Queer in Math Day 2024

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In June 2024 the Queer in Math Day was held at the Max Planck Institute for Mathematics in the Sciences in Leipzig. We, the authors and organizers, would like to give a brief, informal introduction to the surrounding topics, what led up to this day, and some food for thought for everyone in the mathematical community.

Diversity in Mathematics

There is this idea that mathematics is an abstract endeavor, unrelated to real-world social or political issues. But we, the mathematicians, are not part of the abstract mathematical axiomatics, we are social beings working on mathematics together. Hence our experience in the mathematical community is inherently linked to our identity.

Because of our gender and/or sexual identities, we authors, and probably many of you readers too, have experienced different situations where we felt unwelcome or out of place, questioning our own participation. Whether you were told that being openly gay would make others in the department uncomfortable, had to run down two flights of stairs to the nearest women's bathroom, or heard somebody make fun of the concept of pronouns at a conference dinner, such reoccurring incidents are frustratingly common. Go and ask around!

These experiences are not isolated or independent events but stem from sexism and systemic discrimination against marginalized groups. Indeed, we see a rise in anti-queer[1] hostility around the world, inclu-

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[1] See the brief glossary at the end of this article for an explanation of some terminology.

ding in Germany[2]. While many academic institutions praise themselves with gender diversity, at the same time transgender[1] and non-binary[1] students are more likely to leave STEM academia[3].

Mathematical events centered around marginalized communities are helpful in that they provide space for networking, discussion, research and overall experiencing mathematics in a context striving to be safe from discrimination. Giving visibility to these communities allows for younger mathematicians to witness different role models and feel represented in the field. Since the 1970s, when the Association for Women in Mathematics (AWM) was founded, many events have been organized to promote and support the work of women in mathematics. They have helped us create a community, find collaborators, and encourage young women to pursue a career in mathematics.

During one of the monthly FLINTAQ*[1] lunches at the Max Planck Institute for Mathematics in the Sciences (MPI-MiS), Leonie Kayser brought up the idea of celebrating queer pride month at the institute. Over the next three months, this idea led to the first Queer in Math Day that took place on June 6th, 2024 in Leipzig. As we understand it, queer is a reclaimed umbrella term for "non-normative sexual or gender identities" and includes all LGBTQ+[1] identities.

The most famous queer mathematician is probably Alan Turing, whose life has been the subject of many books and films; but there have been and are many more queer mathematicians to look up to, as witnessed for example by Spectra's "outlist"[4]. The primary goal of the Queer in Math Day was to bring together queer mathematicians from all academic career stages or mathematical backgrounds and to provide a safer space for networking. The second purpose was an educational one, indeed the conference was open to participants regardless of their identity, inviting everyone to learn about the experiences of queer mathematicians.

Queer in Math Day – a timeline

The preparations

On March 4th, 2024 the institute's monthly FLINTAQ* lunch took place. During the informal conversations, Leonie Kayser suggested that it would be nice to have some community events during Pride Month. The idea was met with enthusiasm and a few others showed interest in co-organizing the event. Thus the idea of a "Queer in Math Day" was born.

A group of five volunteers (Celia Hacker, Leonie Kayser, Mireille Soergel, Neža Žager Korenjak, and Pierre

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[2] bmi.bund.de/SharedDocs/downloads/DE/veroeffentlichungen/2024/lb-lsbtiq.pdf
[3] pmc.ncbi.nlm.nih.gov/articles/PMC9250371
[4] lgbtmath.org/People.html

Bréchet) formed at the first organizational meeting on March 13th (again, during lunch). Inspired by other queer conferences and events held in the math community such as LGBTQ+Math Day[5], QTMC[6], QuINGs[7] and $\mathrm{Spec}(\overline{\mathbb{Q}})$[8], we imagined what that day could be and distributed tasks among each other for planning.

During the following weeks and more productive lunch breaks, we decided on June 6th as a date, settled on a preliminary program, sent invitations to potential speakers, and drafted a community agreement and advertising emails. Many people were eager to help with the preparations: Thomas Endler designed the colorful logo and poster, which was sent to universities in Saxony and surroundings, Anna Wienhard secured funding, Katharina Matschke helped create a website[9], registration form and booking the rooms, Samantha Fairchild helped planning the plenary discussion, to name a few.

One obstacle along the way was the lack of means to contact our main target audience (queer folks in the mathematical community) – both for speakers and participants. Spectra, an association for LGBTQ+ mathematicians, provides an "outlist"[4] of its members who are comfortable being reached out to, a great starting point for us to look for speakers. All recipients of invitations were grateful for our planned event, and eventually, we found two speakers, Theresa Simon (University of Münster) and Yossi Bokor Bleile (Aalborg University). Getting the word out about the event was not easy either. It relied mostly on word-of-mouth marketing, committed friends sending emails to their faculties, and the occasional math mailing list.

The big day

At 10 am on the 6th of June 2024, groups of people began flocking into the institute for registration at the Queer in Math Day – set intentionally late to allow people to travel by train to and from Leipzig on the same day. Upon arrival, participants were handed a name tag and a pamphlet, which included practical information such as the program and the dinner location, as well as the community agreement and a glossary, parts of which can be found at the end of this article.

The program started with Leonie Kayser giving an introductory talk about the LGBTQ+ alphabet soup and its relevance to the mathematical community, highlighting issues that were also discussed later that day. Afterward, Theresa Simon and Yossi Bokor Bleile presented their engaging general mathematical audience talks about *Nonlocal isoperimetric problems* and *Doughnuts and Data* respectively, separated by a catered lunch break. Next was a lightning talk session,

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[5] fields.utoronto.ca/activities/22-23/LGBTQplus
[6] queertransmath.com
[7] quings-workshop.github.io/2023
[8] fields.utoronto.ca/activities/22-23/SpecQ
[9] mis.mpg.de/de/events/series/queer-in-math-day

Abbildung 1. *Impression from the panel "Being Queer in Mathematics".*

where several participants gave five-minute talks introducing their research. The following extensive coffee break, just like the lunch break, offered ample opportunity to connect with the other participants and exchange ideas and experiences.

The last item on the agenda was the highly anticipated panel discussion moderated by Samantha Fairchild (MPI-MiS), featuring Theresa Simon and Yossi Bokor Bleile as well as Érika Roldán (MPI-MiS) and Rin Ray (University of Münster). The questions had been collected and given to the panelists prior to the conference, which allowed them to give well-prepared answers and avoid certain topics if desired.

Are there any research areas where queer mathematicians feel particularly welcome? Who are your queer mathematician role models? How to come out in an academic context? How to build a community? How can allies[1] help create a better culture? – These are some of the questions the panelists answered by sharing valuable personal stories we would not hear otherwise in a mathematical context. To end the discussion on a lighter note they shared some positive improvements they have seen in academia.

After the official program, the entire group moved the discussion to a beer garden, an enjoyable early-summer evening rounding off the first Queer in Math Day in Germany.

Building a more inclusive future

Judging by our impressions and the feedback we received from numerous participants, the first Queer in Math Day was a great success. We learned a lot from the experiences, positive and negative, of fellow mathematicians. It is evident that there is a need for a network and more support of LGBTQ+ researchers and students within the German mathematical community, and perhaps beyond, at a European level. Many do not yet feel safe being openly queer at their home

institution and thus do not have the possibility to join such events. We hope that a regular occurrence of this event and others will help to connect queer mathematicians and it is only one of many steps towards more inclusiveness.

We strongly encourage the mathematics departments in Germany to show more support towards their local queer students and researchers. We insist on the fact that the responsibility of building a more inclusive environment should not solely rely on the queer community to carve out a space for themselves, rather, this responsibility must be collective.

As a consequence of policy changes in Colorado, revoking protection from discrimination based on sexual identity, the 1995 Joint Math Meetings (JMM), which was scheduled to take place in Denver, Colorado, was moved to San Francisco, California. This historical event led to the creation of the Spectra Association, which has regularly contributed events to the JMM since. It serves as an inspirational example of how individuals, working together with their institutions, can advance the inclusiveness of the mathematical community. More details can be found in the article linked in the recommended reading list below.

The discrimination and challenges faced by marginalized communities have been studied and discussed in depth by many and we do not claim to address the deeper societal issues here. Our article aims to share our personal experience in mathematics and in organizing the Queer in Math Day. We write from our point of view and wish to shed some light on the situation in the mathematical community. Below, we share some thoughts and simple actions that can help create a more inclusive environment, some of which have been applied in our institute. Some of these points are relevant not just for queer inclusiveness but for supporting all marginalized groups.

Local events

The three of us connected at MPI-MiS' monthly FLINTAQ* lunch and this is also where the idea for the Queer in Math Day emerged. Regular FLINTAQ* events are a great opportunity to meet and connect, build a network beyond academic hierarchies, and help encourage members from underrepresented groups to pursue a career in mathematics. Feel free to get inspired by your colleagues' ideas for activities!

Amenities

Within your institution or at conferences, change some bathrooms to gender-neutral bathrooms! This allows for everyone to feel safer and more welcome. Here are some resources to get you started:

- *Guide to gender neutral bathrooms*
  `universaldesignaustralia.net.au/gender-neutral-bathrooms`

- *Diskriminierungsfreie Toilettennutzung für alle*
  `transinterqueer.org/diskriminierungsfreie-toilettennutzung-fuer-alle`

- *Öffentliche Toiletten ohne Diskriminierung*
  `berlin.de/sen/lads/_assets/ueber-uns/materialien/`
  `factsheets/factsheet_12_toiletten_bf.pdf`

Speakers

Inviting someone to give a talk at a seminar or a conference recognizes their mathematical contributions to the field. A diverse cast of speakers allows participants to relate to the speaker and feel seen, thus creating a sense of belonging. As a seminar and conference organizer you can play an active role in giving marginalized groups more representation!

Pronouns, name tags and websites

Addressing people in the way they prefer is common politeness, we have certainly all met a *Herr Professor Doktor* who was unhappy about being addressed with the wrong set of titles. Without surprise, this applies to using the correct pronouns as well. For some people their pronouns align with their presentation, for others, this might not be the case. Addressing someone using an incorrect pronoun can be avoided by giving people the opportunity to share their pronouns. They can for example be displayed on name tags at conferences, included on one's website, signature, or after one's name in an online meeting. Specifically for conferences, we encourage organizers to give participants the option to share their pronouns in registration forms – if they wish to do so. By normalizing the practice of sharing pronouns, we strive to create an environment where everyone feels safer doing so.

Guidelines for workshops

Inspired by other like-minded conferences, we wrote a community agreement for the conference. The agreement manifests a common set of values, reminding attendees of some guidelines to be respected during the event and building a framework to handle discrimination. Here are some community agreements you can use as inspiration for your own!

- Encuentro Colombiano de Combinatoria
  `fardila.com/SFSUColombia/eccoagreement.pdf`

- Queer and Trans Mathematicians in Combinatorics
  `queertransmath.com/community-agreement`

- Macaulay2 in the Sciences
  `github.com/Macaulay2/Workshop-2024-Leipzig/`
  `wiki/Workshop-Community-Agreement`

Queer in Math Day 2025

We have handed over the organization of the next Queer in Math Day to a new group of highly motivated organizers. This year's edition will take place on **June 11th, 2025** at the Max Planck Institute for Mathematics in the Sciences in Leipzig. We invite everyone, from the queer community or not, to join this exciting event. More details about the event will be available soon at

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mis.mpg.de/de/events/series/
    queer-in-math-day-2025
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Mailing list

In collaboration with the DMV Fachgruppe *Gender, Diversity and Sustainability in Math* we have created a new mailing list for all topics related to queerness and mathematics. This list will be used to share information about future events and other opportunities in Europe. You can subscribe to the mailing list through the following website:

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diversity-math.org/membership-contact
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Recommended reading

We have selected some of our favorite resources about queerness in general and also specifically in math academia to provide additional perspectives on the topic.

- The Nature article *Queer inclusion equals better mathematics* by Anthony Bonato, 2022.
  `nature.com/articles/d41586-022-02354-y`

- The Notices article *The Origins of Spectra, an Organization for LGBT Mathematicians* by Bryant, Buckmire, Khadjavi, and Lind, 2019.
  `ams.org/journals/notices/201906/rnoti-p875.pdf`

- The illustrated book *Queer: A Graphic History* by Meg-John Barker and Jules Scheele, 2016.

- Homepage of the *Federation Queer Diversity in Germany LSVD$^+$*, a great starting point for many resources (also Germany-specific).
  `lsvd.de`

- Website of *Spectra*, the association for LGBTQ+ mathematicians.
  `lgbtmath.org`

- Website of *Out in Science, Technology, Engineering, and Mathematics* (oSTEM), a non-profit professional association for LGBTQ+ people in the STEM community.
`ostem.org`

- Website of the *Online Undergraduate Resource Fair for the Advancement & Alliance of Marginalized Mathematicians* (OURFA^{2}M^2).
`ourfa2m2.org`

- Slides from Leonie's *Introductory talk* at the Queer in Math Day 2024.
`files-www.mis.mpg.de/mpi-typo3/events-files/`
`slides_1256.pdf`

Glossary

The following glossary is based on the pamphlet for participants of the Queer in Math Day 2024.

Ally Used to describe a person who supports and advocates for LGBTQ+ people while (currently) not identifying as LGBTQ+.

FLINTAQ* Female, Lesbian, Intersex, Non-binary, Trans, Agender, and Queer. The additional $*$ stands for other marginalized identities not encompassed in the acronym. Mostly used in Germany, sometimes with fewer letters (or in a different order).

Gender Identity A person's internal, deeply held knowledge of their own gender.

Gender Expression External manifestations of gender, expressed through a person's name, pronouns, clothing, haircut, voice, and/or behavior.

LGBTQIA+ Lesbian, Gay, Bisexual, Trans and non-binary, Queer, Intersex, and Asexual, aromantic and agender. The + stands for other identities not encompassed in the acronym. An umbrella term that is often used to refer to the community as a whole, sometimes with fewer or more letters.

Non-binary, Enby Adjective used by people who experience their gender identity and/or gender expression as falling outside the binary gender categories of man and woman.

Queer A term used to describe a range of sexual orientations and gender identities. Although once used as a derogatory term and still considered derogatory by some older LGBTQ+ folks, the term queer now encapsulates political ideas of resistance to heteronormativity and is often used as an umbrella term to describe the full range of LGBTQ+ identities.

Transgender, Trans Adjective used to describe people whose gender differs from the gender they were assigned at birth. *Antonym:* **cisgender**, **cis**

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