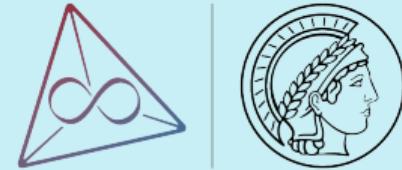


QUEER IN MATH DAY

Laura Lankers, Leonie Kayser & Skye Rothstein

leokayser.github.io

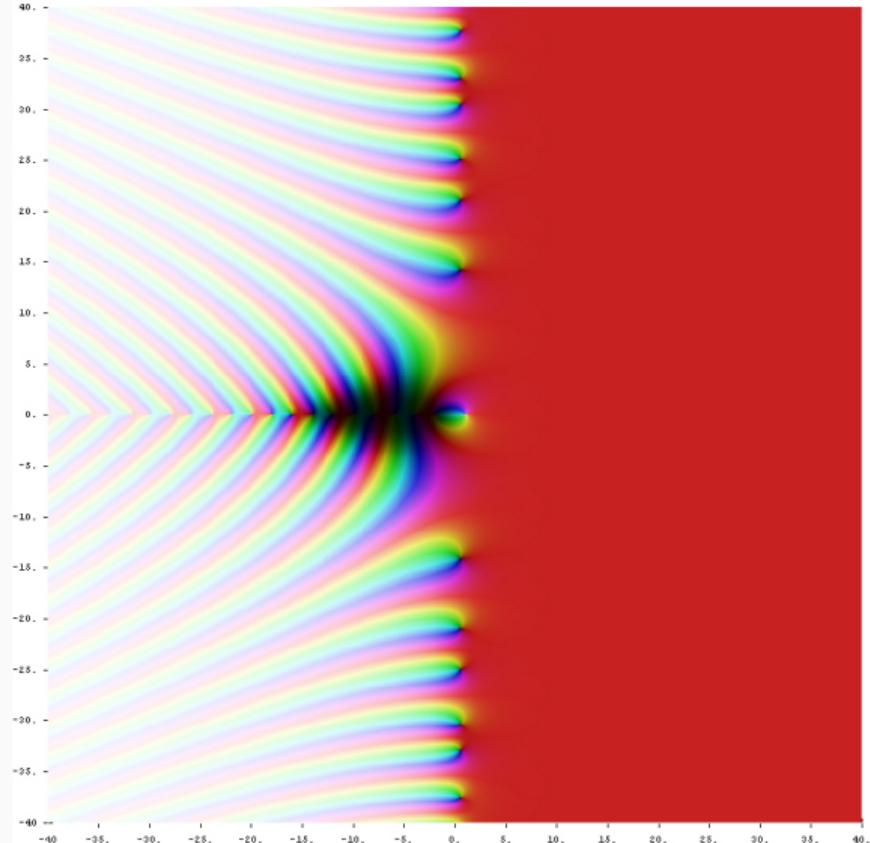
June 11, 2025



MAX PLANCK INSTITUTE
FOR MATHEMATICS
IN THE SCIENCES

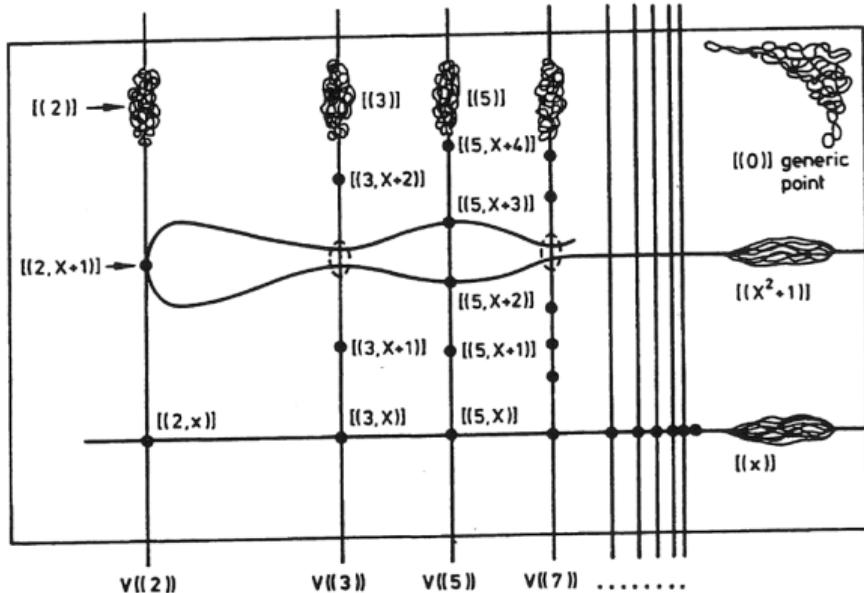
Odd similarities between mathematical and queer communities

- ▷ Love rainbows



Odd similarities between mathematical and queer communities

- ▷ Love rainbows
- ▷ Many things are a spectrum



Odd similarities between mathematical and queer communities

- ▷ Love rainbows
- ▷ Many things are a spectrum
- ▷ Chains of adjectives
- ▷ Argue about definitions

1. Idea

The notion of *commutative monoid* (or *commutative monoid object*, *commutative algebra*, *commutative algebra object*) in a [symmetric monoidal](#) ($\infty, 1$)-category is the ($\infty, 1$)-[categorical](#) generalization of the notion of [commutative monoid in a symmetric monoidal category](#). It is the commutative version of [monoid in a monoidal](#) ($\infty, 1$)-category.

Note that *commutative* here really means E_∞ , in the sense of [\$E\$ -infinity operad](#).

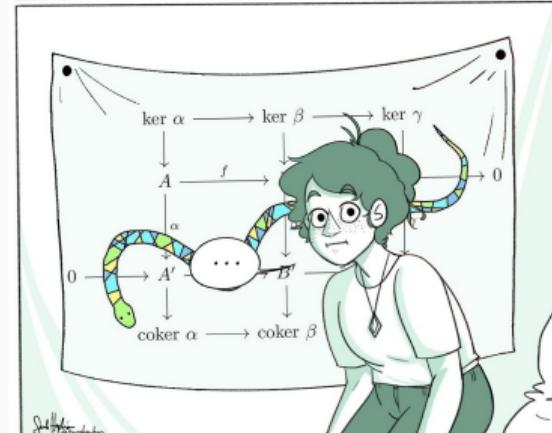
Odd similarities between mathematical and queer communities

- ▷ Love rainbows
- ▷ Many things are a spectrum
- ▷ Chains of adjectives
- ▷ Argue about definitions
- ▷ Shady sites to access vital resources
- ▷ Have friends all over the world



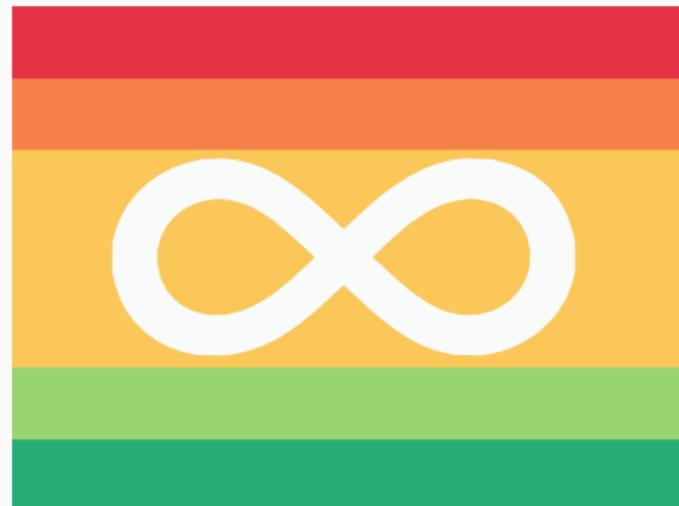
Odd similarities between mathematical and queer communities

- ▷ Love rainbows
- ▷ Many things are a spectrum
- ▷ Chains of adjectives
- ▷ Argue about definitions
- ▷ Shady sites to access vital resources
- ▷ Have friends all over the world
- ▷ Fun symbols



Odd similarities between mathematical and queer communities

- ▷ Love rainbows
- ▷ Many things are a spectrum
- ▷ Chains of adjectives
- ▷ Argue about definitions
- ▷ Shady sites to access vital resources
- ▷ Have friends all over the world
- ▷ Fun symbols
- ▷ Correlate with autism



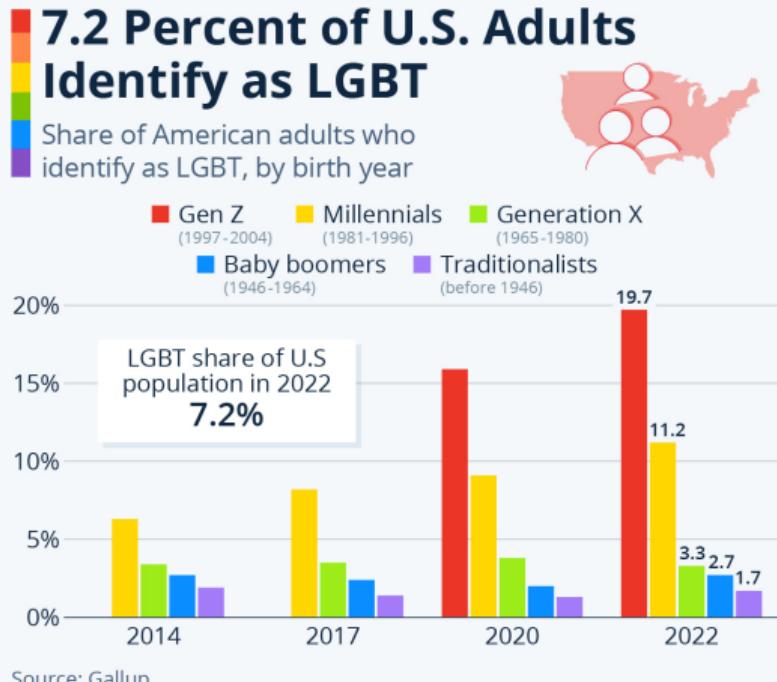
Odd similarities between mathematical and queer communities

- ▷ Love rainbows
- ▷ Many things are a spectrum
- ▷ Chains of adjectives
- ▷ Argue about definitions
- ▷ Shady sites to access vital resources
- ▷ Have friends all over the world
- ▷ Fun symbols
- ▷ Correlate with autism
- ▷ Impostor syndrome
- ▷ Always in need for funding

QUIZ: Are You Even Good Enough to Have Imposter Syndrome?

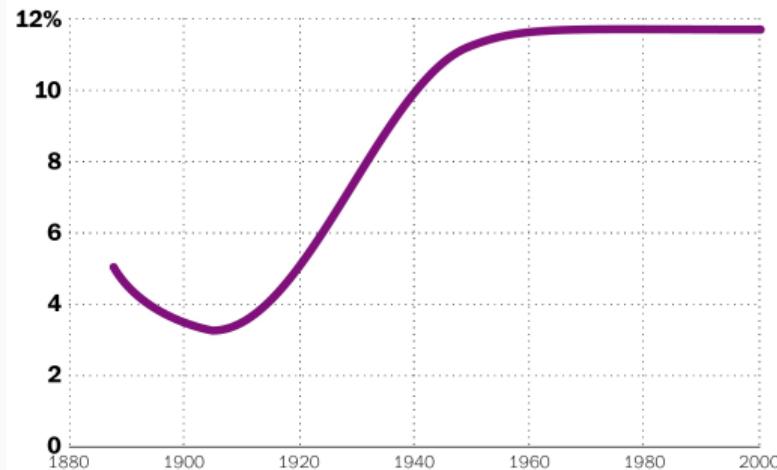


Gays everywhere???



The history of left-handedness

Rate of left-handedness among Americans, by year of birth



WAPO.ST/WONKBLOG

Source: Survey data reported in "The History and Geography of Human Handedness" (2009)



statista

The alphabet soup

LGBTQIA+ ≈ lesbian, gay, bisexual, transgender, queer & non-binary, intersex, questioning, asexual, aromantic, ... agender

- ▷ Queer is a reclaimed umbrella term for “non-normative sexual or gender identities”
- ▷ Queer identities often involve
 - Sex
 - Gender identity
 - Sexual and romantic attraction (or lack thereof)
- ▷ Different acronym popular in Germany (potentially +Queer)

FLINTA = female, lesbian, intersex, non-binary, transgender, agender



Sex (\neq gender)

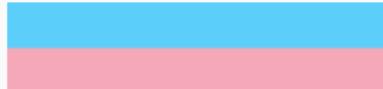
- ▷ Several **sex** characteristics: chromosomes, gonads, hormones, genitals
- ▷ Initially assigned female/male at birth (AFAB/AMAB), aligning with external genitalia
- ▷ Sex itself is a spectrum <https://www.nature.com/articles/518288a>
- ▷ **Intersex:** sex characteristics that do not fit typical binary notions of male or female bodies



- ▷ **Gender** is a cultural and social concept, manifesting in identity and expression
- ▷ Not necessarily aligning with one's sex/AGAB

Gender (\neq sex)

- ▷ cisgender: gender identity corresponds to AGAB
- ▷ transgender: gender identity differs from AGAB



- ▷ non-binary (= enby): gender does not align with categories “woman” and “man”



[https://twitter.com/theFoxFisher/
status/1694646306826867091](https://twitter.com/theFoxFisher/status/1694646306826867091)

Sexuality

- ▷ Heterosexual: Straight (women loving men, men loving women)
- ▷ Homosexual: Lesbian (women loving women) and gay (men loving men)



- ▷ mSpec (multi-attraction spectrum):
bisexual, pansexual, polysexual (attraction to own and other genders)



Sexuality 2

- ▷ **Allosexual:** ability to experience sexual attraction
- ▷ **Asexual and aromantic:** lack of sexual/romantic attraction or desire



- ▷ **Aroace umbrella:** Asexuality is a spectrum
- ▷ **Demisexual:** sexual attraction requires strong emotional connection with partner



- ▷ Yet another aspect: **monogamy** ↔ **ethical non-monogamy (ENM)**, polyamory

Pronouns matter

- ▷ Queer labels are relevant in the context of relationships/dating and queer communities
- ▷ Pronouns are always relevant, especially in a professional context
 - she
 - he
 - they (German: es or dey)
 - Combinations such as they/he (usually not totally ordered)
 - Any pronouns
 - No pronouns: always use name
 - Neopronouns, e.g. ze/zir
- ▷ Disregard of pronouns can cause discomfort and gender dysphoria
- ▷ You can't always tell a person's name from their face – just ask!
- ▷ Normalize having pronouns on name-tags and websites – when it's safe to do

- ▷ 1992 Colorado revoked the protected status of queer people
- ▷ 1995 Joint Mathematical Meetings (JMM) by MAA & AMS was planned to take place in Denver
- ▷ David Pengelley and James Humphreys independently wrote letters to AMS & MAA officers urging them to move meeting out of Colorado
- ▷ Despite the financial and organizational cost of cancelling and rebooking contracts, both AMS and MAA agreed on moving JMM – though not without (internal) backlash
- ▷ Future hotel contracts for JMM include “Change of Legislation” clause
- ▷ Lead to the creation of *Spectra*, an organization for LGBT mathematicians
- ▷ Full story (amazing read!) ams.org/journals/notices/201906/rnoti-p875.pdf

Queer in Math Day 2024

- ▷ Idea proposed at MPI MiS' FLINTAQ* lunch on 13. March 2024
- ▷ Team of five volunteers formed
- ▷ News spread by word of mouth, Spectra, and posters
- ▷ First Queer in Math Day held on 6. June 2024, $O(36)$ participants
- ▷ Article in Mitteilungen der Deutschen Mathematiker Vereinigung
degruyterbrill.com/document/doi/10.1515/dmvm-2025-0015/
- ▷ We have a **mailing list** for queer math activities in Germany and Europe now!
listserv.dfn.de/sympa/info/queermath



Opportunities and challenges

- ▷ Queer individuals still face discrimination in their daily lives
- ▷ Networking and visibility help create a welcoming environment
- ▷ Queer inclusion equals better mathematics
<https://www.nature.com/articles/d41586-022-02354-y>
- ▷ Awareness of **intersectionality** and multiple discrimination (racism, ableism, antisemitism, . . .)
- ▷ Acknowledging **social privileges** & calling out power structures aiding privileged people
- ▷ Sharing experiences helps to empower the community!

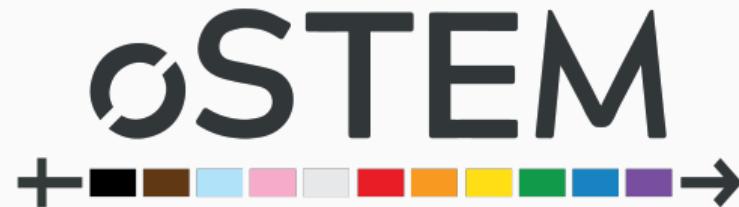
Queer associations in math and STEM



<https://lgbtmath.org/>



<https://www.ourfa2m2.org/>



<https://ostem.org/>

Towards a community agreement

- ▷ The Queer in Math Day aims to be a place of inclusivity, diversity, and non-competitiveness. We work to create a welcoming and safe space where everyone can feel supported and enjoy a fun, affirming environment.
- ▷ We will not tolerate any form of discrimination or harassment. Behavior, language, or conduct (either verbal or written) that is acceptable or welcomed by one person might be unwelcome or offensive to another. **We therefore ask you to be mindful to ensure that your words and/or actions communicate respect for one another.**
- ▷ If you are being harassed, made to feel uncomfortable with the way you are being treated, notice someone else being harassed, or if you have any other concerns, contact the organizers (Laura, Leonie & Skye) or email queerday@mis.mpg.de

Based on QTMC's community agreement queertransmath.com/community-agreement/

The gay agenda

- ▷ 10:30 **Welcome to Queer in Math Day 2025** talk by Leonie Kayser
- ▷ 11:00 **Group actions** talk by Matthew Cordes
- ▷ 12:00 **Group photo** (voluntary)
- ▷ 12:05 **Lunch Break**
- ▷ 13:00 **Singularity and solidity** talk by silviana amethyst
- ▷ 14:15 **Lightning talks**
- ▷ 15:15 **Coffee Break**
- ▷ 16:00 **Being Queer in Mathematics** Panel discussion feat. Katrin, Matt, Rosa, silviana
- ▷ 18:00 Walk to Substanz (~20mins)
- ▷ 18:30–∞:00 **Dinner at Substanz** (cash payment only!)

Thank you! Questions?