

# QUEER IN MATH DAY



**MAX PLANCK INSTITUTE**  
FOR MATHEMATICS  
IN THE SCIENCES

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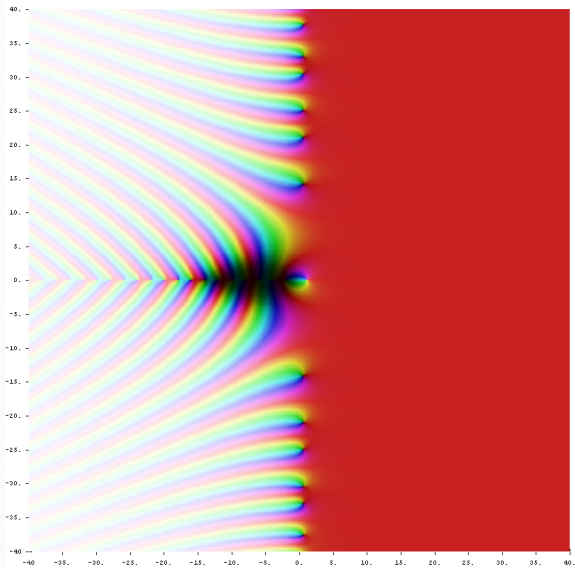
Leonie Kayser

[leokayser.github.io](https://leokayser.github.io)

June 6, 2024

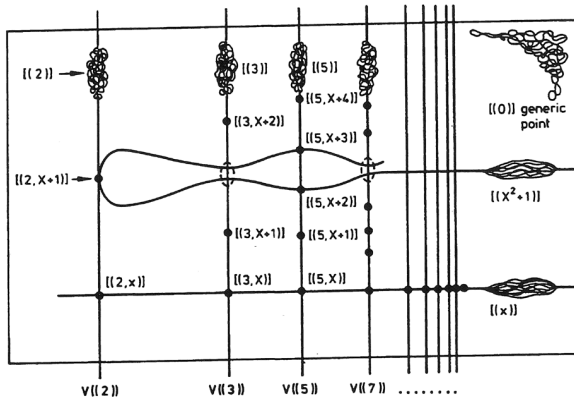
# Odd similarities between mathematical and queer communities

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- ▷ Many things are a spectrum



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- ▷ 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 \(infinity,1\)-category](#) is the [\(infinity,1\)-categorical](#) generalization of the notion of [commutative monoid in a symmetric monoidal category](#). It is the commutative version of [monoid in a monoidal \(infinity,1\)-category](#).

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

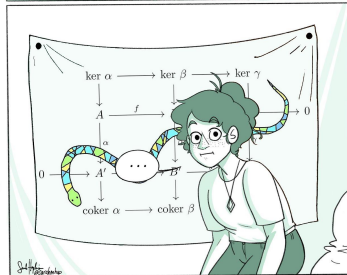
# Odd similarities between mathematical and queer communities

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- ▶ Fun symbols
- ▶ Correlate with autism



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- ▷ Fun symbols
- ▷ Correlate with autism
- ▷ Impostor syndrome
- ▷ Always in need for funding

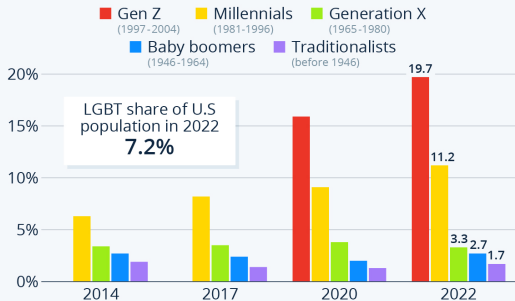
## QUIZ: Are You Even Good Enough to Have Imposter Syndrome?



# Gays everywhere???

## 7.2 Percent of U.S. Adults Identify as LGBT

Share of American adults who identify as LGBT, by birth year



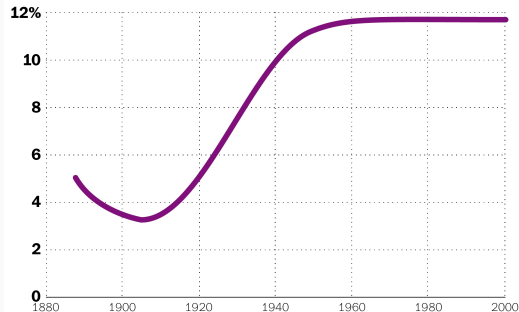
Source: Gallup



statista

## 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)



# A fuzzy coordinate system

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

▷ Main “axes” of queer identities

1. Sex (“biological”, see next slide)
2. Gender identity (social, cultural)
3. Sexual and romantic attraction (or lack thereof)

▷ queer is a reclaimed umbrella term for “non-normative sexual or gender identities”

▷ Different acronym popular in Germany (potentially +Queer)

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

## Sex ( $\neq$ gender)

- ▷ Sex is initially assigned at birth (AFAB/AMAB) aligning with external genitalia
- ▷ Several characteristics: chromosomes, gonads, hormones, genitals
- ▷ Even sex is a spectrum <https://www.nature.com/articles/518288a>
- ▷ Intersex: sex characteristics including chromosome patterns, gonads, hormones, or genitals 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>

# 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)

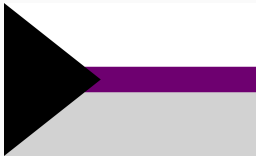


## Sexuality 2

- ▷ **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 mostly relevant in the context of relationships/dating
- ▷ Pronouns are always relevant, especially in a professional context
  - she
  - he
  - they
  - Combinations such as they/he (usually not hierarchical)
  - 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!
- ▷ Normalise having pronouns on nametags and websites!

- ▷ 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 organisational cost 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
- ▷ Full story (amazing read!) [lgbtmath.org/NoticesArticle/Article.pdf](http://lgbtmath.org/NoticesArticle/Article.pdf)

Blog post:

[reddit.com/r/math/comments/13xj5cd/on\\_the\\_intersection\\_of\\_pride\\_and\\_math/](https://reddit.com/r/math/comments/13xj5cd/on_the_intersection_of_pride_and_math/)

# Opportunities and challenges

- ▷ Queer individuals still face discrimination in their daily lives
- ▷ Networking and visibility helps creating 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** and calling out power structures aiding privileged people
- ▷ Sharing experiences helps empowering the community!



## Queer associations in math and STEM



<https://lgbtmath.org/>



<https://ostem.org/>

# The gay agenda

- ▷ 10:30 Leonie Kayser: *Introductory Lecture*
- ▷ 11:00 Theresa Simon: *Nonlocal Isoperimetric Problems*
- ▷ 12:00 *Lunch*
- ▷ 13:00 Yossi Bokor Bleile: *Doughnuts and Data*
- ▷ 14:00 You amazing folks: *Lightning talks*
- ▷ 15:15 *Coffee break*
- ▷ 16:00 Panel discussion *Being Queer in Mathematics*
- ▷ 18:00 *Dinner at Substanz* (cash payment only!)

**Thank you! Questions?**