

Women in Mathematics in Germany

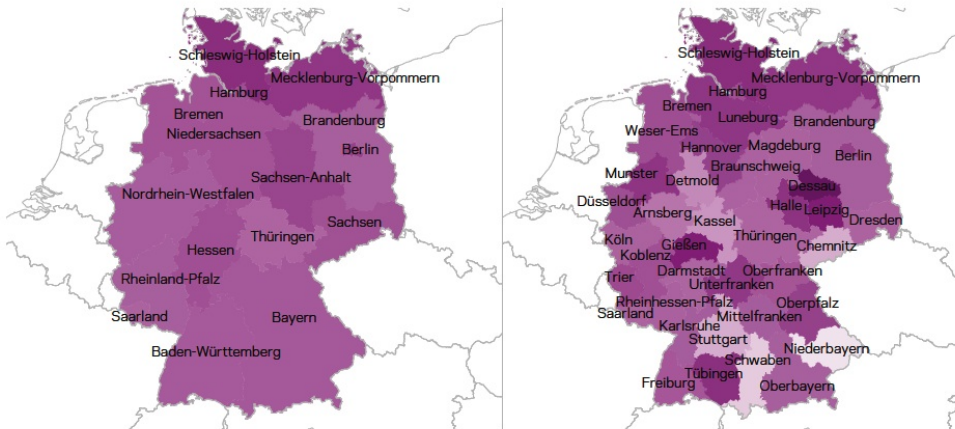
Maria Infusino

University of Konstanz

IWOTA 2016

Washington University St. Louis – July 19th, 2016

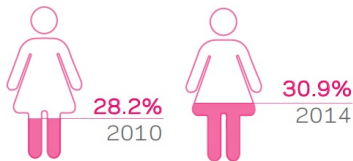
Distribution of female researchers in Germany



Share of female researchers per state/NUTS1 region (left) and per government region/NUTS2 region (right); all subjects; for Germany; 2010-2014.

Female ratio
0.175 0.469

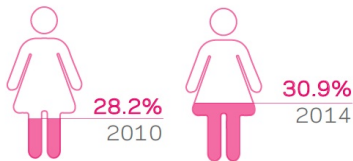
Distribution of female researchers in Germany



In general, Agriculture, Medicine, and Health related subject areas have the highest share of female researchers.

Subject areas in the Natural Sciences and Engineering have the lowest shares.

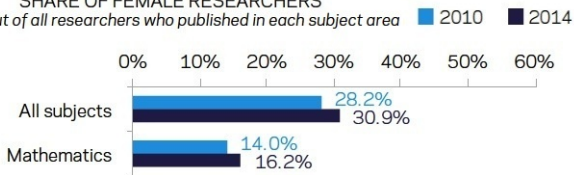
Distribution of female researchers in Germany



In general, Agriculture, Medicine, and Health related subject areas have the highest share of female researchers.

Subject areas in the Natural Sciences and Engineering have the lowest shares.

SHARE OF FEMALE RESEARCHERS
out of all researchers who published in each subject area

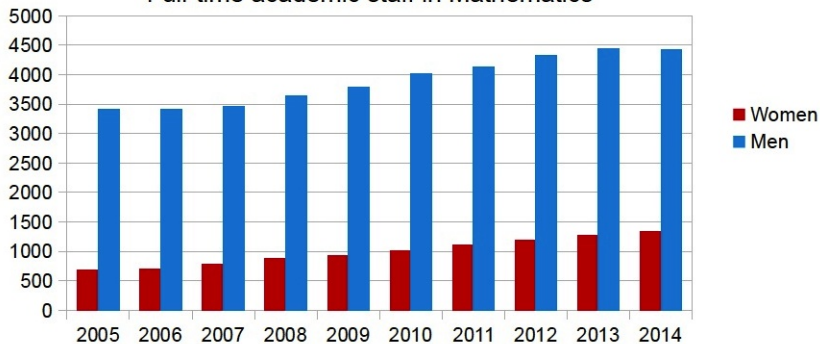


A general good trend in the Math Departments:

full-time academic staff in Mathematics from 2005 to 2014

	Total	Women	Percentage
2005	4 091	676	16.5
2006	4 115	703	17
2007	4 249	788	18.5
2008	4 518	871	19.3
2009	4 710	921	19.5
2010	5 027	1012	20.1
2011	5 249	1111	21.2
2012	5 510	1186	21.5
2013	5 724	1275	22.2
2014	5 770	1342	23.2

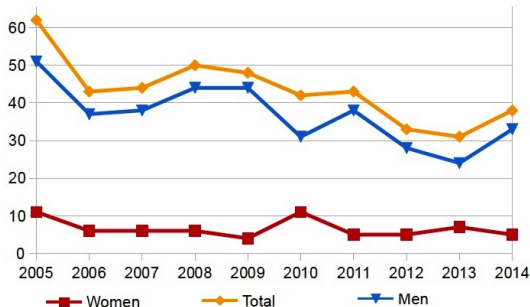
Full-time academic staff in Mathematics



A critical career point: postdoc → professor

Habilitations in Mathematics from 2005 to 2014

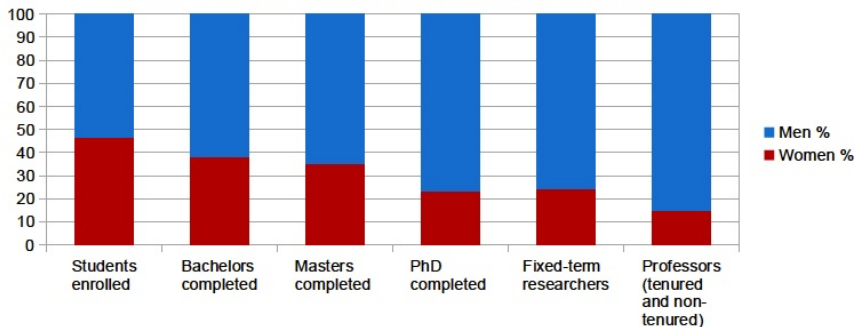
	Total	Women	Percentage
2005	62	11	17.7
2006	43	6	13.9
2007	44	6	13.6
2008	50	6	12
2009	48	4	8
2010	42	11	26.2
2011	43	5	11.6
2012	33	5	15.2
2013	31	7	22.6
2014	38	5	13.1



Distribution of Women in Maths in 2014 per study/academic career stage

	Total	Women	Percentage
Students enrolled	33728	72391	46.6
Bachelors completed	2665	1020	38.2
Masters completed	1117	395	35.4
PhD completed	562	132	23.5
Fixed-term researchers (e.g. postdocs, fixed-term lecturer)	3697	905	24.5
Professors (tenured and non)	1247	185	14.8

Gender distribution in Mathematics per study/academic stage



Female Professors in Mathematics in German universities



- 0 female professor
- 0 female tenured professor, but 1 – 2 female non-tenured professors
- 1 – 2 female professors, at least 1 tenured
- ≥ 3 female professors, at least 2 tenured

Associations and activities focused on advancing WIM

European level

European Women in Mathematics (EWM)

- created in 1986, after the participation of many european mathematicians to a roundtable organized at the ICM in Berkeley by the AWIM.
- 400 members and coordinators in more than 30 countries.
- aims: encouraging women to study mathematics, supporting women in their careers, giving scientific visibility to female mathematicians
- sponsors: meetings, lectures, initiatives to promote equal opportunity and spread the awareness of the gender gap in academia
- biennal general EWM meeting

Associations and activities focused on advancing WIM

European level

European Women in Mathematics (EWM)

- created in 1986, after the participation of many european mathematicians to a roundtable organized at the ICM in Berkeley by the AWIM.
- 400 members and coordinators in more than 30 countries.
- aims: encouraging women to study mathematics, supporting women in their careers, giving scientific visibility to female mathematicians
- sponsors: meetings, lectures, initiatives to promote equal opportunity and spread the awareness of the gender gap in academia
- biennal general EWM meeting

European Mathematical Society's Women and Mathematics Committee

- established in 1991
- 8 members
- aim: address issues relating to the involvement and progression of women in maths, support and promote the recognition of their achievements.

Associations and activities focused on advancing WIM

European level

European Women in Mathematics (EWM)

- created in 1986, after the participation of many European mathematicians to a roundtable organized at the ICM in Berkeley by the AWIM.
- 400 members and coordinators in more than 30 countries.
- aims: encouraging women to study mathematics, supporting women in their careers, giving scientific visibility to female mathematicians
- sponsors: meetings, lectures, initiatives to promote equal opportunity and spread the awareness of the gender gap in academia
- biennial general EWM meeting

European Mathematical Society's Women and Mathematics Committee

- established in 1991
- 8 members
- aim: address issues relating to the involvement and progression of women in maths, support and promote the recognition of their achievements.

EWM/EMS Scientific Committee

- established in 2008
- aim: advising EMS and EWM on scientific programmes and speakers for events aimed at emphasizing women's scientific contributions.

Example: The EMS/EWM Survey Lectures 2016 at 7ECM 2016 in Berlin

Associations and activities focused on advancing WIM

National level: Germany

German Section of European Women in Mathematics

- exists since the early days of EWM
- 50 members
- newsletter with information on job ads and other matters of interests for WIM
- annual national meeting *German Chapter of EWM* (next meeting in 2017)

Associations and activities focused on advancing WIM

National level: Germany

German Section of European Women in Mathematics

- exists since the early days of EWM
- 50 members
- newsletter with information on job ads and other matters of interests for WIM
- annual national meeting *German Chapter of EWM* (next meeting in 2017)

DMV Diversity and Equal Opportunities Division

The German Mathematical Society (DMV) has Diversity and Equal Opportunities as one of its fields of activities and cooperates closely with the German section of EWM.



Emmy Noether Lectures

initiated by the DMV Diversity and Equal Opportunities representative in 2008. In the annual DMV conference, DMV honours the work of a female mathematician (German or working in Germany) by inviting her to give a distinguished keynote lecture.

Associations and activities focused on advancing WIM

National level: Germany

German Section of European Women in Mathematics

- exists since the early days of EWM
- 50 members
- newsletter with information on job ads and other matters of interests for WIM
- annual national meeting *German Chapter of EWM* (next meeting in 2017)

DMV Diversity and Equal Opportunities Division

The German Mathematical Society (DMV) has Diversity and Equal Opportunities as one of its fields of activities and cooperates closely with the German section of EWM.



Emmy Noether Lectures

initiated by the DMV Diversity and Equal Opportunities representative in 2008. In the annual DMV conference, DMV honours the work of a female mathematician (German or working in Germany) by inviting her to give a distinguished keynote lecture.

Arbeitskreis Frauen und Mathematik

- sub-unit of the German society of math education (GDM) founded in 1989
- mainly concerned with in gender-specific issues in math education
- annual meeting organized every autumn

Associations and activities focused on advancing WIM

National level: Germany

German Section of European Women in Mathematics

- exists since the early days of EWM
- 50 members
- newsletter with information on job ads and other matters of interests for WIM
- annual national meeting *German Chapter of EWM* (next meeting in 2017)

DMV Diversity and Equal Opportunities Division

The German Mathematical Society (DMV) has Diversity and Equal Opportunities as one of its fields of activities and cooperates closely with the German section of EWM.



Emmy Noether Lectures

initiated by the DMV Diversity and Equal Opportunities representative in 2008. In the annual DMV conference, DMV honours the work of a female mathematician (German or working in Germany) by inviting her to give a distinguished keynote lecture.

Arbeitskreis Frauen und Mathematik

- sub-unit of the German society of math education (GDM) founded in 1989
- mainly concerned with in gender-specific issues in math education
- annual meeting organized every autumn

Several **thematic local meetings** aimed to encourage female researchers specialist in a particular math area.

Konstanz Women in Maths (KWIM)

- project supported by the Equal Opportunity Division of the University of Konstanz since May 2013.
- aim: promoting female mathematicians in their paths in studies and career, being a counseling by women for women.
- KWIM Activities:
 - a lecture series aimed to present mathematical results/biographies of female mathematicians and/or their experience in academia.
 - annual meeting in Konstanz
 - participation of local female researchers/students in national and international meetings in the framework Women in Mathematics

Thank you for your attention

Sources:



Mapping Gender in the German Research Arena, Elsevier's Analytical Services.



Map of female professors in Mathematics in Germany, Christine Bessenrodt.



Bildung und Kultur, Fachserie 11, Reihe 4.2 und 4.4, DESTATIS, German Federal Statistical Office.

Special thanks to:

- Salma Kuhlmann, *Konstanz Women in Mathematics*, University of Konstanz.
- Tanja Edelhäusser, *Equal Opportunity Council of the University of Konstanz*.
- Barbara Gentz, *German Section of European Women in Mathematics*.