mathematics has just been formed. This committee hopes to organize a meeting in summer 2016; we await developments with interest and felt that this is exactly the type of activity which our committee can encourage and support. We noted that there is also a recently formed group in Pakistan.

Since ICWM 2014 in Seoul, there have been two major meetings for women in mathematics in South Korea, one in November 2014 in Seoul, and one in July 2015 in Daejeon. However there is no overarching Asian organization and it was agreed to establish a contact list and work towards a possible pan-Asian meeting in 2017.

Latin America

Carolina Araujo and Alicia Dickenstein told us that, apart from a few recent initiatives in Mexico and Chile, there is a lack of organization for women in mathematics in Latin America. However Carolina reported that some Brazilian women will be organizing the First Meeting of Women Mathematicians of the state of Sao Paulo in March 2016. We hope our committee can lend its support to this nascent group, possibly helping it to include delegates from other Latin American countries.

Middle East

Regarding Turkey and the Middle East, Betül Tanbay (current President of the Turkish Mathematical Society) gave a presentation on Mathematics in Turkey, including the Nesin Mathematical Village, where gender balance is achieved in the activities. We noted that there might be a possibility of some activity at the Caucasian Mathematics Conference, August 25-26, 2016, and that there is also some interest in organization from women in Saudi Arabia. We also noted -after Cortona- that the first Israeli meeting for Women in Mathematics took place this year August 2015 in Tel Aviv.

Oceania

Finally for Oceania, Bill Barton (former President and current member of the ICMI Executive) reported that there are two organized groups for women in mathematics in Australia: Women in Mathematics Special Interest Group of Australian Mathematical Society (WIMSIG) and Choose Maths, a five-year AUD 22 million national program that aims to turn around public perception of mathematics and statistics as a career choice for girls and young women. WIMSIG has been especially active recently with travel awards, lectureship and a monthly newsletter; for more information about both organizations see the CWM website. In New Zealand, there are activities but no single organization. As far as we know, there are no women in mathematics activities in Pacific nations, despite both French and English-speaking pan-Pacific universities.

More details and links can be found on CWM webpage <http://www.mathunion.org/cwm/>

(WM)² : World Meeting for Women in Mathematics

The discussion then moved onto how to use the opportunity of the ICM in Rio in 2018 to further our remit. It will be very important to avoid the overlapping of activities with the ICM itself which was an unfortunate feature of ICWM 2014 in Seoul. After considerable discussion, aided by the fact that Carolina Araujo is on the local organising committee for the ICM 2018 in Rio, it was agreed that we should aim to organize a pre-ICM event for female mathematicians with a strong Latin American focus. The name (WM)² : World Meeting for Women in Mathematics was suggested. (WM)² would include a mix of academic activities (a plenary lecture and short presentations by Latin American women) and panel discussions about gender gap in the region. Given the current absence of an organization for women in mathematics in S. and Central America, we agreed this meeting should be an official a CWM initiative. A main focus should be on networking in the region, and a main aim will be to structure a Latin American network for women in mathematics to be launched at that meeting. As an established IMU committee, we expect also to have a slot in ICM 2018 to report on our activities and possibly hold a social event, ideally on the day of the Emmy Noether lecture.

Creation of regional and continental networks

The committee then turned to possible actions and activities in relation to its remit. It was suggested that we focus on a few concrete objectives by Rio 2018, and that establishing networks of female mathematicians at the continental or subcontinental level would be important. We have a budget from the IMU of just under 20,000 euros per year and agreed a priority use would be to help the creation of such networks. It was decided that we will shortly launch a call for proposals for funding of up to 3000 euros to support actions which would further these aims, preferably on the 'regional' or 'continental' level. In particular, we envisage supporting the nascent organizations in India and Latin America in this way. Help could include funding initial meetings, travel for individuals for consultation purposes, or advice and support in creating websites along the line of that of AWMA. The call will be announced on the CWM website and advertised as widely as possible through suitable channels.

Other projects

Various other possible projects were discussed. Briefly, these were: to create a list of contact persons who could disseminate information in each of their regions; to launch a Gender Gap Index in Mathematics, to hold a CWM summer school in 2017, if possible with ICTP support and with a joint CWM-OWSD (Organisation for Women in Science in Developing countries) event.

Next meeting

Although the committee plans normally to work by electronic means, a number of its members will be present in Berlin in July 2016 for the European Congress and the ICMI Executive meeting and we agreed to hold a meeting there on July 19th for those members who can attend. Other members will be able to participate electronically.

Key ideas

Finally we note a few general remarks agreed on by the committee. It was pointed out that CWM is the only committee that considers the issues for women in mathematics at the world level so we have an important role and responsibility. Change takes generations, and although the situation is gradually getting better, each piece of progress presents new challenges. Networking seems to be key for this change. We need to keep a critical eye on gender equality initiatives so that we are in a better position as to what to recommend for others. A starting point might be to invite instigators of such initiatives to provide evidence of the effectiveness and outcomes of their programmes.

Conclusion

We live in exciting times. Maryam Mirzakhani became the first woman to receive the Fields Medal at ICM 2014 in Seoul, and in the last two years, mathematical women in many more countries have come together to launch meetings and networks. As the only international Committee for Women in Mathematics, we believe CWM has a vital role to play and we are grateful to the IMU for giving us this platform and support.

Marie-Françoise Roy & Caroline Series
October 2015

Country News

In this issue, the country news can be found in the reports given by country co-ordinators for the general meeting in Cortona, which is attached to the end of the newsletter as an appendix.

Photography Project: Interviews with Sylvie Paycha, Sara Azzali and Noel Matoff

As already mentioned in the news of the upcoming meeting in Berlin, as part of the social activities there will be the opening of a photography project documenting the lives, careers and work of thirteen female mathematicians. We took the opportunity to talk to Sylvie Paycha and Sara Azzali, the organisers of the project, and Noel Matoff, the photographer, in Cortona.

EWM: Can you say a few words about the idea behind, and the organisation of the project?

SP: The idea arose from a former, very modest project that I'd initiated and pursued, which was interviewing via the internet ten female mathematicians from around

the world (I knew them all personally), and asking them to send a photograph. They were told very frankly that I was going to give a talk in Konstanz, in Southern Germany, and I'd like to talk about them! Because I think we meet very interesting women who happen to be mathematicians, and I wanted to

report on their experiences, personalities, and so on. Then, a friend who is a film maker said why didn't I do this on a larger scale with more money, more support, in the form of an exhibition. So, I naively said, yes, why not? I didn't realise what amount of work it was going to be, especially looking for funding.

With Sara and Noel (one other person gave up in the beginning, she was supposed to look for funding, but I think she got a bit discouraged), and also Sasha Alexandra Antoniouk, from Kiev, who is not here, who was involved prior to the project in a sense, and who was looking for funding on the Humboldt Foundation side, and thanks to her, and all of us, we got a prize from the Humboldt Foundation for this project. They considered it to be a project useful for networking. With this prize came €25, 000. Then from the Bosch Foundation, thanks to Jean-Pierre Bourguignon, who I sent a message to asking where we could apply for funding as it was proving difficult, we also got some support. Noel also got some support from an artists' foundation. Then we had written to the ECM organisation in view of holding the opening of this touring exhibition in Berlin during the conference. After some hesitations, they finally gave us the answer "yes", so in the end we will be hosted there in the very nice mathematics library at the technical university in Berlin and the librarian is very generous and open-minded. We found the library team very supportive.

SA: It was very interesting looking for funding! After we got the initial prizes, we also got support from places that had originally turned us down or forgotten us. So it was easier. But there were organisations who we would have thought would have been supportive who turned out not to be.

The exhibition after the opening will be a touring exhibition, so it will last for another two years. It will be shown in various mathematical and other scientific centres. We are also looking for more suggestions of where else to exhibit it – it doesn't need so much space, but we are thinking of also having an accompanying event, maybe a talk, maybe a mathematician explaining something.

SP: After all, an exhibition is made to be seen, and we want to attract visitors with accompanying events.

Interview with Noel Matoff:

EWM: What are your impressions from the project so far?

N: I'm really totally impressed that mathematicians, female and male probably, are so very happy with their work. I mean, not all the time,

and often it is a long way to go, but in every photo session, at some point the women said, "Isn't that nice!" or "Look at that!" or something similar. I didn't know that before. Also, they all say that it is hard work and there are a lot of things you must do, ups and downs, but at some point there is a very positive result. That's something I've never heard before so often.

Another thing I thought was very unusual and special was that all women that we talked to said that they never regretted choosing mathematics as a profession. Not a single one. Most of them knew already from the age of 6 or so that they wanted to do mathematics, from the very beginning. I think this is very amazing and very impressive.

EWM: Have you ever met a professional mathematician before this project?

N: Just Sylvie, for two years now, and I've been at only one conference before this one, in Potsdam, that Sylvie invited me to.



Interviewing Dusanka Perisic, in the courtyard of il Palazzone.



Noel at work, with Alice Fialowski, pictures by Sara Munday



Santander Universities network and Global connections award.

This summer, I was awarded a travel grant from the Santander Global Connections Award, administered by the University of York (my previous institution). The application process was extremely light, the probability of success was high, and the reporting back on the outcomes of the grant demanded only a very slight effort. It became apparent in talking to many colleagues that no-one was aware of this programme, despite the fact that Santander Universities has over 1200 partner institutions in 20 countries around the world. The grants are open to everyone - students, temporary and permanent staff - and can be used for any "reasonable" purpose. It seems to me that this avenue of funding is well worth exploring. A link to the UK page is here:

<http://www.santander.co.uk/uk/santander-universities/about-us/our-partner-universities>



My project was to visit the East China Normal University and Jiaotong University, both in Shanghai, to teach a mini-course to graduate students on some topics related to ergodic theory and to establish possible research connections with academics there. I was very happy to make the acquaintance of Professor Dongmei Xiao at Jiaotong University (which is also a partner university in the Santander network). She also had not heard about the possibility of obtaining funding from Santander until I contacted her about a possible visit. I took the opportunity to briefly interview her when we met.

Sara Munday

Interview with Professor Dongmei Xiao

Professor Xiao obtained her PhD from the Peking University of China in 1991. She previously worked in Wuhan, before taking up her current post as a full professor in 1997. Jiao Tong University is one of the top four universities in China.

She also held a postdoctoral position at UC Berkeley, as well as several visiting positions in the USA, Canada, Singapore and Australia.

As well as her career, Prof Xiao also has a family – her husband is a professor of mathematics at the East China Normal University and her son is now studying civil engineering.

EWM: How easy was it for you to achieve the position you have now?

X: I got the position in 1997. In those times the number of faculty

with Ph. D degree in our university was few, about 5 percent. Thus, it was easy to get this position if you have Ph. D degree and do research well. Now it is hard.

EWM: You attended the ICWM in Seoul recently, can you tell us a little about this experience?

X: Yes, it is was a memorable experience for me. Woman mathematicians from around the world to exchange ideas and information about mathematics and to increase awareness of women in mathematics. We had the panel discussion titled "Mathematics and Women: different regions, similar struggles". Some of the speeches impressed me.

EWM: What is the position for women in mathematics in China generally, in your opinion?

X: I think the position is lower for women in mathematics in

China even though there are many women teaching or doing research in mathematics at Universities, about 40 percent, since there are no leaders.

EWM: Can you share something about your research? Your favourite topics and problems?

X: Sure. I am interested in dynamics and bifurcations of dynamical systems by ODE or PDE. My favourite topics has two subjects: one are ODE and PDE coming from mathematical modeling, and the other is some problems related to the second part of Hilbert 16th problem, e.g., the weakened Hilbert 16th problem proposed by Arnold.

Some of the modeling problems I work with come from mathematical Biology. It is very different to communicate with biologists!

USEFUL LINKS AND CONTACTS

EWM website:	http://www.europeanwomeninmaths.org/	
EWM convenor:	Susanna-Terracini	susanna.terracini(at)unito.it
EWM deputy convenor:	Angela Pistoia	pistoia(at)dmmm.uniroma1.it
EWM email list:	Katrin Leschke	k.leschke(at)le.ac.uk

Other organisations with similar aims to the EWM:

The European Mathematical Society (EMS): <http://www.euro-math-soc.eu/>

EMS Women in Mathematics Committee: <http://www.euro-math-soc.eu/comm-women.html>

France: Femmes et mathématiques: <http://www.femmes-et-maths.fr/>

UK: LMS Women in Mathematics Committee: http://www.lms.ac.uk/activities/women_maths_com/

Job announcements:

<http://www.math-jobs.com>

<http://www.jobs.ac.uk/>

<http://www.euro-math-soc.eu/jobs.html>

Membership: The membership fee can be paid by credit card or Paypal via the EWM website, or by direct transfer to the EWM bank account. For more details, see

<http://europeanwomeninmaths.org/about-us/membership>

Reports of EWM coordinators for the Cortona General Meeting August 2015

European Women in Mathematics has coordinators in 31 European countries (see their list on <http://www.europeanwomeninmaths.org/about-us/organization>).

In EWM Newsletter, in the period after Bonn's EWM General Meeting in 2013, several reports were given about the situation of women in mathematics in European countries:

- Germany (Newsletter number 23),
- Italy (Newsletter number 23),
- Spain (Newsletter number 25),
- Turkey (Newsletter number 25).

In addition, reports on activities in France, Poland and United Kingdom were given in Newsletter number 24. All these reports can be found in the section Resources of EWM website <http://www.europeanwomeninmaths.org/>

Now follow the reports received from the local coordinators for the Cortona EWM General Meeting in 2015, as well as two guest reports from India and Africa.

For each country, we include a reference to the Global Gender Gap Index 2014 (rank of a given country in a list of 142 countries, see <http://reports.weforum.org/global-gender-gap-report-2014/rankings/>). Through the Global Gender Gap Index, the World Economic Forum quantifies the magnitude of gender-based disparities and tracks their progress over time. While no single measure can capture the complete situation, the Global Gender Gap Index presented in this Report seeks to measure one important aspect of gender equality, the relative gaps between women and men across four key areas: health, education, economy and politics.

From Denmark

Global Gender Gap Index 2014: 5th

EWM activities and membership

Sadly enough, there is nothing to report from Denmark in the two last years. There are simply too few women in mathematics in Denmark, so keeping up regular meetings seems not to have enough momentum. The work lies on too few shoulders. However, this “just” means that there will be years where we have nothing to report, this one being one of them, and once in a while there will be a period with activities.

Tinne Hoff Kjeldsen, coordinator for Denmark

From Finland

Global Gender Gap Index 2014: 2nd

EWM has less than 10 members in Finland. During the past 10 years, discussion on gender balance and especially on the number of female mathematics professors has been active. For instance, Aalto University has taken the initiative to improve the gender balance among math professors, having recently recruited 3 female tenure track professors (one tenured), which is a third of all tenure track professors. However, nationally the percentages are not as flattering - less than 5% of all Finnish professors in mathematical sciences are women. Activities to promote gender balance in science are

already taking place and more are being planned especially in the capital area, including various women in science networks, lecture series, employees' well-being related events as well as more general diversity seminars. Many positive changes have taken place in the past few years so we may say the recent trend is towards the better.

Paola Elefante, coordinator for Finland

From France

Global Gender Gap Index 2014: 15th

EWM members and activities

The situation in France is specific because there exists a French association *femmes et mathématiques* (Women and Mathematics). This association has about 120 members, most of them women, half of them are mathematicians or scientists, the other half are teachers in mathematics in high schools or in higher education institutions.

There are 6 members of EWM, paying the member fee, and 8 other women mathematicians are or have been associated to EWM activities in 2013-2015. Among the French members, Marie-Françoise Roy, the past convenor of EWM, is EWM webmaster and Jasmin Raissy is co-editor of EWM Newsletters.

All the activities concerning women in mathematics in France are organized either by or under the auspices of the association *femmes et mathématiques* (see below for some details about the activities). Information about the situation in France has been made known to EWM members through the EWM Newsletter, in particular Issue 21 (2012/2). Issues 23 (2013/2), 24 (2014/1) and 25 (2014/2) contain reports about the yearly forum which is organised in France for young women mathematicians, as well as reports about activities in France.

Information about the activities of EWM are spread on the electronic list of members and friends of *femmes et mathématiques*. The e-letter of EWM is sent on this list, as well as news about EWM local or international meetings. Moreover a newsletter in French is sent 3 times a year to the members and friends of *femmes et mathématiques*: information about EWM and other European associations such as the European Platform of Women Scientists (EPWS) is found there in particular.

The situation in France

Since 2012, when a left government was established, the overall situation of women in France may seem a little better, especially in universities, after a law for higher education and research has been passed in July 2013.

By the law, the public service for higher education has to lead actions against gender stereotypes, in the courses as well as in the different aspects of the university life. The orientation should favor the access and an equilibrate representation of women and men in university programmes. A mission for equality between women and men has to be established in each university. The university management board has to obey certain rules of parity: the lists of candidates have to alternate sexes (as in European political elections); the elected board should name as many women members as men members exterior to the university to make it complete. The disciplinary committee of the university, which is part of the management board, has to have as many women as men. The

academic council, when dealing with the careers of lecturers, has to have as many women as men, and as many of lecturers and of professors. The recruitment juries have to have at least 40 % members of each sex, but exemptions are in action for the next 4 years for professorships in disciplines where there are too few women professors at the national level (such as in pure mathematics where there are less than 7 % women professors, or in applied mathematics, where there are less than 15 % women professors). Mainly scientific disciplines are concerned with these exemptions (law disciplines too).

The CNRS (National Center for Scientific Research), which is the main institute for research in France for natural and exact science, has set up in 2014 grants called PEPS-Egalité (First Funding for Exploratory Projects – Equality): the research project, which is subsidized from 2000 to 5000 euros, has to be lead by a woman mathematician, has to have one third of each sex in the team and has the obligation to promote the results of the research toward younger women in high schools. Moreover, since 2013, the non-permanent 6-month to 1 year positions, called « délégations CNRS », are open especially to women mathematicians teaching at the university and returning to work after a maternity leave.

Activities of the French association *femmes et mathématiques* in 2014 and 2015

The association *femmes et mathématiques*, which has celebrated its 25th birthday in 2012, has also updated its statutes in 2013: men now can also become ordinary members of its management board (it had been a privilege for women only since the creation of the association; the male members were named « friend members » and could not apply for the management board). The president of the association still has to be a woman. This move had been necessary for welcoming younger women mathematicians into the association.

Forum for young mathematicians. The forum consists of a series of lectures by senior women mathematicians, talks by doctoral students and young mathematicians, and mentoring activities for young mathematicians. The 13th forum was held in Lyon in November 2013, on the theme « Mathematics and Computer Science in Interaction ». The 14th forum was held in October 2014 in Paris, with the theme of « Women mathematicians in view of excellence ». It was one of the events taking place after the International Congress of Mathematicians in Seoul: three women mathematicians working for French institutions and having given talks in Seoul were invited in the forum, Zoé Chadzitakis, Sandrine Péché and Michela Varognola. It was also one of the events taking place in Institut Henri Poincaré, for the 20th birthday of its renovation as a research centre for mathematics and theoretical physics.

The 15th forum will take place in Lille in November 2015, and its preferred theme will be « Probability and statistics ». More information, in particular applications of young mathematicians, women or men, are welcome, on the web site <http://www.femmes-et-maths.fr/?p=2580>

Math days for high school girls and beginning students. These aims to attract high school aged girls towards the pleasure of mathematics and show them the stereotypes in the field of women in mathematics. This activity is also geared toward beginning women students in science, as a way to encourage them to continue their studies in mathematics. The huge French State contract we were thinking of two years ago did not yet materialized itself in an actual grant, but the association now benefits from a grant from the L'Oréal Foundation to organize these activities for younger women. Seven days in 2013, ten days in 2014 and fifteen days in 2015 have been or will be organized (in the cities of Rennes, Paris, Tours, Lille, Kremlin-Bicêtre, Villetaneuse, Grenoble, Nevers, Dakar in Senegal, Palaiseau, Saint-Denis in La Réunion, Metz, Lyon).

Presentation of statistics on the presence of women mathematicians in France. These statistics are

regularly maintained on the web site of the association *femmes et mathématiques*. A study about the recruitment and the promotion of women and men mathematicians in France from 2008 to 2014 has been recently published on the web site of the association, as well as in the newsletters of the two main professional associations in France, the Société mathématique de France (the French Mathematical Society) and the Société de mathématiques appliquées et industrielles (the French Society for Applied and Industrial Mathematics).

Becoming a member of CFEM. In 2014 the association *femmes et mathématiques* has been accepted as a member of the Commission française pour l'enseignement des mathématiques (the French Commission for Mathematics Education - which is the French commission of the International Commission on Mathematical Instruction – ICMI). As member of CFEM, the association became a visible partner during the negotiation for the French national strategy for mathematics and was specifically consulted by the minister of education, higher education and research about what should be done to increase the number of students in mathematics, and especially of women students. The association also has been participating in the organisation of the public events which took place in March 2015, in Paris, Lyon and Marseilles, under the title « Forum pour les mathématiques vivantes : de l'école au monde » (Forum for Live Mathematics: from School to World).

African mathematicians, a day for the African diaspora in France and for women mathematicians in Africa. Marie-Françoise Ouadreogo (Burkina Faso) had been invited at the 15th EWM General Meeting in Barcelona in 2011. The association EWM serving as a model association, the African Women in Mathematics Association (AWMA) was then created in 2013 in Cape Town (South Africa) (see also the report from Africa, here below). Noting that a number of African women are holding positions at the university or in the private sector in France after studying there for 3 to 8 years, the association *femmes et mathématiques* organised a one-day meeting in Paris in May 2015 for presenting different experiences of African women mathematicians, either living in Africa or in France. This day was a real success in making African and French mathematicians work together for promoting mathematical studies for women and for helping women mathematicians in Africa.

Other activities. The association is also leading a number of activities. In collaboration with other French associations such as Femmes & Sciences (Women & Science), Femmes Ingénieurs (Women Engineers), Réussir l'Égalité Femmes Hommes (Succeed in Equality Between Women and Men) and the European Plattform of Women Scientists (EPWS), we organised:

- Visits in high school classes to give information about careers in STEM;
- Publication of the 2013-edition of the booklet about stereotypes regarding women in science, « Femmes & Sciences, au-delà des idées reçues » (Women & Science: Beyond Common Beliefs);
- Organisation of colloquia about the place of women in science and in the society;
- Writing of about 30 notices of deceased women mathematicians for the « Dictionnaire universel des femmes créatrices » (General Dictionary of Creating Women), covering all disciplines of Arts, Culture, Politics and Science, which was published in November 2013 by the Editions des femmes in France;
- Actions towards the French ministry of education about the new mathematics programmes for elementary and junior high schools for taking into consideration the fact that students in schools are of both sexes, not only male students;
- Preparation of a MOOC (Massive Open Online Course) about « Être en responsabilité demain : se former à l'égalité femmes-hommes » (« Be in Responsibility Tomorrow: to Learn about Equality between Women and Men »), which was published in June 2015; the first session was held June 15 to July 31, 2015;
- Lobbying actions for promoting women in STEM, for example by attending the 2014 General

meeting of EPWS, which took place in Paris, « New perspectives for women scientists careers in Europe »; the association *femmes et mathématiques* is actually a member of EPWS;

- Publication of a booklet about examples of jobs that students might think of after studying mathematics or computer science, in collaboration with the French professional associations in mathematics, statistics or computer science, « Zoom sur les métiers des mathématiques et de l'informatique » (Zoom on Mathematics and Computer Science Jobs). The publication includes portraits of close to as many professional women (10) as men (12).

Colette Guillopé, coordinator for France

From Georgia

Global Gender Gap Index 2014: 85th

Overall situation of women in science

About 4 490 000 people live in Georgia. The number of women are 2 349 100. The unemployment rate is about 50 %. Among people employed, 39% are women, mainly employed in the private sector in small and medium businesses. The number of women is small in politics. In Georgian Parliament are 150 members. Among them 11% are women. Pensioner women in Georgia are about 549 000.

As research has shown, the girls academic achievements in STEM's subjects are equal to boys academic achievements. However, in the end, less girls continue their career in STEM professions. Compared to previous years the number of dynamics is rising, but only slightly.

2014 yearly research report has shown that in higher education institutions are employed 290 mathematicians. Among them 33% are women.

EWM activities and membership

Since 2007, Georgia regularly participates to the EWM meetings which took place in Cambridge, Novi Sad, Barcelona and Bonn. These meetings are helping women mathematicians to exchange about their experiences.

In Georgian scientific, research and educational institutions there are a variety of projects which are trying to combine and integrate different fields of mathematics. Since 2013 we are involved in the projects MATH-GEAR and META-MATH. In these projects are involved Georgian, Armenian, Russian, German, French and Finnish mathematicians and among them some women, as evidenced by the meetings in Saarbrücken, Lyon, Tampere, Yerevan, Tbilisi, Batumi and Kutaisi universities.

The group of Georgian women mathematicians gathered in Tbilisi on December 3, where were discussed the latest EWM activities, the review of gender issues in academia at the international level and the support to women in their mathematical career in our country.

Then a meeting has been planned in Batumi, on June 5, 2015. We will discuss organizational issues to attend the meeting in Cortona, also about the possible change of the regional coordinator.

http://www.gtu.ge/News/3843/?sphrase_id=25511

<http://www.bsu.edu.ge/sub-12/page/3377/index.html>

Nino Rokva, coordinator for Georgia

From Germany

Global Gender Gap Index 2014: 12th

EWM activities

The German section of EWM currently has 50 members.

With the meeting in Aachen in April 2011, organized by Gabriele Nebe, Julia Hartmann and Eva Zerz (all from Aachen), regular German EWM meetings were re-established. The next meeting took place in Bielefeld in November 2012, organized by Barbara Baumeister (Bielefeld), Christine Bessenrodt (Hannover), Andrea Blunck (Hamburg), Evelyn Buckwar (Linz), and Barbara Gentz (Bielefeld). Since the EWM 16th General Meeting took place in Bonn in September 2013, the next German EWM meeting was postponed to this year. Ilka Agricola (Marburg) and Dorothea Strauer (Marburg) organized this meeting at Castle Rauschholzhausen near Marburg with a two-day scientific programme on 1–2 May 2015, see <http://www.mathematik.uni-marburg.de/%7Eagricola/rausch2015/index.html> .

The plenary talks were given by Verena Bögelein (Salzburg), Salma Kuhlmann (Konstanz), Reidun Twarock (York) and Gerlind Plonka-Hoch (Göttingen). With an additional 12 shorter talks and a poster session, the 55 registered participants enjoyed a broad and attractive programme. Since all participants were staying at Castle Rauschholzhausen, there was ample opportunity for discussions and strolls in the beautiful park surrounding the castle.

Our next meeting is planned for 2017. While the organizers have already been found, the date has not yet been fixed.

Overall situation of women in mathematics

Regarding the number of female professors in Mathematics in Germany, the map <http://www2.iazd.uni-hannover.de/~bessen/FiM/Deutschlandkarte.html> , provided and kept current by Christine Bessenrodt, shows that there are 10 universities in Germany with no female professor of Mathematics, and another 5 universities which have only non-tenured female professors, while a few universities have been quite successful in increasing the number of female professors at a high level.

Barbara Gentz, coordinator for Germany

From Greece

Global Gender Gap Index 2014 : 91th

EWM activities and membership

Unfortunately, after the workshop we organized in 2011 at Heraklion nothing happened. We are trying to involve more people that can help us into organizing us better (create a list, etc.), organise a local event, etc.

Chrysoula Tsogka, coordinator for Greece

From Ireland

Global Gender Gap Index 2014: 8th

A number of Women in Mathematics Day, Ireland, have taken place over the past five years, the most recent one in 2014 <http://www.conference.ie/Conferences/index.asp?Conference=371>. The one day conferences include presentations and posters by women active in mathematics, mathematics education and industry, at a variety of career stages. The aim of the events is to bring together those passionate about mathematics and to demonstrate the variety of opportunities available to those engaged in mathematics/mathematics education. The events provide an opportunity to hear some inspirational talks and to informally chat to others at different career stages.

Máire Ní Ríordáin, coordinator for Ireland

From Moldova

Global Gender Gap Index 2014: 25th

Moldova is a small country with population around 3.5 million inhabitants (without Transnistria), where women make up about 51%. According Gender Gap Index Moldova is ranked 25th in the results for 2014 (it was 52nd in 2013 and 34th in 2010) improving its position because the country has promoted the rights of women and policies as one of the highest percentage of women employed in non-agricultural sector. However, women earn on average 12.9% less than men. The remuneration of women is lower than that of men in most of the economic activities. Gender pay gap in agriculture, forestry and fishing is 9.5%, industry 18.4%. In the field of education, where about three quarters of all teachers are women, the wage gap between women and men is 8.9%. Men have higher percentages among leaders of all levels. In leadership at all levels 56% are men and 44% are women. For example the State University State senate of 99 members, 46 are women, which is 46%, but at higher levels of the country leading women's participation rate are lower. Women exceed men among retired. From the total of pensioners registered with social security bodies 66% are women.

Overall situation of women in science

In research we have the following situation: only 67 of 403 habilitated doctors are women; 654 women hold a Ph.D. in science, and 707 men. In the field of Education in Moldova women make up about 80%. Unfortunately in recent years in Moldova there is an increase of population migration, especially among youth. This is due to the political situation and especially the country's economic: low wages, low employment opportunities. Of course, interest in research and education, where there is the lowest wages is declining. For example, in 2013 the faculties of the State University of Moldova (the largest institution of higher education in Moldova) have not filled available places in mathematics etc. In these circumstances it is quite difficult to promote science and research.

EWM activities and membership

Since 2006, the local coordinator has attended all EWM meetings: Cambridge, 2007, Novi Sad, 2009, ICWM Hyderabad India 2010 and ICM Hyderabad, Barcelona 2011, Bonn 2013. The results of these meetings have been shared with the Moldovan women mathematicians interested in the work of EWM. The work of the coordinator is focused on the issue of women mathematicians Moldovan information about EWM, main events, summer school, organized opportunities for

participation, scientific meetings, the experience of organizing the research work of women in other countries, etc.

At least once a month EWM members meet at the State University of Moldova and discuss the various scientific, research issues, opportunities to participate on various international meetings. In 2012, Mrs. Galina Rusu member of EWM participated to the satellite EWM activities and attended the 6th European Congress of Mathematics in Krakow, Poland, on July 2-7, 2012. In February 25, 2015 Maria Capcelea, a member of EWM obtained her PhD thesis, and became Doctorate in Sciences. I consider the activity of EWM a beneficial one, especially for the moral and spiritual sustainment of mathematician women. Of course it would be also useful if it could somehow encourage the financial sustaining, at least for participating at some absolutely necessary conferences for research or it could put at disposal journals, books, and other materials of free registering. For this target, may be it would be possible to initiate some common research projects with financing from European Funds. In this manner, the fame of EWM would grow, but also the interest towards it, becoming in a good measure as a savior for many women who have choose between family and research.

Currently EWM has eleven members from Moldova (3 of them only are registered on our website).

Alexandra Tkacenko, coordinator for Republic of Moldova

From Montenegro

Global Gender Gap Index 2014: 74th (first time measured)

In Montenegro there isn't an association or any activity that is devoted to women in mathematics.

In the country there are just 7 women with PhD in mathematics, and in the whole population (about 650 000 residents) we have just 20-25 mathematicians.

The only novelty is that the Dean of the Faculty of Natural Science and Mathematics is a women, for the first time in the history of the faculty which was established in 1979.

Biljana Stamatovic, coordinator for Montenegro

From Netherlands

Global Gender Gap Index 2014: 14th

Overall situation of women in mathematics

The overall situation of women in mathematics in the Netherlands has not changed significantly since our last report.

The latest data on women in mathematics in the Netherlands were collected and published in 2008 by NWO (the Netherlands Organisation for Scientific Research) and can be found in the table below.

	Total staff (fte)	Number of women (fte)	% female
Professor	78	3,5	4,4
Associate professor	89	5,4	6,1
Assistant professor	117	14	12
Postdoc	89	7,3	8,2
PhD student	279	45,2	16,2

Table 1: statistics for women in mathematics at universities in the Netherlands

The data show that even though emancipation of women in science in general, and in mathematics in particular, has been given priority on the political agenda for a number of years, not much measurable progress has been made in the number of women in post-doctoral academic positions.

There are no new statistics on the number of women employed, but apparently NWO (the Netherlands Organisation for Scientific Research) is currently collecting these data again.

EWM activities and membership

There is a EWM-the Netherlands website www.uu.nl/ewmnetherlands

There are currently around 120 people (almost all women) on the EWM-the Netherlands mailinglist, that is also used to forward important information from EWM, job openings, etc.

Last Wednesday, the annual EWM-the Netherlands event took place. Press release about this meeting is included below.

Last Wednesday, 4 March 2015, the annual meeting of the European Women in Mathematics - the Netherlands took place at the Academiegebouw in Utrecht. It was generously sponsored by Platform Wiskunde Nederland (PWN).

« The afternoon started off with four excellent talks by female researchers, each representing one of the four mathematics clusters in the Netherlands: Charlene Kalle (STAR, Leiden University) explained how random continued fractions arise on the intersection of ergodic theory and number theory; Miranda Cheng (GQT, University of Amsterdam) introduced the remarkable connection between monstrous sporadic groups and modular objects; Martina Chirilus-Bruckner (NDNS+, University of Leiden) shed some light on the mathematics (partial differential equations) behind optical fibres. Finally, Karen Aardal (Diamant, TU Delft) told us how mathematical algorithms can save lives by calculating the optimal positions and movements of ambulances in the Netherlands.

Afterwards, Petra de Bont (NWO) commented on the deplorable situation of women in mathematics in Europe and in the Netherlands in particular. She then invited the audience to engage in a discussion which yielded several helpful recommendations to NWO and mathematics departments, that could help to improve this situation. »

EWM has only 6 registered members in the Netherlands.

KaYin Leung and Valentijn Kremaker, coordinators in the Netherlands

From Poland

Global Gender Gap Index 2014: 57th

Since the last EWM General Meeting in Bonn I made some efforts to advertise the idea of EWM in my country. In February 2014 I was invited to the conference "Archipelago of Mathematics" in Warsaw University of Technology (I presented the report in the EWM Newsletter no.24). I talked about the contemporary women mathematicians and introduced European Women in Mathematics. The presentation included the basic facts about EWM, structure and activities, as well as some statistics on the situation of women mathematicians across Europe.

In September 2014 I participated in the Polish Conference of Applied Mathematics organized by Polish Academy of Science. It is one of the largest conferences in Poland. I made a presentation about EWM to invite new members and raised an interesting discussion about the work conditions and gender issues in Poland.

The participants made the points about the main differences between Polish and West European systems to organize the work at universities in general, not only in mathematics or science. Mainly, we do not rely on post-docs, hence we are not forced to compete for a job every 2-3 year. The research position is mostly connected to teaching obligations (with proportion 50-50 but it is often biased towards teachings which does not leave much time for the research). Additionally, the social security system in Poland does not provide any help for the families and working women in rising children. Together with the limited access to the kindergartens (too few) or afternoon care in schools, it forces women to focus mainly on family and child care than work, not to mention leaving for conferences. That is why we have still too few women professors while so many women study mathematics and science and complete PhDs. The scientific career often stops at the position of Assistant or Lecturer. As my friend summarized the situation: "with three kids at home forget about research". I only stress here that the above described situation concerns not only mathematics but all the disciplines and universities in Poland and to solve the problem we need deep changes in social security system from the government level.

There is the Polish Mathematical Society (PTM) - the largest mathematical organisation in Poland with long tradition (since 1919). Among many activities like the 6th European Congress of Mathematics in Cracow 2012 or support for the young mathematicians, the association supports the development of mathematical education and popularization of mathematics. Aside of this long-lasting and successful work there are also the government supported Campaigns to encourage girls to become engineers or to study science "Dziewczyny na Politechniki!" and "Dziewczyny do Scislych!" (the names mean "Girls as Engineers!" and "Girls go Science!") with the wide support of mass-media. Many women mathematicians are already engaged in the above mentioned activities, hence EWM has no much space left to attract new members.

Anna Grybos, coordinator in Poland

From Portugal

Global Gender Gap Index 2014: 39th

EWM membership

Currently, there are only 3 official EWM members from Portugal registered on the EWM website. Given the number of Portuguese members of the EWM Facebook group, I believe that, from our country, we have many more people interested and sympathizing with the aims of EWM. We intend to explain to Portuguese mathematicians how to register for official membership of EWM using our Facebook platform in Portugal:

[European Women in Mathematics – Portugal](#)

The objectives of this Facebook group include: providing posts in the Portuguese language, supporting and encouraging Portuguese beneficiaries, to research and evaluate the situation and working conditions of Portuguese women in Mathematics and to collect data for the production of a report. In addition, I have invited some women by email as well as in person at conferences.

During the next few months, I expect that more Portuguese mathematicians will join the Facebook group.

Portuguese EWM Activities

With the aim of starting the Portuguese EWM Facebook group, the following invitation was sent to various Portuguese Facebook groups of Mathematics lecturers, Mathematics, Applied Mathematics and Statistics alumni:

Dear Mathematician,

*Are you interested in becoming a member of the group
European Women in Mathematics?*

This invitation (including various appropriate website links) was sent to teachers and lecturers, researchers and mathematicians working in industry, students and others. Interested individuals were asked to fill in a questionnaire with some of their details, to be contacted subsequently by email.

(P.S. Male members were also welcomed to join and participate in our objectives in supporting women mathematicians, since our aims do not promote any form of sexism.)

This activity led to the creation of the new Facebook page and then Facebook group, which allowed and facilitated further and deeper interaction.

The group was opened in March 2015 and it currently has 240 members (both male and female mathematicians living in Portugal) and every day we receive new contacts interested in joining the group. Our current members include primary and secondary school teachers as well as university lecturers, university researchers and researchers working in industry (including consulting, information technology, insurance and banking) as well as training centres and private tutors.

In addition to the main objectives of the wider EWM movement, we define specific objectives for

EWM-Portugal, as follows:

1. To produce a report on the current professional situation of women mathematicians in Portugal in collaboration between the different members working in the various sectors listed above.

2. To encourage and facilitate online networking between our members, to share information about job opportunities, grants and other opportunities specifically for women, and also to provide a forum for our members to discuss difficulties while participating in mutual support, such as reconciling the challenges of motherhood combined with career, tips for classroom management techniques and communication with parents/guardians when this can be challenging, and communicating concerns with managers.

3. Arranging and organising national meetings for women mathematicians.

4. Promoting participation in international events organised by EWM.

5. Proposing open discussion questions, such as:

Have you been awarded a prize in a competition or contest in which only women could be candidates? Have you been awarded any grant for female students/pupils? Have you and your spouse made use of any childcare provision at work or during a conference, etc?

Have you ever felt discriminated against in the world of work because you are a woman? (For example, were you ever asked in a job interview about whether you were single or whether you were planning to have children in the next few years?)

What would you like to change in any of these or related contexts?

Up until the present, we have been focusing on our first above-mentioned objective, which is to analyse the situation facing women mathematicians in Portugal. We researched and collected data and information relative to:

Situations facing Portuguese mathematicians:

1. Proportion of mathematicians working in Portuguese universities (as coordinators, lecturing staff or as temporary uncontracted lecturing staff, researchers and other types of contracts or positions) who are female.

2. Proportion of grant candidates in mathematical subjects and the proportion of grants awarded to females (FCT, Gulbenkian, ERC etc.)

3. Proportion of female mathematicians working in industry, programming, consulting, banking and so on.

4. Proportion of secondary school mathematics teachers who are female.

5. Proportion of personal mathematics tutors who are female.

6. Proportion of mathematicians opening their own personal tutor outfit or business, who are female.

7. Proportion of mathematicians who open or are principals/headteachers of private schools and colleges, who are female.

8. Proportion of university students (undergraduate, masters, and PhD) who are female mathematicians.

9. Proportion of female pupils enrolled on secondary school courses involving a strong mathematical component (such as sciences, information technology, economics, finance, etc).

Note: at the moment, data is available only for points 1, 4 and 8.

In a first analysis resulting from this study, we observed that, in Portugal, the majority of mathematicians work as mathematics teachers/lecturers, and only a small number work in industry, or in research.

In this way, we were able to compare the number of women Mathematics teachers and lecturers

with the total number of Mathematics teachers and lecturers involved in each respective level of education delivery. Here are some results:

Table 1 – Teachers working in primary, secondary and higher education during the academic year 2013/2014 in Portugal (including the Azores and Madeira as well as mainland Portugal)

Level of course	Type of institution	Women	Total staff	Percentage who are women
Secondary school (Maths and science, years 5 and 6)	all	4492	5739	78,27%
	state	4157	5303	78,39%
	Academies	195	261	74,71%
	Private/independent	140	175	80,00%
Secondary (years 7 to 12)	all	6286	8483	74,10%
	state	5656	7597	74,45%
	Academies	335	457	73,30%
	Private/independent	295	429	68,76%
Higher (university and polytechnics)	State and private	692	1324	52,27%
Total		11470	15546	73,78%

Sources : DGEEC-MEC: <http://www.dgeec.mec.pt/np4/96/>

Rebides - Registo Biográfico dos Docentes do Ensino Superior, DGEEC/MEC

It was observed that the higher the level of education, the lower the proportion of women involved as teachers/lecturers. That is, the proportion of women teachers is high at the primary level (78.27%) and decreases a little towards the upper end of secondary level (74.1%) and the decreases is accentuated at the higher education level (52.27%)

It is important to underline the percentage difference between women teachers at state and private institutions, as this could be due to the fact that while recruitment of teachers at state institutions takes place by online competitions (while not selecting candidates, the ordering of candidates takes place through a computer program that compares candidates' curricula), the recruitment process at private institutions normally involves a traditional interview and therefore there could be difference factors influencing the selection process.

At the lower secondary levels, this phenomenon occurs with less emphasis, which could be because the number of male teachers interested in teaching mathematics and sciences to pupils aged 10 to 11 years, is considerably less, that is, the number of male candidates seems to be much fewer.

In terms of lecturing at university level (private or independent) in Portugal, the percentage of women lecturers was compared with the percentage of women lecturers with qualifications in Maths and Statistics at the same level. The overall results are presented in the table below:

Table 2 - Total number of lecturing staff with qualifications in the areas of Mathematics and Statistics in Portugal in the academic year 2013/2014

Higher Education (Universities and polytechnics, both private and state)					
Total n°. lecturers	Women lecturers	% women lecturers	Total n°. Lecturers qualified in Maths and/or Statistics	Women lecturers qualified in Mathematics and/or Statistics	% women lecturers qualified in Mathematics/Statistics
33528	14745	44,0%	1324	692	52,3%

Source: Rebides - Registo Biográfico dos Docentes do Ensino Superior, DGEEC/MEC.

According to the database of the Portuguese Ministry of Education and Science, and our proceeding analysis of the 294 institutions of higher education in Portugal (all higher education institutions including private, state, university, polytechnical, in all the Portuguese territories: mainland, Azores and Madeira), it is found that, (perhaps unexpectedly), the percentage (52.3 %) of women mathematicians lecturing on university courses is higher than the percentage of women teaching in other disciplines (44%).

According to an investigation into the current interest in studying mathematical subjects at university level and careers involving mathematical subjects amongst the younger sector of the Portuguese population, the following data was collected and analysed:

Table 3 – Gender of students enrolled on higher education courses during the academic year 2013/2014

Educational level	Gender		Total	Male		Female	
		%			%		%
Total			362200	168252	46,5	193948	53,5
Training			36	6	0,0	30	0,0
First degree			1	-	-	1	0,0
First part of first degree ⁽¹⁾			220786	101486	60,3	119300	61,5
Specialisations ⁽²⁾			3431	1198	0,7	2233	1,2
Masters degree ⁽³⁾			62950	33156	19,7	29794	15,4
Second part of Masters			54751	23076	13,7	31675	16,3
PhD (first part)			19801	9118	5,4	10683	5,5
PhD			444	212	0,1	232	0,1

(1) Includes courses "Licenciatura - 1.º ciclo" and "Preparatórios de licenciatura - 1.º ciclo"

(2) Includes courses of "Especialização pós-licenciatura" and "Especialização pós-bacharelato".

(3) Includes courses of "Mestrado integrado", "Preparatórios de mestrado integrado" and "Mestrado integrado (parte terminal)".

Sources: DGEEC-MEC: <http://www.dgeec.mec.pt/np4/96/>

Inquérito ao Registo de Alunos Inscritos e Diplomados do Ensino Superior, MEC.

Given these data, obtained from the Portuguese Ministry of Education and Science, and our proceeding analysis of the 295 higher education institutions (both independent and state) in Portugal, it was observed that, at all levels of training, the number of women enrolled on higher education courses in the academic year 2013/2014 was higher than the number of men enrolled, with an overall proportion of 53.5 % women.

Which higher education disciplines do women tend to prefer?

Table 4 – N.º of first year women enrolled in each subject area in Portuguese higher education for the academic year 2013/2014

First year women students enrolled – Higher education – 2013/2014	
Subject Area	N.º women
Education	5953
Arts and Humanities	8608
Social sciences, Commerce and Law	25421
Sciences, Mathematics and Information technology	4862
Engineering, Civil Construction industry	5876
Agriculture	1139
Health and Social care	12263
Other Services industries	3597
Unknown or unspecified	168
Total	67887

Source: DGEEC-MEC: <http://www.dgeec.mec.pt/np4/96/>

Although as many as 67,887 first year women students were enrolled on higher education courses in the academic year 2013/2014, only 7.16% of these were enrolled in Sciences, Mathematics and Information technology courses.

In particular, we studied the proportion of female students enrolled on first degrees, masters and PhD degrees in the areas of Mathematics and Statistics.

Table 5 – Total N.º of students enrolled on Mathematics or Statistics course and their gender. Data for 2013/2014

a)

N.º higher education institutions (independent and state)	Total enrolled on Mathematics or Statistics courses	N.º women enrolled on Mathematics or Statistics courses	% women enrolled on Mathematics or Statistics courses
23	2 566	1 340	52%

Source: Inquérito ao Registo de Alunos Inscritos e Diplomados do Ensino Superior, MEC.

From the database obtained from the Portuguese Ministry for Education and Science, 23 higher

education institutions were analysed (both private and state-funded). One observes that of the total number of students enrolled on Mathematics or Statistics courses, 52% are women.

In summary, from the information presented in tables 3 and 5, one concludes that the total number of women studying at higher level in 2013/2014 (193,948 women) only 0.69% of them chose a course in Mathematics and/or Statistics (1,340 women). It is our endeavour to organise activities that will lead to an increase in this number during the years to come.

Acknowledgements

To Rachel Martins for the great help on translation to English.

To João Faria Martins and Teresa Araújo for the help on the creation of the EWM-Portugal Facebook page and group.

Catarina Oliveira Lucas, coordinator for Portugal

From Russia

Global Gender Gap Index 2014: 75th

Activities for women in science

At the second Russian conference “Women - mathematicians” in 1994, held in Pushchino, it was established Russian Association “Women in Science and Education”. This Association is headed in the last 20 years by Galina Y. Riznichenko, professor of Lomonosov Moscow State University.

The Association WSE has divisions in different Russian cities and also carries out the work through these divisions. Every year it organizes three different conferences:

- 1) The International Conference MATHEMATICS. COMPUTER. EDUCATION. This conference takes place every winter in scientific Moscow region centers of Pushchino or Dubna.
- 2) Conference “Women in Mathematics. Education. Information technology”. The conference takes place annually in the different cities of Russia.
- 3) Conference “Nonlinear world”, a conference-dialogue between scientists and representatives of art and culture. The conference takes place in the different cities of Russia.

In 2015 the conference MCE took place in winter in Pushchino, the conference “Women in Mathematics. Mathematical Education” took place in May at the Kazan' State University, the conference “Nonlinear world. Kurdyumovsky readings” took place in April in Tver.

The 23th International conference MCE will be held in January 25-30, 2016, Dubna, Russia. The Official Conference Website is <http://www.mce.su/>

Natalya Lyulko, coordinator for Russia

From Serbia

Global Gender Gap Index 2014: 54th

Activities for women in science

Last year, the Serbian Mathematical Sciences Association [“SNMD-Srpsko naučno matematičko

društvo”, snmd.mi.sanu.ac.rs] was founded as a non-profit association, established for an indefinite period in order to achieve objectives in the development of mathematics as a scientific discipline. Almost 50% of members are women. Before that, there had been a society of mathematicians and physicists, established in 1948. For a short period, the society changed name to Society of mathematicians, physicists and astronomers. From 1981, when society was split, with a Society of mathematicians in Serbia [“DMS-Društvo matematičara Srbije”, www.dms.rs].

There is no any female mathematical association yet. The number of EWM members from Serbia is less than 20, but number of active members is even less than 10. Recently, active members of EWM started to talk about an idea of forming the Female Mathematical Network of Serbia. Four members of EWM (Dušanka Perišić, Sanja Rapajić, Sanja Konjik and Jelena Aleksić) applied for a project entitled “The fulfillment of the conditions for the establishment of women's mathematical networks in Serbia” to the Provincial secretariat for science and technological development of Autonomous Province of Vojvodina. Almost all active members are from University of Novi Sad. We are also active in making contacts with women mathematicians from five universities in Serbia, University of Belgrade, Niš, Kragujevac, Novi Pazar and Kosovska Mitrovica, and from the Serbian Academy of Science and Arts.

As we wrote in previous reports, women are almost 50% of mathematicians in Serbia. Regarding teaching of mathematics, the percentage of women is even higher.

The only grant in science available only for women is the L'Oréal-Unesco scholarship. Every year, 3 women scientists obtain these grants. Sometimes a woman mathematician gets it, but it is rare.

Jelena Aleksic, coordinator for Serbia

From Slovakia

Global Gender Gap Index 2014: 90th

Overall situation of women in mathematics

Basic facts:

- about 25% of active mathematicians working at the Mathematical Institute of Slovak Academy of Sciences are female (10 women);
- about 40% of mathematicians working as university lecturers at 10 universities in Slovakia are female (about 200 women);
- about 35% of leading positions in the boards of 2 existing Slovak professional mathematical societies (with about 160 members) are female;
- Union of Slovak Mathematicians and Physicists - 8M + 5F; Slovak Mathematical Society - 3M + 6F.

Activities for women in mathematics

Currently there are no special committees or members of steering committees within any from above two professional organisations that would be responsible for promoting women in mathematics nor the agenda related to these issues.

The non-profit professional scientific organisation Slovak Society for Geometry and Graphics aimed to stimulate scientific development in the field of geometry and computer graphics, to

support young scientists in these disciplines, and to enhance the quality of geometry and graphics education at all levels has about 45 members, while 33 of them are women.

This society organized under its own costs several special events for women in mathematics:

- Seminar Women in Geometry and Geometric Modelling, October 16-18, 2013, Kočovce, Educational Centre of Slovak University of Technology.

- In December 2013, during the annual meeting of Slovak mathematicians regularly organised by the Union of Slovak Mathematicians and Physicists a general discussion was held with the topic of possible establishment of a special board for women in mathematics that could take care about special needs of more women mathematicians and their promotion. Information about EWM was also provided here for all participants in order to foster interest of women to participate in EWM and benefit on its activities.

- A special seminar on position of women in mathematics in Slovakia was held during the international conference on applied mathematics Aplimat 2014, February 4-6.

- On October 16, 2014, during the Symposium on Computer Geometry held at the Institute of Mathematics and Physics, Slovak University of Technology in Bratislava, an informal meeting of participating women mathematicians was held, where information about EWM organisation and its activities was presented and possibility of individual membership was promoted.

EWM activities and membership

The EWM national coordinator for Slovakia has collected addresses of all women mathematicians who articulated interest to receive information about EWM and its activities, and disseminates all information received from the EWM to them.

They have been invited to participate in the first EWM meeting in Slovakia that will be held at the Institute of Mathematics and Physics, Slovak University of Technology in Bratislava, on September 30, 2015. Informations will be given about the 17th EWM General Meeting in Cortona, and it will be suggested to establish of a Slovak Group of Women in Mathematics – an official body dealing with gender issues, hidden forms of invisible discrimination and under-representation of women in decision bodies and boards related to Mathematics. In the meantime we will try to encourage more women mathematicians to attend this event. During the seminar possibilities and ideas on how to continue in order to promote better gender awareness in Slovak mathematical community remaining reluctant towards various gender problems in STEM.

So far, there are no other activities related to EWM in Slovakia, and there are only 2 members, while some others might hopefully appear during the meeting in September 2015.

Daniela Velichová, coordinator for Slovakia

From Spain

Global Gender Gap Index 2014: 29th

Activities for women in mathematics

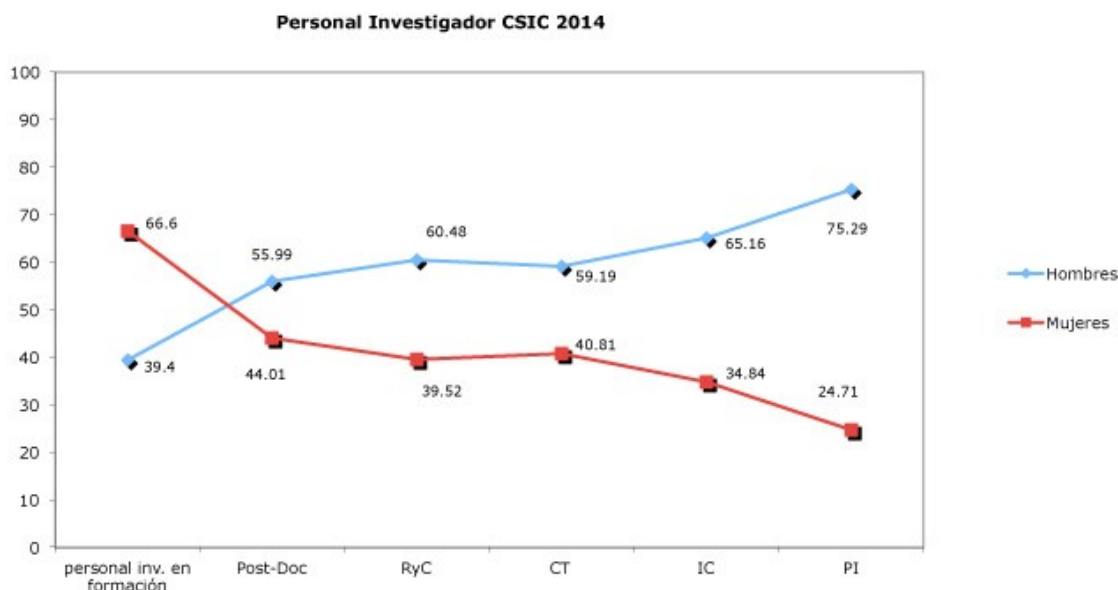
While there are several national/local associations for women in Science along the different Spanish universities, there is only one organization for women in mathematics: the commission for women in the Real Sociedad Matemática Española (Spanish Royal Society of Mathematics).

The main associations or commissions for women in science are:

- Unit of Women and Science of the Ministry of Economy and Competitiveness: organization established in 2006 that fights for the effective equality between genders. It produced the White Paper about the Situation of Women in Science in Spain in 2013. Available online at

- Women and Science at CSIC (Spanish Council for Scientific Research): commission that produces a yearly report with statistics about women scientists. Available at <http://www.csic.es/mujeres-y-ciencia>. It organized different raising-awareness events to celebrate its tenth anniversary in 2013.

None of these commissions distinguishes between the different sciences, so we cannot infer accurate data about the general situation of women mathematicians. However, studies from both commissions show and underline the existence of the so-called Glass ceiling for women. Even when the percentage of women studying mathematics at an undergraduate level is larger than the percentage of their male colleagues, as far as we follow the ascending positions line, these percentages get reversed.



The Commission for Women of the Real Sociedad Matemática Española (RSME) is formed by 9 members and it is led by Marta Casanellas Rius, professor at Universitat Politècnica de Catalunya. It pursues spreading the most relevant women mathematician contributions and stressing some of the difficulties and integration problems that stop women to reach senior positions. The main activities that were accomplished since 2012 are:

- Updating the webpage of the commission: <http://mym.rsme.es/>
- Starting a new initiative in which women mathematicians are recorded while explaining and sharing their concerns about their jobs. Some videos are available at the previous webpage.
- Organization of different debates and discussions about the situation of women in Science, mainly inside the program Dona 2.0 (Woman 2.0) at Universitat Politècnica de Catalunya and also at some other Spanish universities.
- Producing a detailed [report](#) (2014) with information about the percentage of women mathematicians in different positions at universities in Spain. The data was collected by the Spanish National Institute of Statistics in 2010.
- Insisting to the Spanish Government on including special clauses in all research calls for maternity leaves.

EWM activities and membership

The main aim of the Spanish section of the EWM is keeping going with the awareness of the worries and difficulties of women mathematicians in order to try to detect the specific problems and find solutions to them.

Some of the precise actions that the Spanish section of the EWM expects to accomplish to reach these goals are the following ones:

- Organizing a round table inside the Congress of Young Researchers of the RSME (September 2015).
- Taking part in the European Girls' Mathematical Olympiad in 2016.

Elisa Lorenzo García, coordinator for Spain

From Switzerland

Global Gender Gap Index 2014: 11th

There are approximately 15 female mathematicians who hold a permanent position in a Swiss research university (from lecturer to professor level). There are many more post-doctoral researchers and doctoral students. There are no specific activities organized for female mathematicians in Switzerland, nor is there an organization whose membership is defined by this common attribute.

The Swiss National Science Foundation has a funding program and various policies aimed at encouraging and assisting female researchers, see for example

<http://www.snf.ch/en/funding/careers/mhv-grants/Pages/default.aspx>

On the occasion of the 100th anniversary of the Swiss Mathematical Society, Christine Riedtmann wrote an informative article about the history of women mathematicians in Switzerland (in German), which can be found in the Reports section of <http://europeanwomeninmaths.org>

Relinde Petronella Maria Johanna Jurrius and Donna Testerman, coordinators for Switzerland

From Turkey

Global Gender Gap Index 2014: 125th

Activities for women in mathematics

The first workshop of women mathematicians was held during May 02-04, 2014, in Gebze, Kocaeli, at the Gebze Institute of Technology. The main themes of the workshop were Algebra, Algebraic Geometry, Graph Theory and Numerical Analysis. There were three talks in each area; one general talk given by a senior women mathematician, following two talks given by young women mathematicians. There were also poster presentations, mostly done by graduate students. From undergraduate to senior mathematicians, mostly women but also some men, there were nearly 150 participants. We did not get any financial support except that the host university arranged accommodation and lunches at reasonable prices.

The second one is taking place from Friday, May 1, 2015 to Tuesday, May 5, 2015 in Cumhuriyet University Merkez/Sivas, and will be organized with the EWM moral support.

Information communicated by Semra Pamuk

From United Kingdom

Global Gender Gap Index 2014: 26th

There are several activities in the UK now to support and increase the participation of women to STEM (Science, Technology, Engineering and Mathematics). Universities can apply for an Athena Swan award, at three different levels (bronze, silver and gold). These awards are granted after a very demanding application and peer review process, based on collection and analysis of diversity data. While this poses several problems, for example that junior women tend to be lumbered with the job of preparing the application for their departments, it has served well to raise awareness of the massive gender imbalance in STEM.

UK EWM works closely with the London Mathematical Society Women in Mathematics Committee, which among many other activities runs a Good Practice Scheme supporting mathematics departments interested in embedding equal opportunities for women, and preparing Athena Swan applications. The Isaac Newton Institute also have a Gender Balance Programme.

The main meeting point of women mathematician in the UK is the annual Women in Mathematics Day. Usually this is a one, or sometimes two-day event, with a few invited lectures and PhD-junior short lectures, plus time to network. This year the event lasted four days celebrating women across the mathematical sciences, and for the first time it had a day dedicated to high school students as well. The event was held in Oxford in 2015 as part of the 150th anniversary year of the LMS. You can follow what is going on Twitter: @womeninmaths.

Beatrice Pelloni, coordinator for UK

GUEST REPORTS

From India

Global Gender Gap Index 2014: 114th

Three women related activities were held in the year 2014-15 in India.

1. Indian Women and Mathematics : 2-4 April, 2015. University of Delhi, South Campus, New Delhi, India. More information can be found at

<http://maths.du.ac.in/webpage-IWM/symposium.html>

2. Young Women and Mathematics : 25-27 July 2014 at IISER, Pune.

<https://sites.google.com/site/ywmiisc/>

3. Teachers Training Programme : 20-24 November 2014 at Vellalar College for Women, Erode, Tamil Nadu. <https://sites.google.com/site/iwmttp2014/home>

All these activities were funded by the **National Board for Higher Mathematics (NBHM)**, DAE, Govt. of India (<http://www.nbhm.dae.gov.in/>) to a large extent and the institute/university, where the particular activities took place, also sponsored partly.

Dr. Anisa Chorwadwala, a woman mathematician and a faculty of IISER Pune, India, maintains a website for women related activities, past and present, in India which also gives information about opportunities and some useful link. The website is at <https://sites.google.com/site/homepageiwm/> . This website has a link to EWM and we also mention EWM in all the activities of women and mathematics that we are involved in.

Apart from these, there was a one day seminar held titled "**Women in Science: A Career in Science**" at the Karnataka State Women University, Bijapur, India, on the International Women's Day (8th March, 2015) which was sponsored by the **Panel for women in Science (WiS), of the Indian Academy of Sciences (IASc)**. Five women scientists including a mathematician were invited to give one hour talk on their research to encourage women students to take up a career in science. There will be report regarding this in Current Science. For more activity of WiS, IASc see the website <http://www.ias.ac.in/womeninscience/>. Moreover, there have been special seminars on the occasion of 8th March, 2015, like a common program of DRDO Institutions, National Cell Science Centre, a common program of all the ISRO institutions. There was also an Indo-French seminar on women in science in the first week of March.

I would like to add that in 2014 CSIR-NISCAIR (Concil of Scientific and Industrial Research (CSIR)-National Institute of Science Communication and Information Resources (NISCAIR)), India made a tele-series called 'Scientifically Yours' which comprised of half an hour interviews of Indian women scientists. The series was aired, one interview every weekend from July to October, 2014, on one of the national television channel called DD-Bharati so that it reaches a wider audience. It was also re-telecast again this year. They took interviews of 13 women scientists including a mathematician. The series was made to encourage girl/women students to take up a research career in science by highlighting the journey of successful women scientists. The link to the website of some videos is here: <http://scm.niscair.res.in/category/scientifically-yours/> This year, CSIR-NISCAIR is compiling all the interviews in a book and would publish it.

Talking about books, I would like to mention one book 'Women Scientists: Reflections, Challenges and Breaking Boundaries' written by Magdolna Hargittai and published by the Oxford University Press this year (2015).

Riddhi Shah, EWM corresponding person in India

From Africa

Global Gender Gap Index 2014: from Burkina Faso 110th, South Africa 18th, Kenya 7th (only the three countries where women in mathematics workshops were organized are listed. For other African countries GGGI see <http://reports.weforum.org/global-gender-gap-report-2014/rankings/>).

Since Bonn's EWM general meeting, the main AWMA (African Women in Mathematics Association) activity was its first General Meeting in Lake Navaisha, Kenya from 16-18 July 2015, in the framework of a AMUCWMA/AWMA workshop.

The theme of the workshop was "Women in Mathematics for Social Change and Sustainable Livelihoods". This workshop was a follow-up one of a series workshops jointly organized by AMUCWMA (African Mathematical Union Commission on Women in Mathematics in Africa) and CIMPA (International Center for Pure and Applied Mathematics). The first one was held in Ouagadougou (Burkina Faso), 26th-27th October 2012, and the second one was held at the African Institute of Mathematical Sciences (AIMS), Cape Town, 17th-19th of July 2013.

The main objective of this workshop was to bring together women from various countries within the continent to a platform where they can present their work, exchange experiences and discuss initiatives that promote Mathematics with the aim of addressing social change and creating sustainable livelihoods. There was also plenary sessions from invited speakers representing various African regions as well as experts from elsewhere to address and facilitate specific themes of the workshop. More precisely, the event had four main components:

- scientific lectures by renowned mathematicians in their area of research,
- lectures on women mathematicians situation in Africa,
- scientific presentations of the work of some participants,
- the first General Assembly of AWMA since its establishment in 2013.

The workshop attracted 43 participants from at least 17 African Countries within the continent: Algeria [1], Burkina Faso [1], Cameroon [2], Ivory Coast [3], DRC Congo [1], France [2], Gabon [1], Ghana [1], Kenya [11], Morocco [3], Nigeria [5], Senegal [3], South Africa [5], Tanzania [1], Uganda [1], Tunisia [1], Zimbabwe [1].

The aims of the first AWMA General Assembly were multiple, mainly adopt the report of activities of the period 2013/2015, adopt the logo of AWMA and approve the new website of AWMA.

It was noted that several national associations for Women in Mathematics have been created since 2013 in Congo, Ivory Coast, Kenya, Nigeria, Tunisia.

See more information on Women in Mathematics activities in Africa on AWMA website <http://africanwomeninmath.org/>

Marie-Françoise Ouedraogo, AWMA president, EWM corresponding person in Africa