



Newsletter 23

Edited by Sara Munday (University of Bristol, UK)
and Elena Resmerita (University of Klagenfurt, Austria)

2013/2

In this issue

This issue is dedicated to the EWM general meeting which took place in September 2013 at the Hausdorff Centre for Mathematics, Bonn. A report and the minutes of the meeting are included below, followed by interesting data related to gender in Math publications provided by colleagues from Zentralblatt Math (presented also at the meeting).

The interviews focus on the change of convenor: Marie-Francoise Roy (former convenor) and Susanna Terracini (new convenor), and on Tamar Ziegler, a guest speaker at Bonn who has been the European Mathematics Society 2013 lecturer.

The series of articles on the STEM situation in different European countries continues here with Germany and Italy.

An article published a few years ago in the magazine "Role Model Book" of the Nagoya University, Japan is included courtesy to its author: Yukari Ito.

Prestigious prizes for research awarded to woman mathematicians this year in Europe are highlighted.

A series of announcements on Math events and miscellanea are pointed out at the end of this issue.

The 2013 EWM general meeting

Report from the meeting

The meeting was opened by the EWM convenor Marie-Francoise Roy and by Dr. Michael Meier, Chief Administrator of HCM Bonn, who talked about the mission and activities of HCM, as well as the personality of the mathematician Felix Hausdorff, who on top of his contributions to topology and many other topics in mathematics was also a philosopher and playwright under the pseudonym Paul Mongré.

The series of invited lectures on Dynamics and prime solutions to linear equations by Tamar Ziegler (Hebrew University, Israel) started with an enlightening presentation for quite a general audience. After the lunch break, the second plenary speaker Karin Baur (Graz University, Austria) gave an interesting chalk talk on Cluster algebras and triangulations of surfaces. The parallel sessions started in the afternoon. A total of 25 talks were given in these sessions during the week. Their list and abstracts are part of the documents posted on the EWM website after the meeting. They were followed by an active presentation of participants "Present your neighbor". This was instructive and relaxing at the same time, as one could find out about the scientific careers, research interests, families and hobbies of the participants.

On Tuesday morning, Catharina Stroppel (University of Bonn, Germany) gave a plenary lecture with a puzzling title: *On Categorification what? why? how?*. On Tuesday afternoon, Tamar Ziegler continued with the second part of her lecture series, this time a more specialized talk. Later on, a discussion session was held. The participants split up into small groups, to discuss the following topics:

- Future direction and activities of the EWM (understood fairly broadly)
- Discussion topic for the next general meeting
- The contents of the newsletter

One member of each group then reported to the room what was discussed. Here is a short summary of the ideas that came up. Firstly, only one suggestion for the discussion topic for the next general meeting was given, namely, to discuss the role of national coordinators. In particular, what can the EWM reasonably expect from them and what help/resources can they expect from the EWM. The main idea is that the coordinators should get in contact with the corresponding national mathematical organizations, in order to obtain support to promoting the objectives of the EWM in the respective country. Moreover, new regional coordinators should be established in countries where the current coordinators have not been active lately (at least providing a report for the EWM meeting in Bonn).



Group photo, on the steps of the Hausdorff centre

On the newsletter, it was agreed that the reports from meetings were important and should be kept, and, if possible, reporting from local/national events should be increased. Of course, this is dependent on volunteers writing the reports. It was also suggested that some biographies of women mathematicians from history would be nice, even if all that was included was a link to material available elsewhere. These could appear linked up to the country profiles that currently appear in each issue. Another suggestion was that we could include news from the AWM, our sister organisation in America (particularly because they are very active and well organised). It was mooted that we could start to include some mathematical content too, for instance book reviews (perhaps of books with female authors) and/or reviews of gender and Maths education research. It is not, however, altogether clear who would step up to provide such content. Apparently, the AWM newsletter contains such material and we could look there for ideas.

Some suggestions concerning the website were also mentioned. It was asked whether it would be possible to host individual country pages, where information could be given about local events in the language of the country. The answer is yes, there is already one page per country on EWM website. Another suggestion was to collect personal testimonies from EWM members about why they joined EWM and what they think it is good for. This was in response to the question, "I am a country coordinator. How do I encourage more women from my country to join, when they can't see what EWM is good for?"

The bulk of the discussion concerned the future direction and activities of EWM. Some groups reported very specific actions that could be taken, others more like wish-lists, still others reported discussions about problems women still face that they would like to see the EWM address somehow. The more concrete suggestions were as follows:

- Keep organising summer schools, with Romania as a possible venue for the next one.
- Join some of the EWM general meetings up with the ECM (as has also been suggested in previous email communication within the standing committee and in an email discussion on the mailing list). This could start in Berlin in 2016.
- Try to organize the next EWM general meeting in 2015 in CIRM Luminy.
- Host one-day mathematical events on various topics.
- Try to organise special sessions for women in Maths inside semester-long programs at places such as the Mittag-Leffler Institute, or the Isaac Newton Institute (although it is not altogether clear how the EWM could go about achieving this).

- Reinststate a mentoring program for young women.
- More broadly, host workshops on grant applications and/or job application skills.
- Write short articles on EWM to appear in the newsletters of the various national mathematical societies. Keep on top of how often they appear, make sure it is quite regularly. Generally, advertise as often and as widely as possible, making sure to advertise the mathematical content of meetings and the fact that males are very welcome to join the talks.
- In our meetings, perhaps have short presentations on making more of national differences. This wouldn't only have to be at international meetings - the example was given of a speaker from the UK addressing a German national meeting on this topic.
- Make more meaningful and deep connections to national/local women in mathematics organisations. Where none exists, somehow help women in these countries to approach their national mathematical society with the aim of at least setting up a women in maths committee within the wider organisation. Hopefully these national organisations would also promote membership of EWM.
- Make nice t-shirts, cut to fit women! Then our members might wear them to conferences – more advertising.

Two big wishes for the future also came up. The first was the EWM takes a more active lobbying role, both in Europe as a whole and in the member countries. The inspiration here is the activity of *femmes & mathématiques* in France. One precondition of such activity would seem to be increased membership, as the bigger we are, the more seriously we can expect to be taken. One immediate area for lobbying work is in contacting conference organisers to ensure that they are giving sufficient space to women speakers. If they claim not to be able to find any, they can be directed to the EMS women in maths scientific committee. On top of this, it would be good to be able to lobby the EU directly on issues that concern women mathematicians. For that, more data collection is probably necessary.

The second big idea is to have a fundraising effort made in order to be able to award small grants. The pay-offs if such a scheme would become possible are clear: increased membership, direct help available for women particularly from countries with low salaries and low prospects. However, it would require an enormous amount of work, both in identifying and applying for available pots of money, and in the subsequent administration. The applications could be made both nationally and internationally and to public and private sources. It would certainly require a dedicated group within the standing committee to go after all available avenues of funding. To summarise, difficult, but probably worth doing.

Finally, interestingly, we had one group made up entirely of non-Europeans: two Indians and one woman each from Japan, Korea and China. They reported a desire to form an Asian women in mathematics society. They also told of the low proportion of women mathematicians across Asia and mentioned some possible societal reasons for this fact. One of the Indian women is also a member of EWM, she joined after a conference organised by EWM. The 2010 ICWM in Hyderabad (see newsletter 17, which can be found on the website, for a report), inspired a women in maths conference to be organised in India. It was reported by our Japanese colleague that she heard no news in Japan about the ICWM, despite extensive coverage of the ICM. So again, a call for more advertising was made. She also related her experiences of organising a weekly women in maths lunch at her university, which makes the women staff and students feel very comfortable, but does sometimes lead to awkwardness with male students. Perhaps these kinds of small local actions could also be advertised, through the newsletter of website?

On Wednesday morning, the first talk was given by Helena Mihaljevic-Brandt and Lucia Santamaria, from Zentralblatt MATH (<http://zbmath.org/>). They first introduced their organisation, then gave us a fascinating overview of research that they have recently undertaken to analyse scholarly publication data in connection with womens' careers in mathematics. (They have also contributed a short article about this research for the EWM newsletter.) The second talk of the morning was by Frank Kiefer and Nike Alkema from DFG, the German research funding body. They talked about the equal opportunities policy at DFG.

Tamar Ziegler finished the morning session with the third of her EMS lectures. This one had a somewhat different topic to the first two, namely, the Moebius randomness principle. The Moebius function is one of the most important arithmetic functions. The function assigns one of the three values $\{-1, 0, 1\}$ to each integer, depending on its prime factorisation. There is a somewhat vague but well-known principle concerning the randomness of the Moebius function, which states that the Moebius function ought to be orthogonal to any "structured" sequence. Tamar gave us an overview of recent work towards Sarnak's conjecture which states that the correct definition of "structured" here is any sequence arising from a deterministic dynamical system.

Wednesday afternoon was taken up with the excursion, first to a restaurant on the banks of the Rhine, then a boat trip and a train ride to Drachenfels, and finally a guided tour around Schloss Drachenburg. The weather was beautiful and a good time was had by all...



Tamar Ziegler



Fioralba Cakoni, Marie-Francoise Roy and Colette Guillopé



Some of the participants admiring the views over the Rhine from the top of Drachenfels



Socialising in the garden of Schloss Drachenburg

Thursday was a full conference day, starting with the instructive chalk talk of Mei Min Wang (Université Paris -Sud, France) on Nonlinear Fourier series and applications to PDE and ending with the lively and pleasant conference dinner. Note that also several researchers from the HCM or Bonn University (including male ones) attended the plenary talks at this meeting.

During the lunch break on Thursday, there was a poster session. Several very interesting posters were displayed, by Makharadye Dali, Galina Filipuk, Yukari Ito, Sanja Rapajić, Nino Rokva, Budi Nurani Ruchjana and Dorothea Strauer.



Yukari Ito, from Nagoya University, with her colourful poster



Discussions at the poster session

After lunch, came the general assembly meeting. The minutes of the meeting are included below, but some of the topics that were discussed seem worth writing up in slightly more detail. First of all, the convenor gave us a report on the activities of the EWM since the last general meeting and a financial report. There was a short discussion on the need to increase the proportion of members paying their fees. The number of members who have paid fees in 2013 directly to EWM is higher than in the two previous years (90 against less than 60 previously), but this number (which represents about a third of the total number of EWM members) could obviously also be better. In Germany, where the local branch of EWM collects fees, they have had some success with using standing orders directly to the EWM bank account. Perhaps something similar could be done elsewhere? Also, it was decided that the standing committee would investigate the possibility of bundling EWM memberships with either national mathematical societies and/or the EMS. Colette Guillopé raised the issue of the difficulty of raising EWM fees in France because most active women are already part of *femmes et mathématiques*. It was agreed that further discussion is needed around this issue.

After this discussion came the election of the new convenor, new deputy convenor and several members of the standing committee. The statement of Susanna Terracini (the new EWM convenor) is covered in detail elsewhere in this issue, but let us just mention that she gave a very nice presentation to the meeting where she explained how she came to be active in EWM and her hopes that we can come together to begin to solve the very difficult problem of how to change the environment we all work in. She also told us a little about Angela Pistoia, who was elected as the new deputy convenor. Unfortunately, Angela couldn't be present at the general meeting, as she was organising another conference at the same time. We heard how she has been active in local women in mathematics organisation in Italy for some time and how she is very keen to work closely with Susanna. Angela Pistoia takes over the position of deputy convenor from Lisbeth Fajstrup, who has carried out an enthusiastic and fervent activity in this respect.

Another topic which was discussed was the EWM-EMS scientific committee. The committee has mainly concerned itself with selecting the speakers for the satellite meeting organised in Krakow and the speakers for the Bonn general meeting, as well as making suggestions for EMS 2013 lecturer and the Emmy Noether ICM 2014 lectures. However, the original idea behind the scientific committee was wider than this. The committee should also aim to increase the proportion of women speakers at big conferences which are not organised by EWM, by approaching the organising committees to ensure women are chosen to speak. It was noted that this would be quite a lot of work and also that it might already be too late once the lists of speakers are published for any given event. In that case, it was argued, the committee should do more complaining about it afterwards. We should make a poster for the EWM which contains the information that the scientific committee exists to help conference organisers find appropriate women speakers. That way, we would hear less of the excuse, "but we couldn't find any women". It was also noted that it would be better if more members of the scientific committee would attend the events that they choose speakers for, so that they can see the outcome of their choices.

An exciting part of the meeting was given by the messages from international representatives (of other organizations) of women in math: AWMA - the African Women in Mathematics Society which was founded in August 2013, the Indian and the Indonesian community.

Last but not least, the participants at the general assembly gave a huge round of applause to Marie-Francoise Roy, who has been our very successful EWM convenor for the last four years.

After the general meeting was concluded, the final session of the day was a discussion on excellence schemes and how they are impacting women's careers. The discussion was raised by Sylvie Paycha, who sent a questionnaire to the EWM mailing list a few months ago, regarding excellence grants at national levels. The basic question up for discussion was whether women benefit or suffer from the profusion of excellence schemes now being offered by many funding bodies. Sylvie Paycha detailed a few answers to the questionnaire which were received from 11 participants from 8 countries. Susanna Terracini prepared a few slides on data related to excellence schemes from the European Research Council (ERC), which showed that for starting grants in all domains funded, the proportion of women evaluated was 30% and funded was 25%. The success rate for women obtaining starting grants is 8%, whereas for men it is 10%. For the advanced grants, 15% of women were evaluated and 13% were funded. The success rate was again 8% for women, compared with 11% for men. Two problems were identified: women not applying and evaluators not promoting women. Data on women in editorial boards of top journals in Mathematics was also presented by Susanna Terracini. The situation in this case is critical as well, proportions ranging from 0% to 20%.

As mentioned above, the discussion on excellence schemes followed a questionnaire that was sent out prior to the meeting. Here is a summary of the eleven answers received:

Pros for both women and men

- Encourages collaboration
- Enhances the quality of research
- Serves as an incentive

- Provides funding

Cons for both women and men

- Low rate of success (concentration of financial support)
- Small universities and small countries are disadvantaged
- Involves a lot of administration, organisation and paperwork (which we are not trained to do)
- Too few sources of funding leaves out many people

Pros for women specifically

- Promotion of women is sometimes part of the requirements

Cons for women specifically

- Even lower rate of success
- Low rate of application (women tend to withdraw when competition gets intense)
- Difficulty in fulfilling the requirements due to factors such as family constraints (vicious circle)

Some suggestions of what can be done to address the problems identified are to use our EWM network to encourage more women to make applications and also to match some of the EWM projects with excellence type projects.

The final morning of the conference consisted of two plenary talks, the first by Michela Procesi and the second by Tanja Eisner. Michela Procesi works as a researcher at the University of Rome "La Sapienza", where she holds an ERC starting grant to research, amongst other topics, KAM theory and wave equations. Tanja Eisner is a Professor at the University of Leipzig, where her main research topic is Ergodic Theory. Both talks were extremely well presented and very interesting, a fitting end to a week filled with very high quality mathematics and stimulating discussions.

By Sara Munday and Elena Resmerita

Minutes of the meeting

1. Welcome from the EWM convenor, Marie-Françoise Roy. There are 38 participants, 31 of them are EWM members.
2. Situation of membership: 296 members (calculated via the website), 90 of whom have paid their fees in 2013 plus about 40 having paid in Germany. In 2011 and 2012, there were only 60 who paid their fees (not counting the German members), so this year the situation is better (due to payment being made easier on the website).
3.
 - (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: Dorothea Strauer, Germany.
4. Minutes of the previous General Assembly: the minutes of the General Assembly, held during the 15th General Meeting of EWM in Barcelona in September 2011, were approved.
5. Report of the convenor on past activities since the last General Meeting. A complete report has been given to the participants at the beginning of the present General Meeting. Marie-Françoise Roy gives the list of the different events of the 2011-2013 period. The report was approved by the General Assembly.
 - (i) EWM Meetings:
 - 25th anniversary in Barcelona in 2011.
 - Meeting in Krakow in 2012, 80 people attended,
 - Panel discussion in ECM meeting in Krakow: about 30 people attended.
 - 30 young women were supported by two grants, one from Google and one from Foundation of Compositio Mathematica, to attend the EWM and the ECM meetings in Krakow, the administration of the grants was integrated into the ECM organisation.
 - (ii) Invitation of EWM by the Russian association for women in Science and Education: Sara Munday attended.
 - (iii) Summer school in Trieste: Susanna Terracini gave a short report, including that there were 80 participants from 34 countries. See the appendix for a more detailed report.

(iv) Creation of the African Women in Mathematics Association (AWMA) in July 2013, in the presence of Marie-Françoise Roy (in particular, this was made possible after the participation of Marie-Françoise Ouedraogo, first president of AWMA, in the EWM General Assembly in Barcelona).

(v) Website: a new one was established in 2012, this was made possible in particular due to the efforts of Marie-Françoise in collecting enough funds to have the website designed by a professional, and by the work of Olga Lukina, Lisbeth Fajstrup and the secretarial help from her university in Aalborg.

6. Financial reports: Marie-Françoise presented the EWM Financial Report for the period September 2011 – August 2013, 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.

7. Election of members of the standing committee: Dorothy Buck and Marie-Françoise Roy are finishing their term and are not candidates for a new term. Lisbeth Fajstrup (Denmark), Syvie Paycha (Germany and France) and Sanja Rapajic (Serbia) are candidates for renewal. There are two new candidates, Chiara Simeoni and Angela Pistoia (both from Italy). The other members have been elected in 2011 for 4 years: Camilla Hollanti (Finland), Olga Lukina (now in United States), Sara Munday (Great Britain), Elena Resmerita (Austria), Susanna Terracini (Italy), Daniela Velichova (Slovakia), Corinna Ulcigrai (Great Britain). This makes a complete standing committee of 12 members. Marie-Françoise Roy (France) and Anca Croitoru (Romania) are proposed as « EWM volunteers » by the General Assembly.

Susanna Terracini is candidate for convenor, and there is no other candidate. She is elected by the General Assembly by an unanimous vote (31 favorable votes). Susanna is enthusiastically congratulated by the General Assembly for taking on this responsibility.

Unanimous vote for the standing committee.

Unanimous Vote for the Deputy Convenor: Angela Pistoia.

8. Regional coordinators: 26 countries have coordinators, 14 are active (see their report in the appendix). 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.

9. Unanimous vote for the fees to remain the same: low fee, 5 euros; normal fee, 20 euros; high fee, 50 euros. Members are free to choose the rate appropriate to their circumstances and country. The General Assembly agreed for the standing committee to explore and lead the negotiations for membership in common with other associations, such as the EMS and/or the national associations, together with a reduced fee (to be determined).

10. Links with international associations or committees, Newsletter, mailing list, website.

(i) Link with EMS: Caroline Series is the chair of the Women committee of EMS. Very good contact with EWM.

The joint scientific committee of EWM and EMS is chaired by Isabelle Gallagher, France. Its role is to select the speakers for the General Meeting, make suggestions for the EMS Lectures, and for the ICM Noether Lecture. A discussion develops about the role that EWM or the scientific EWM-EMS committee might have: finding women for big mathematical meetings, for example; to send letter of protest when we find out that there are not enough women among the main lecturers in international conferences; to make this committee better known, to avoid the excuse that organisers can't find women speakers. It was also suggested by Susanna Terracini that more members of the scientific committee should be encouraged to attend the talks they choose speakers for.

(ii) A link with ICWM (International Conference of Women Mathematicians) was established during the ICM 2010 in Hyderabad (India) and will continue for the ICM meeting in Seoul (Korea), in August 2014. Caroline Series and Susanna Terracini are

members of its Scientific Organizing Committee. It was noted that the ICWM should not be the only way women participate in the ICM, there should be women speakers at the main meeting also.

(iii) Olga and Marie-Françoise agreed to continue their responsibility for the website.

(iv) Newsletter: Elena Resmerita and Sara Munday agreed to continue as editors of the EWM newsletter. Appreciation was expressed for the very high quality of their work as editors.

(v) Katrin Leschke accepted to take over responsibility for the mailing list EWM-ALL (about 400 members).

11. Reports and documents on EWM General Meeting in Bonn are to be made available on the website.

12. Participants representing non-European countries are invited to present their association or the situation in their country.

(i) The African Women in Mathematics Association, by Joséphine Guidy Wandja (Ivory Coast) and Yirgalem Tsegaye Kifle (Ethiopia), both vice-presidents, who participated in the creation in July 2013 of this association.

(ii) India, by Manjusha Majumdar Tarafdar. Two meetings have been organised for women mathematicians (in Hyderabad in 2010 before the ICM meeting, and in Chennai in 2012).

(iii) Indonesia, by Budi Nurani Ruchjana who is the president of the Indonesia Mathematical Society.

13. (i) Auditors. The current auditor and accountant will continue their duties.

(ii) Secretary: EWM does not have a secretary, though there is a need for one. The new convenor might be able to find some help in this regard.

14. Next General Meeting, in 2015, will most likely be held in CIRM, in Luminy, near Marseille. This is awaiting formal approval, but is very likely. We are hoping to obtain a partial financial support for participants to the meeting. Some possible dates are either September 14-18, or September, 21-25, or a later date in the autumn.

15. Future activities:

(i) Summer school in Mittag-Leffler Institute (Sweden), joint EMS-EWM, every two years, for a group of 20 mathematicians: Apollonian Circle Packings is the topic selected in 2014. Soon, there will be a call for the next one, which will take place in 2016. These summer schools are meant to be for a smaller group of participants who are already active in the research area of the school. A larger summer school, in the style of the one at ICTP, could be organised in 2015 in Romania.

(ii) General Meetings: every 2 years, one every 4 years will be during the ECM meeting (next General Meeting in 2015 and the one after, in 2016 during a satellite EWM conference of the ECM meeting in Berlin, Germany).

16. Thanks and conclusions. Marie-Françoise Roy thanked everyone, especially the members of the standing committee, for the work which has been done for EWM, and wished good luck to Susanna Terracini as convenor. The General Assembly also thanked very warmly Marie-Françoise Roy for her actions as convenor for the past 4 years and wished that she will continue to help developing EWM in the future, as a respected resource person advising the convenors and the standing committee.

By Colette Guillopé and Sara Munday

Statement of Susanna Terracini

In addition to encouraging women to study mathematics and supporting their initiative and careers, EWM should try to strengthen the specific actions of encouragement and support to women who compete for leadership positions in mathematics. Indeed, one has the clear impression that the situation of women's careers in Europe is still far from being satisfactory. We see few women in top positions, in top institutions, as principal grantees of national and international research funds, in the editorial board of top scientific journals.

As a first step, a close monitoring of women's share in top positions and its evolution in time should be in order, including data collection and reports on gender distribution in the top positions in the countries. Moreover, we should try to give the successful women the best possible visibility in order to encourage more women to take more scientific and professional responsibilities.

On the other hand, EWM should keep trying to elaborate different, more inclusive, views on the academic competition and propose ways adaptive to women's needs and evaluation criteria tolerant towards unconventional careers. I personally see academic sisterhood as a key mechanism to improve the gender unbalance in the scientific environment.

As a scientific society, EWM should continue the organization of events, in order to keep and strengthen its visibility and credibility within the mathematical community. I propose to maintain EWM General assembly every other year, on the occasion of a general EWM meeting every four years and of a satellite women conference to the EMS congress (e.g. in Krakow 2012) in between.

We should do our best to keep organizing the EWM summer schools in both declinations: the small, focused events, specifically tailored for those already working in the field (e.g. the Mittal-Leffler summer school in 2014); and the larger schools, designed for a wider, less specialized audience, and possibly involving extra European women associations (e.g. the ICTP summer school in 2013). Finally, we should also push for the organization of more local and focused events (e.g. Women in number theory, Young women in PDE's, Women in topology, Algebraic Combinatorixx, Incontri delle donne del laplaciano).

A very important aspect of EWM life concerns the funding of the activities. Obviously, we need to keep and enhance fundraising from private institutions (e.g. Compositio Foundation, Google). In addition, the collection of annual registration fees could be improved, first by making an effort to have our members pay their fees every year, but also through specific agreements with the European and national mathematical societies, which could include registration to EWM into a package.

Finally, we should keep collaborating with other women mathematical societies, by organizing joint meetings, summer schools and workshops. To this end, we should reinforce our collaboration with EMS, EMS-WIM, but also with the national mathematical associations and involve the former in data collection about gender balance and discussions.

The agenda is full of commitments and will require much effort from the whole association. Fortunately, we can rely on the experience and efficiency of the standing committee. I hope the national coordinators will be active in organizing local EWM events and in collecting data. I am very happy that Angela Pistoia has agreed to be a candidate for deputy convenor.

List of participants to the EWM General Assembly

Daria Apushkinskaya (Germany)	Sanja Kostadinova (Macedonia)	Budi Nurani Ruchjana (Indonesia)
Karin Baur (Austria)	Olga Lukina (USA)	Anju Saini (India)
Andrea Blunck (Germany)	Dali Makharadze (Georgia)	Lucia Santamaria (Germany)
Sema Coskun (Turkey)	Violeta Manevska (Macedonia)	Stanislava Skychko (Ukraine)
Anca Croitoru (Romania)	Helena Mihaljević-Brandt (Germany)	Dorothea Strauer (Germany)
Ioana Dragomirescu (Romania)	Sara Munday (UK)	Manjusha Tarafdar Majumdar (India)
Tanja Eisner (Germany)	Yuliya Namlyeyeva (Ukraine)	Susanna Terracini (Italy)
Barbara Fantechi (Italy)	Sylvie Paycha (France/Germany)	Alexandra Tkacenko (Moldova)
Elena Gavrilova (Bulgaria)	Irene Pieper-Seier (Germany)	Nabila Torki-Hamza (Tunisia)
Charu Goel (Germany/India)	Michela Procesi (Italy)	Yirgalem Tsegaye (Ethiopia)
Anna Grybos (Poland)	Sanja Rapajić (Serbia)	Tatiana Vasilyeva (Russia)
Joséphine Guidy Wandja (Ivory Coast)	Elena Resmerita (Austria)	Aneta Velkovska (Macedonia)
Colette Guillopé (France)	Marie-Françoise Roy (France)	Wei-Min Wang (France)

Data from Zentralblatt MATH

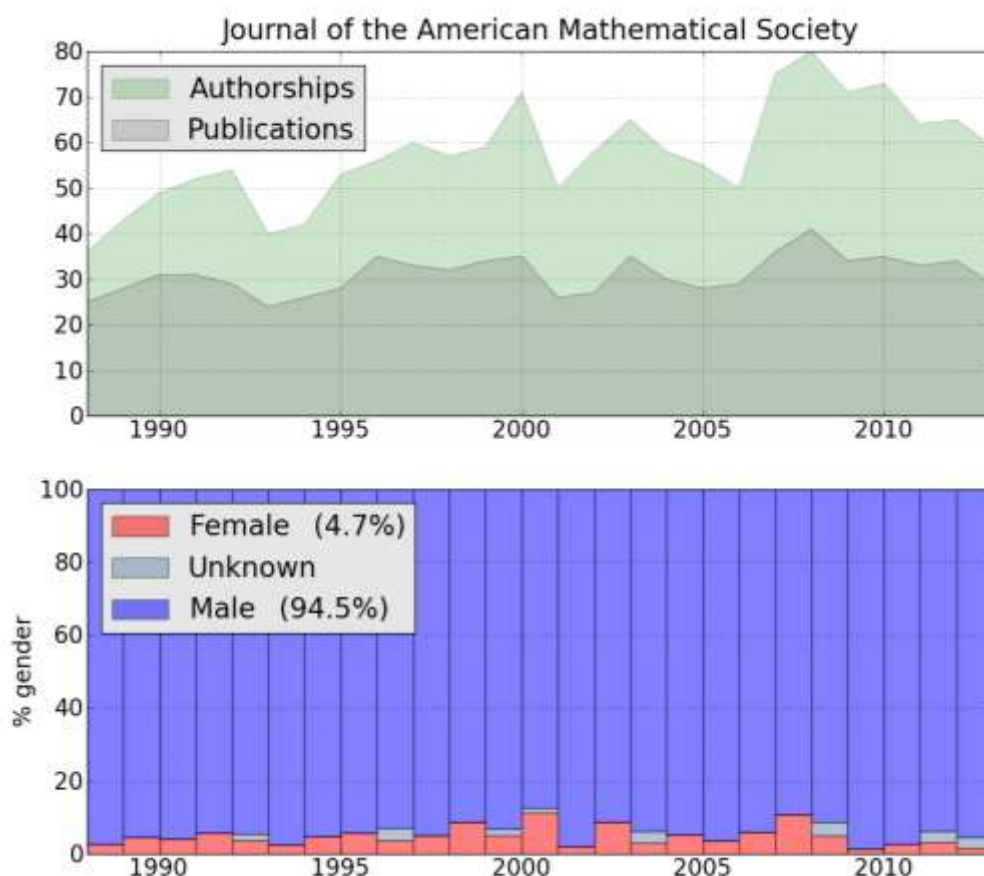
The gender gap in science and academia, and how to close it, has been a topic of interest for the last few decades. A large body of research is devoted to the demographics of STEM fields. While the number of women at the graduate and postgraduate level has increased significantly over that time, the high-ranked university positions are far from being equally distributed among men and women. For instance, the recent survey commissioned by the LMS shows that a mere 6% of all professors in mathematics departments at British universities are women.

Undoubtedly, a key factor in achieving and sustaining a successful academic career is a solid record of scholarly publications in the form of research papers. Several studies have thus looked at the differences in scientific output according to gender. As

editors of zbMATH, we wanted to contribute to the discourse by performing a quantitative analysis on a large body of bibliographic data. The database zbMATH, traditionally known as Zentralblatt MATH, comprises the largest metadata collection of publications in pure and applied mathematics reaching back to the 19th century. Currently, more than 3.2 million entries drawn from more than 3,000 journals and serials, and 170,000 books are indexed in the service.

As part of a plenary session on careers of women in mathematics at the 16th General meeting of the EWM in Bonn we gave a talk entitled, "Show me your data! What scholarly publication numbers can say about womens' careers in mathematics". Using zbMATH data, we addressed the following topics: the proportion of women authors in mathematics, the difference in the average scientific production (productivity puzzle), representation of women in particular subfields, and their presence as authors in the leading research journals. One of our goals was also to initiate a dialogue around the question of what community-based services like zbMATH can do to raise awareness of the contributions of women to mathematics and give them visibility.

Our presentation elicited the interest of the audience and lead to positive feedback and fruitful discussions. Possibly the most commented result of our study was the gender distribution of the authors in several top journals: with an average of less than 5% female authors, there is no noticeable increase when looking at data from the last few decades, as the figure below indicates.



We hope that our research contributes to raising awareness of the matter of the advancement of women in mathematics. Furthermore, we believe that our work provides an additional and significant source of data for further discussions on this and related topics.

Looking ahead, we look forward to refining our results while broadening our scope as part of an on-going research project. The slides of our talk at the EWM general meeting in Bonn can be found online at the URL:

http://www.zentralblatt-math.org/static/ewm/Presentation_EWM2013.pdf

Helena Mihaljevic-Brand

Lucia Santamaria

Zentralblatt MATH (zbMATH), FIZ Karlsruhe

Berlin

INTERVIEW: Marie-Françoise Roy

Marie-Françoise Roy was a student at Ecole Normale Supérieure de Jeunes Filles in Paris and received her habilitation in mathematics in 1981. She became Professor in Rennes in 1985, after being assistant then associate professor at University Paris Nord, and University of Niamey, Niger (1981-1983).

She served as president of the Commission of CNRS for mathematics from 1991 to 1995, and was director of Institut de Recherches Mathématique de Rennes from 2001 to 2004. From 2007 to the end of 2013 Roy was scientific advisor for mathematics in sub-Saharan Africa at CIMPA/ICPAM. Roy was President of the Société Mathématique de France from 2004 to 2007 and coordinator of Mathématiques à Venir/The future of Mathematics in 2009. A member of the steering committee of the

Newton Institute from 2009 to 2013, she serves on several editorial boards.

First President of Femmes et Mathématiques from 1987 to 1989, she has been convenor of European Women in Mathematics from 2009 to 2013. She founded Tarbiyya Tatali, a network of associations in Niger and France helping the self-development of the people of Niger, in 1997: www.tarbiyya-tatali.org

She was awarded the Prix Irene Joliot Curie in 2004 (recognition mention) and became Chevalier de la Légion d'Honneur in 2009.

Roy's mathematical work and interest is focused on real algebraic geometry, and algorithms. She initiated the Mathematics Algorithms and Proofs international research group. Her major research contributions have been concentrated on the study of the real



spectrum of a ring and on the complexity of algorithms in real algebraic geometry (quantifier elimination, deciding connectivity, degree bounds for Hilbert 17th problem).

Marie-Françoise married Michel Coste in 1971. They have two children Denis (boy) and Elise (girl) born in 1974 and 1976, and two grandsons Pierre and Alexandre (12 and 10 years old).

EWM: You have been EWM convenor from the beginning of 2010 until the 2013 general meeting in Bonn. What do you think have been your major achievements?

MF: I do not think of EWM achievements in this period as my personal achievements, even if it is clear that I put my personal touch and have to acknowledge I worked very hard. But EWM is a collective enterprise. The standing committee and the national coordinators play a key role in all our activities. I want to mention particularly the constant support of Lisbeth Fajstrup who was a wonderful deputy convenor and a dear friend, of Olga Lukina for the website and email list, of Sara Munday and Elena Resmerita for the newsletter and editing of reports. Frances Kirwan helped me a lot when I started, especially by remaining the main organiser of the general meeting in, which enabled

me to concentrate on the renewal of the website. Also, Camilla Hollanti is constantly available for financial matters. I contacted Susanna Terracini before Barcelona and she agreed to join the standing committee and to get ready for becoming convenor after me. It was reassuring to know that EWM would be in good hands. These are the names that first come to mind but there are of course many more people involved.

In my opinion, EWM achievements in the period are the following:

We organized successfully our two general meetings in CRM Barcelona and HCM Bonn. It is not so easy to organize general purpose meetings, which are not scientifically focused, especially when it comes to funding. I particularly liked the meeting in Bonn, maybe because I was more involved. The relevant information is included in another part of this newsletter. I want to mention the

superb support we got from the administrative staff in HCM Bonn.

We had two beautiful summer schools, one in Leiden and one in ICTP Trieste. What is wonderful in these summer schools is that young mathematicians do the main organisational work. I would like to give a special mention to Janne Kool and Chiara Simeonni for their efforts in this regard. Susanna Terracini had proposed a successful scheme for the school at ICTP: there was a call for mathematical topics and four were chosen out of about fifteen. Moreover, at ICTP, we had many participants from all over the world. Again details are to be found in the relevant newsletter.

We had a lot of activities at ECM Krakow: a satellite meeting with survey talks, a round table, the funding for the participation of more than 30 young women mathematicians from eastern countries, a visit to Google's lab. It

was so wonderful to work with Anna Grybos on that. At some point I was ready to give up since the invited lecturers seemed to be refusing one after the other but Anna convinced me to go on and a few days later we had a complete list of first class lecturers.

Last but not least, we adopted a new logo and modernized our website with the help of a professional.

EWM: Who are the EWM main partners?

MF: Our main partner is EMS. The relationship with them is excellent and has many facets: the joint EMS EWM scientific committee selecting the speakers at our events, our continuous cooperation with the women in mathematics committee of the EMS, our presence at ECM Krakow as organiser of a satellite event and as co-organisers of a round table, our support to their grant system at ECM Kralow, thanks to the money we obtained from compositio and Google for young women mathematicians from the east, EMS support to our general meeting by nominating a woman as EMS lecturer when we have our general meeting.

Other natural partners would be other "women in mathematics" organisations outside Europe and we do have occasional contacts, but nothing much structured. The ICWM meeting in Seoul in 2014 might improve this situation.

EWM: You played a key role in the launching of the African Women in Mathematics Association, how is this connected with your responsibility at EWM?

MF: It was part of my intentions to help organize women in mathematics in Africa, a continent with which I have very special links, since my stay in Niger from 1981 to 1983 with my family; but the success was beyond my expectations.

AWMA was launched at AIMS South Africa this summer after a preliminary meeting in Burkina Faso!

EWM played a key role in two ways. By inviting Marie-Françoise Ouedraogo to Barcelona, we were able to help her design a strategy for her future activities. Moreover the EWM statutes were instrumental in the write up of AWMA constitution. Of course, other institutions also helped, among them CIMPA, IMU, EMS CDC, ICTP, LMS, UEMOA etc.

EWM: Do you have any regrets?

MF: One regret is that I was not able to push further the project of an EWM foundation.

In order to have success in getting money from companies, we need people with a good list of contacts and who work very hard. We do not have that currently.

A more personal regret is that I did not attend the meeting in Hyderabad, because of lack of funding. I hope to go to Seoul next year.

EWM: What are the challenges you had to deal with?

MF: The first challenge is the lack of money. EWM is really very poor. A little less so now compared to when I arrived, and we did spend a lot in the period, particularly for the new website.

A second challenge is the fact there is nearly no secretarial support.

A third challenge is that the list of members did not exist and I had to work to reconstitute it from partial data. As EWM volunteer I offered Susanna to go on working on that.

A fourth challenge, very recent, is that the servers hosting our new website crashed (after a malevolent attack) and there is no recent

backup. There will be plenty of work to reconstitute all the information.

EWM: In terms of mathematical research, did you benefit from your EWM activities?

MF: Strangely and unexpectedly, yes. One thing I always appreciated in EWM meetings is the general cultural benefits from attending excellent lectures which are not in my specialized area of expertise. But I also benefited in several personal research projects. A first example: when I visited Lisbeth in Aalborg with Olga, to work on EWM website, I gave a colloquium style talk on certificates of positivity and one of her colleagues appreciated it a lot and wrote to me after that, we have now a research project together, including a six months visit in Rennes of a postdoc! A second example: in Bonn I realized that Wei Min Wang, who is a specialist in PDE is using techniques from semi-algebraic geometry and we plan to discuss more.

EWM: At the beginning of 2010, when you started your responsibility as EWM convenor, you said that your main research project is the complexity of Hilbert's 17th problem. Can you remind us of the problem and tell us if you made any progress?

MF: The problem is the following: if a polynomial is positive, how can one express it efficiently as a sum of squares of rational functions? The initial beautiful proof by Artin that there exists a sum of squares was not effective at all and how to construct the sums of squares is a big challenge.

I am very happy to report that we (myself and my coauthors Henri Lombardi and Daniel Perrucci) have made enormous progress on this project in the last three years, and are finishing a very long paper of 85

pages to be posted soon on arxiv, and submitted for publication.

The result we obtain is rather amazing, we prove that the degree of the sum of squares are bounded by a tower of exponentials of height five, while previously bounds on degrees were primitive recursive.

More information on my recent mathematical work can be found on my webpage: <http://perso.univ-rennes1.fr/marie-francoise.roy/>

EWM: And what about your family life in the period?

My husband, also a mathematician, always supported my activities, and EWM was no exception. My two children are grown up and my two grand children are kids (11 and 9). We see them for long periods over summer, and the very active preparation of the Bonn meeting did not prevent me from being a happy grandmother in August 2013!

EWM: Do you have any recommendations for the future of EWM?

The recommendations I had in mind were discussed by the standing

committee before Bonn and were approved by the general assembly. I think it is not easy to organise our general meeting and it is important to make closer links with EMS, so I proposed that we hold our general meeting during ECM and have a full independent general meeting only once every four years. This was approved and I do not have any other specific recommendations.

INTERVIEW: Susanna Terracini

Susanna Terracini obtained her PhD degree at SISSA (Trieste) in 1990. From 1992 to 2001 she was associate professor of Mathematical Analysis. She is a full Professor at the University of Milano Bicocca since 2001. She is the author of about 85 papers, published in major international mathematical journals and is on the editorial board of a number of national and international journals. She has been invited to speak at many Italian and foreign institutions such as MSRI, School of Mathematics in Minneapolis, Paris VI and IX, the Paris Astronomic Observatory, the Courant Institute in New York, Winsconsin University at Madison, Rutgers University, CMAF in Lisbon and EPF in Lausanne. She was invited as a plenary speaker to

many international conferences, notably to the Equadiff2003 meeting, the IV and V International Meeting on Celestial Mechanics 2004-2006, the Jean Leray Centennial Conference in 2006, the XIV Rivière-Fabes Symposium, the XIX Congresso dell'Unione Matematica Italiana and the 9th AIMS Conference on Dynamical Systems, Differential Equations and Applications in 2012. She was awarded the C. Vinti prize in 2003 and the B. Finzi prize in 2007. She is the principal investigator of the Research Project of National Interest (PRIN2009) project Critical Point Theory and Perturbative Methods for Nonlinear Differential Equations. She is the principal investigator of the ERC Advanced



Grant No 339958 - COMPAT, Complex Patterns for Strongly Interacting Dynamical Systems. Her joint paper with D.L. Ferrario "On the Existence of Collisionless Equivariant Minimizers for the Classical n -body Problem" published in *Inv. Math.* was selected as "featured review" on *Math Reviews*.

EWM: How did you decide to become a mathematician?

ST: I was unsure of what I wanted to study to begin with, I wanted something scientific, but didn't know whether to choose mathematics, engineering or agriculture. So I went to some courses and there had the personal feeling that maths was for me. So it was not, so to speak, a vocation, rather a discovery that I

really enjoyed studying mathematics. It was not always easy to understand, but the effort was enjoyable and it still is.

EWM: Can you describe your career steps? The system now in Italy for becoming a professor seems to be tough, how did it happen for you?

ST: The system has changed over time, becoming harder. I obtained

my PhD at SISSA in Trieste, which was a great boost, as in this time the doctoral programs in Italy really were not working at all. Except at SISSA in Trieste, and in few other institutions, such as Scuola Normale in Pisa, the culture was much different. There were many positions available when I finished and I got a permanent position very soon. Next I passed national and local

competitions and I got a full professorship in 2002. I have been very lucky!

Full professors, especially the subset of very powerful ones, are usually men in Italy. At some crucial times in my career, I feel my opinions within my past department have not been considered properly, or even at all. Decisions are made in a very hierarchical way, by a small group of male professors. This is why I changed institution several times. My present Department in Torino has a large majority of women full professors holding all the top positions. We'll see...

EWM: Can you describe your main areas of research and your main contributions to these areas?

ST: My research interests include different directions in the field of nonlinear analysis with application to the variational approach to chaotic and complex trajectories in Hamiltonian dynamical systems, especially in celestial mechanics and pattern formation mechanisms for nonlinear reaction diffusion and Schroedinger systems.

EWM: Do you feel you have achieved a good work/life balance?

ST: My husband is also a mathematician, in a neighbouring field, and we have only one child.

When he was young, it was more difficult for travelling and so on, but we had the opportunity of traveling all together. Italian universities are not well organised for childcare, it is difficult to find good public childcare. Usually, people would rely on grandparents, but of course this is not possible with the mobility of modern careers. The general trend for non-permanent positions is very bad for the whole mathematical community, but particularly for women. Personally, I always feel at some debt, either to my son, or my husband, or work, or my students, always running from one to the other.

INTERVIEW: Tamar Ziegler

Tamar Ziegler obtained her PhD in 2003 from the Hebrew University in Jerusalem. She worked for several years in the United States, first at Ohio State University, then at the Institute for Advanced Study in Princeton and the University of Michigan. In 2007 she was appointed as a senior lecturer at Technion (Israel Institute of Technology), spent last year as a visiting professor at Stanford, and is now a full professor at Technion. She

is currently on leave from Technion and is a professor at the Hebrew University. She has been awarded several honours and prizes, including the Erdős Prize in Mathematics in 2011 and the EMS lecturer of the year in 2013. Part of the duties associated to this EMS position were the series of three lectures delivered to the EWM general meeting. Her current research interests are in structures related to the



phenomenon of multiple recurrence in ergodic theory and applications of ergodic theory to combinatorical number theory.

EWM: What does it take, in your opinion, for a person to become a successful researcher in Mathematics?

TZ: It is hard to say, but includes a good education, hard work, persistence, luck.

EWM: How much time does it take you on average to develop an idea into a full publication, in parallel with your other duties?

TZ: It really depends on the paper - it can take anything between a few months to a few years.

EWM: Women mathematicians may tend sometimes to quit following an academic track, for various reasons. Have you ever thought of quitting?

TZ: I thought of quitting several times. First time was during my PhD - I just had my second child, my spouse had made great progress on his PhD and it was clear that he was going to finish within a year or so, and I felt that my PhD was going nowhere. But then shortly after the end of my maternity leave I had a breakthrough. I played with the idea of quitting several other times throughout my career. I was lucky to

have very supportive spouse and parents, and they never let me consider it seriously.

EWM: During the lecture series given at the EWM meeting in Bonn, the interest of the audience was aroused partly by the dynamic and convincing style of your presentations. Do you have some tips for young mathematicians for giving a good talk?

TZ: It is very tempting to direct the talk to the few experts in your field, since it is them you wish to impress, but then you lose everybody else. I

still make this mistake sometimes. It is also very important not to go overtime - even if what you are saying is very interesting, people lose patience. I usually write down the entire talk beforehand - the number of pages gives me a very good estimate for how long it will take. For general audience talks, my general guideline is that my talk is in the way between the audience and their cafe and croissant. My best advice for these talks is to prepare the talk well in advance and to let someone not from your field look at it beforehand.

EWM: We would like to know about your family, how do you manage as a very busy mother?

TZ: Many times I feel that I don't. The most difficult thing is to find long stretches of time when you don't need to worry about the kids. What works well for me is that my spouse and I split the week into "responsibility days". If it's your day then you are responsible for all kid issues - if one of the kids is sick, forgot his lunch, etc., you need to take care of it and you don't bother your partner. On my free days I come back late and those days are guaranteed to be full working days.

EWM: What did you enjoy most at the EWM meeting in Bonn?

TZ: There were some very good talks. It was great to see that there are many young women in Europe

doing high quality Math. The EWM offered help with funding child care during the conference to one of the participants who brought her infant child with her - I think this is a great initiative, and perhaps other granting agencies will follow and include childcare as a recognized conference expense.

EWM: Do you find some time for hobbies?

TZ: No time for serious hobbies, but I do have time to do stuff I like - running on the beach, going on family hikes, reading, listening to music. Come to think of it - math is a serious hobby of mine and I get to do it a lot.

Situation of women in Mathematics/STEM in Germany

In 2011, about 13% of the professors of mathematics at German universities were female. This means that the percentage is (slowly) increasing. Among the non-professors (with mostly non-permanent jobs), the proportion is about 24%. It is interesting that among the students of mathematics there are almost 50% women, and there are even more if one looks at the students who study to become mathematics teachers. So there are a lot of women studying mathematics but only a few of them go on to a university career.

Christine Bessenrodt (Hannover) maintains a website with a map showing how many female professors there are at the mathematics departments at German universities:

<http://www.iazd.uni-hannover.de/~bessen/FiM/Deutschlandkarte.html>

Here one can see at a glance there are many mathematics departments with no female professors at all (14 out of 69).

According to the international and national lists, there are about 70 EWM members in Germany. Due to some events that took place during the last years, EWM in Germany is getting more and more active now. In particular, we have successfully re-established regular German EWM meetings.

After the meeting in Aachen (April 2011), organized mainly by Gabriele Nebe, Julia Hartmann and Eva Zerz (all from Aachen), in November 2012 a two-day meeting took place in Bielefeld with about 40 participants. The meeting was organized mainly by Barbara Gentz (Bielefeld). In addition the organizing committee consisted of Barbara Baumeister (Bielefeld), Christine Bessenrodt (Hannover), Andrea Blunck (Hamburg) and Evelyn Buckwar (Linz). The main speakers were Nina Gantert (München), Caroline Lasser (München), Sarah Rees (Newcastle) and Katrin Tent (Münster). Moreover, there were shorter presentations by female PhD students and postdocs, a poster session, a round table discussion, and, last but not least, social events like a joint dinner. More information and some photos can be found here:

<http://www.math.uni-bielefeld.de/~gentz/pages/WS12/EWM12.html>

Meanwhile we can already announce the next German EWM meeting: It will take place at the beginning of May 2015 at Schloss Rauschholzhausen, a castle near Marburg, and will be organized by Ilka Agricola and Dorothea Strauer (both from Marburg).

*Andrea Blunck
Hamburg University, Germany*

Situation of women in Mathematics/STEM in Italy

The Italian mathematical community is made up of approximately three thousand mathematicians, who are employed as researchers, associate professors and full professors in Italian universities, plus a consistent number of young people in various post-doctoral positions. According to the various areas of research, they are divided into seven sectors, which are called MAT 01 to 09 and SECS-S06, respectively devoted to logic, algebra, geometry, complementary mathematics, analysis, probability and statistics, physical mathematics, numerical analysis, operational research, mathematical methods for economics, actuarial and financial sciences.

As in a report of 2011, below we have described the precise situation as of August 2013 with histograms.

A comparison of the data for 2011 and 2013 did not show any great difference. We can say that cuts in research and universities have led to a reduction in the workforce and, in particular, in the number of female staff. Even now we observe the existence of the glass ceiling; the so-called "pipeline shrinkage" is quite clear. Only around twenty per cent of Italian full professors in mathematics are women, even though more than half of the graduates in mathematics are women. The Minister for University and Research has pointed out very clearly that women are doing very well in Italy in all degree courses in scientific areas. Of course this does not mean that things are going to be easy in the future. But at least in the Italian governance of mathematics, women steadily enter in the control room. As regards the Italian Association of Mathematics Applied to Economic and Social Sciences (AMASES) only two members are women, the Vice-President and Secretary. We strongly believe that more work has to be done in this direction, but things are actually changing as far as the glass ceiling is concerned.

As we pointed out in a similar report in 2011, there are organizations in Italy who take care of the Italian mathematicians: the Italian Mathematical Union (UMI) and the National Institute for Advanced Mathematics (INdAM). Both have a President, a Vice President and a Scientific Committee. UMI is the Italian mathematical society. INdAM is the Italian Mathematics Research Institute, and it is a self-governing state research institute, similar to CNR, the National Research Council and INFN, the National Institute for Nuclear Physics. It is legally constituted and supervised by MIUR, the Ministry responsible for University Education and Research, and is extremely important because it receives money from the State to promote research in mathematics.

In the Scientific Committee of UMI, which is made up of the President, the Vice-President, the Administrator and the Secretary, plus 15 elected members, there are two women.

At INdAM, which is run by a President, a Vice-President and the Scientific Council, composed of seven elected members, there are also two women, one is the Vice-President.

This situation is actually quite new. As a matter of fact, two years ago the Italian Government organized the reform of the Italian Research and the Board of Administration of INdAM adopted a new Statute. One of the main features of this Statute was that new equal opportunity rules were introduced for elections of the governing members, and these produced, after the elections in July 2011, the presence of one woman in the Scientific Council and a woman as Vice President. One has to understand that up to 2007 no woman was ever elected in the INdAM governance. One of the visible effects of the gender oriented rules adopted by INdAM in the sequel was the introduction in 2013 of "quotas" in the election of the Scientific councils of the four National Research Groups of INdAM. As a matter of fact, besides the 10 members of the research staff (three members on the Board of Administration, including President and Vice-president, plus seven members in the Scientific Council) the Institute has four Research Groups called GNAMPA (mathematical analysis, probability and their applications), GNFM (mathematical physics), GNCS (computer science) and GNSAGA (algebraic and geometric structures and their applications), and there are around 2500 members. Each group takes care of the research in its area.

On the occasion of the renewal of the Scientific Councils of each group, thanks to the "quotas", there is now at least one woman in each Council and up to three women in the groups GNCS and GNSAGA. In addition to the five elected members, for each group two experts have been nominated by the Board of Administration, eight all together, and among these there are two women. Moreover, for the first time a woman has been nominated Director of one of the groups, GNCS. This is an important step ahead, as the main goal in any positive action for the achievement of equal opportunities is to increase the presence of women in governance.

Of course, we are still far away from a real gender equality, but one has to take into consideration the fact that INdAM promotes the training of researchers in mathematics at national, international and European Community levels, develops research in pure and applied mathematics, especially in the emerging branches, fosters close contact between Italian and international

mathematical research, so one understands that the existence of women in the ruling positions can help a gender oriented attitude.

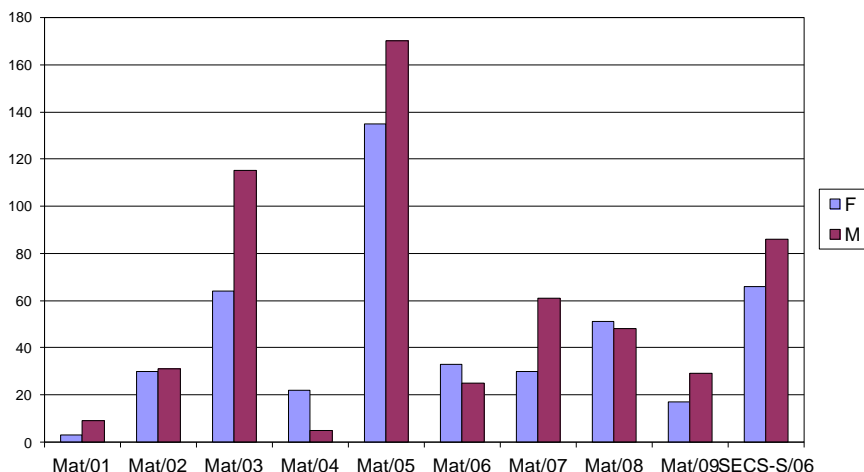
This is not just a statement. In the four years of vice-presidency of a woman, equal opportunity rules were introduced in the yearly national challenge for bursaries awarded to students at the Bachelor level of study in the new LMD System, intended for nurturing vocations for mathematics among the young, and an Equal Opportunities Committee was appointed in the INdAM Co-fund Programme within the FP7 Marie Curie Actions active from 2011. This Committee regularly takes care of the gender balances in each of the bursaries. Moreover, on the occasion of the initiative called “INdAM Day”, featuring four high-level expository lectures which took place in Padua (2008), Turin (2009), Catania (2010), L’Aquila (2011), Genoa (2012) and Palermo (2013), each time among the speakers a female mathematician was chosen, these were Claire Voisin, Idun Reiten, Irene Fonseca, Laure Saint-Raymond, Olga Holtz, and Sophie Morel.

In any case, all general improvements have been monitored since 2012 by the Italian Mathematical Union (UMI), which has appointed a Group for Equal Opportunities composed of six Italian female mathematicians who have the task of taking care of gender issues among the Italian mathematical community.

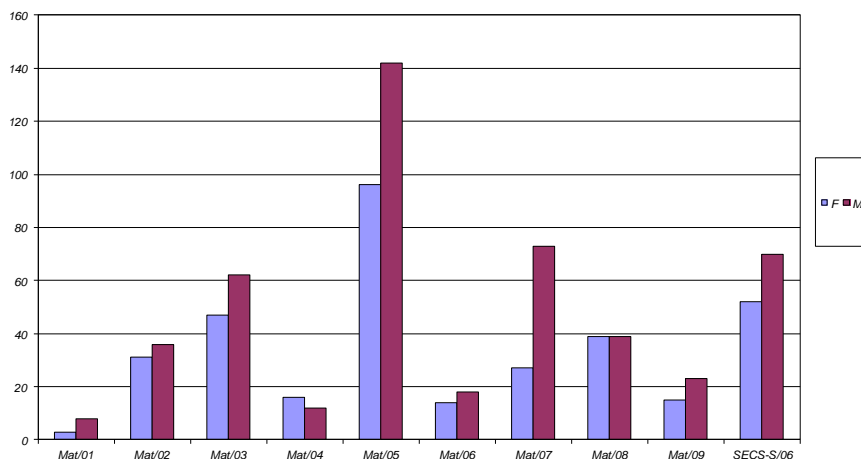
FIGURES: Gender distribution for several university roles and for the sectors of Italian mathematics.

- MAT/01 LOGICA MATEMATICA
- MAT/02 ALGEBRA
- MAT/03 GEOMETRIA
- MAT/04 MATEMATICHE COMPLEMENTARI
- MAT/05 ANALISI MATEMATICA
- MAT/06 PROBABILITÀ E STATISTICA MATEMATICA
- MAT/07 FISICA MATEMATICA
- MAT/08 ANALISI NUMERICA
- MAT/09 RICERCA OPERATIVA
- SECS-S/06 METODI MATEMATICI DELL'ECONOMIA E DELLE SCIENZE ATTUARIALI

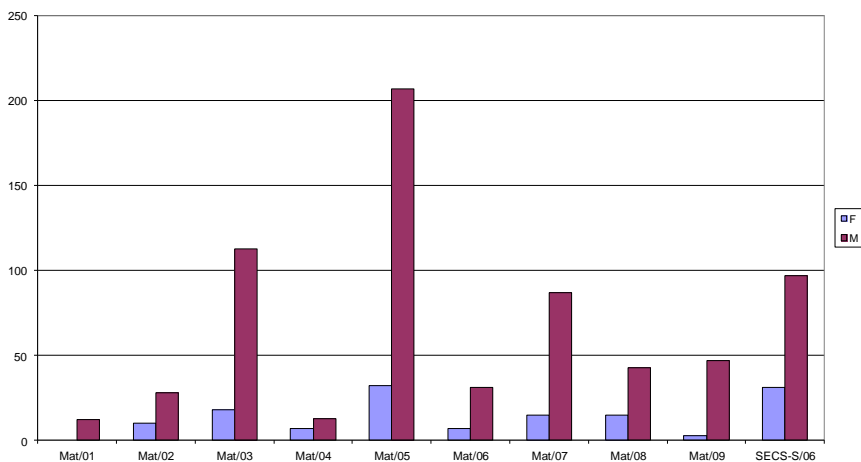
Gender distribution of researchers August 2013



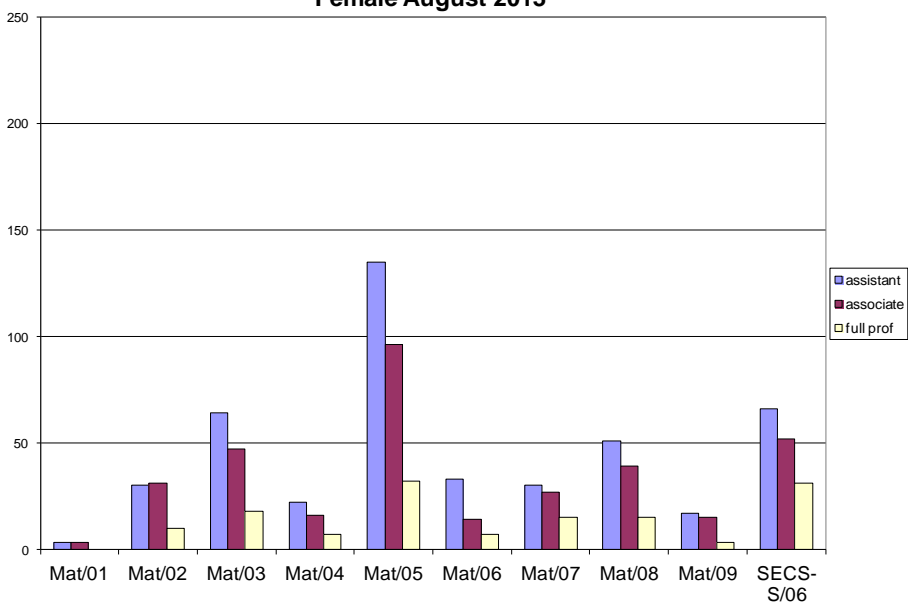
Gender distributions of associate professor August 2013



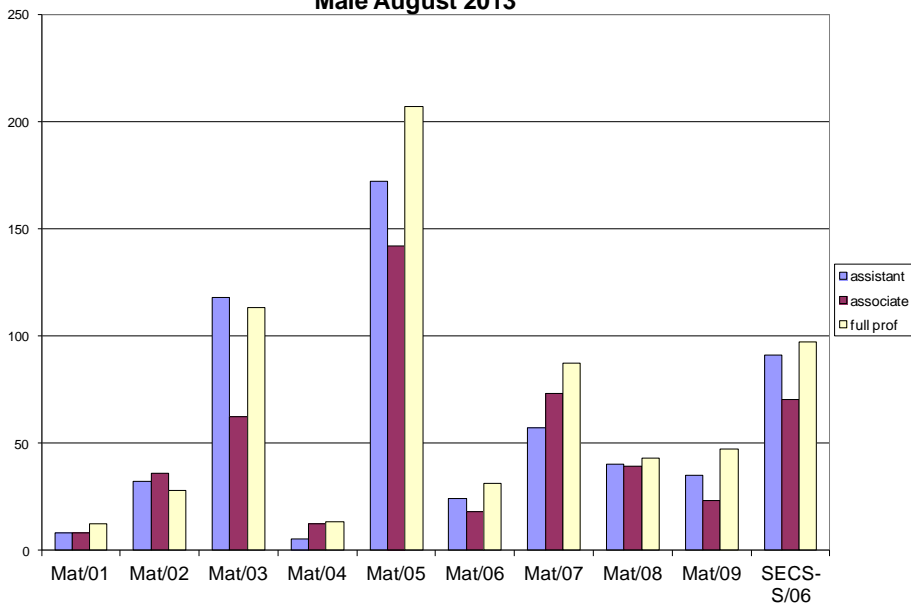
Gender distributions of full professor August 2013



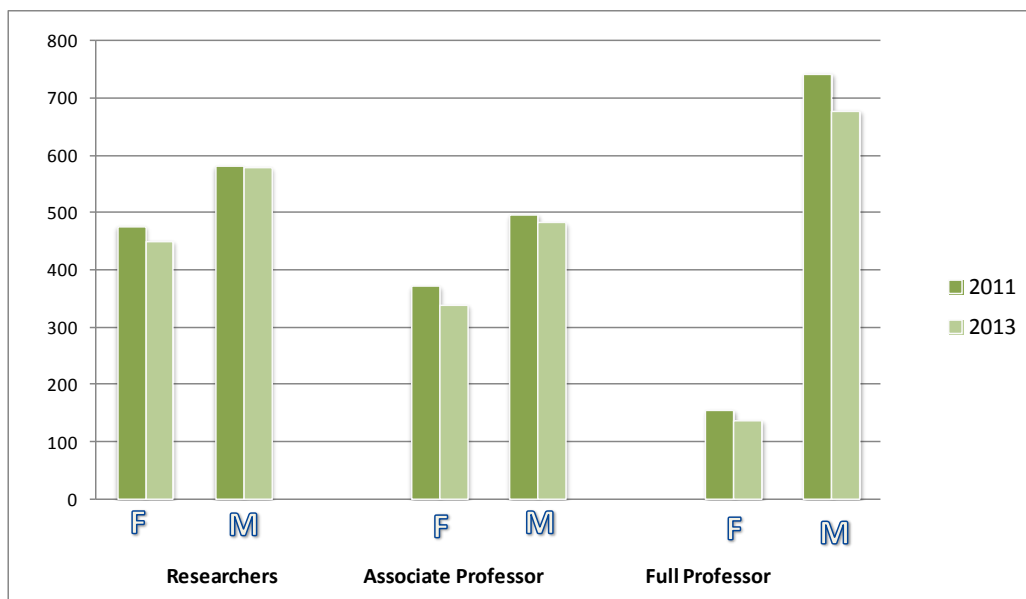
Female August 2013



Male August 2013



Gender distribution for several university roles of Italian mathematicians, comparing 2011 and 2013 :



	2011	2013
Researchers		
Female	477	451
Male	582	579
Associate Professor		
Female	372	340
Male	497	483
Full Professor		
Female	155	138
Male	743	678

Lucia Maddalena, Vice - President of AMASES (data elaboration)
 Elisabetta Strickland, Vice - President of INdAM (description of associations)

Prize awards

Nalini Anatharaman, professor of mathematics at the university Paris-South - Paris 11, has been awarded a Silver Medal by CNRS in 2013, among 14 awardees, half women, half men, in all disciplines. Her research is mathematical physics, especially quantum chaos, allying dynamical systems and wave equations. She also was awarded the Poincaré prize in 2012 (together with Sylvia Serfaty, professor of mathematics at the university Pierre et Marie Curie - Paris 6, her research is on partial differential equations, more particularly for the Ginzburg-Landau superconductivity problems).

<http://www.cnrs.fr/jnsmi/spip.php?article814>



María Pe Pereira (Spain 1981) has been awarded by the Real Sociedad Matemática Española (RSME) with the "José Luis Rubio de Francia" prize. This prize is awarded to young researchers (up to 32 years old) in Spain with an outstanding career. It is the first time that this prize has been awarded to a woman. The prize is funded with 3000€ and the winner is invited to give a plenary talk at the next RSME Conference. Maria Pe has been awarded this prize for her work on the Nash Problem ON ARCS FOR SINGULARITIES, which involves solving the Nash conjecture on arcs for surfaces. Her joint work with J.Fernandez de Bobadilla proving this conjecture had been published in the prestigious journal Annals of Mathematics in 2012. For more information, see <http://www.rsme.es/content/view/1281/> and for the next José Luis the Rubio prize see <http://www.rsme.es/content/view/66/73/>



Translation from the magazine "Role Model Book" of Nagoya University

When I was a girl

Origami is interesting material mathematically, but I just simply liked it. I've heard that I started Origami when I was one or two years old. I continued folding Origami alone only with pictures in the book until it was completed. There were also many puzzles in my house and loved to play with them. I enjoyed thinking about mathematical problems like puzzles. However, I was not intending to study mathematics more in the future.

When I was a high school student, I wanted to study architecture and decided to go to a faculty of engineering at a university. Then I studied mathematics more seriously to pass the entrance examination of universities.

New mathematical world

I also went to a preparatory school where the math teachers taught us more advanced mathematics. Some of them were professional mathematicians and they talked about their research in the lectures. I really enjoyed them and felt that my mathematical world was changed. And my interest moved from architecture to mathematics.

My high school was very liberal and the students were eager to do anything to realize their dream. In this atmosphere, it was natural for me to do my best for what I wanted to do or be. My friends from the high school were very active and they encouraged me many times in various situations.

Truth in mathematics

Mathematics is an endeavor to find the complete truth. A proved fact will never be overturned. Moreover, the completed mathematical theories are perfectly beautiful. We try to find the simplest fact in the complicated world, and the simplest is the most beautiful in mathematics.

For example, "Fermat's Last Theorem" has been recently proved and the simple equation has been well known. Fermat was a French mathematician in the 17th century who wrote a short message about the equation in the margin of a book. Many people were impressed by the beautiful simple equation, and many mathematicians contributed to the development of Number Theory when trying to understand the equation. Finally, 360 years after Fermat's note, the theorem was proved by Andrew Wiles. It was very exciting news.

Applications of mathematics

A study of mathematics is more similar to romance than to preparing for an examination. Mathematicians are thinking the problem anytime and even dream about it in the night. Once a big problem stands in front of us, it is easy to forget the other things in our real life.

Mathematics does not appear clearly in our usual life, but many things around us are changed and influenced by the developments of mathematics. Without mathematics, we wouldn't have Internet or computers, CT and MRI at the hospitals, rockets in the universe. Mathematics is important not only in the research of natural sciences, but also in everyday life.

There will be a way!

I studied mathematics without thinking about my gender. I always think we are free from anything and believe we can do anything that we want. I don't believe in any barrier and limit of a person's abilities. I think this is also true for educating my two children.

In Japan, there are very few female scientists and the balancing of work and child-caring is a difficult problem. However, this is different in other countries. When I was staying in Germany, I met a female researcher visiting the university with a small child. I was surprised and asked her, "How can you study with your small child in a foreign country?" Then she said: "As there is a nursery school here, it is just the same as the usual life in my country." A few years later, I stayed at the Isaac Newton Institute in Cambridge, U.K., for 4 months with my daughter of age three. I studied mathematics and could also enjoy various experiences and intercultural exchanges with my daughter.

We need a little courage to do new things, but we can do anything! We should be pioneers to change our environment by ourselves to continue our study comfortably.

Children and students

I like to listen and play music. I played the piano when I was a girl and now I play it together with my children's violin. I sometimes sing songs in a choir, it is a good refreshment. I like to take a walk around my house and take pictures of my children. Though I liked to take pictures of landscapes before, it became interesting to catch the facial expressions of my children.

It is also exciting to communicate with young students. At the university, we see the students studying and finding their way. I could continue my work at the university because I like studying mathematics and also teaching.

What one likes, one will do well!

If you are female high school student, don't hesitate to do anything. You have to see many things, meet many people without caring about your gender. When you find an interesting thing, you should continue to think about it more. Then you may find a wonderful unknown world. What one likes, one will do well! I wish you to find your treasure in your life by yourself.

*Yukari Ito, Associate Professor,
Graduate school of Mathematics, Nagoya University*



Yukari Ito (right) with two students at the EWM meeting

UPCOMING EVENT

International Congress of Mathematicians 2014 and International Congress of Women Mathematicians 2014

The online application system for the travel grant application (Nanum 2014) for ICM 2014 and ICWM 2014 is accepting applications again from October 16, 2013 to October 31, 2013.

The goal of the "Nanum 2014" is to provide travel grants to 1000 mathematicians in developing countries to attend the ICM 2014 in Seoul, Korea. Out of the 1000 mathematicians selected, travel grants for 100 women mathematicians who will also attend the ICWM 2014 will be provided by the ICWM 2014 committee. The "Nanum 2014" online application web site initially accepted applications from June 10, 2013 to August 31, 2013. Due to high demand for the travel grants, the web site will be accepting additional applications from October 16, 2013 to October 31, 2013. The recipients of the travel grants will be notified in January, 2014.

Woman mathematician wishing to attend both ICM 2014 and ICWM 2014 can apply for the travel grant online on the ICM website (please make sure to check that you attend at ICWM 2014 on the application form):

<http://www.icm2014.org/en/participants/mathematicians>

UPCOMING EVENT

The 13th forum of young mathematicians will take place November 13 to 15, 2013, at the Ecole normale supérieure in Lyon. The 2013 theme is "Mathematics and Computer Science in interaction".

The senior women mathematicians invited are: Mireille Bousquet-Mélou (Bordeaux I), Anne Canteaut (INRIA-Paris Rocquencourt), Catuscia Palamidessi (INRIA Saclay) and Frédérique Bassino (Paris XIII).

Objective : This forum is geared toward young mathematicians, women and men, who are performing their doctoral studies or have defended their doctoral thesis recently.

The forum displays main conferences, where senior women mathematicians present their own works, and parallel sessions with shorter communications. Young mathematicians may, during their presentation, benefit from the presence of senior mathematicians having a look on the purely scientific aspects of their research, and also on their exposition techniques.

Mentoring activities are organised as well as activities concerning the awareness of problems related to parity between men and women in higher education and research, as a complement to the scientific programme.

Organisation : The forum is organised by the French association femmes & mathématiques and is sponsored par SMAI (Société de Mathématiques Appliquées et Industrielles), by SMF (Société Mathématique de France), by SIF (Société Informatique de France) and by EWM (European Women in Mathematics).

The forum received grants from the Mission pour la place des femmes au CNRS (Mission for the place of Women at CNRS), from INSMI and INS2I (CNRS Institutes for Mathematics and for Computer Science), from MIPADI (Mission of the Ministry for Higher Education and Research for Parity and against Discrimination), from INRIA, from the Research Group GDR IM (Mathematical Computer Science), from the Labex MILyon, from Ecole Normale Supérieure de Lyon, from the Laboratoire de l'Informatique et du Parallélisme (LIP), from the Institut de Science Financière et d'Assurance (ISFA) and from the Faculté des Sciences et Technologies (FST) of the Université Claude Bernard – Lyon 1.

Scientific Committee

Co-chairs :

Anca Muscholl, LABRI, Université Bordeaux 1,
Brigitte Vallée, GREYC, Université de Caen, president of the
Committee

Members:

Agnès Desolneux, CMLA, ENS Cachan,
Marie-Françoise Roy, IRMAR, Université Rennes 1,
Anne Siegel, IRISA, Université Rennes 1

Program Committee:

Valérie Berthé, LIAFA, Université Paris Diderot -Paris 7,
Aline Bonami, MAPMO, Université d'Orléans,
Laurence Broze, EQUIPPE, Université Lille 3,
Anne Pépin, CNRS, Mission pour la place des femmes au CNRS,
Céline Grandmont, INRIA Rocquencourt,
Christian Kassel, IRMA, Strasbourg,
Véronique Lizan, IMT, Université Toulouse 2,
Marie-Françoise Roy, IRMAR, Université Rennes 1

Organising Committee

Anne Benoît, LIP-ENS Lyon,
Vincent Borrelli, ICJ, Université Lyon 1,
Christine Charretton, association femmes &
mathématiques,
Véronique Maume-Deschamps, ISFA, Université Lyon 1,
Natacha Portier, LIP-ENS Lyon,
Nathalie Revol, LIP-ENS Lyon,
Denis Serre, UMPA-ENS Lyon., IRISA, Université Rennes 1

See also <http://forum2013.sciencesconf.org/>

MORE UPCOMING EVENTS

1) Women teachers training programme: 23-28 December 2013, at Mumbai University, Mumbai India

<https://sites.google.com/site/iwm2013ttp/home>

2) Young Women and Mathematics: 25-27 July, 2014 at Indian Institute of Science, Bangalore, India.

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

MISCELLANEOUS

"La lettre de femmes & mathématiques", published in French three times a year, mentions the activities of the association femmes & mathématiques, as well as what is going on in France in terms of equality between women and men in Mathematics and in Science, and more generally in the educational French system. This issue, number 4, October 2013, also reports on the EWM General Conference in Bonn last September. A number of recent publications in English are listed at the end of this newsletter, pages 10 to 12.

See <http://www.femmes-et-maths.fr/> to read the letter and detailed informations about the activities of the association femmes & mathématiques.

Nine women wearing beards, from the French activist group "La Barbe", came into the large amphitheater of the Henri Poincaré Institute (IHP) in Paris to celebrate "Thirty years of mathemachism" on October 8th, 2013. On the occasion of the 30th birthday of the French association of Applied and Industrial Mathematics (SMAI), a meeting about MOOC and scientific publications was organised: the 11 speakers were men except for one woman (whereas SMAI has 24 % of women among its members).

<http://images.math.cnrs.fr/Le-8-mars-c-est-toute-l-annee-2451.html>

See also the radio report (in French) on <http://www.franceinter.fr/depeche-femmes-a-barbe>

Marie-Hélène Schwartz, former professor of mathematics at the university of Lille I, died on January 5th, 2013, in her 100th year. The French society of Mathematics (SMF) published in the October issue of its magazine a tribute to her (in French). See in particular the article by Jean-Paul Brasselet, issued from a tribute published in 1997 for the 10th birthday of the association femmes et mathématiques, where he describes her research's lines, from functions of one complex variable to characteristics classes of singular sets, via Chern's formulae.

<http://smf4.emath.fr/Publications/Gazette/2013/138/>

<http://images.math.cnrs.fr/Marie-Helene-Schwartz.html>

Meena Kotecha was invited by the Royal Statistical Society (RSS), as one of six subject advisors, to contribute to new research on the changing environment of data statistics and how this can be better reflected in A-level economics curriculum. The report, entitled A World Full of Data Statistics: opportunities across A-level subjects, is the outcome of round-table discussions and research seminars which commenced on 6th March 2013. It was launched on 11 September at the Institute and Faculty of Actuaries

USEFUL LINKS AND CONTACTS

EWM website: <http://www.europeanwomeninmaths.org/>

EWM convenor: Susanna-Terracini [susanna.terracini\(at\)unito.it](mailto:susanna.terracini@unito.it)

EWM deputy convenor: Angela Pistoia [pistoia\(at\)dmmm.uniroma1.it](mailto:pistoia@dmmm.uniroma1.it)

EWM email list: Katrin Leschke [k.leschke\(at\)le.ac.uk](mailto:k.leschke@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>