



**A Global Approach to the Gender Gap
in Mathematical, Computing and Natural Sciences:
How to Measure It, How to Reduce It?**

**Discussion by discipline
Mathematics**

**Marie-Françoise Roy, IMU
Coordinator of the project
Director of the Conference**

The participants from mathematics to the ICTP Conference

About 40 from mathematics

Coming from 32 different countries

All continents

Over 90 % female

**Over represented compared to other disciplines
because of IMU's Committee for Women in
Mathematics and its ambassadors**

Short presentation of people in the room

Math in the Global Survey

Please read the report !

Applied math subset of Math

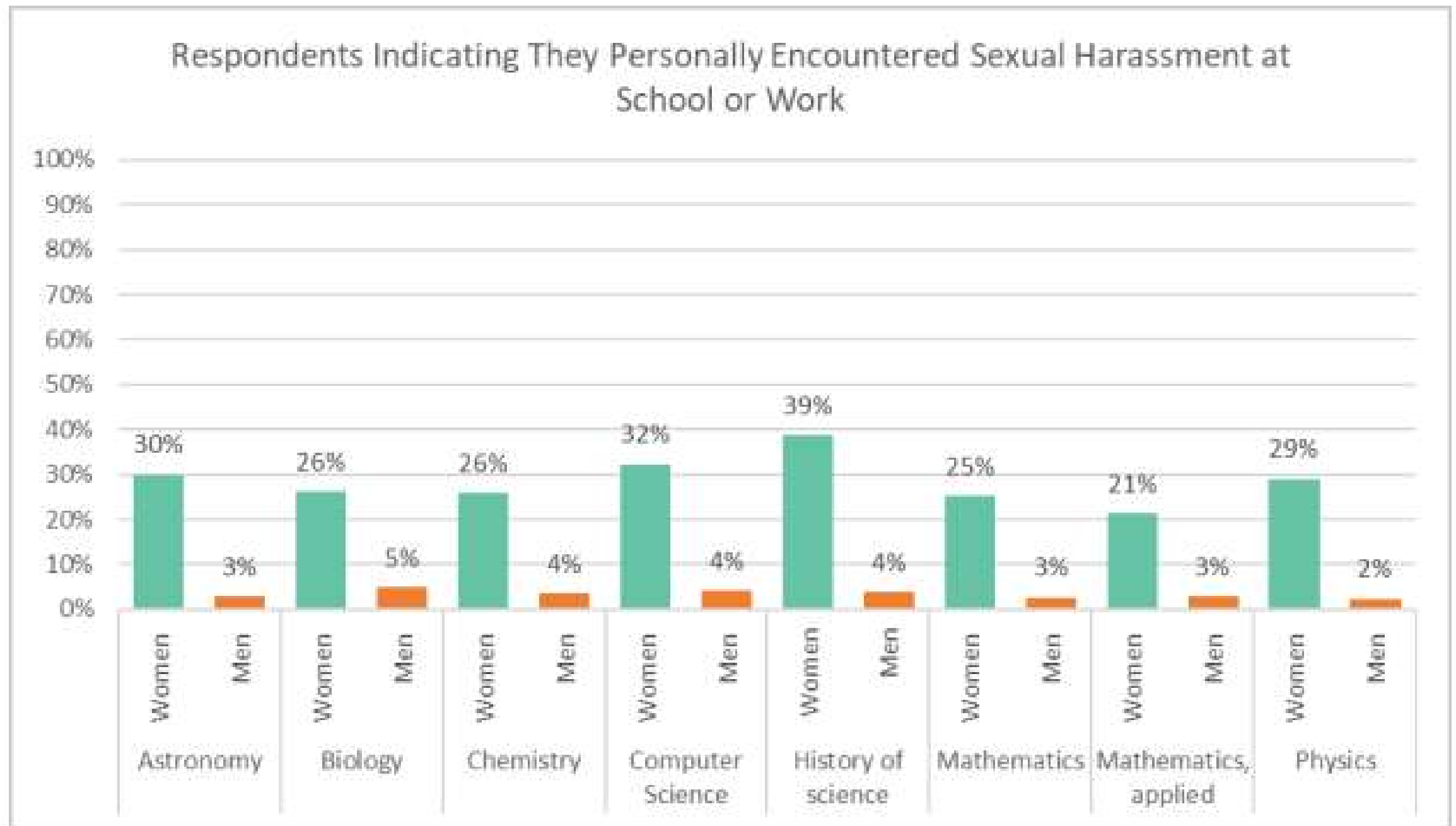
Many answers 5931 (2251 applied math)

(more answers than other disciplines)

47% of men/53 % women

(more women than in the community)

Math in the Global Survey



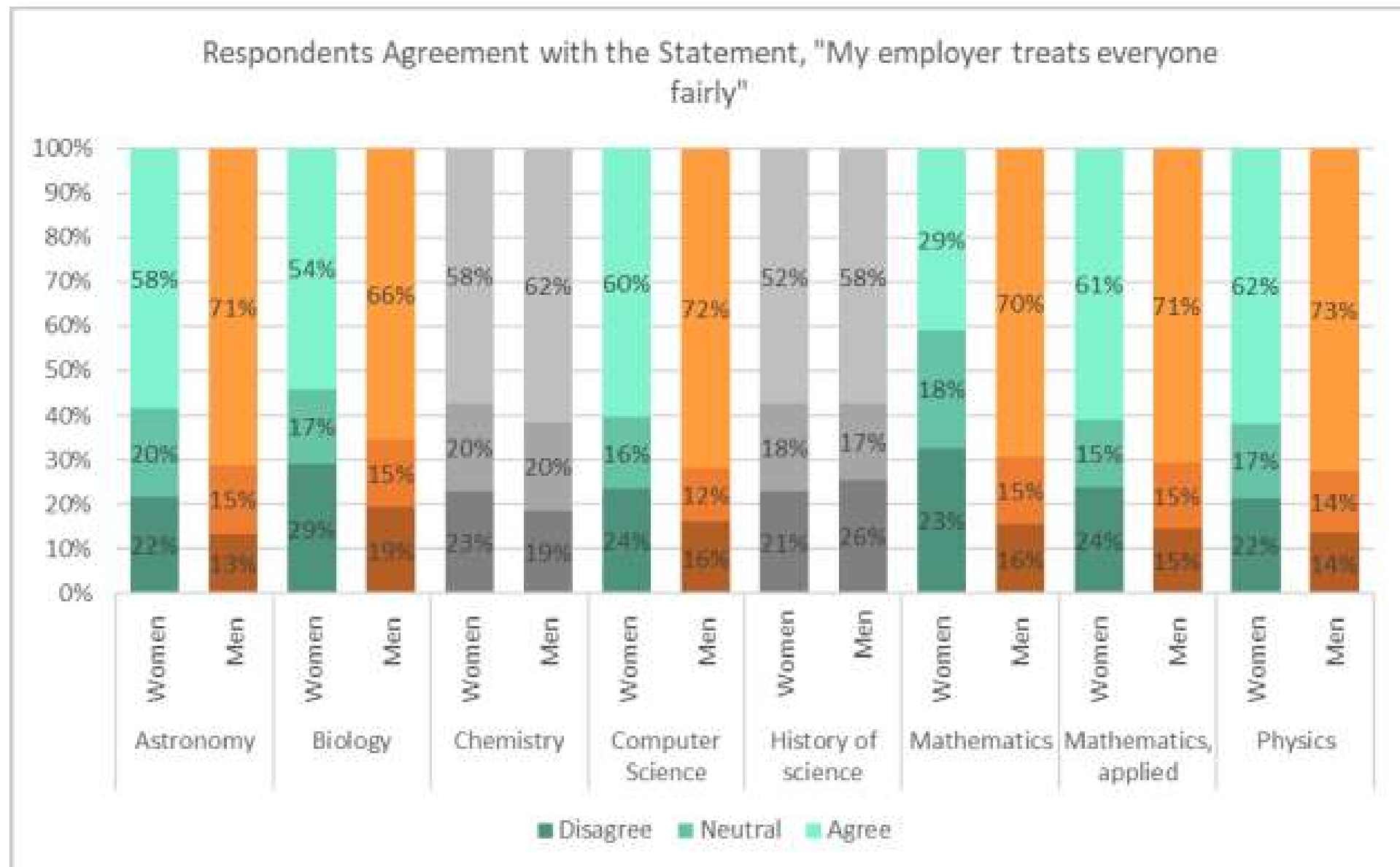
Math/applied Math in the Global Survey

**For most questions where there is a gender gap
(different answers from men and women) no
significant difference between pure and applied
math**

**However a few cases where there is a difference
between applied math/all of math for the whole
population (men and women)**

Math/applied Math in the Global Survey

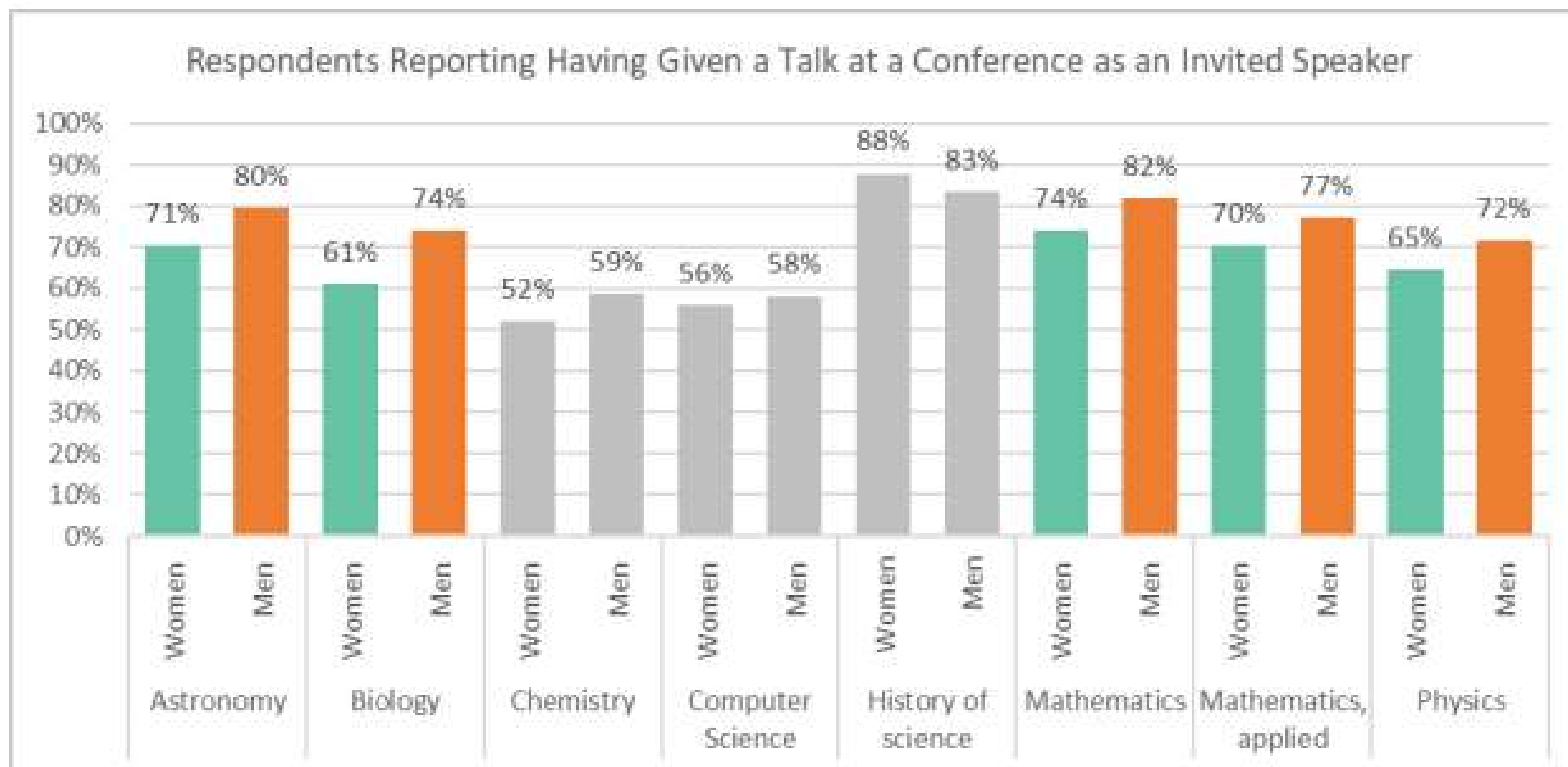
Respondents Agreement with the Statement, "My employer treats everyone fairly" more approved in applied math for women



Math/applied Math in the Global Survey

Respondents Reporting Having Given a Talk at a Conference as an Invited Speaker

Less in applied math than in math for men and women, and less women for both



Math/applied Math in the Global Survey

- Respondents Indicating the Period of Time They Chose Their Primary Field : choice is earlier in applied math for men and women than for all of math**
- Respondents Indicating They Personally Encountered Sexual Harassment at School or Work % slightly smaller in applied math**

Math/applied Math in the Global Survey

- Respondents Indicating They Had Significant Interruptions in their Doctoral Studies more important in applied math, for women and men**
- Respondents Comparing their Career Progression to Their Colleagues Who Completed their Final Degrees at the Same Time**

The answer more slowly is more present in applied math than in all of math, for women and men

Math/applied Math in the Global Survey

**-Respondents Comparing their Career Progression
to Their Colleagues Who Completed their Final
Degrees at the Same Time**

**The answer more slowly is more present in applied
math than in all of math, for women and men**

Math and Publication Patterns

Please read the report !

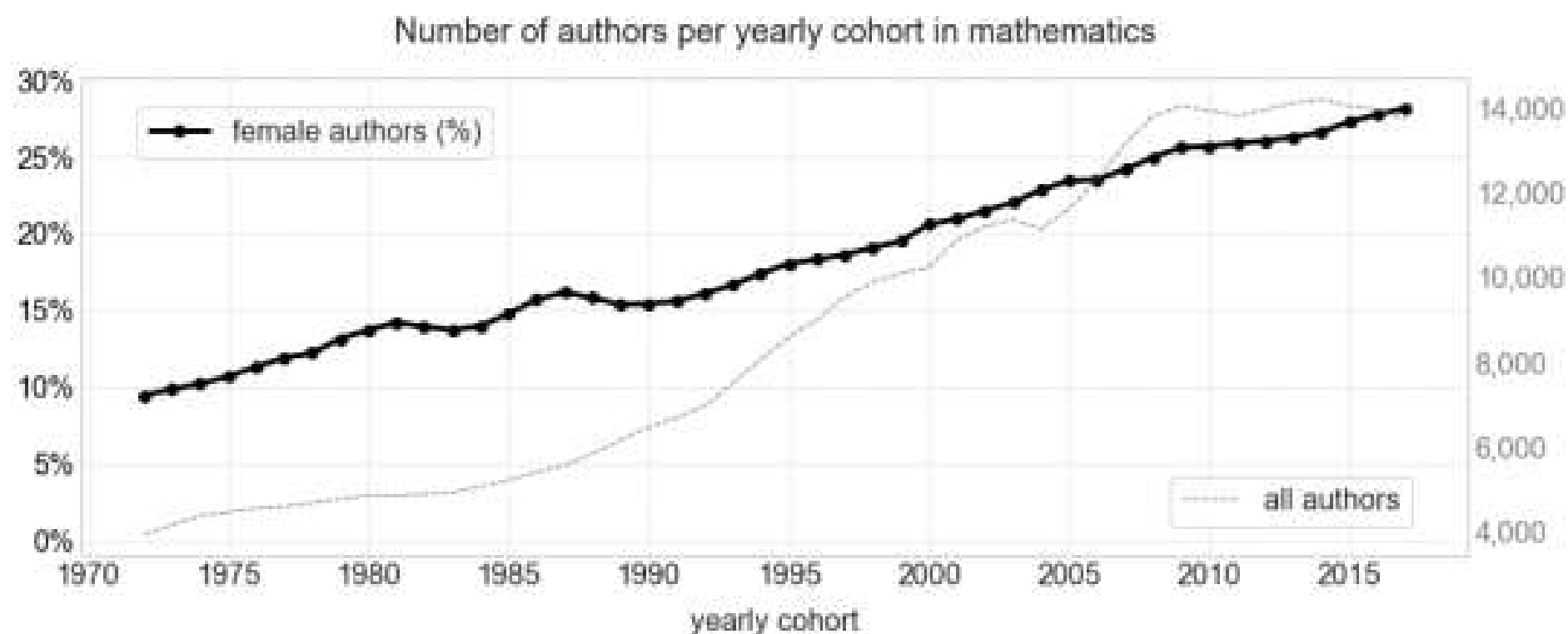


Figure 18: Number of active (**publishing**) mathematicians since 1970 and percentage of them that are women.

Math and Publication Patterns

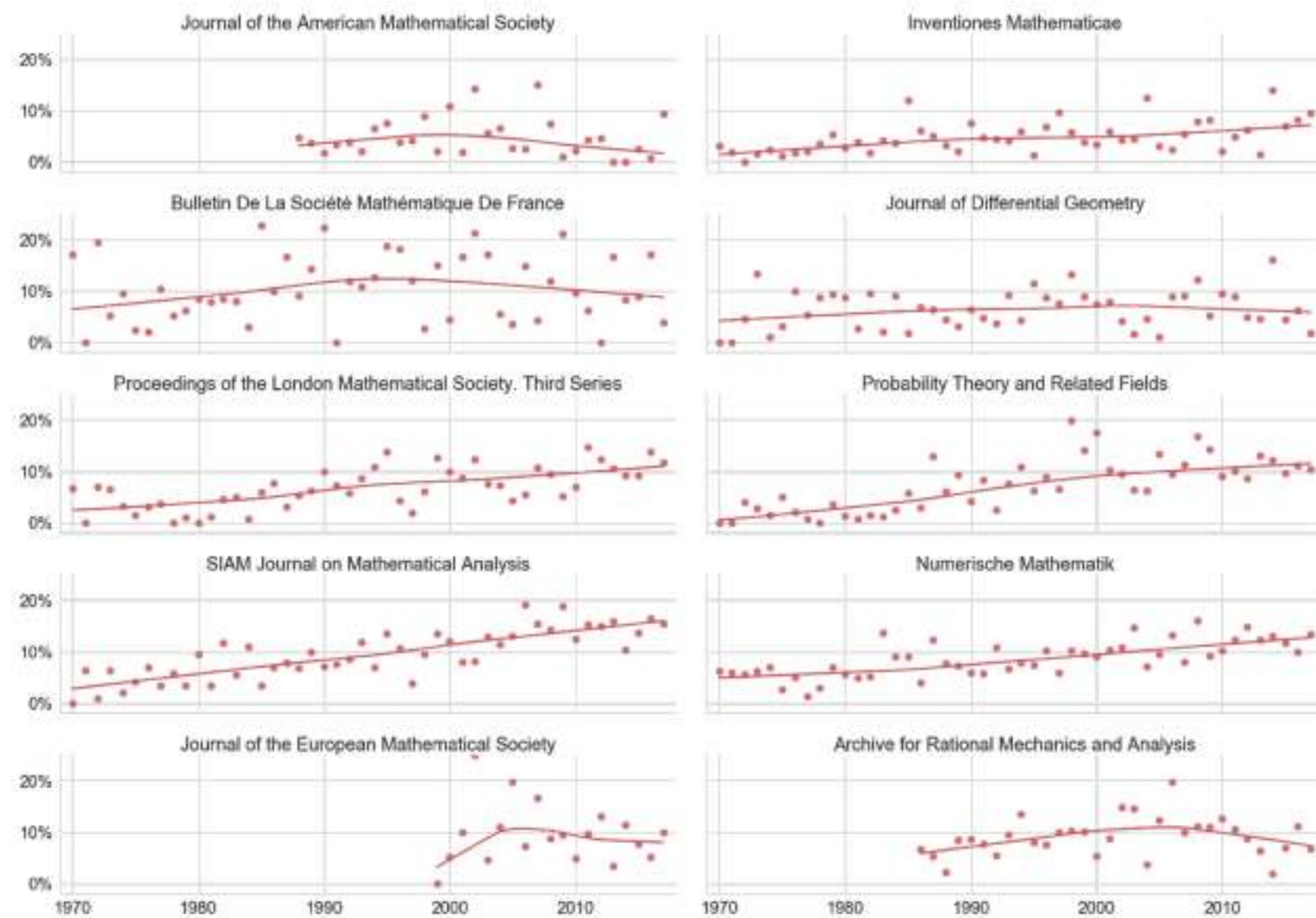
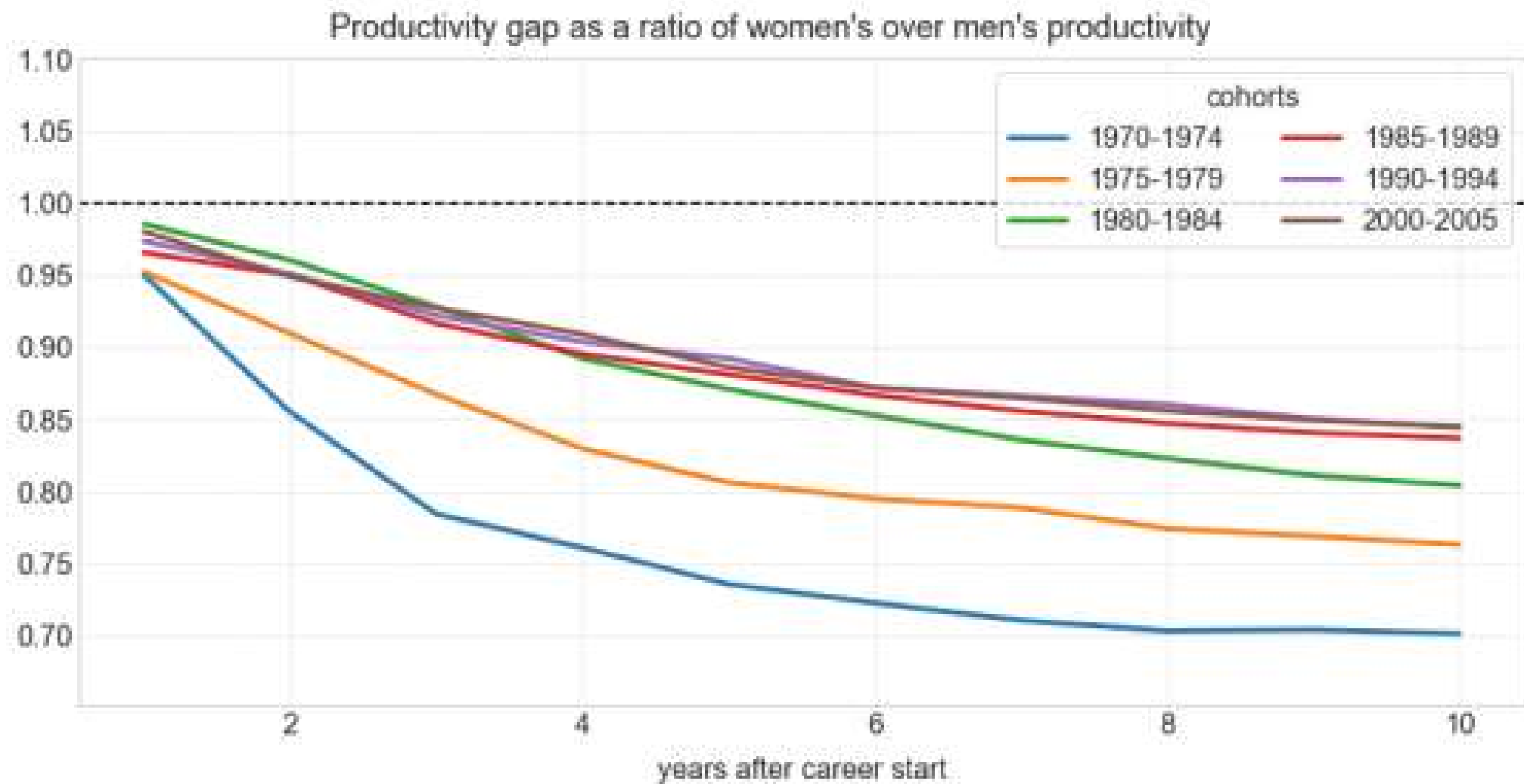


Figure 4: Percentage of fractional authorships from women in top mathematics journal per year since 1970.

Math and Publication Patterns



Math and Database of Good Practices

What can be said ?

Are these specific recommendations for Mathematics?

Preliminary recommendations in the Report

for instructors and parents

for local institutions

for national (and beyond) organizations

Discussed in an interactive way during the World Cafe

Part of the last session on friday