



Fostering equity, diversity and inclusion: an astronomical challenge?



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First ... who I am and why I'm here

- Senior astronomer at ESO-Garching
- Started as ESO Fellow
- Then User Support Department (Operations)
- Now Observing Programmes Office (Science)

- Early 2000: started to engage with gender equality matters
- Different roles, inside/outside ESO
 - AAS CSWA, IAU WG WiA
 - ESO D&I Committee, EIROforum D&I, WBSBF
 - Various projects:
 - H2020 GENERA, now GENERA Network
 - ISC Gender Gap
 - Opticon Radionet Pilot

- Italian, married, 2 children
- Several hobbies: travelling, snorkeling, reading, cooking, art, mosaic, ...



Second ... some nomenclature

DIVERSITY

gender, ethnicity, age, personality, cognitive style, tenure, organizational function, education, background and more.

INCLUSION

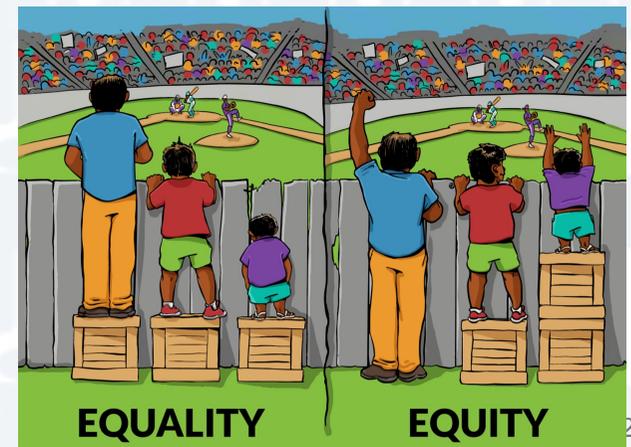
how the workforce experiences the workplace how organizations enable all employees to make meaningful contributions

EQUALITY

everyone treated in the same way, same resources or opportunities

EQUITY

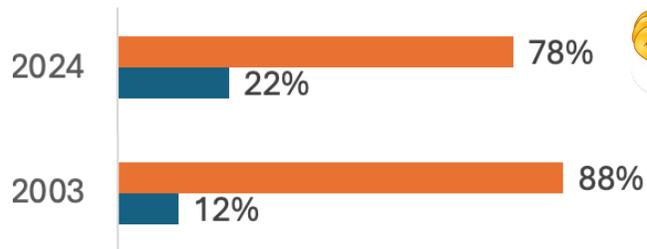
everyone provided with what they need to succeed



Decades of efforts and ...?

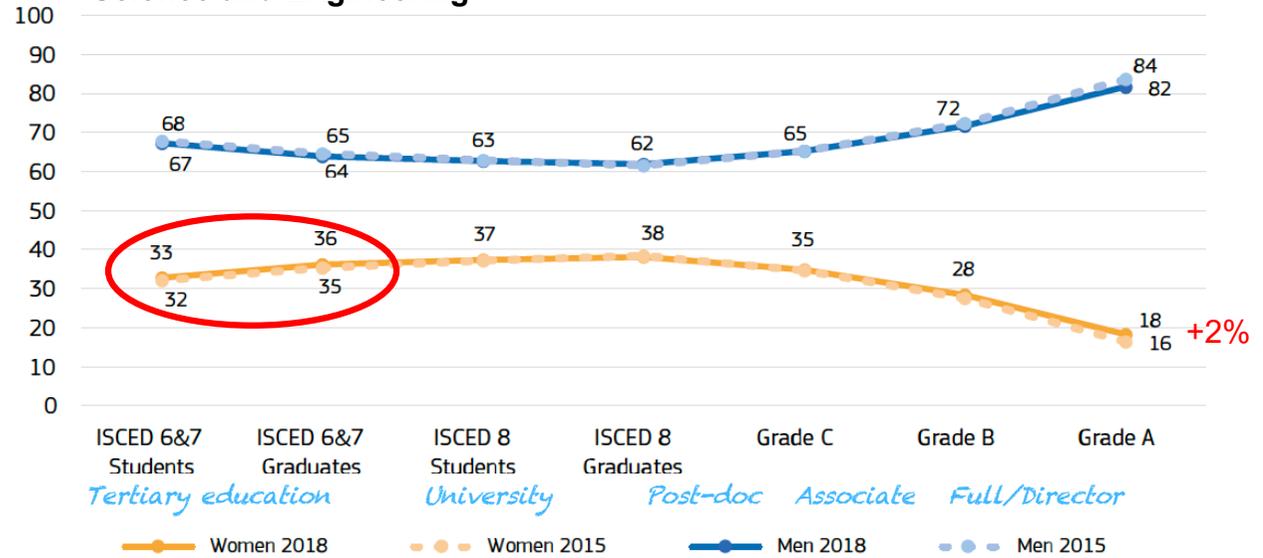
- 1992 **Baltimore Charter**
Women Hold up Half the Sky
- 2003 **Pasadena Recommendations**
We need to learn how to unlearn
EQUITY NOW
Concerns: hiring, career promotions, policies
- 2009 **IAU Resolution B4**
For IAU Members and NCs

IAU Overall



Science and Engineering

She's Figures 2023
EU-28



Age bin	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65
% women	50.9	37.0	36.6	31.3	26.5	22.0	19.6	17.8

Slowly but steadily...

2015

1st Inclusive Astro Conference → Nashville Recommendations

- Removing barriers to access
- Creating an inclusive environment
- Improving inclusion and access to power, policy and leadership
- Establishing a Community of Inclusive Practice

2020

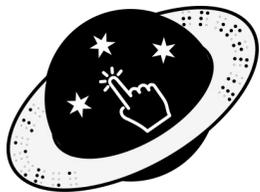
IAU S385 Astronomy for Equity, Diversity and Inclusion

- More participation of un-/under-represented
- Release documents accessible to all
- Support structural changes favouring DEI
- Monitor numbers
- Equity of access (for education)



2020

SARA (Space and Astronomy Research Accessibility)



- Policies/Initiatives
- Technical Developments
- Personal needs

So, where are we today?

- DEI is on "everyone's" agenda ... → *fashionable or for real?*
- Code of Conducts ... → *too obvious and common-sense?*
- DEI Plans, supporting policies, core/shared-values, diversity-aware communication, ...
- DEI training at astro-schools for early career scientists (ORP/NEON) and conferences

Progress remains slow, still lots to do, but each of us can help.



committed to make the access to our facilities open world-wide (CfP, Archive, ...)

About 8 – 10 years ago, STScI and ESO found systematic differences in the success rates of their time allocations between male and female PIs.

→ implicit bias among the proposal referees.

Peer review results @STScI and @ESO

HST Cycles 11-21

[2001-2012]

Reid (2014)

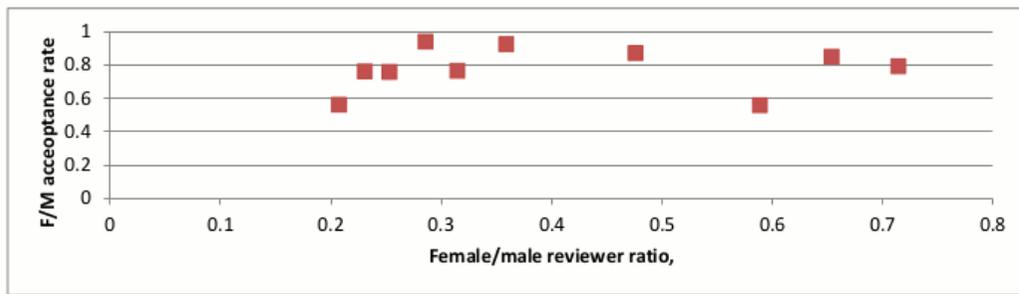


Figure 6: The relative acceptance rate for proposals with female PIs relative to proposals with male PIs plotted against the overall female/male reviewer ratio for Cycles 11 to 20; there is no evidence for a significant correlation.

→ Later, similar trends found by other facilities (ALMA, NRAO, Canada)

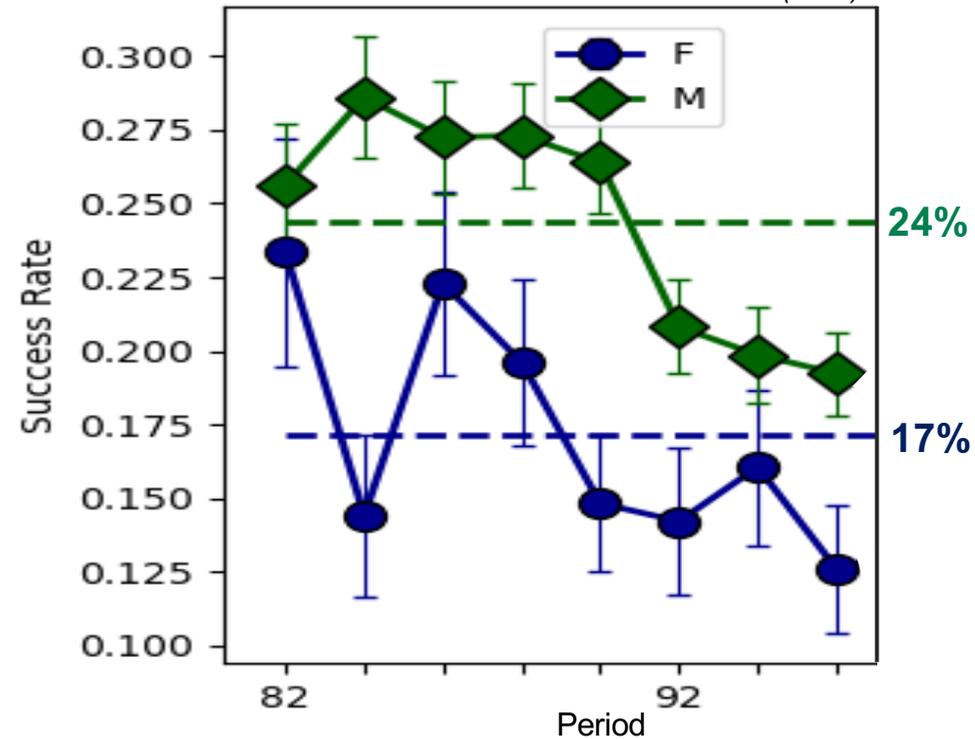
ESO P82 – P96

[2008-2015]

13000 proposals

3000 PIs

Patat (2016)

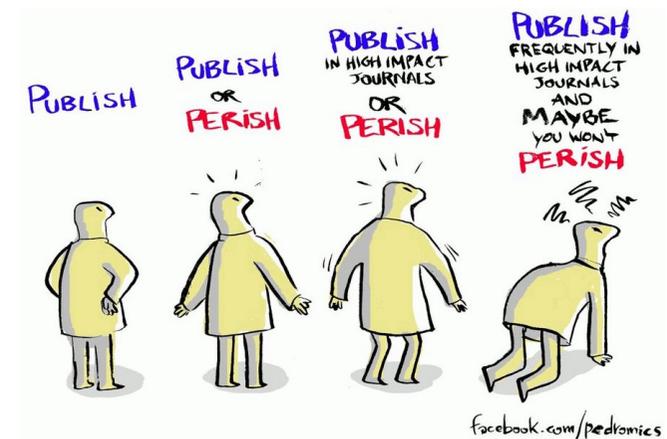


Why should we care or worry about this?

For an observational astronomer, winning telescope time means new exciting data, new project, new publications, a better CV, more career, ...

Academic excellence
a very gendered concept

a **prolific scholarly record**
international visibility
grants/awards
teaching & mentoring
...



Smaller portfolio are typically perceived as being of a lower quality → lower impact

Focus on the science, not on the scientist ...

... and if you cannot do that, then we need to remove the “scientist”



DUAL ANONYMOUS PEER REVIEW

- 1 we introduced a plenary session on unconscious bias at the beginning of the panel meetings
- 2 we moved the list of investigators to the last page of the proposal
- 3 we list them in alphabetical order, without any PI identification
- 4 we removed all information about the teams → **need for proposals anonymisation**

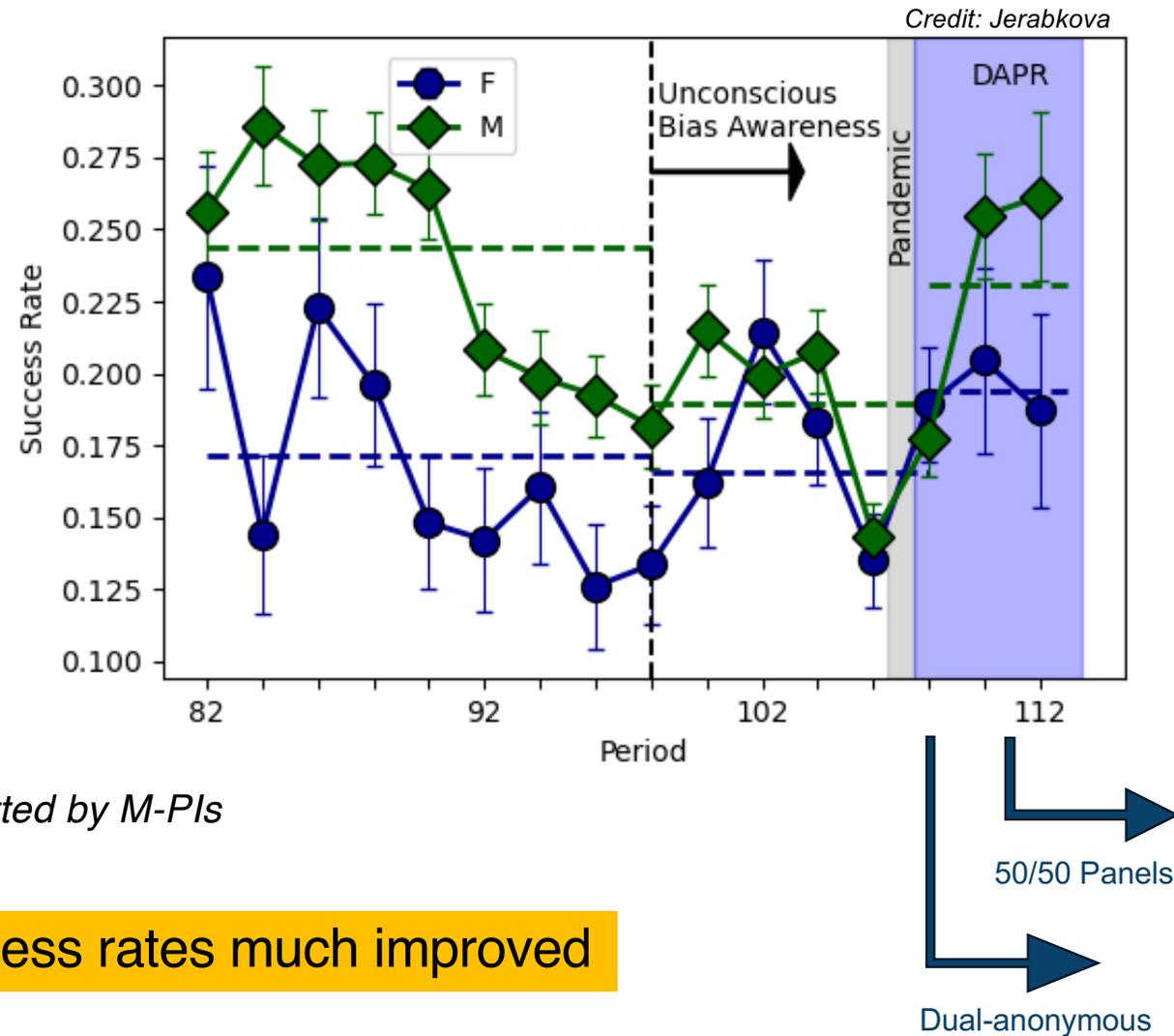
(Preliminary) Results

- M vs F gap reduced and even closed (P102-108) before DAPR*
- With DAPR, F-rates improved but average values diverging again

→ Recent fluctuations yet to be understood

→ Significant jump in number of proposals submitted by M-PIs

Early career success rates much improved



*DAPR=Dual Anonymoyus Peer Review; DPR=Distriuted Peer Review

Some personal reflections

Maybe progress has not been that bad, it's just that tangible results are not there yet ...

- DEI is on the agenda of universities, observatories, organizations
- DEI Working Groups and parallel initiatives
- DEI training at meetings
- DEI “certifications” (Athena Swan, BSBF Award, ...)

- Main areas to tackle identified
 - Biases in CV, hiring, evaluations/promotions, peer-review, ...
 - Need for equitable policies
 - Large collaborations & **Instruments Consortia(!)**

Biggest challenge → change the mentality

Develop a world-class STEM talent pool



**Diversity is the mix
but inclusion is what makes the mix work**

Thank You

Women hold up half of the sky

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