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Women and minorities in research

1. Disparities, inequalities and biases in science : guidelines for STEM conference organizers - Rachel Torchet
2. Gender biases in grant allocation - Emre Özel
3. Non-visible biases and the underside of these biases - Enka Blanchard
4. Gender equality: acting from within the lab - Camille Maumet

Disparities, inequalities and biases in science : guidelines for STEM conference organizers



Spotlight the Code of Conduct

The Code of Conduct should highlight all the essential values of your conference organisation. Please make sure that the document is not only easily accessible and available in all concerned languages, but it is also shared actively with all stakeholders, including speakers and attendees. It is essential to make sure that detailed conference policies are acknowledged by members of organisation committee and hosting institution. In addition, it is encouraged to share your conference's Code of Conduct in more interactive and easy-to-read formats, such as infographics and quizzes.



Keep track of gender statistics

We highly recommend organisers to record gender parity among organisers, speakers and attendees in conferences, especially in annual conferences. It is important to self-evaluate frequently and work towards improvement. With respect of diversity and inclusion, collection of such data requires the organisers to provide an extensive list of gender options instead of only men and women.



Observe your conferences

Academic conferences are a great opportunity to discuss and communicate on the topic of gender bias in science. One of the easiest and most effective way to raise such awareness and gain valuable insights is conducting observational studies (for example, on question-asking behaviours). You may use practical tips provided in our project as references to observe your conferences.



Adopt gender-sensitive language

Provide practical tools and advice for speakers, moderators and chairpersons to ensure that the use of language during the conference is gender-sensitive and gender-inclusive. For instance, avoid gendered pronouns when the person's gender is unknown. If possible, it is helpful to include examples of what gender-biased and gender-discriminatory communication is and how to avoid it.



Attention to discrimination & harassment

Raise awareness of gender-discrimination and sexual harassment through sharing information and developing an effective reporting system. Apart from re-examining the existing conference policies with attention to discrimination and harassment, conference organisers should make sure that clear and accessible tools of reporting violations of the policies are in place and shared with all conference participants prior to their attendance at conference. Depending on the size of the conference, appointing one or more safeguarding leads to observe and report inappropriate behaviours can be highly beneficial.



Seek diversity and inclusion expertise

Conference organisers are advised to include a diversity and inclusion consultant throughout the stages of conference planning, implementation and evaluation. An external consultant who has no connection with organisation committee or hosting institution can be especially beneficial in avoiding the potential "insider bias". Such role is expected to provide professional opinions, practical tools and actionable solutions.



Provide childcare support

The frequent lack of childcare support has barred many parents, especially mothers, from attending academic conferences. It is recommended to either provide childcare facilities at the conference or offer childcare funds to the needed participants if the conference takes place virtually. If the conference is unable to support all funding applicants, conference organisers can take into consideration several factors when selecting the final candidates, such as the applicants' gender, marriage status, salary level, seniority, and nationality.



Support minorities in question-asking

Based on previous literature and our research findings, conference organisers may consider taking the following actions to encourage women and other minorities to ask questions during conferences:

- If possible, moderators and chairpersons can give the opportunity of asking the first question after a talk to a junior female attendee (e.g., a female PhD student).
- A quick pause before starting the Q&A session may give attendees, especially those who are generally hesitant to ask questions, more time to construct their questions.
- Ensuring gender diversity and parity in speakers can also encourage female and other minority to attend conferences and ask questions during conferences.

Disparities, inequalities and biases in science : guidelines for STEM conference organizers



- 33% of questions are asked by women
- Senior men ask 9.5 times more questions

Conferences guidelines:

- Clear code of conduct
- % minorities: speakers
- Use sensitive language
- Pay attention to discrimination & harassment

- Line of questioning:
Men challenging questions vs women methodology

Table 1: Previous empirical studies on gender bias in grant peer-review



Reference	Country	RFO	Period	Discipline	Dependent Variable	Gender Effect
Banal-Estañol et al. (2019)	UK	EPSRC	1991-2007	Engineering and Physical Sciences	Awarded or not	No
Bautista-Puig et al. (2019)	EU	ERC	2007-2016	All Disciplines	Awarded or not	Yes
Bedi et al. (2012)	UK	Wellcome Trust	2000-2008	Biomedical Sciences	Awarded or not	Yes
Bol et al. (2022)	Netherlands	NWO	2005-2016	All Disciplines	Scores+Evaluation stages	Yes
Burns et al. (2019)	Canada	CIHR	2000-2014	Biomedical Sciences	Awarded or not	Yes
Cañibano et al. (2009)	Spain	Ramón y Cajal Programme	2005-2006	Physics, Molecular Biology, Philosophy and Philology	Awarded or not	No
Ginther et al. (2011)	USA	NIH	2000-2006	Biomedical Sciences	Awarded or not	Yes
Ginther et al. (2016)	USA	NIH	2000-2006	Biomedical Sciences	Awarded or not	Yes
Head et al. (2013)	UK	Various	1997-2010	Biomedical Sciences	Awarded or not	Yes
Jagsi et al. (2009)	USA	NIH	1993-2007	Biomedical Sciences	Awarded or not	Yes
Lerchenmueller and Sorenson (2018)	USA	NIH	1985-2015	Biomedical Sciences	Awarded or not	Yes
Magua et al. (2017)	USA	NIH	2010-2014	Biomedical Sciences	Scores+Sentiment analysis	Yes
Mutz et al. (2012)	Austria	ASF	1999-2009	All Disciplines	Scores+Awarded or not	Small
Polhaus et al. (2011)	USA	NIH	1999-2004	Biomedical Sciences	Awarded or not	Mixed Results
Sandström and Hällsten (2008)	Sweden	VR	2004	Biomedical Sciences	Scores	No
Severin et al. (2020)	Switzerland	SNSF	2009-2016	All Disciplines	Scores	Yes
Tamblyn et al. (2018)	Canada	CIHR	2001-2005	Biomedical Sciences	Awarded or not	Yes
van der Lee and Ellemers (2015)	Netherlands	NWO	2010-2012	All Disciplines	Scores+Sentiment analysis +Evaluation stages	Yes
Witteman et al. (2019)	Canada	CIHR	2011-2016	Biomedical Sciences	Awarded or not	Yes
Yip et al. (2020)	Hong Kong	Uni. of Hong Kong	2015-2020	Social Sciences	Awarded or not	No
Bianchini et al. (2022)	EU	ESF	2003-2010	All Disciplines	Scores+Sentiment analysis+Awarded or not	Yes

Notes: Gender bias in research funding has been studied by different research areas, across disciplines and countries for more than three decades. See, e.g., Bornmann et al. (2007) and Marsh et al. (2009) for a systematic review and meta-analysis based on the literature published before 2007. The studies mentioned in this table start from 2008. Only a few studies examine the review materials and each step of the grant evaluation process.

Gender biases in grant allocation

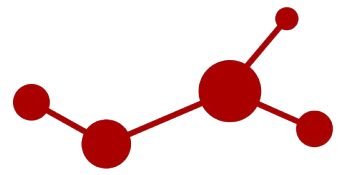
- If there is more women in your consortia, your research is less likely to be funded
- In grant evaluation, 31% of women
- In most consortia closer to 20%
- In Europe data is not disclosed due to GDPR
- Women's work get cited less, do not get as high position as men
- Do we need women quota in grant approval ? does not work since women are also biased against women
- For reviewers, career breaks are not a good thing (pregnancy)
- How to unbias the grant scheme No idea, because the peer reviewers will always be biased in some way
- applying guidelines from DORA & COARA fixes a big part of the problems

Diversity in research versus excellence and productivity



- What is the effect of having a quota in research
 - Gets minorities in research □ can/will look at things others do not look at, since they're not directly at risk
- A lot of the metrics are bad:
 - For grants
 - For recruitment
- Defining what a better and more productive researcher is ?
- The question of quota is not the good question, since we do not have the metrics to correctly compare 2 researchers
- Quotas: good way to get the foot in the door
 - Can it get us to rely a little less on metrics ?
 - How representative is it of the population who actually have the opportunities

Gender equality: acting from within the lab



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Paris 2024



Gender equality committee at IRISA / Inria Rennes, France

<https://egalite-fh.irisa.fr>



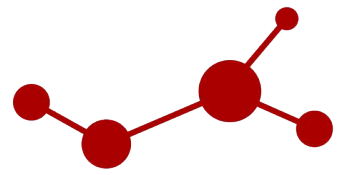
Team work!

Members of the gender-equality committee (2023/2024)

Santiago Sara Bautista. Michèle Basseville. Nathalie Bertrand. Louis Béziaud. Tassadit Bouadi. Peggy Cellier. Bertrand Coüasnon. Enora Denimal Goy. Jamal El Hachem. Ulrich Fahrenberg. Éliisa Fromont. Nathalie Girard. Nolwenn Jegou. Camille Juigné. Jérémy Lefort-Besnard. Mael Le Treust. Nicolas Markey (resp.) Camille Maumet (resp.). Camille Muller. Anne-Cécile Orgerie. Charlotte Pelletier. Martin Quinson. Patrice Quinton. Aline Roumy. Camille Sicot. Anne Siegel.

As well as **many lab members** who join for a given activity and the **support team** (admin, audio, comm').

Gender equality: acting from within the lab



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Images: undraw.co

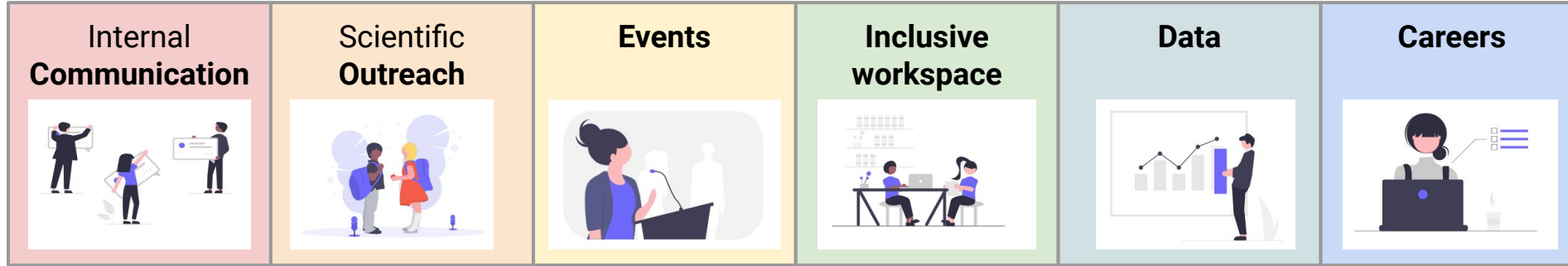
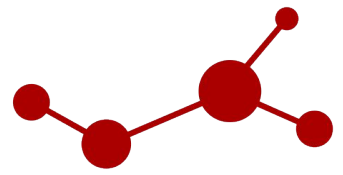


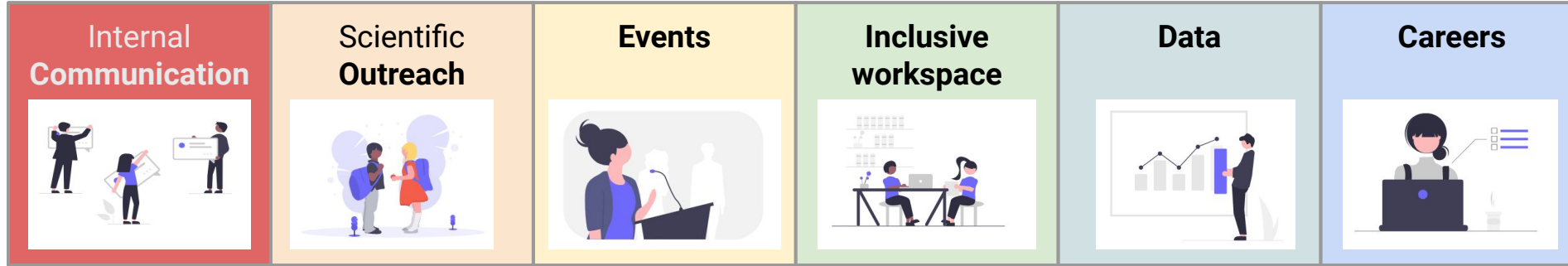
Image credits: undraw.io

Gender equality: acting from within the lab



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Images: undraw.co

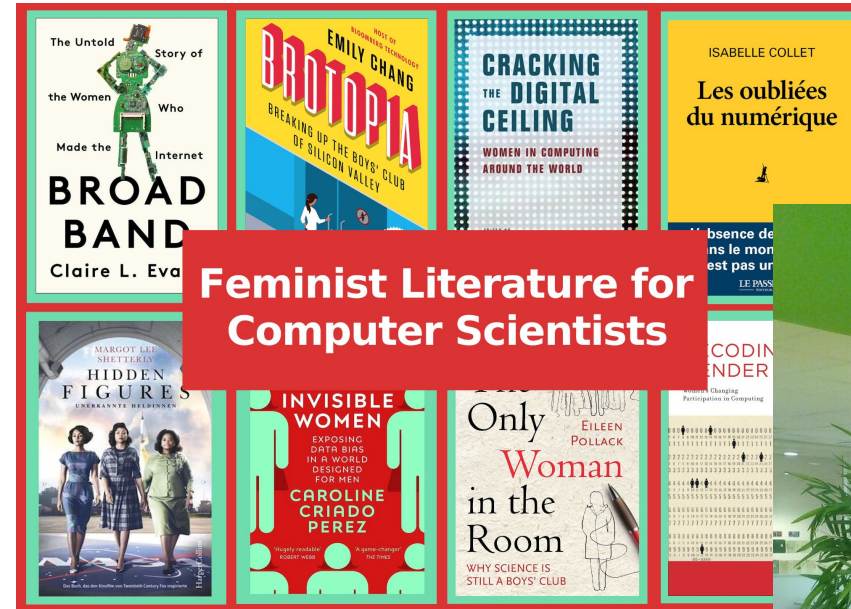


Reading circle

A group of early career researchers

1 book per session

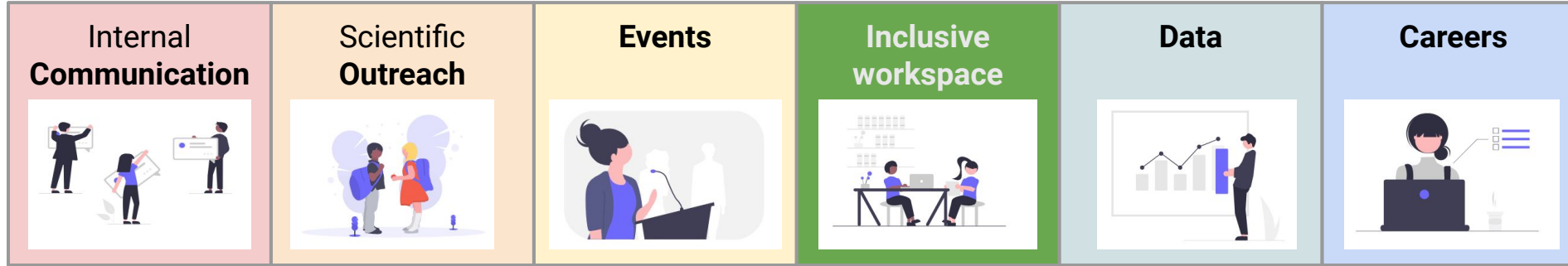
Meeting every week to discuss



and Véronne Yepmo, supported by Antoine L'Azou.

Gender equality: acting from within the lab

Images: undraw.co



Free menstrual products

Fighting menstrual insecurity and also just-in-case

Available in the infirmary

Posters in each restroom (men and women)



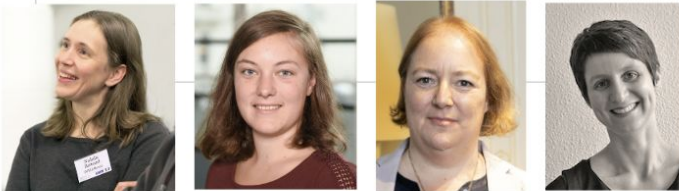
Pas de protection menstruelle avec vous ?
Serviettes et tampons sont à votre disposition **gratuitement** à l'infirmerie (A018)



No more menstrual products?
Pads and tampons are available **free of charge** in the infirmary (A018)

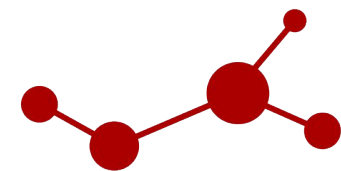
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egalite-fh.irisa.fr

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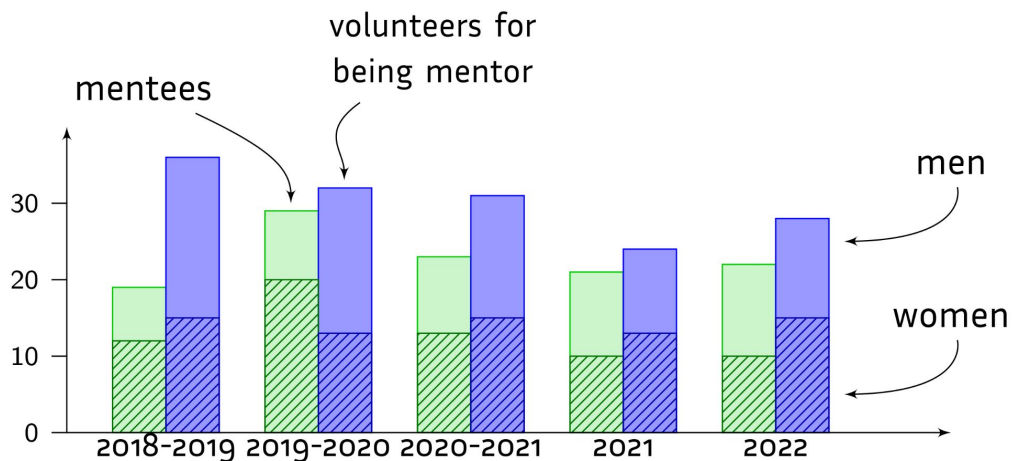
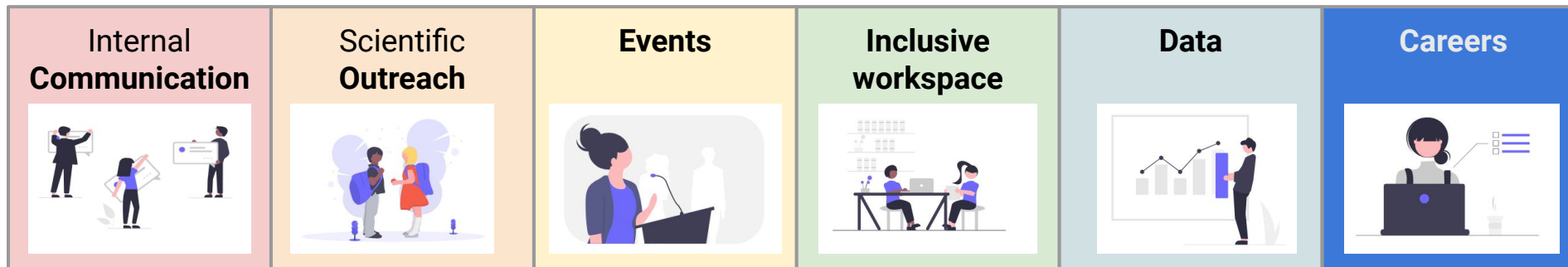
and CLHSCT,
supported by
Agnès Cottais.

Gender equality: acting from within the lab



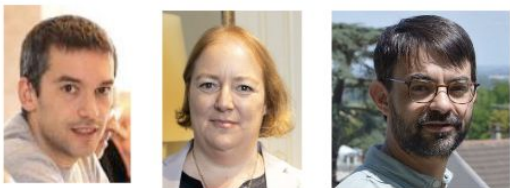
MIDL
Paris 2024

Images: undraw.co



Mentoring program

Pair mentor / mentee
Meet for a year
Discuss topics chosen by the mentee



and Elise Bannier, Ronan Gaugne, Anne Buzaré, Isabelle Monjaret, supported by Michèle Basseville, Nathalie Bertrand, Thierry Jérón, Sylvain Orain, ...

Gender equality: acting from within the lab



- Possible to have a committee with tens of people because the lab is big (circa 800 people)
- All sorts of reactions to initiatives but in general, not to much push-back.
- Mandatory training for all supervisors (permanent staff) about harassment was supported by the institute. Received some push-back but in the end over 90% of staff were trained.
- The committee focus on women in science but more work is needed to support other minorities in science.