

ANNUAL REPORT 2021

Introduction

In 2021, our activities hampered to some extent by the COVID-19 pandemic. The focus of 2021 was on “Community Spirit”, as working remotely took a toll on our members. To give shape to this theme, we started community projects that can be carried out exclusively online. These pertain to updating / translating / creating Wikipedia pages of women mathematicians, designing a poster of prominent women mathematicians throughout history, and starting a new STEM campaign. We further continued with our long-term projects (mentoring, monitoring, outreach). These projects, in addition to their intrinsic value, had indeed an effect in fostering a community spirit in the Dutch community of women in mathematics. This is evidenced by the significantly increased engagement we had with our social media, the fact that the Wikipedia project continued running throughout the whole 2021 (and continues in 2022) with a core team of volunteers, and the addition to the executive and advisory boards of five new members.

Looking forward, we expect that 2022 will bring (beginning of) the normalization of the pandemic and expect to provide service to the community by giving a forum to our members for forging connections, gathering and sharing information, networking, and sharing mathematics.

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Events organisation

NMC participation and International Day of Mathematics

EWM-NL participated in the National Mathematics Congress 2021 during the “What’s cooking?” event on 22 February 2021. The event presented developments from the PWN direction, the Research Committee, and EWM-NL. EWM-NL was represented by its president, Maria Vlasiov, who presented the activities of the association in 2020 and the plans for 2021.

Further, EWM-NL collaborated with NMC to host an event for the International Day of Mathematics. UNESCO has declared 14 March, also known as π Day, as the International Day of Mathematics. In the second edition of the International Day of Mathematics on March 14, 2021, we celebrated Mathematics for a Better World. The event, organised by EWM-NL, took place online in the afternoon of March 15th. Several captivating talks were given by fellow mathematicians from different fields of research. Also the new website www.mathness.nl was presented by Platform Wiskunde Nederland. From March 14th www.mathness.nl/pi-dag showed what applications π plays a role in.

Organisers: EWM-NL, Olfa Jaïbi (Leiden University), and Francesca Arici (Leiden University)

Programme:

15:00 – 15:10	Opening
15:10 – 15:40	Aida Abiad (TU/e, UGent, VUB), <i>What does the spectrum reveal about a graph?</i>
15:40 – 16:10	Pieter Kleer (MPI-Inf), <i>Generation of random graphs with given degrees</i>
16:10 – 16:20	Online coffee break
16:20 – 16:30	Presentation by Wil Schilders (PWN)
16:30 – 17:00	Katerina Stankova (MU), <i>Games of life and death</i>
17:00 – 17:30	Diletta Martinelli (UvA), <i>Some thoughts about my mathematics experiences in Africa</i>
17:30	Closing

CWM coordinators meetings

Maria Vlasiou, also on behalf of EWM-NL and as the representative of CWM in The Netherlands, co-organised two events for the European Women in Mathematics and for the Committee of Women in Mathematics of the International Mathematical Union.

On **16 March 2021**, CWM and EWM organised a meeting, open to the public, on the Gender Gap in Science Project. In the meeting, Colette Guillopé [1], Helena Mihaljević [2], Marie-Françoise Roy [3], and Susan White [4] presented various chapters from the final report of the project.

The Gender Gap in Science Project is a multidisciplinary project in which eleven organisations contributed to the analysis of the gender gap in science from three complementary perspectives:

- The Global Survey of Scientists addresses issues related to the absence of role models, feelings of exclusion, harassment, low participation, and retention rates.
- The Study of Publication Patterns provides insights on the proportion of women as research authors or the presence of women publishing in top scientific journals.
- The Database of Good Practices introduces a conceptual framework to analyse good practices, in order to provide evidence of effectiveness and impact.

Further information about the project can be found at <https://gender-gap-in-science.org/>.

On 23 March 2021, the second meeting, open only to CWM ambassadors in Europe and EWM national coordinators, took place. It had six short presentations of initiatives for reducing the gender gap in mathematics in six European countries and was followed by a general discussion. The presentations were from Norway, Romania, Greece, Ireland, Turkey, and the UK.

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[1] French Association Women & Science, Honour President

[2] Hochschule für Technik und Wirtschaft (HTW) Berlin, University of Applied Science, Berlin, Germany

[3] Chair of the International Mathematical Union Committee for Women in Mathematics

[4] Interim Director, Statistical Research Center, American Institute of Physics, College Park, MD, US

Organising committee:

Colette Guillopé, Université Paris-Est Créteil

Kaie Kubjas, Aalto University

Houry Melkonian, University of Exeter

Elena Resmerita, Alpen-Adria Universität Klagenfurt

Marie-Françoise Roy, Université de Rennes 1

Galina Rusu, Moldova State University

Elisabetta Strickland, Università degli Studi di Roma "Tor Vergata"

Maria Vlasiou, University of Twente and Eindhoven University of Technology

Annual meeting

The Annual Meeting took place on November 12, 2021, at Utrecht University. The theme of this year's meeting was "The Importance of Networking". Our main goal was to discuss best practices and benefits of networking and to provide a networking opportunity to our participants. It was a successful and

productive afternoon. We organized the event in hybrid form and had 40 participants registered for in-person participation, and 23 for online participation.

The program for the event started with two lectures by the invited speakers, who shared their experience in leading active and successful university and national level networks connecting female mathematicians.

The first speaker of the day was Vanessa Magnanimo, the chair of Female Faculty Network Twente. In her presentation, Magnanimo talked about the story of creation and development of the Female Faculty Network at University of Twente. Using the example of this organization, she showed how such faculty networks can foster positive change in the university policy, promote equity and gender balance, and help create nurturing and welcoming atmosphere for all students and faculty members. Magnanimo also talked about changes in recruitment and promotion policy that are necessary to achieve these goals.

The second plenary speaker was Eugenie Hunsicker, the chair of the London Mathematical Society's Committee for Women and Diversity in Mathematics. Hunsicker shared her own experience in creating professional networks and her path into diversity work. She talked about different goals networking can have, such as research, support and action, and different approaches one can take, depending on the goal. She also gave an overview of various networks, organizations, and projects aiming to promote diversity and equity, and support female mathematicians, focusing on how they can help one in achieving their networking goals.

The second half of the event started with an overview of EWM-NL's activities and plans for the next year given by EWM-NL president Maria Vlasiou. It was followed by an open discussion based on the questions that participants submitted during their registration for the event. The list of topics included:

- mentorship programs and networking activities in the Netherlands
- post-Corona networking: what will be different?
- role of social media in building and maintaining professional networks
- ways to promote inclusion principles in your department

Both in-person and online participants actively contributed to the discussion.

The program of the event also provided plenty of time for informal discussions and networking among the participants during coffee breaks and reception.

Media training workshop

In December 2021, two media trainings were organised by board member Francien Bossema and sponsored by EWM-NL. The aim was to train female mathematicians how best to interact with the media and to present their research in a possible interview. The goal is that the participants will feel more comfortable in taking part in interviews and increase the visibility of female mathematicians in the Netherlands. We engaged trainer Michel van Baal, who has experience with giving over 500 media and interview trainings to scientists. An astronomer by training, he continued as press officer and head of internal and external communication at TU Delft and is head of Communication and Public Affairs at the federation of doctors KNMG. We opened a pre-registration for the media training, which was open to all female mathematicians and women in related fields. In this registration form we asked about their availability on the scheduled dates, language preference and motivation to join the training. In total 20

pre-registrations were received, from master students to full professors. Two board members selected participants based on their motivations. Two sessions were organised on 1st and 8th of December, one in English and one in Dutch, for a total of 10 participants. The trainings took place live at the Centrum Wiskunde & Informatica, who sponsored the event by providing a room.

The participants were thrown in at the deep end, as they were asked to be interviewed on camera straight away. The trainer then gave an introduction and background information about journalists and interviews, what to expect and how to prepare. After this, the interview videos were analysed together, and tips and tops pointed out. The training continued with more hands-on exercises to teach the participants how to tackle off-topic questions and lead the conversation back to their research. The training was concluded by an interview in which all of the participants were more able to take control over the interview process, leading to clear and concise interviews in which their research played the main role. Afterwards the participants were asked to fill in an evaluation survey. They were very enthusiastic about the learning curve of the course and reported to be more confident about appearing in the media and accepting interview requests. They all stated they would certainly recommend the training to other scientists, as the training gave them valuable experience.

As a follow-up, we are in the process of reaching out to (blog) writers and journalists to arrange interviews for the participants of the workshop. Next to this, we aim to keep in touch with the participants and hope to engage them in future outreach activities that raise the profile and visibility of women mathematicians.

Projects

Number of women in mathematics

EWM-NL has been collecting data on the number of women working as scientific staff in mathematics departments and institutes in the Netherlands. From 2021, this effort is coordinated by NWO in their capacity of supporting the Wiskunderaad, and the data is shared with EWM-NL. From the 12 organisations asked, 11 provided the information requested and 1 gave no answer. The aggregated data from those departments are as follows:

Rank	% women	% men	% fte women	% fte men	fte/# women	fte/# men
Full professor	8.6%	91.4%	9.0%	91.0%	90.7%	86.0%
Associate professor (tenured)	14.6%	85.4%	13.8%	86.2%	86.7%	92.5%
Assistant professor (tenured)	14.9%	85.1%	16.5%	83.5%	97.6%	86.5%
Tenure track positions	38.0%	62.0%	37.7%	62.3%	93.8%	94.9%
Postdoc	21.9%	78.1%	20.8%	79.2%	77.8%	83.2%
PhD	20.7%	79.3%	20.4%	79.6%	90.4%	92.6%
Assistant professor aggregate	24.4%	75.6%	25.5%	74.5%	95.2%	89.3%

Wikipedia project

At the start of this year, EWM-NL initiated a project to add, extend, and translate pages of women mathematicians. The project is run by Anne-Men Huijzer, with the contribution of several volunteers and Wikipedia editors.

Pages added

Ute Ebert, Ruth Curtain, Tanja Lange, Nelly Litvak, Margot Gerritsen, Gianne Derks, Rineke Verbrugge, Maria Vlasiou, European Women in Mathematics, Renate Loll, Caroline Series, Kirsten ten Tusscher, Jeanine Daems, Anneli Cahn Lax, Maria Wonenburger, Alice ter Meulen.

Pages extended

Ietje Paalman-de Miranda, Ingrid Daubechies, Tatjana Pavlovna Ehrenfest

Mentor network

In 2021, six new mentees and three new mentors enrolled in the mentor network of EWM-NL. All the interested mentees got successfully coupled to a mentor. Not every mentor got already assigned to a mentee; at the moment we do have a surplus of mentors. In 2022, new mentees and mentors are cordially invited to join the mentoring program.

STEM campaign

Having received permissions to use the material collected by our first STEM campaign to our social media, Dzemila Sero started publishing the campaign on Twitter and Instagram. Specifically, in 2021 the following quotes and photos were posted, with the engagement in parentheses:

- Katerina Stankova (Twitter: 6,554 impressions, LinkedIn: 147 views, Instagram: 21% of users who did not follow our account viewed the post),
- Fleur Zeldenrust (Twitter: 4,359 impressions. LinkedIn: 724 views, Instagram: 58% of users who did not follow our account viewed the post),
- Svetlana Dubinkina (Twitter: 1,088 impressions. LinkedIn: 3,569 views, Instagram: 41% of users who did not follow our account viewed the post).

Poster women in mathematics

Inspired by a poster on [Notable Women in Computing](#), EWM-NL started collecting ideas for a poster on Notable Women in Mathematics. In 2021, we collected and created all material needed for a poster and engaged a designer for the final product. The poster is expected to be finalised in the first few months of 2022. The material was prepared by a joint Dutch and UK team comprising Maria Vlasiou and Silvy Dijkstra (NL) as well as Houry Melkonian and Tom Ritchie (UK).

Competition

The University of Exeter ran a competition for its students to celebrate diversification in the culture of mathematics, and to support participation among underrepresented groups. Joining forces with EWM-NL, the goal assigned to the students was to prepare a biography about a female mathematician.

Winning entries of the competition will contribute to the poster on women mathematicians. Below, you may find the winning entries of the UK competition.

- [Ada Lovelace](#) by Anila Navaratnam
- [Emmy Noether](#) by Anila Navaratnam
- [Florence Nightingale](#) by Amber Ellis
- [Katherine Johnson](#) by Sophia Jaffer
- [Maria Gaetana Agnesi](#) by Sophie Peel
- [Marie-Sophie Germain](#) by Sophie Peel
- [Sofia Kovalevskaya](#) by Sophia Jaffer

Outreach

Insight Out

Insight Out – Inspiring women in STEM is a career event for women in exact, technical, and natural sciences. The third edition took place online in June 2021. On four Mondays the event offered inspiring talks, workshops, panel discussions and networking activities. Insight Out is organised by NWO, with input from LNVH, ECHO, KNAW de Jonge Akademie, PNN, PostdocNL and Young Academy Europe. EWM-NL participated on the 4th day of the event “Building and investing in a professional network: Stories on the importance of a professional network and strategic alliance”. We provided an introductory video to the association (also to be found on our [website](#)) and Francien Bossema represented the board during the “Spatial Chat” part of the programme.

Sponsoring national mathematics Olympiad

On Friday, November 12, 2021, the award ceremony of the Dutch Mathematical Olympiad 2021 took place in the Auditorium of TU/e. At the finals on September 17 at TU/e, 136 participants from all over the country competed for the prizes. There are five prize winners in each of the three categories: class 6, class 5, and classes 2, 3, 4.

EWM-NL awarded the top three girls from each of the categories a small prize. The winners were:

- In Class 4, the overall top ranked **Allie Zong**, also a medallist in the European Girls Mathematical Olympiad;
- In Class 5, **Mathilda Kenessey de Kenese**, who is new to the group;
- In Class 6, **Wietske de Vos**, also new to the group.

Words of Women in Mathematics in the Time of Corona

In the past, EWM-NL promoted, supported, and participated in the video project "Faces of Women in Mathematics" organized by colleagues in the UK, Germany, Japan, and Italy and disseminated through EWM. The film collected 146 clips of 243 women mathematicians from 36 different countries speaking 31 different languages. This very successful project has contributed to making women working in mathematics more visible and has received very positive resonance from the general public. This project was followed up by a second project “Words of Women in Mathematics in the Time of Corona”. EWM-NL supported this project too through dissemination and personal contacts.

Social media

We are active on a number of social media. These were managed throughout 2021 by Maria Vlasiou. Since December 2021, Dzemila Sero started taking care of LinkedIn, Twitter, and Instagram. Posts regarded mainly the following items:

- Information about media training (Twitter: 699 impressions English post, 174 impressions Dutch post, Instagram: 16% of users who didn't follow our account viewed the post, LinkedIn: 266 views)
- The STEM campaign
- Dzemila and Maria agreed on future posts/retweets also about: facts about women in maths from accounts of UN Women, #womeninscience; retweets from NWO, PWN; invite board members and female colleagues to share news items such as publications, achievements, awards, to be advertised on our social.
- Retweets about maths news mainly from: Your Daily Epsilon Math, SOWISO, Platform Talent voor Technologie, FEM Maastricht University, Digital EU
- Posts about open academic positions around NL (TU Delft, Amsterdam UMC, QU Tech, etc.)
- LinkedIn: we shared few posts from Eindhoven University of Technology, University of Amsterdam, Network pages, Quantum Delta NL, Jakub Tomczak.
- Instagram: we had issues in logging in from multiple locations simultaneously. The problem is now solved.

We plan to engage more with Instagram and LinkedIn. We consider topics on EWM-NL activities (meet the board, newsletter, meetings, courses, grants), on engaging with our network, and on the new STEM campaign.

Internal affairs

Board composition

The 2021 executive board comprised Maria Vlasiou, Olfa Jaibi, Anne-Men Huijzer, **Dzemila Sero**, Palina Salanevich, **Chayenne Olumuyiwa**, **Ivan Kryven**, and **Francien Bossema**. The members in **bold** all joined the board in 2021. The call for a new president was not successful in 2021. Maria Vlasiou will continue in this role until a new volunteer for the role is found. The advisory board was extended by the addition of Jo Ellis-Monaghan in December 2021. Thus, the advisory board now comprises De Gunst, Rottschäfer, and Ellis-Monaghan. Further additions to the advisory board will be left for an eventual new president of the executive board.

Grants

In total 2 applications for EWM-NL Career Support Grants were received. One was awarded, to Francien Bossema, prior to her becoming a board member. The grant was awarded to participate in an (online) winter school at the TU Berlin: 'Machine learning using python: theory and applications', which took place in January 2021. The second applicant withdrew their application.

Finances

We continued facing the ramifications of the pandemic. In 2021, we organised a few online events (e.g. the International Day of Mathematics and the Wikipedia project) and a few in-person events (e.g. the media training workshops and annual meeting). Given the relaxation of some restrictions at the end of the year and financial resources, we were able to organise two sessions of the workshop on media training, which is reflected in the realised expenses. Winners of the Dutch Mathematical Olympiad were a bit late in claiming their prizes, thus moving two prizes in the 2022 expenditures.

Expense	Budgeted amount	Realisation	Notes
Board meetings	200	69.44	9/10 online
EWM memberships	100	40	
Grants	1500	500	
Lunch with local representatives	100	0	
Promotional material	100	0	
Exhibition	200	0	
Gifts mathematics competitions	200	54.79	(1/3 of the prizes)
Print poster Women in Mathematics	500	0	deferred to 2022
Design poster Women in Mathematics	1000	0	deferred to 2022
Wikipedia edit-a-thon	400	33.86	
International Day of Mathematics	400	0	Online
Annual meeting	2000	1956.65	
Workshop	1000	2089.44	
PhD day event	300	0	
Total	8000	4744.18	