

Activities of Gender Equality Promotion Committee in the Physical Society of Japan



Kaya Kobayashi , Okayama University
on behalf of the Gender Equality Promotion Committee, JPS

Outline

- **Who we are:** Gender equality promotion committee of JPS
- **What we do:** Support young female scientists
 - Summer camps for pre-university students
 - Fumiko Yonezawa Memorial Award
 - Nursery at JPS meetings
 - Co-ordinate with other societies JSAP etc.
 - EPMEWSE
 - 5th large scale survey

Gender Equality Promotion Committee of JPS

日本物理学会男女共同参画推進委員会

ホーム

委員会について

委員会の活動

諸資料

日物応物男女共同参画連絡会

Home, about committee, activities, material, JPS and JSAP liaison



Since 2002

<http://danjo.jps.or.jp>

Members: 15 (special, usual number: 10) + 3 observers
Term: 2 years

Scope of Gender Equality Promotion committee

1. Discussion and activities upon Gender equality

Annual meetings (twice a year)

Symposium and daycare at JPS meetings

2. Provide support for the female physicists of the next generation

Fumiko Yonezawa Memorial Award

Support for Summer workshops (high school/junior high school students)

3. Survey and Analysis

5th large scale survey (liaison of academic/industrial societies: EPMEWSE)

日本物理学会男女共同参画推進委員会

[ホーム](#) [委員会について](#) [委員会の活動](#) [諸資料](#) [日物応物男女共同参画連絡会](#)



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Development of Next Generation Female Researchers

For junior and high school female students, numerous JST grant supported activities started

- “Natsu-Gaku”: Summer Camp
- “Kansai Science School” : Science school (workshop) in Kansai area
 - Several programs at several universities (Osaka, Kobe, Nara, Kyoto) in Kansai area



- Now NPOs are formed for those long-term activities
 - Both of NPO organizations attract the interests and financial support from various companies.

Natsu Gaku: Summer Camp



- Since 2005
- supported by EPMEWSE, JST (Japan Science and Technology Agency), NWEC (National Women's Education Center)
- 2 days camp (online since 2021)
 - ~120 participants (ranging from 3rd year junior high to 3rd year high school)
 - With scientists, engineers and tutors (female university students)

Natsu Gaku: Summer Camp

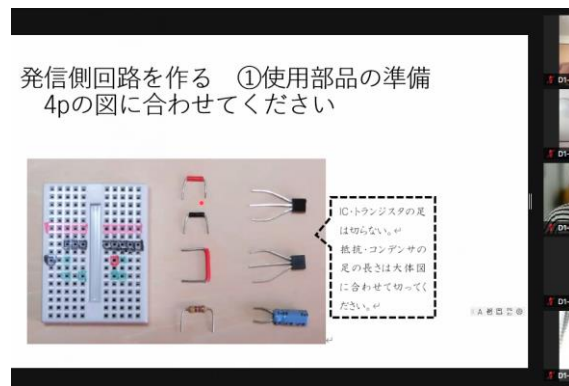
The online summer camp



Assignment to prepare before the camp

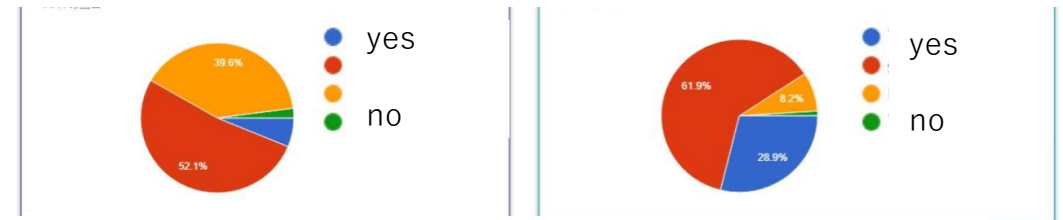
More speakers on careers in Science and Technology

Poster presentations from 36 groups

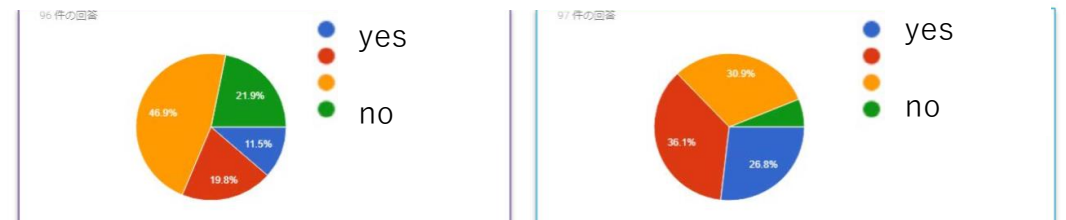


Before → After

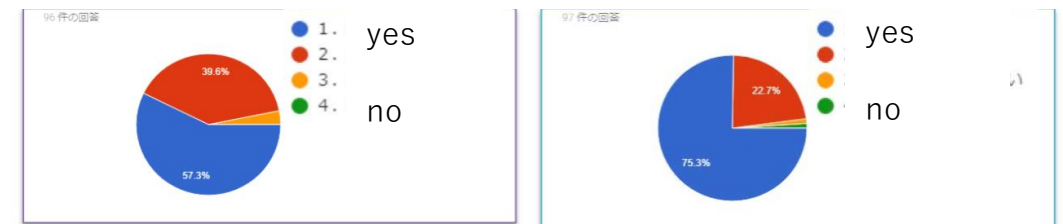
Q1: Can you imagine that you are working in the future ?



Q2: Do you determine your future course ?



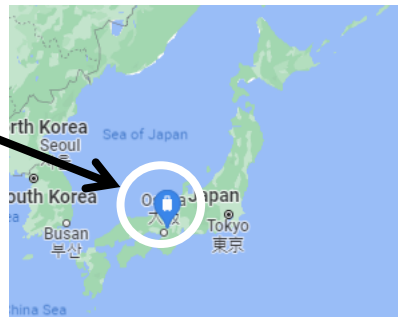
Q3: Do you want to go to higher school or work of science?



After the summer camp, almost all answers turn to be positive.

Kansai Science School for girls

Kansai area



- Since 2007
- Organized by 4 Universities in Kansai area
- Supported by companies in the area and JPS



<http://www.kansai-kj.org/index.html>

A 身近なロールモデルと気軽に話そう!
大阪大学
2022 7/30[±]
対象: 中高生 定員: 80名
講演会
はばたけ!女子中高校生
相馬 芳枝 (元産業技術総合研究所技術名譽リサーチャー)
星を研究する御路(みち)
大小田 結貴 (理化学研究所)
ショウジョウバエで何が出来るか -シンガポールと阪大での研究-
福木 美紀子 (大阪大学大学院理学研究科 生物科学専攻 講師)
ビジネスの世界での理系女性の活躍機会
松岡 智代 (株式会社QunaSys COO)
◆開校式 ◆講演会 ◆理系女子学生との交流会

B ~健康を支える医薬品研究の現場へ~
ロート製薬株式会社
ロートリサーチビルディング京都
2022 8/3^水 10:00-13:30
対象: 中高生 定員: 25名
◆医薬品研究所ツアー ◆研究員とのコミュニケーションランチ

C 大学での実験を体験!
大阪公立大学・京都大学
2022 10/23^日
対象: 中学生 定員: 108名
◆実験・実習◆詳細は裏面

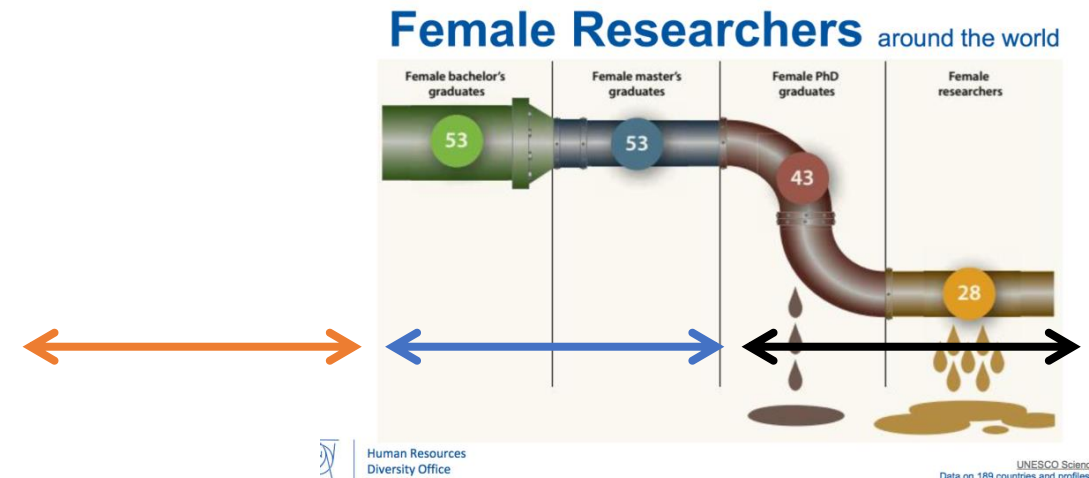
D 大学での実験を体験!
11/6 神戸大学・11/13 奈良女子大学
2022 11/6^日・13^日
対象: 高校生 定員: 6日 58名 13日 67名
◆実験・実習◆詳細は裏面

E サイエンスのワクワク、お伝えします!
日東電工株式会社
茨木事業所 inovas[イノヴァス]
2022 12/26^日 13:30-16:30
対象: 中高生 定員: 20名
◆inovas見学 ◆女性技術系社員との体験デモ

F 実験結果をまとめて発表してみよう!
大阪大学
2023 3/18[±]・19^日
対象: 中高生 定員: 66名
◆実験・実習とまとめ ◆発表会、表彰式

Focus on the outreach of young students

- Pre-university students: Careers in future, research experience
- Increase the number of female students in bachelor's level
- Encourage the young physicists in academia



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How it comes for the new Women Scientist Award

Key: Women's ratio in young scientist Award of JPS

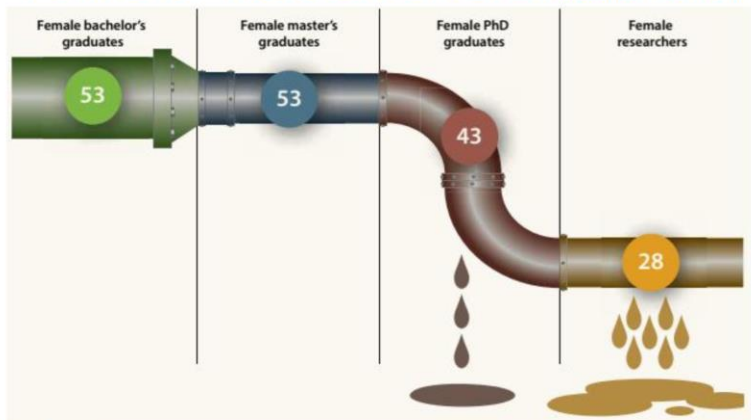
<https://www.jps.or.jp/english/meetings-and-awards/award.html>

Young Scientist Award of the JPS:

- Since 2007 (62nd JPS meeting)
- Member of the JPS
- “Young researchers” in each division
 - Total: About 50 winners
 - Division: theoretical particle physics, experimental particle physics, theoretical nuclear physics, experimental nuclear physics, cosmic ray and astrophysics, beam physics, division 1~13 (plasma, condense matter physics, physics education, and so on)
- Activities including lectures at academic meetings, publications, and degree theses

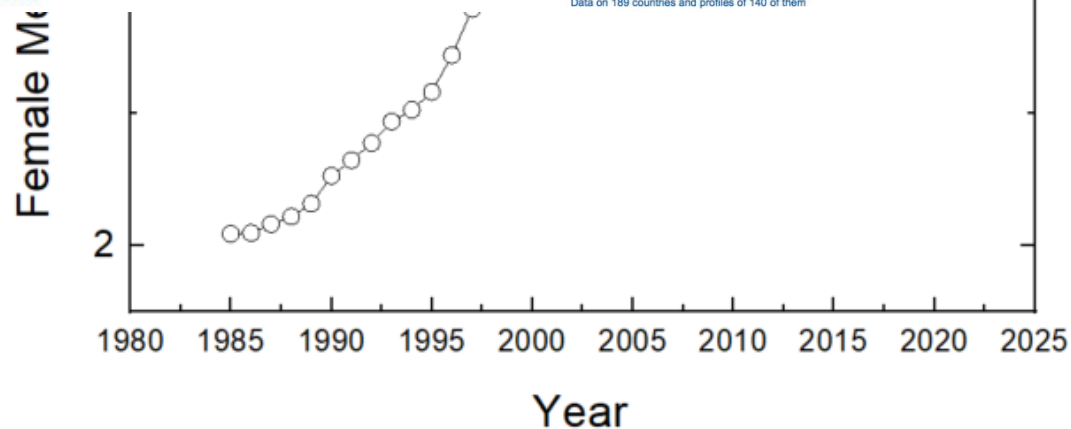
How it comes for the new Women Scientist Award

Female Researchers around the world

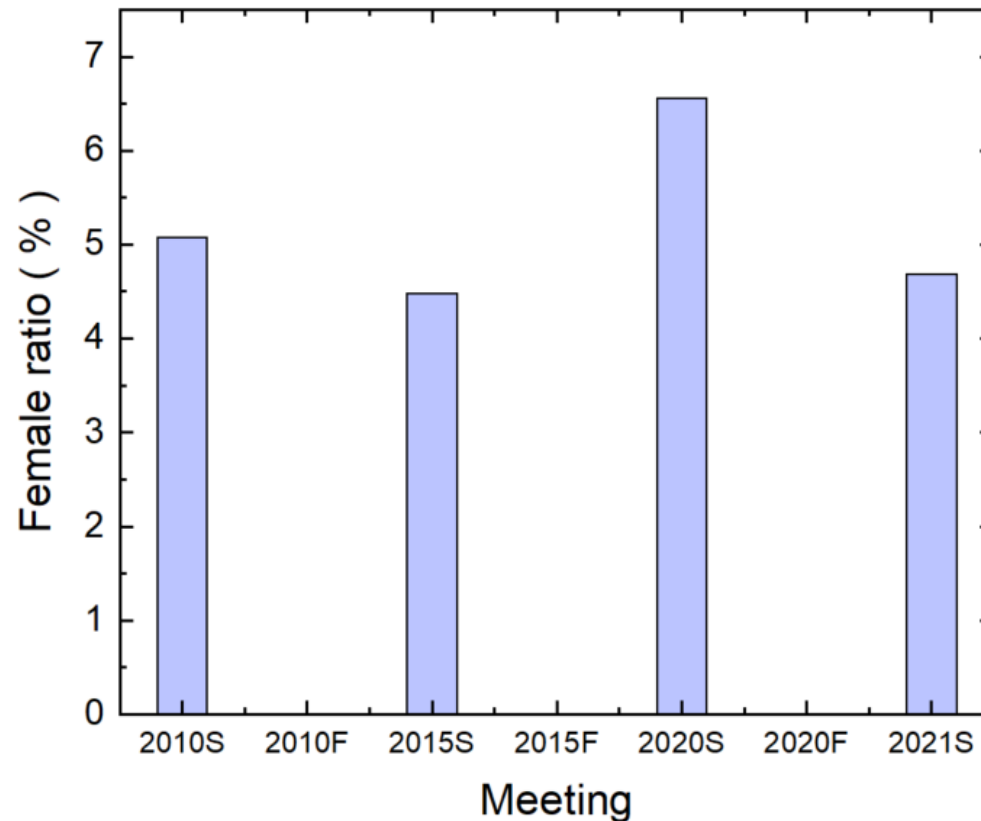


Human Resources Diversity Office

UNESCO Science Report, 2015
Data on 189 countries and profiles of 140 of them



Young Scientist Award



Awardee are not representing the female ratio increase in the member

Fumiko Yonezawa Memorial Award

Commemorating the premier achievements of Professor Fumiko Yonezawa, JPS founded the Fumiko Yonezawa Memorial Award in 2020 to honor and encourage the landmark studies and activities of female members in JPS. The award selection process takes place once a year, with the award ceremony held during the Annual Meeting.

➔ [Fumiko Yonezawa Memorial Award](#)  (Japanese only)

[2022 Award-winners list](#)

[2021 Award-winners list](#)

[2020 Award-winners list](#)

Target researchers
those within 15 years after the degree

For those in early career stage

YONEZAWA, Fumiko

- Emeritus, Keio University
- Semi-conductors and liquid metals
coherent potential approximation,
theory for metal insulator transition,
- 52nd president of JPS
- President of “To bright future for
female scientists Saruhashi prize”



米沢富美子 第52期会長

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Daycare for Participants' children at JPS meeting

- JPS has been providing a daycare services in the JPS meetings since 2010.
- Now GEP in JPS has responsibility for the nursery, instead of of the host universities.
- Ex: at fall meetings (September, 2019)
 - Yamagata University: 4 children from 4 families (12 total)
 - Gifu University: 5 children from 4 families (11 total)



日本物理学会男女共同参画推進委員会

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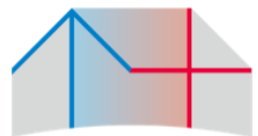
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The Japan Inter-Society Liaison Association Committee for Promoting **E**qual **P**articipation of **M**en and **W**omen in **S**cience and **E**ngineering (EPMEWSE)



The screenshot shows the homepage of the EPMEWSE website. At the top left is the logo, which consists of a stylized house shape with a blue roof and a red cross. To the right of the logo is the text "一般社団法人 男女共同参画学協会連絡会" and "THE JAPAN INTER-SOCIETY LIAISON ASSOCIATION COMMITTEE FOR PROMOTING EQUAL PARTICIPATION OF MEN AND WOMEN IN SCIENCE AND ENGINEERING". In the top right corner, there is a link ">> Japanese | Sitemap". Below the header is a navigation menu with the following items: "Home", "About Us", "What We Do", and "Additional Resources". The main content area features a large image of a woman's profile in silhouette, with a glowing blue digital network overlaying her head. To the left of this image, the text reads: "Gender equality is the key to achieving our full potential in the fields of science and technology."



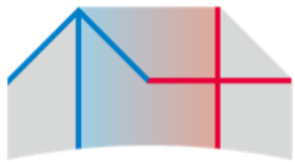
E P M E W S E

男女共同参画学協会連絡会

THE JAPAN INTER-SOCIETY LIAISON ASSOCIATION COMMITTEE FOR PROMOTING EQUAL PARTICIPATION OF MEN AND WOMEN
IN SCIENCE AND ENGINEERING

EPMEWSE

- Organizations
 - Full members (54 societies)
 - Associate members (65 societies)
- Events
 - Annual Symposium
 - Summer/Spring camps for junior and high school girls
- Studies
 - Large-scale survey on gender equality in STEM
 - Activities of the affiliated societies
 - Female ratio of the affiliated societies
 - ...



EPMEWSE

男女共同参画学協会連絡会

THE JAPAN INTER-SOCIETY LIAISON ASSOCIATION COMMITTEE FOR PROMOTING EQUAL PARTICIPATION OF MEN AND WOMEN IN SCIENCE AND ENGINEERING

- Japan is well-qualified as a country that promotes scientific advancement. However, the ratio of female professionals in science, technology, engineering and mathematics (STEM) field is at only 14.7% in 2016, which is far behind other developed countries. In order to overcome these gender gaps in Japan over a long period of time, we established "The Japan Inter-Society Liaison Association Committee for Promoting Equal Participation of Men and Women in Science and Engineering (EPMEWSE)" in 2002. At present, EPMEWSE is the association of 90 academic societies in STEM field in Japan, actively working for gender equality in Japan.

The major roll of EPMEWSE could be summarized into the following four headings :

1. We conduct the [Large Scale Survey](#) every five years in order to know the actual conditions of gender equality in STEM field in Japan. [More »](#)
2. We offer [proposals and requests](#) to our Government based on the survey results for leveling the playing field for women researchers and engineers. [More »](#)
3. We survey the [activities](#) and [female ratio](#) of each member of scientific societies associated with EPMEWSE. [More »](#)
4. We support STEM Programs for high school girls through [Summer Camps \(Natsu-no-Gakkou\)](#) as well as Science Workshops (Kansai-Kagaku-Juku). [More »](#)

Activities above have been supported by the corresponding Working Groups in EPMEWSE. At the end of 2016, we will obtain the results of the 4th Large Scale Survey, which could shed light on what we need to proceed in near future for maximizing our potential in STEM field

https://www.djrenrakukai.org/en/about_us.html

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Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

<https://djrenrakukai.org/en/studies.html#enq>

- 1st survey FY2003
- 2nd survey FY2007
- 3rd survey 2012/11/1-2012/12/14
- 4th survey 2016/10/8-2016/11/7

The survey reports are used to decide the next generation science/technology policy

Ex. Extended post-doc term due to Maternity leave

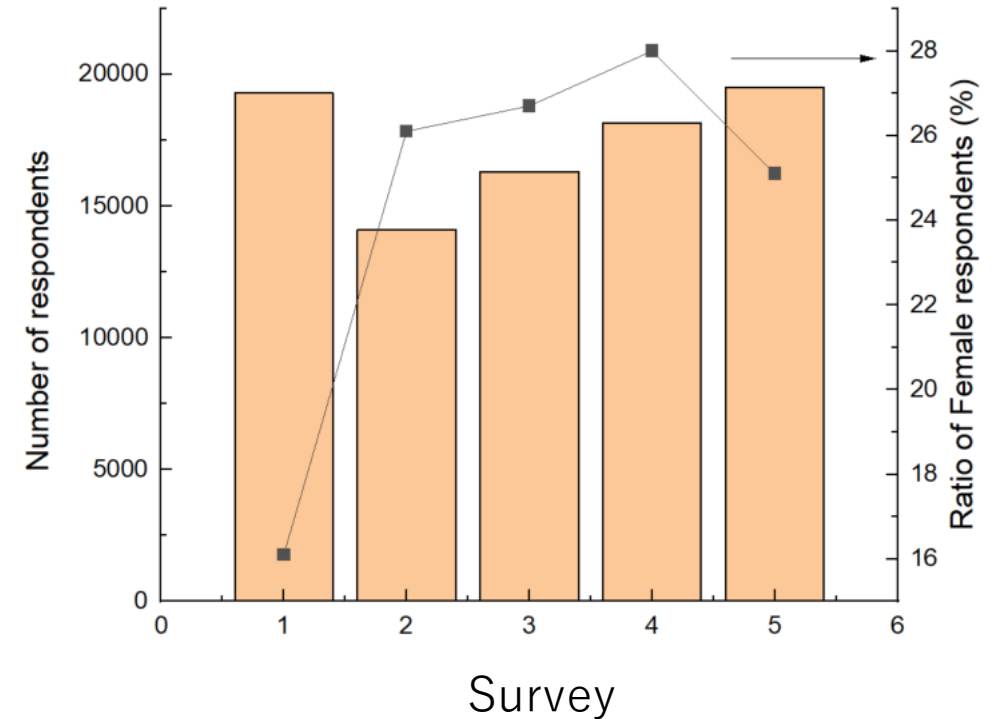
5th Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

Survey Period: 2021/10/20-2021/11/30

Analysis is on-going

Voluntary working group on the analysis

Basic trend follows the previous surveys



Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

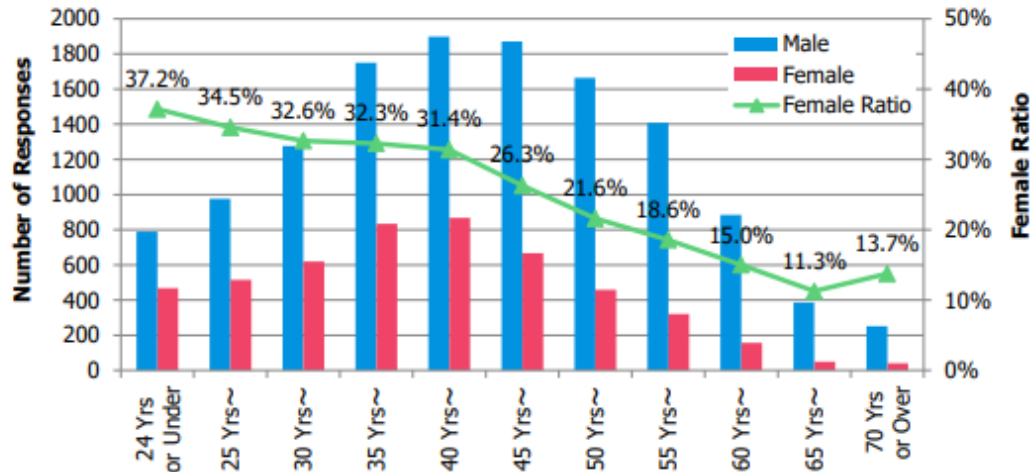
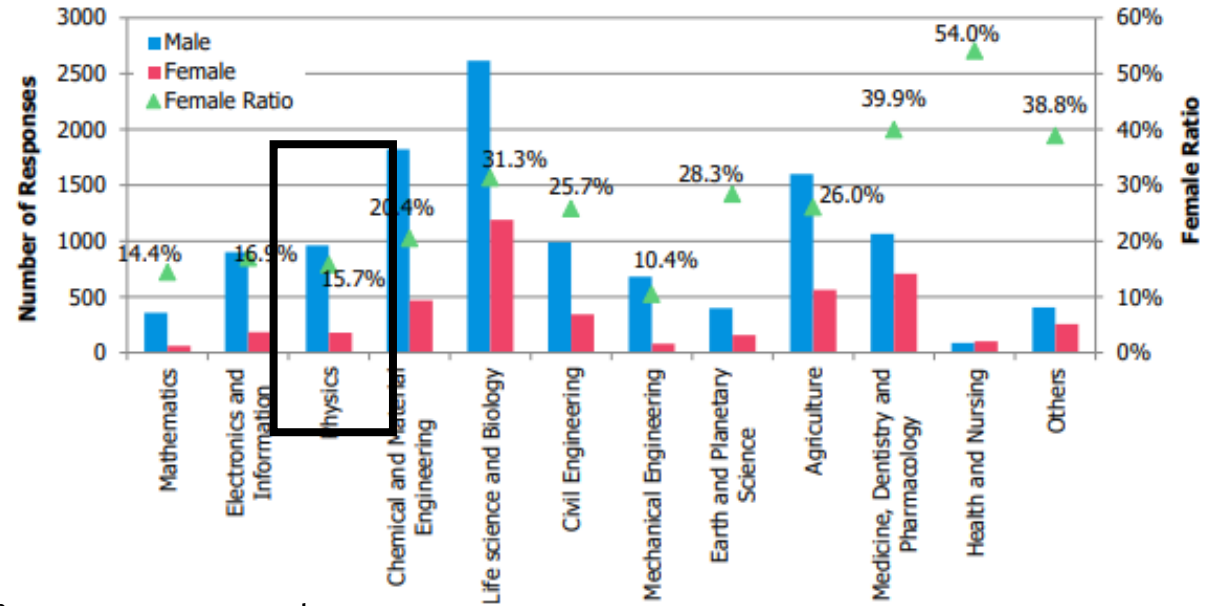


Figure 1.1 Age Distribution of Respondents and Percentage of Females



From 4th survey report

Number of female researchers are increasing

very slow

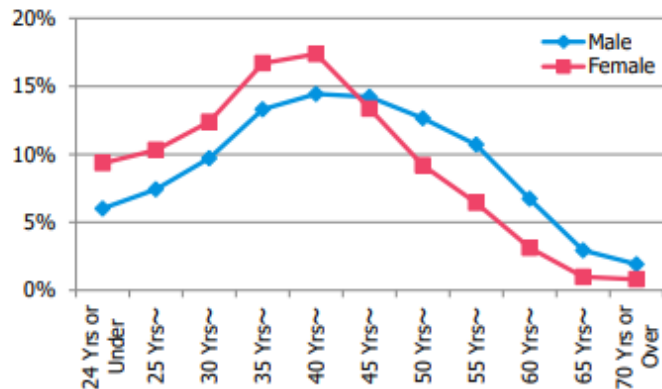
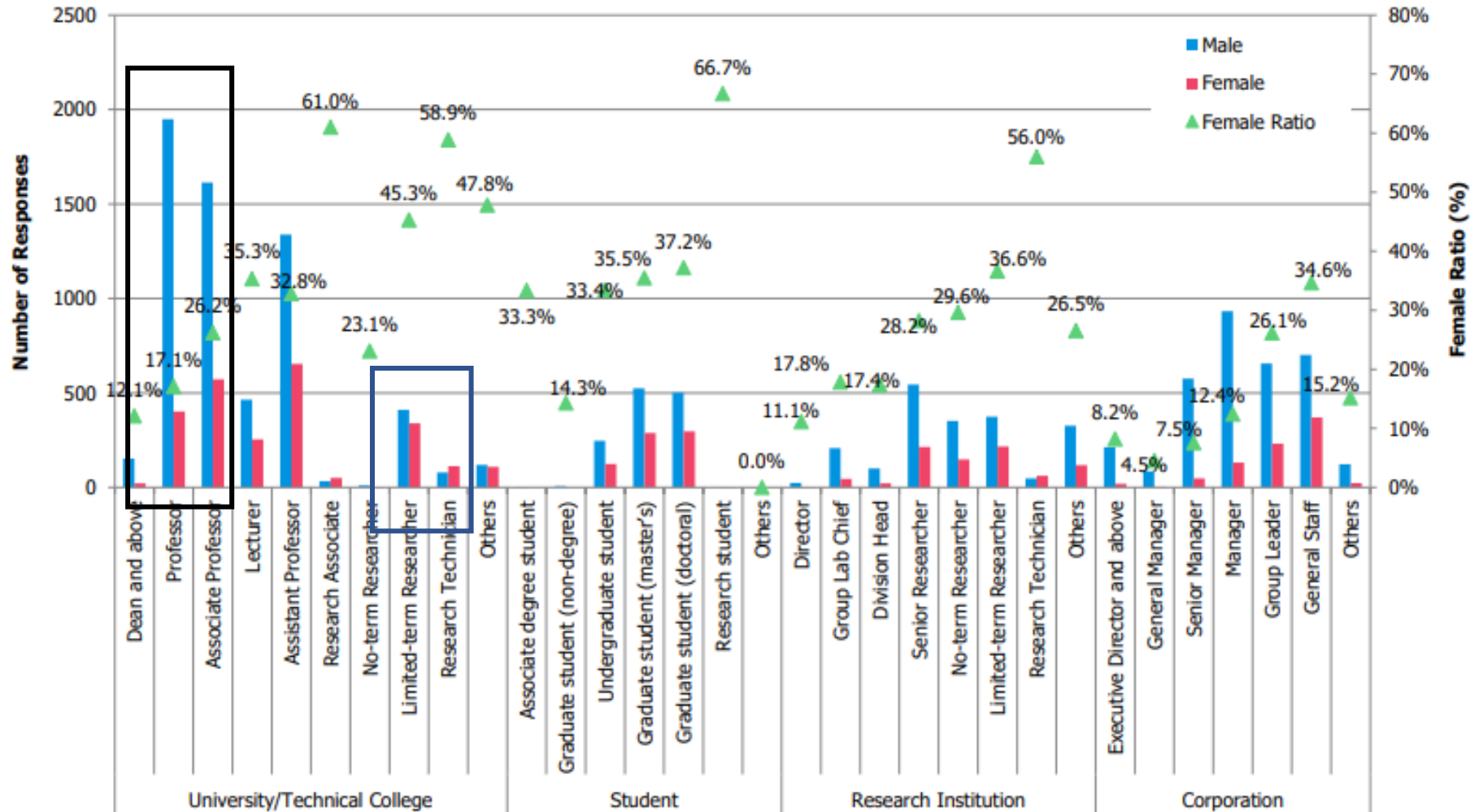


Figure 1.2 Age Distribution of Respondents by Gender

Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

From 4th survey report

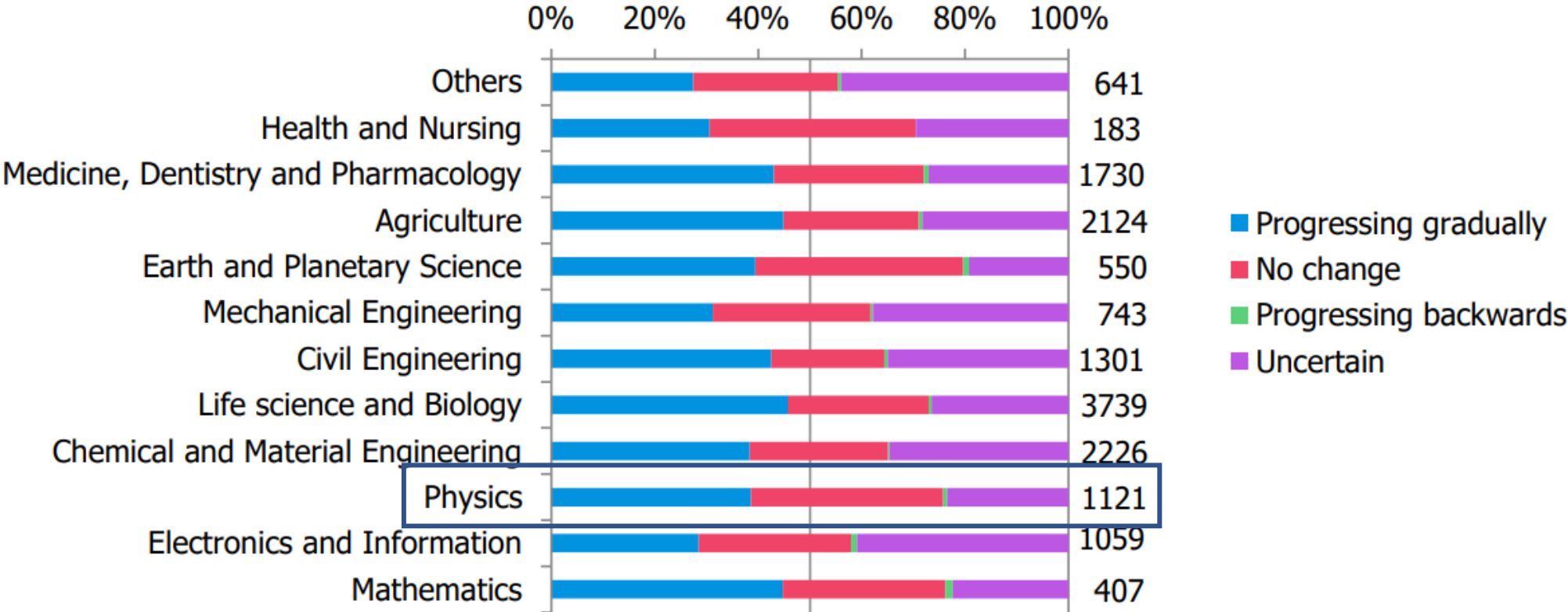


Still low percentages for higher level

Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

For gender equality

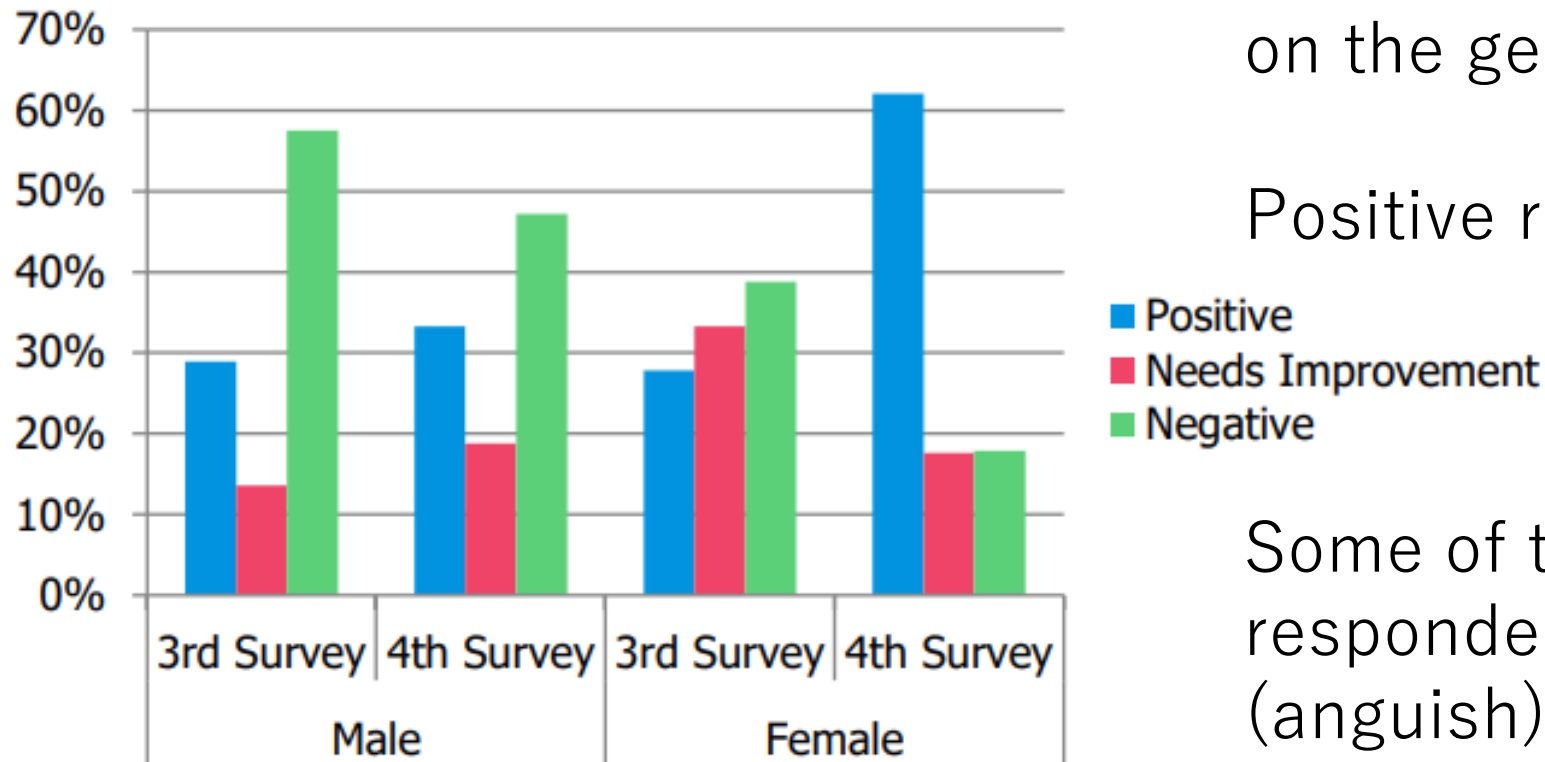
From 4th survey report



People feeling progress are less than 50 %

Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

To improve the situation, targeted job hiring (female scientists) is discussed



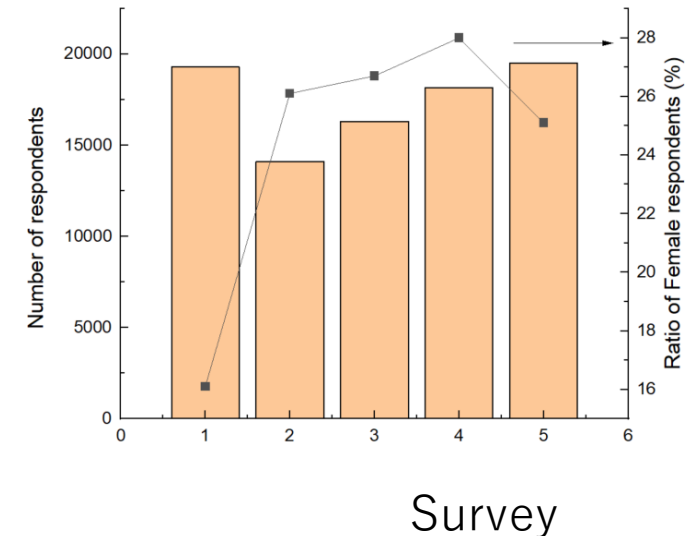
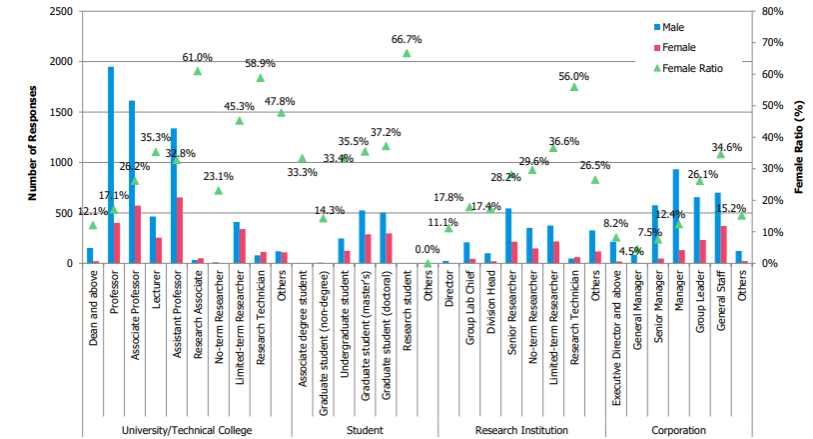
Reactions are different depending on the gender

Positive reactions are increasing

Some of the reactions from male respondents are emotional (anguish)

Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions

- 5th survey carried out last year is now analyzed
- The general trend follows the previous ones
- The increase of female scientists' ratio is slow but steady
- Targeted hiring for female scientists is discussed
- Reactions are mixed for both gender but stronger for male



Presenting at 7th IUPAP-WIP(Online)

7th IUPAP International Conference on Women in Physics

This event will be held virtually during 11-16 July 2021 by invitation only.

All Conference Information is available on the ICWIP 2021 website

Activities for diversity in physics field in Japan



Atsushi Masuda^{1,3}, Noriko Chikumoto^{1,4}, Atsuko Ichikawa^{2,5}, Emiko Hiyama^{2,5} and Akiko N. Itakura^{2,6}
¹ The Japan Society of Applied Physics, ² The Physical Society of Japan
³ Niigata University, ⁴ Chubu University, ⁵ Tohoku University, ⁶ National Institute for Materials Science

The Japan Society of Applied Physics (JSAP) and The Physical Society of Japan (JPS):

There are two major academic societies related to physics in Japan: The Japan Society of Applied Physics (JSAP) and The Physical Society of Japan (JPS). The former serves as an academic interface between science and engineering and an interactive platform for academia and the industry. The latter deepens understanding for nature, enrich our culture, and contribute to the welfare of human being, through search for the truth in the field of physics. This paper introduces current topics on diversity and related issues in both academic societies.

Number of Members and Affiliation:

JSAP members are about 19,000 in 2021. 54% of the JSAP members belong to universities, 9% public research institutes, and 31% private companies. Women fractions are 7% for all members, 5% for members in private companies, and 8% for those in universities. The member record covers researchers and engineers both in academia and industry. JPS members are about 15,000 in 2020, and about 1,000 are women. Majority of the JPS members belong to either a university or a research institute. The member record covers significant Japanese physics researchers. Each year, more than 1,500 new members join as new JPS members, and the ratio of women is typically about 10% since year 2000.

Promotion of Women Researchers:

In JSAP "Promotion and Nurturing of Female Researchers Contribution Award" was established in 2009 based on the fund from Prof. Kashiko Kodate. Senior and young women researchers with great achievement, and members or organizations contributing to nurturing of women researchers are awarded. "Fumiko Yonezawa Memorial Prize" in JPS was established in 2019 for women members in commemoration of Prof. Fumiko Yonezawa, the first woman president of JPS. These prizes are expected to encourage activities of women researchers.

The good news for both JSAP and JPS is that the woman ratio of student member is higher than that of all members, as shown in Fig. 2. It may be expected that the current proportion of women will increase in the future. However, some of students, regardless of gender, withdraw when they graduate from the universities and get a job at a private company, so an increase in the woman student ratio does not necessarily lead to an increase in the woman ratio of members in the future. There are many cases where women withdraw from membership, as reported by JPS in the 2017 WIP-report.

Under Covid 19 Pandemic:

COVID-19 pandemic also forces academic societies to fundamentally change systems of academic conferences, committee meetings, etc. using online system. Sophisticated knowledge and foresight of both presidents are required for overcoming the crisis. Nowadays virtual conferences are frequently held and some are organized in hybrid style. It can be inferred that the new meeting style has advantages in promoting diversity.

Women Presidents in Physics Societies:

The most impressive event is that women members assumed the presidents in these two societies: Prof. Mutsuko Hatano for JSAP (2020-2021 FY) and Prof. Setsuko Tajima for JPS (2021 FY). This is the first time for JSAP and the third time for JPS among 34 and 59 successive presidents, respectively. The first woman president is Prof. Fumiko Yonezawa in 1996, and the second woman president is Prof. Masako Bando in 2006. From this April, Prof. Tajima has been appointed as the third woman president of JPS. Both presidents, Prof. Hatano and Prof. Tajima, have a common career path that they moved from industry to academia.



Prof. M. Hatano
President of JSAP
(2020-2021 FY)

Prof. S. Tajima
President of JPS
(2021 FY)

Expectations for Women's Leadership:

Fig. 1(a) shows the evolution in the ratio of women members of JPS and that of women directors. The percentage of women directors in JPS has been about the same as the percentage of women members from 2003 to 2015. From 2015, active promotion of women began in JPS, expecting the leadership of the women directors. As a result, the percentage of woman director in 2021 becomes higher than ever, but it is still around 30%. JSAP has a similar tendency (Fig. 1(b)). The percentage of women members is rising moderately, while that of women directors increase sharply. The proportion of women in directors exceeds the proportion of women in members. The tendency is the same for both JSAP and JPS.

It is expected that women presidents and directors not only promote activities related to gender equality, diversity and inclusion in each society but also encourage all the activities from the perspective of women, leading to the dawn of a new era.

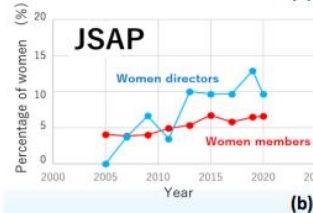
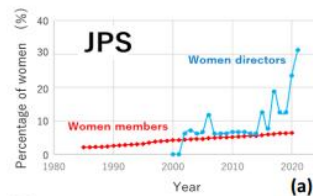
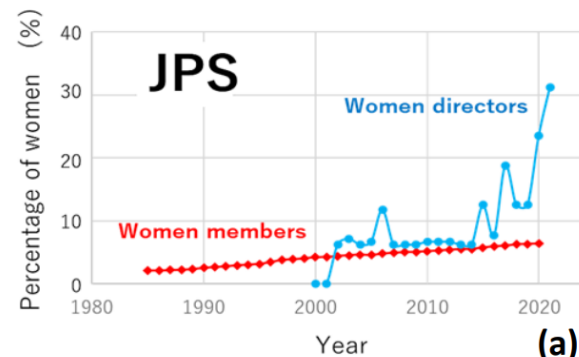


Fig. 1 The percentage of women members and directors in JPS (a) and JSAP (b).

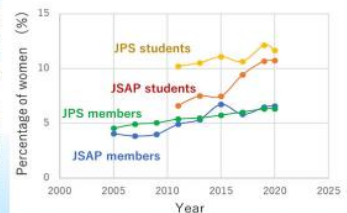
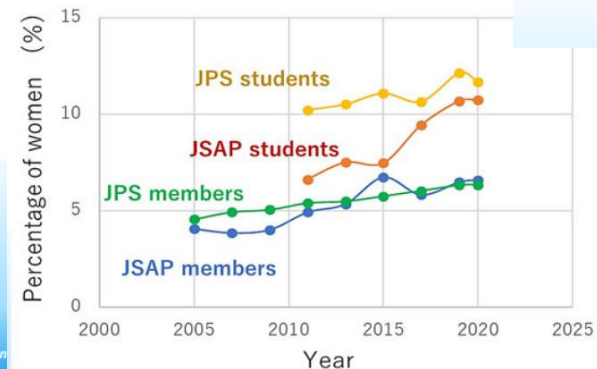
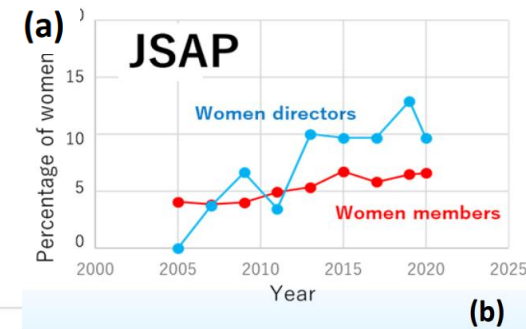
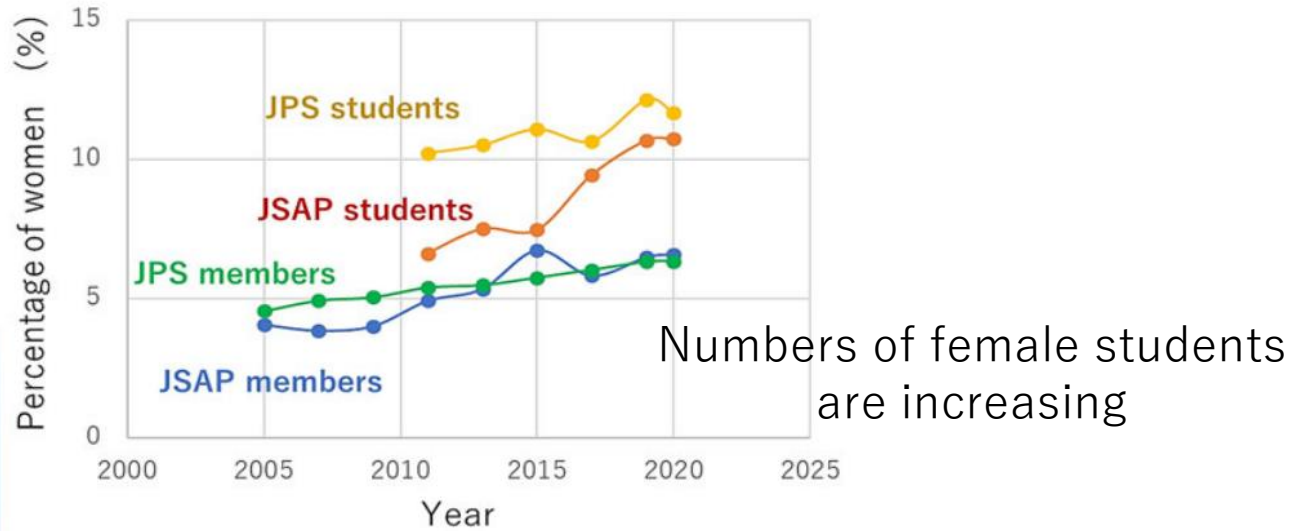


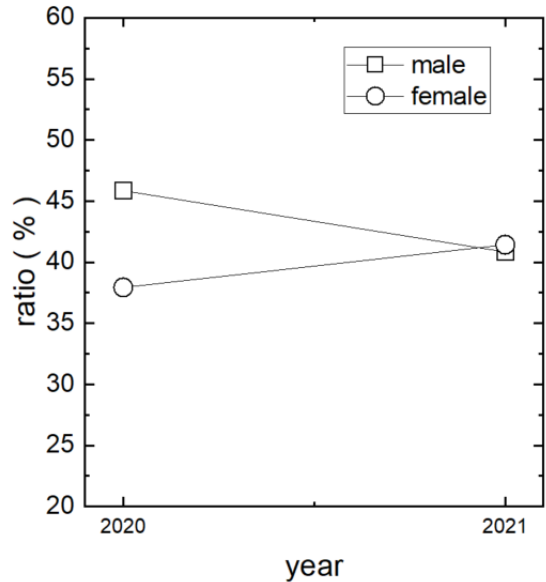
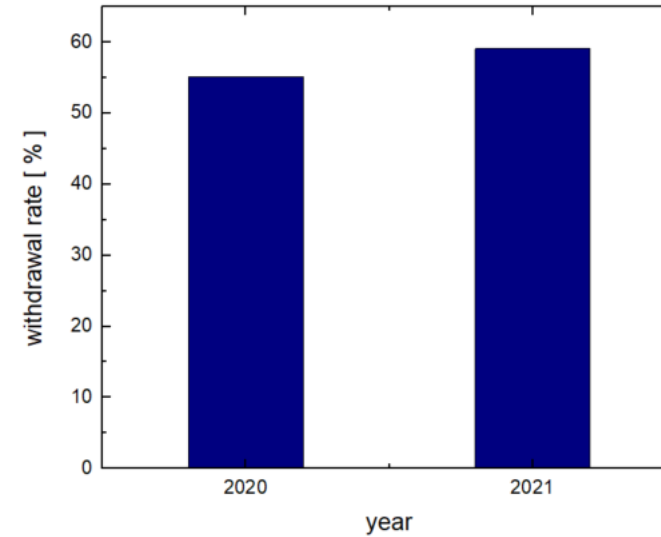
Fig. 2 The percentage of women members and students in JPS and JSAP.



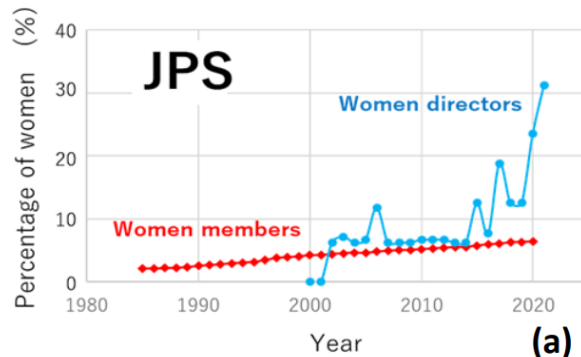
Staying in the community after graduation



After graduate schools, the half leave JPS



The ratio of those stay in JPS has increased recently



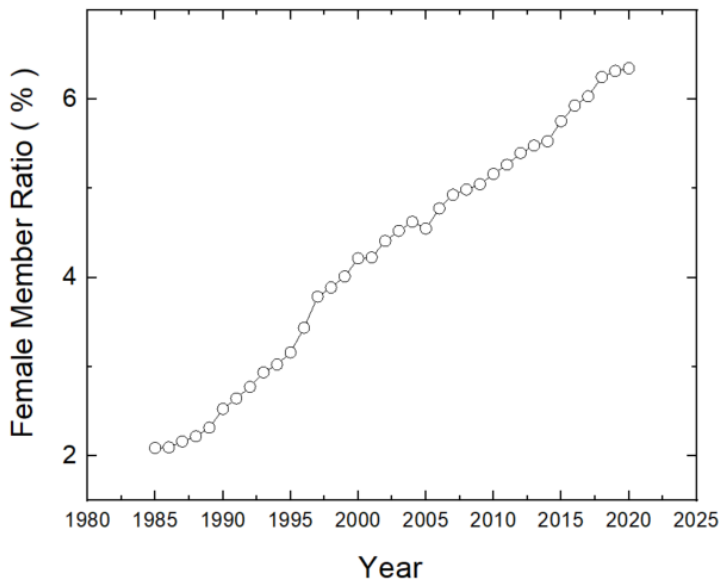
Both the ratio and the numbers increase (very gradually!)

The increase of the ratio in directors

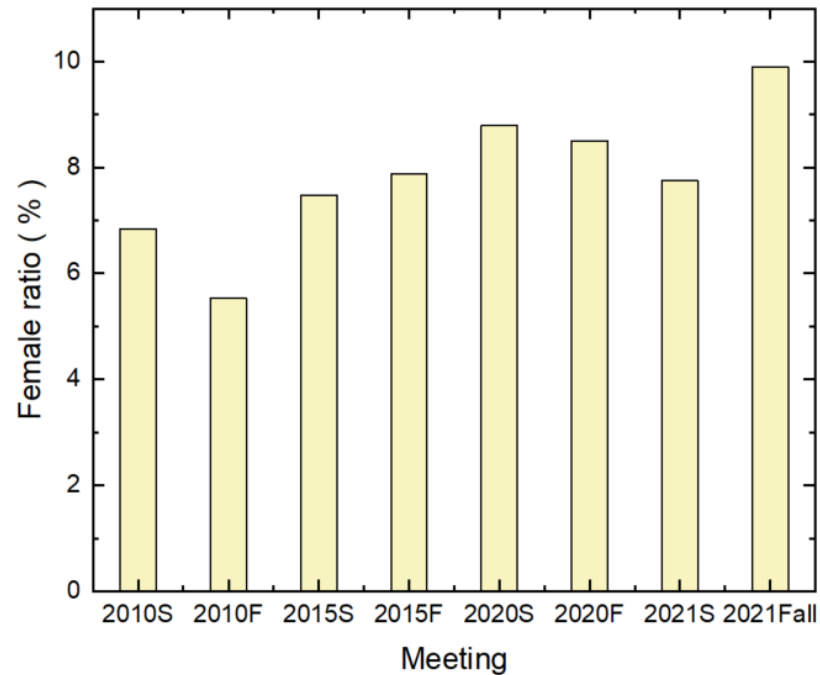
JPS members and female ratio in presentations

Ratio of female members increases

Ratio of female directors drastically increases after 2015

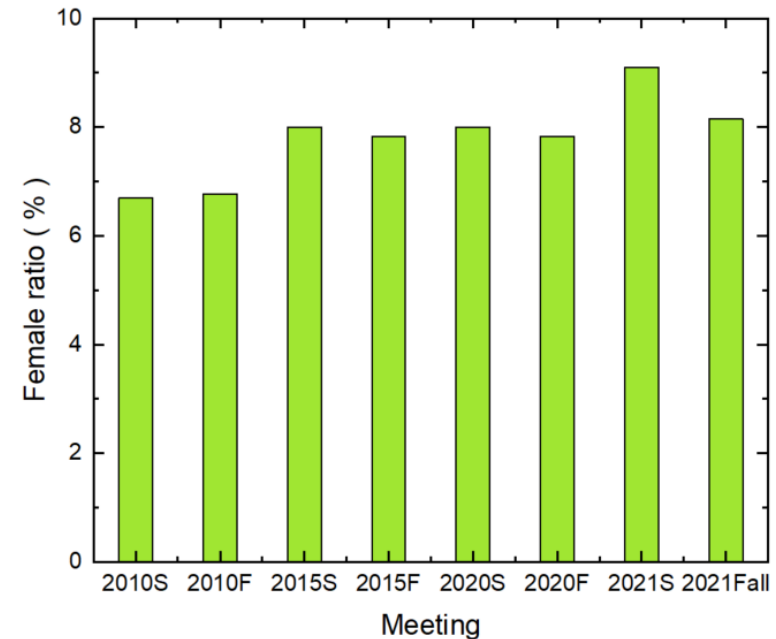


Poster presentation

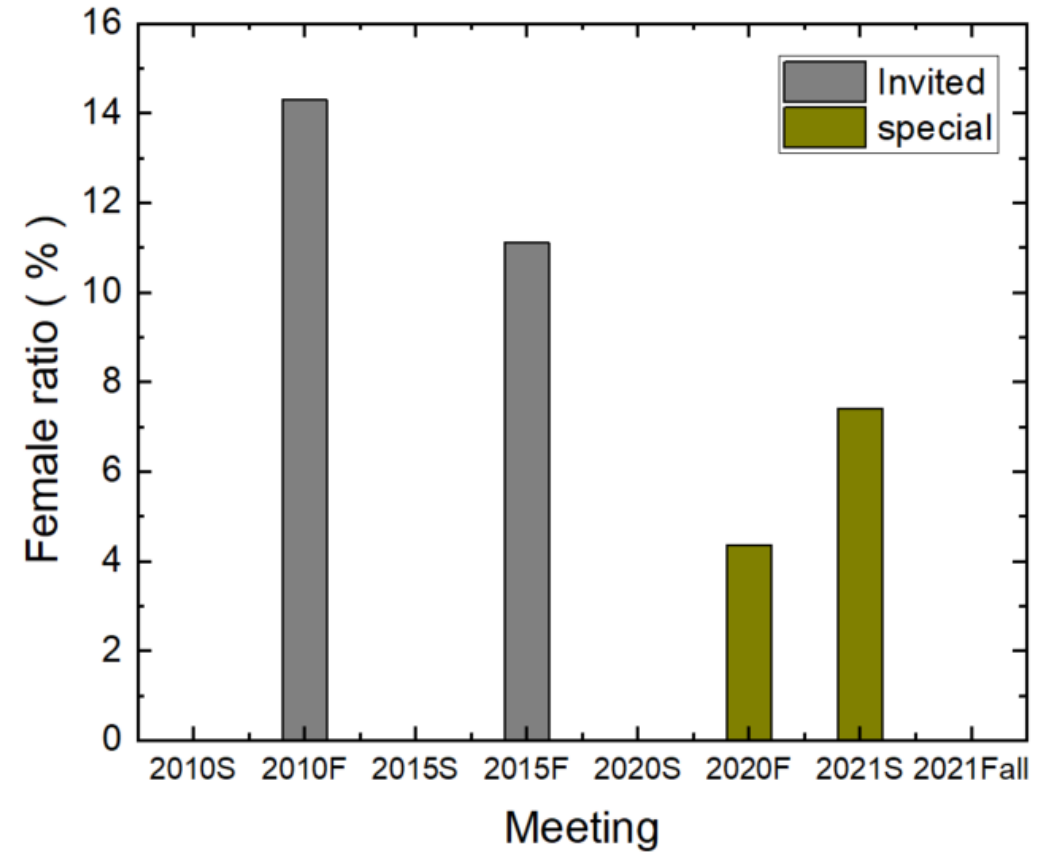
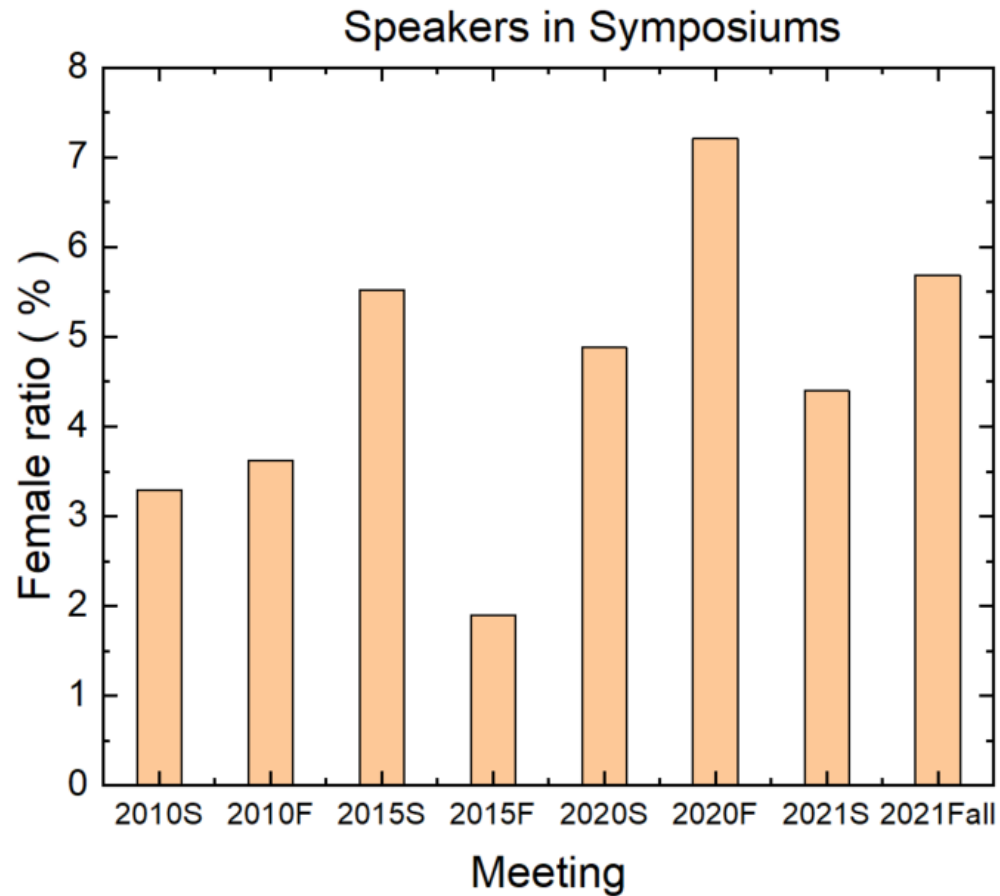


Ratio in presenters are between 6-10 %

Oral presentation



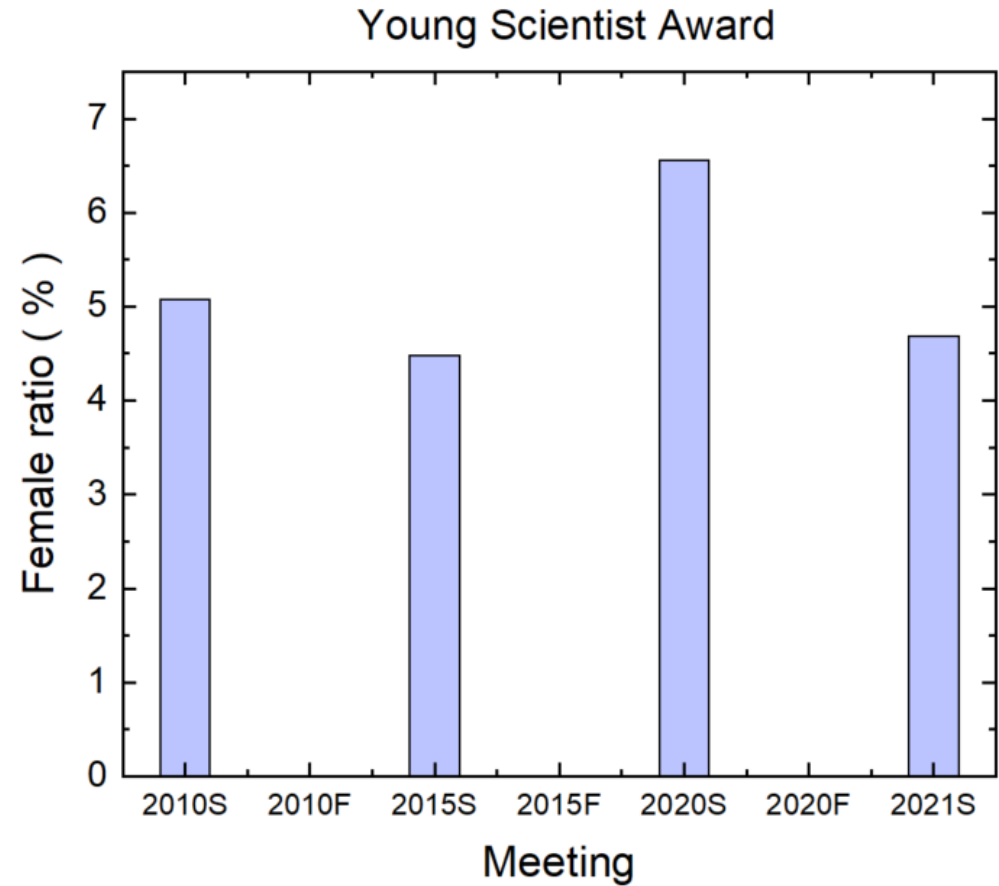
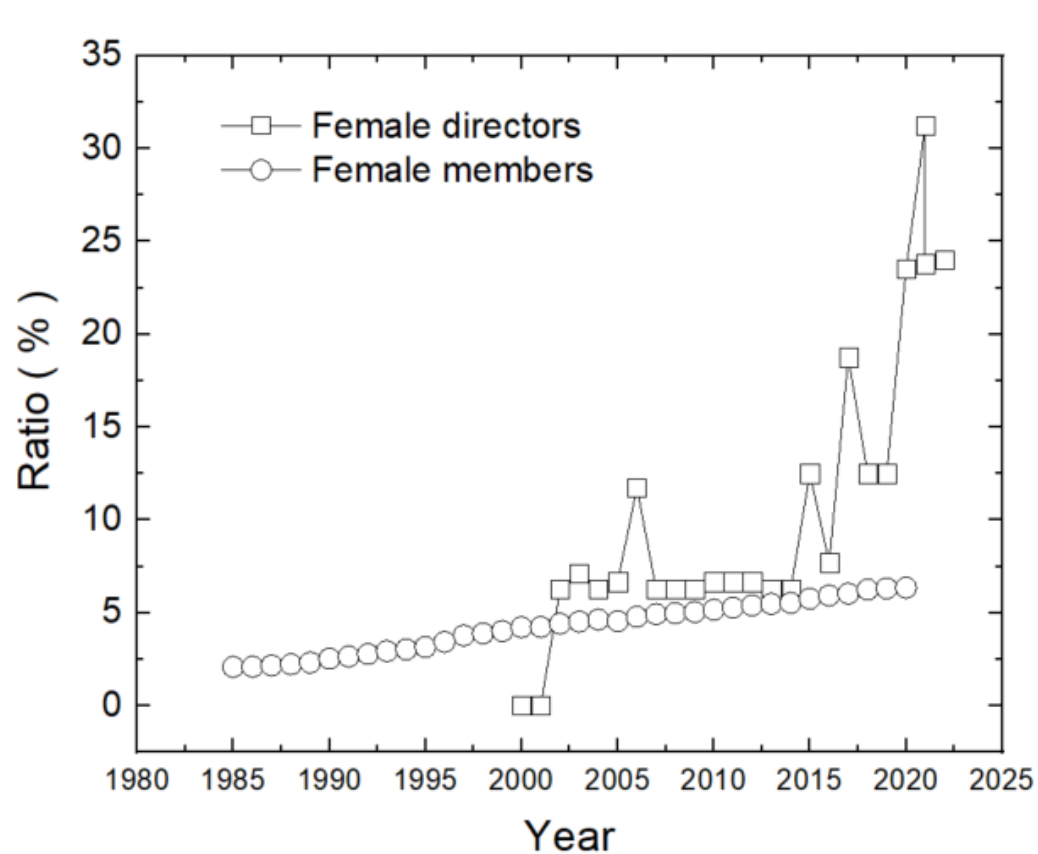
JPS members and female ratio in presentations



Ratio halved in symposiums

Invited talks also have lower than member ratio

JPS members and female ratio in awards



Despite the increase of the members, no increase in awards

Awareness of unconscious bias needed

Summary

Support Summer camps for pre-university students

Online and Onsite activities

New Award for early career female scientists

Fumiko Yonezawa Memorial Award

Support for the meeting attendee

Nursery at JPS meetings

Activities along other organizations

Presented at IUPAP-WIP

5th large scale survey



米沢富美子 第52期会長

