EWM General Meeting, September 2013

Hausdorff Centre for Mathematics, Bonn

Group photo, on the steps of the Hausdorff centre

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 playwrighter 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. Note that a total of 25 talks were given in these sessions during the week. Their list and abstracts are part of the documents posted on 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 to 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) .

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 meeting up with the ECM (as has also been suggested in previous email communication within the standing committee). 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).
- Reinstate 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 kind 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

Tamar Ziegler finished the morning session with the third of her EMS lectures. This one was 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…

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 poster - definitely the most colourful one on display.

Discussions at the poster session

After lunch, came the general assembly meeting. The minutes of the meeting will also be distributed, 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 the 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.

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, buy 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 womens' 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:

<u>Pros for both women and men</u>

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

<u>Cons for both women and men</u>

- 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

<u>Pros for women specifically</u>

- 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.