

May 12, celebrating women in Mathematics in 2020
<https://may12.womeninmaths.org/>



The May 12 initiative, celebrating women in mathematics worldwide on the birthdate of Maryam Mirzakhani took place for the second time in 2020 (see¹ for information about 2019 events).

The 2020 edition was a huge success that took very specific forms given the Covid crisis and the impossibility to meet physically in most places of the world.



We discuss the preparation phase, the individual screenings we made possible as well as collective events, mostly virtual, that took place.

Preparation phase

The May 12 website was made perennial and adapted to annual events, thanks to a funding coming from IMU CWM, EWM and AWM. It was ready at the beginning of 2020.

See <https://may12.womeninmaths.org/>

¹ For the 2019 events see <https://may12.womeninmaths.org/2019> as well as

May 12: Celebrating Women in Mathematics From One Idea to One Hundred Events Nikita Agarwal, Carolina Araujo, Petra Bonfert-Taylor, Mojgan Mahmoudi, Marie Françoise Ouedraogo, Olga Paris-Romaskevich, Marie-Françoise Roy, Elisabetta Strickland, and Andrea Vera Gajardo, Notices of the AMS, Volume 66, Number 11, pages 1879-1886.

Individual screenings of *Secrets of the surface*, the Mathematical Vision of Maryam Mirzakhani through an agreement between Zala Films and the May 12 initiative

The one hour documentary film, produced by Zala Films with the Mathematical Sciences Research Institute was filmed in Canada, Iran and the United States and released in January 2020.

An agreement between the May 12 initiative group and Zala Films was quickly reached before we launch the May 12 initiative, in March 2020.

Initially the agreement was that a link to the film would be provided to organizers of collective screenings approved by May 12. But with the pandemic crisis, it was soon clear that many collective events would have to be canceled and Zala Films agreed to modify the agreement, so that individual screenings were also offered on the May 12 website. Applicants then received a link to screen the film, and they were asked not to disseminate it.



The poster features a portrait of Maryam Mirzakhani on the left. To the right is a film strip graphic containing two frames: the top one shows mathematical sketches of surfaces and curves, and the bottom one shows Maryam Mirzakhani pointing at a whiteboard with mathematical equations. The background is a textured blue and yellow.

SECRETS OF THE SURFACE
The Mathematical Vision of Maryam Mirzakhani

MSRI
Mathematical Sciences Research Institute

A film by George Csicsery
www.secretsofthesurface.com

ZALA films

**GRADQUANT
MOVIE NIGHT**

**SECRETS OF THE SURFACE:
THE MATHEMATICAL VISION OF
MARYAM MIRZAKHANI**

Free documentary showing provided
by May12 Women in Mathematics
Initiative of International
Mathematical Union and Zala Films.

TUE, MAY 12, 2020 | 6PM | ZOOM

When the process started there were versions of the film only in English and Farsi, while French subtitles were on their way. We checked French subtitles and Zala Films produced a French version with specific links. The May 12 network also provided subtitles in Italian, Portuguese, Spanish and Turkish, and the corresponding versions were produced by Zala Films, with their specific links. Moreover, mistakes in the Farsi version were noticed and a text for corrected Farsi subtitles was provided. This new version is not implemented yet given that DVD with former English and Farsi subtitles had been already printed.

The success was beyond any hope. More than 20,000 requests were received and the corresponding links were sent. The proportion of versions requested was as follows: English without subtitles: 37%, subtitles in Farsi: 34 % (requested from people not always located in Iran), in Spanish: 11 %, in French: 8 %, in Italian: 4 %, and in Turkish: 3%. People from 131 countries participated, with the following distribution by geographic zones : Asia: 39 % (Iran: 27 %, other Asian countries: 11 %), Europe: 27 %, North America: 20 %, Africa: 2 %, Oceania: 1 %, and 2 % with no country indicated.

Moreover, after the free screening process stopped, Zala Films received a huge number of streaming and DVD orders.

There was a survey conducted after the screenings. The number of answers was 1201, a small proportion (5,78%) of those who registered to get a link. It is interesting to analyze their answers but they cannot be considered as representative of the whole group. In particular, nearly 2/3 of the answers came from people having requested no subtitles, and only 10 % from those requesting Farsi subtitles, the bias coming in part from the fact that the survey was in English only.

The proportion of female viewers was 53 %, of male, 45 % and 2.00 % chose the option « Prefer not to respond ». Some (11%) had not received the link and some (16 %) had not been able to view the screening due to technical problems or for lack of time before the deadline.

An overwhelming proportion, (99 %) of the people found the life and mathematics of Maryam Mirzakhani as shown in the film interesting. The aspect of life in Iran shown in the film was interesting for 94 %, while the aspect of life in the USA shown in the film was interesting for 90%. Only 7 % found the film too difficult from a mathematical point of view.

70 % of the respondents are connected to mathematics, from students (secondary school to Ph D studies) to professors at various levels, and 60 % of those connected with mathematics are Ph D students, holding a Ph D or are university professors.

Finally 2/3 of the respondents wished to receive news from the May 12 initiative in the future.

Zala Films expressed its satisfaction with the agreement since they had a number of VOD and DVD requests after this point activity with May 12 !

Collective May 12 2020 events

A total of 152 events have been published on May 12 website in 2020 <https://may12.womeninmaths.org/>, on top of the posts reporting the number of people who registered for individual screenings in the 131 countries involved.

A lot of enthusiasm was expressed by the events who reported to us on the nature and success of their activities, sending often full reports, links, pictures and videos. Among the 59 who reported, 55 events went virtual and took place all over the world.

VARIETIES OF VARIETIES AFTER MIRZAKHANI

LECTURE BY LUCIA CAPORASO, UNIVERSITÀ ROMA TRE

9 JUNE 2020-15:00

THE LECTURE WILL BE FOLLOWED

BY THE SCREENING OF THE
DOCUMENTARY FILM

“SECRETS OF THE SURFACE:
THE MATHEMATICAL VISION
OF MARYAM MIRZAKHANI”

BY

GEORGE PAUL
CSICSERY

STREAMING INFORMATION

WWW.MAT.UNIROMA2.IT/MAY12.PHP



Celebrating women in mathematics on #May12

Spread the word

#WomenInMath
#WomenInMath
#May12WIM

or on may12.womeninmath.org

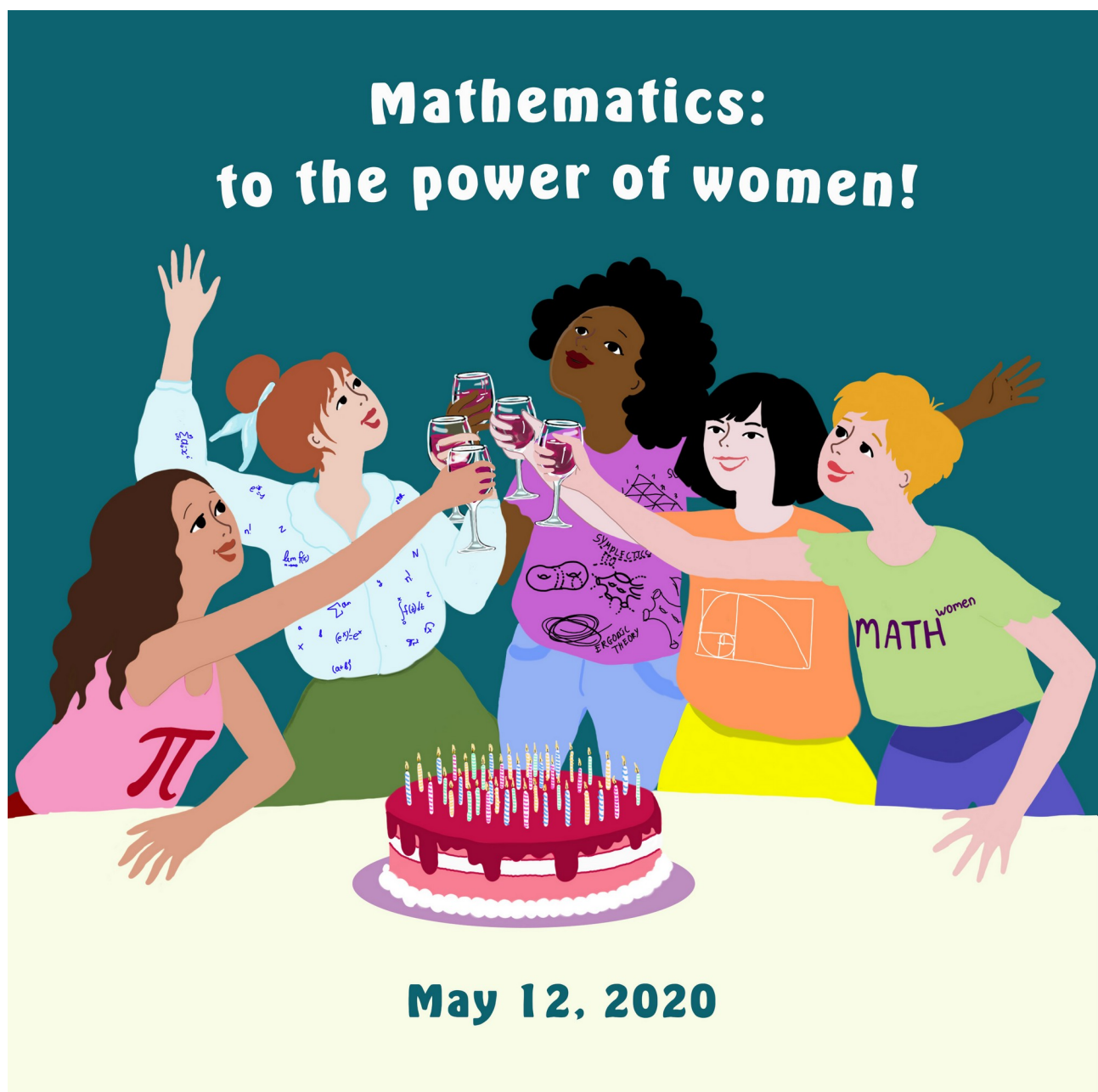


ORGANIZING COMMITTEE
DEPARTMENT OF MATHEMATICS,
UNIVERSITY OF ROME TOR VERGATA

MARTINA LANINI
DOMENICO MARINUCCI
ALFONSO SORRENTINO
ELISABETTA STRICKLAND

Near all the virtual events included a screening of *Secrets of the surface*, which was suggested on May 12 2020 website, and a lot of them included a discussion about the film. The life of Maryam Mirzakhani and her scientific achievements were presented in many of the initiatives. Often the participants were professional mathematicians or students in mathematics but also high school students or even younger children who watched the movie at home with their family.

In many places, other activities were associated to the screening of *Secrets of the surface*: social media campaigns with photos, short reports or videos, production of videoclips promoting or celebrating women in mathematics, roundtables, events in YouTube channels dedicated to mathematics, discussions about the Gender Gap in Science project, celebration of Florence Nightingale, born on May 12 1820. Several events were international, with panelists from various parts of the world. Women in mathematics from industry took part of the activities as well as women working in interdisciplinary contexts. Some of the events dealt with the role of mathematics in epidemiological models, including the Covid crisis and others discussed how the gender gap was revealed and worsened by the pandemy.



Several organizers mention that they already participated to May 12 events the year before, or announced a follow up with the creation of women in mathematics groups. Local newspapers reported some of the events, and others reached an important number of people (more than 16 000 for one media campaign).

Let us end with a more detailed description of three of the events.

In Egypt, the first activity for the Egyptian Women in Mathematics Association (EWMA) as a part of the Egyptian Mathematical Society (EMS) took place virtually, the screening of Secrets of the Surface was associated with various speeches as well as a presentation of the Gender Gap in Science report.

In Brasil, the Gender Committee of the Brazilian Mathematical Society and the Brazilian Society for Applied and Computational Mathematics prepared a special edition of the societies' newsletter, called "Celebrando as Mulheres na Matemática em tempos de pandemia" and contained an introductory letter by the committee and interviews with 7 women working in projects related to mathematics and the pandemic.



In Spain, the Women in Mathematics Commission of RSME (Spanish Mathematics Royal Society) prepared two virtual escape rooms:

The rescue of the sorceress Omega <https://forms.gle/nHkmfZLbuXmvso4M6>: digital escape room specially indicated for students in the first years of elementary school.

The hallway of the remembered oblivion: <https://forms.gle/N4bTKmjB2pw6HraS9> digital escape room especially suitable for high school students.

They can be played in English, Spanish, Catalan and Galician. They have appeared in many social media and also newspapers and radio in Spain. They have been played by thousands of persons in Spain and we have received hundreds of congratulatory messages. Furthermore, this activity continues active and more people are playing everyday.

Conclusion

The 2020 events confirm that the May 12 initiative is promoting global networks among women in mathematics and more generally people involved in improving gender equality in mathematics. The realization that everyone is working towards the same goal, the celebration of women in mathematics through the organization of different events for May 12, makes the organizers and participants feel part of a world community.

برگزاری اولین دوره آموزشی ریاضی

۲۰ اردیبهشت ۱۳۹۹



بخش آموزش بنیاد مریم میرزاخانی دوره های رایگان «آموزش ریاضی» را برای دانش آموزان علاقه مند برگزار می نماید. اولین دوره در روز های ۲۱ الی ۲۳ اردیبهشت سال ۱۳۹۹ و با سرپرستی علمی دکتر عباداله محمودیان از دانشگاه علوم ریاضی دانشگاه صنعتی شریف ، به صورت پایلوت جهت دانش آموزان پایه نهم و آنلاین برگزار می شود. جهت کسب اطلاعات بیشتر به قسمت آموزش مراجعه فرمایید.

علاوه بر این در روز ۲۸ اردیبهشت ۱۳۹۹ به مناسبت روز خیام یک جلسه " آشنایی با ریاضیات " برای تمامی دانش آموزانی که پیشتر برای شرکت در «اولین دوره آموزش ریاضی» ثبت نام کرده بودند برگزار خواهد شد.

May 12 coordination group

Nikita Agarwal (India), Carolina Araujo (Brazil), Mojgan Mahmoudi (Iran), Marie Françoise Ouedraogo (Burkina Faso), Olga Paris-Romaskevich (France/Russia), Marie-Françoise Roy (France), Elisabetta Strickland (Italy), Petra B. Taylor (USA), Andrea Vera Gajardo (Chile).