



DISCUSSING GENDER EQUITY IN THE INDIAN ASTROPHYSICS COMMUNITY

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Research (TIFR), Pune

WORKING GROUP FOR GENDER EQUITY (WGGE) - ASTRONOMICAL SOCIETY OF INDIA (ASI)

- ❖ **WGGE formally constituted in 2015**
 - ❖ **Reconstituted on 23 January 2019**

 - ❖ Preeti Kharb (NCRA-TIFR), Chair
 - ❖ Harvinder Jassal (IISER-Mohali)
 - ❖ Ravinder Banyal (IIA)
 - ❖ Ritaban Chatterjee (Presidency University)
 - ❖ Prajval Shastri (IIA retd.)
 - ❖ Nissim Kanekar (NCRA-TIFR)
 - ❖ Kuntal Mishra (ARIES, ASI Liaison)
 - ❖ Debarati Chatterjee (IUCAA)

 - ❖ **Former members:** Sushan Konar (NCRA-TIFR), Dibyendu Nandi (IISER-Kolkata), Niruj Mohan (NCRA-TIFR), Resmi Lekshmi (IIST), Jasjeet Singh Bagla (IISER-Mohali), Kshitija Kelkar (RRI)
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Table 1: Gender statistics from Indian astronomy institutes gathered by WGGE

Year	Faculty	Women	Ratio	Student	Women	Ratio	Postdoc	Women	Ratio
	Total	Number	%	Total	Number	%	Total	Number	%
National Centre for Radio Astrophysics (NCRA) - TIFR									
2013	16	2	12	18	2	11	...	...	...
2016	18	2	11	20	3	15	5	1	20
2017	19	4	21	17	4	24	7 [†]	2	28
2019	17	5	29	28	8	29	8	1	13
2020	16	4	25	25	7	28	7	3	43
Indian Institute of Astrophysics (IIA)									
2013	53	12	23	56	17	30	...	...	...
2016	48	12	25	72	28	39	10	3	30
2017	43	10	23	70	25	36	9 [†]	2	22
2019	41	10	24	82	35	43	10 [†]	5	50
2020	43	10	23	71	33	46	5	3	60
Aryabhata Research Institute of Observational Sciences (ARIES)									
2013	26	2	8	25	7	28	...	...	...
2016	23	2	9	34	14	41	5	2	40
2017	21	2	10	30	14	47	3	2	67
2019	19	3	16	37	13	35	5 [†]	3	50
2020	18	3	17	52	17	33	13 [†]	3	23
Indian Institute of Science (IISc) - Astrophysics									
2013	5	1	20	...	...	...	...	...	...
2016	5	1	20	11	1	9	1	0	0
2017	6	1	17	11	2	18	1	0	0
2019	7	1	14	28*	8	29	3	1	33
2020	7	1	14	32*	10	31	5	2	40
Raman Research Institute (RRI) - Astrophysics									
2013	11	1	9	2	1	50	...	...	...
2016	11	1	9	18	7	39	2	1	50
2017	11 [†]	1	9	25	10	40	3	1	33
2019	10 [†]	1	10	20	8	40	4	1	25
2020	9 [†]	2	22	10	4	40	4	2	50

Women Faculty ~10%

W Postdocs ~30%

W Ph.D. students ~30%

We used these data to propose for the formation of the WGGE

WGGE'S GUIDING PRINCIPLES

- Gender Equity would have been reached when the fraction of women in the next level of advancement equals the fraction in the pool
 - Pasadena Recommendations for Gender Equity in Astronomy, 2005
 - Gender-related data must be gathered, monitored, and used to identify problems.
 - Gender-sensitization talks and meetings must be organised.
-

- School of Pure & Applied Physics [Department]

Position	Total	Women	Men
Emeritus	2		2
Professor	2	1 (Director)	1
Associate Professor	1		1
Assistant Professor	4	1	3

PhD Awarded in Physics			
Year	Total	Women	Men
1993	2	1	1
1994	2	0	2
1995	4	1	3
1996	2	0	2
1997	3	0	3
1998	9	2	7
1999	5	1	4
2000	6	1	5
2001	11	2	9
2002	7	4	3
2003	6	1	5
2004	9	2	7
2005	4	2	2
2006	7	0	7
2007	6	2	4

*Physics Department,
Mahatma Gandhi University
Kottayam, Kerala
(Source: Dr. Sheelu Abraham)*

Faculty ~20%

Students ~40% - 70%

2008	8	3	5
2009	16	10	6
2010	6	1	5
2011	2	0	2
2012	14	9	5
2013	8	3	5
2014	11	8	3
2015	13	9	4
2016	10	5	5



Date: April 28, 2017

Gender Statistical Data of the Physics Department, IISER Pune from last 5 years as:

Year	Faculty				Professor and above		INSPIRE Faculty Fellows		Postdocs		PhD Students	
	Total	Female	Visiting	Visiting Female	Total	Female	Total	Female	Total	Female	Total	Female
2012	25	5	3	1	3	2	0	0	4	2	36	12
2013	28	5	4	1	3	2	1	0	3	1	44	13
2014	32	7	8	2	3	2	1	0	5	2	45	15
2015	32	7	7	2	3	1	1	0	12	5	52	16
2016	34	7	7	2	3	1	1	0	21	9	53	17

Faculty ~20%

Postdocs ~40%

Students ~30%

Prof. G Ambika
Professor and Dean, Graduate Studies
IISER Pune 411 008

Year- 2017

Total Faculty- 8

Female Faculty- 4

Total Professors and above- 0 (associate professors-6, Assistant professors-2)

Female Professors and above- 0 (associate professors-2, Assistant professors-2)

Total INSPIRE Faculty Fellows- 0

Female INSPIRE Faculty Fellows- 0

Total Postdocs- 0

Female Postdocs- 0

Total PhD students- 9

Female PhD students- 6

Faculty ~50%

Students ~70%

*Physics Department,
Newman College,
Thodupuzha, Kerala
(Source: Dr. Joe Jacob)*

Year	Total Faculty	Female Faculty	Total Professors and above	Female Professors and above	Total INSPIRE Faculty Fellows	Female INSPIRE Faculty Fellows	Total Postdocs	Female Postdocs	Total PhD students	Female PhD students
2013	13	3	1	0	0	0	0	0	0	0
2014	13	3	1	0	1(UGC-FRP)	0	0	0	0	0
2015	12+1(on lien)	3	1 (on lien)	0	1	0	0	0	7	3
2016	12+1(on lien)	3	4 (one on lien)	0	1	0	0	0	7	3
2017	12+1(on lien)	3	4 (one on lien)	0	1	0	0	0	7	3

*Presidency University,
Kolkata
(Source: Dr. Suchetana
Chatterjee)*

Faculty ~23%

Students ~43%

Department of Physics & Astronomical Science

Central University of Himachal Pradesh

Year	Total Faculty	Female Faculty	Total Professors and above	Female Professors and above	Total INSPIRE Faculty Fellows	Female INSPIRE Faculty Fellows	Total Postdocs	Female Postdocs	Total PhD Students	Female PhD Students
2012	7	Nil	1	Nil	Nil	Nil	Nil	Nil	1	1
2013	7	Nil	1	Nil	Nil	Nil	Nil	Nil	4	2
2014	8	Nil	Nil	Nil	1	Nil	Nil	Nil	6	2
2015	8	Nil	Nil	Nil	Nil	Nil	Nil	Nil	5	4
2016	8	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2017	8	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Total Faculty	8							Total	16	

(Source: Dr. B. C. Chauhan)

Ph.D

Year	Total No. of Admission	Gender	
		Male	Female
2010	12	5	7
2011	9	2	7
2012	15	2	13
2013	7	3	4
2014	14	7	7
2015	8	1	7
2016	8	2	6

*University of Calicut,
Kerala*

(Source: Nayana A. J.)

Students ~50% - 75%

Professors: 2(F) 9(M)
Associate Professors : 1 (F) 3(M)
Assistant Professors: 0(F) 1(M)
Adjunct Faculty: 2(F) 1(M)

For 2014-2016 PhD Batch: 8(F) 2(M)
For 2015-2016 MPhil Batch: 7(F) 2(M)

Christ University, Bangalore
(Source: Pranoti Panchbhai 2017)

Faculty ~19%
Students ~70%

	M	F
Professors -	19	1
Associate Professors -	9	5
Assistant Professors -	14	2

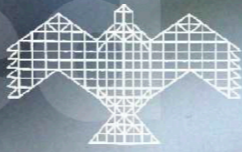
Department of Physics & Astrophysics
Delhi University, Delhi
(Source: Isha Pahwa, 2017)

Faculty ~16%

Overall, the Universities are doing a job better of hiring women faculty members (~20%) compared to Research Institutes (~10%). However, the fraction of women Ph.D. students is almost double of the faculty fractions



IAS-NIAS Research Report



**TRAINED SCIENTIFIC WOMEN POWER:
HOW MUCH ARE WE LOSING
AND WHY?**

Anitha Kurup | Maithreyi R | Kantharaju B | Rohini Godbole

April 2010

Indian Academy of
Sciences (IAS) -
National Institute of
Advanced Studies
(NIAS)
Detailed Report

Fraction of Women
PhDs in all Sciences
~35% - 40%

Gender Audit in ASI Meetings

For the 2017 ASI meeting, No. of Registered participants = 382. Female number = 103; Fraction = 27%

ASI 2017 Jaipur

Chairpersons (F) = 14

Total = 35

Fraction (F) = 40%

Speakers (F) = 43

Total = 145

Fraction (F) = 29.6%

ASI 2016 Srinagar

Chairpersons (F) = 4

Total = 16

Fraction (F) = 25%

Speakers (F) = 21

Total = 82

Fraction (F) = 25.6%

ASI 2015 Pune

Chairpersons (F) = 7

Total = 18

Fraction (F) = 38.9%

Speakers (F) = 17

Total = 84

Fraction (F) = 20.2%

SESSIONS AT ASI

- ❖ Organise 1-2 hour WGGE sessions at annual ASI meetings
 - ❖ *Speakers:*
 - ❖ **Suchetana Chatterjee**, Presidency University
 - ❖ **Paul Ho**, EAO
 - ❖ **Nandita Jayaraj**, science journalist, Life-of-Science
 - ❖ **Anu Sabhlok**, IISER-Mohali
 - ❖ **Shobhana Narasimhan**, JNCASR
 - ❖ Others...
 - ❖ *Achievements:*
 - ❖ ASI provides subsidized Childcare at the ASI meetings
 - ❖ ASI conducts a Gender audit of the ASI meeting speakers and participants
-

ANNA MANI LECTURE SERIES

❖ Talking across disciplines: science historians, philosophers of science, science journalists, social scientists

1. Rama Govindarajan
2. Sumi Krishna
3. Amrita Banerjee
4. Aashima Dogra
5. Rohini Godbole
6. Meera Nanda
7. Abha Sur
8. Jayasree Subramanian
9. Vidita Vaidya
10. Gita Chadha

The Anna Mani Lecture Series

“WHAT DO ‘ANECDOTES’ TELL US ABOUT THE GENDERED CULTURE OF SCIENCE? METHODOLOGICAL REFLECTIONS OF A SOCIOLOGIST”



Youtube link :
<https://youtu.be/DRnW0fBcNdM>
Or scan QR Code below



September 2,
4 PM

Dr. Gita Chadha

Dr. Gita Chadha is a Professor in Sociology at the University of Mumbai. Her research interests lie in sociological theory, contemporary feminisms, science studies and cultural studies. The two principles of interdisciplinarity and intersectionality frame her research and writing. Her work on ‘Gender and Science’ in India, edited with Sumi Krishna, has been published in 2 volumes

The Anna Mani lecture series is an effort by the Working Group for Gender Equity (WGGE) and the Astronomical Society of India (ASI) to increase gender sensitisation in the scientific community



Working Group for Gender Equity (WGGE)
Astronomical Society of India (ASI)

YouTube live stream link: <https://youtu.be/DRnW0fBcNdM>

GENDER EQUITY SURVEYS



Gender Equity : A Survey undertaken by WGGE-ASI (Working Group for Gender Equity, ASI)

[There are TWO pages of this survey. Make sure you have received both the pages. Please note that in questions asking you to quote a percentage, we are simply asking for a rough estimate. It is understandable that you may not have the exact numbers.]

Section-A

1. Your Gender (one that you identify with) :

- (a) Female,
- (b) Male,
- (c) Other.

2. Your Age :

- (a) 25-30 Yrs.,
- (b) 31-35 Yrs.,
- (c) 36-40 Yrs.
- (d) 40+ Yrs.

3. Your Career Status :

- (a) University Student,
- (b) PhD Student,
- (c) Post-Doctoral Fellow,
- (d) Permanent Faculty,
- (e) Others (please specify) .

4. Your Workplace :

- (a) Astronomy Research Institute,
- (b) Astronomy Department in a Research Institute,
- (c) Astronomy Department in a University,
- (d) Physics or other Department in a University,
- (e) Others (please specify).

5. Nature of Your Work (tick all of which are applicable) :

- (a) Theoretical,
- (b) Observational,
- (c) Instrumental,
- (d) Teaching.

6. Percentage of women at your institute at the following levels (ignore whichever is not applicable/you don't know about) :

- (a) University Student : 5% - 10%, 10% - 20%, 20% - 30%, >30%
- (b) PhD Student : 5% - 10%, 10% - 20%, 20% - 30%, >30%
- (c) Post-Doctoral Fellow : 5% - 10%, 10% - 20%, 20% - 30%, >30%
- (d) Permanent Faculty : 5% - 10%, 10% - 20%, 20% - 30%, >30%

7. Percentage of women PhD students at your institute who eventually take up a post-doctoral position :

- (a) < 25%, (b) 25% - 50%, (c) 50% - 75%, (d) > 75%

8. Percentage of women PhD students at your institute who eventually find a permanent faculty position :

- (a) < 25%, (b) 25% - 50%, (c) 50% - 75%, (d) > 75%

- Questionnaire circulated in ASI 2016 Kashmir, and ASI 2020 Tirupathi
- Apart from surveying the interest and awareness of participants, the survey is an exercise in gender-sensitization

- In a meeting a technical question was asked, which a female postdoc correctly answered. A senior male astronomer berated another male astronomer by saying that he just got beaten by a woman!
- One senior female astronomer whose husband is also an astronomer was directly asked if her husband helped her in her research.
- One faculty member mentioned how in a professional meeting, all male astronomers were introduced as Prof. or Dr. so-and-so while she was introduced by her first name. She had found this demeaning.
- One professor discouraged a young student from applying to their University for a faculty position in the future, saying that women were not encouraged to apply because they took maternity leave.
- One person remembered how when a female colleague at their Institute went to complain about some issue to the Women's Cell, everyone else distanced themselves from her, instead of providing support.
- When applying for various kinds of fellowships or other competitive positions, many women have been told by their male colleagues that they would easily get those positions because they are women.

- One postdoc mentioned that the gender bias is so deeply ingrained in our minds, that we ask the female researchers if they will take up teaching in the future, rather than research. She felt that all female astronomers must be aware of these biases and not make the same mistake with their female colleagues.
- One female faculty had been advised to look for a faculty position close to her in-laws place in a different city.
- A technical staff member found that in group meetings the men tended to not address the women by their names. Instead they would say - “She” will do this. This was very upsetting to her.
- One female student who was married could not find a mentor for her PhD project, because there was a worry that she could get pregnant anytime.
- One female student said that as she was more sensitive than her male colleagues, criticism affected her much more. She hoped that the climate in her institute was more welcoming and sensitive.
- One student said that in her college, all the male students worked together and got their homework done much faster, whereas the female students worked independently as was expected of all students, and therefore took much longer to finish their work. She wished the female students would also work together.

TOWARDS GENDER EQUITY IN INDIAN ASTRONOMY



Aru Beri^{1*}
Prajval Shastri^{2*}
Ravinder Banyal³
Debarati Chatterjee⁴

WGGE



Ritaban Chatterjee⁵
Harvinder Jassal¹
Nissim Kanekar⁶
Preeti Kharb⁶
Kuntal Mishra⁷

Chair WGGE

W= Working
G= Group for
G= Gender
E= Equity

*participants in the ICWIP

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The **Working Group for Gender Equity (WGGE)** was formally constituted under the **Astronomical Society of India (ASI)** in 2015. The primary goal of the WGGE is to increase awareness about gender related issues in the astronomical community. The current WGGE comprises 8 members from different astronomy institutes and universities across India. WGGE members organise "Anna Mani lectures" on gender sensitisation. These lectures are an attempt to discuss gender equity issues across disciplines and have included eminent speakers who are science historians, philosophers of science, science journalists, social scientists, as well as scientists. WGGE members carry out gender audits of Indian research institutes and maintain them on their webpage (<https://astron-soc.in/wgge/>). Gender-sensitization talks are also a part of annual WGGE sessions at ASI meetings. These impactful sessions include an open discussion with the ASI participants, whose suggestions are then carried forward for future activities of the WGGE. Online questionnaires to assess and create gender awareness in the community are also circulated to ASI members.

Interdisciplinary practitioners deliver country-wide Anna Mani Memorial Lectures that bring diverse insights on gender inequity

OUR IMPACT ON THE ANNUAL ASTRONOMICAL SOCIETY MEETINGS

- ★ A plenary on gender inequity is a regular feature
- ★ The fraction of women speakers is now 33%
- ★ Child-care facility is routine

Learn more about Anna Mani, from our website: She became a physicist in an era when many women were not allowed to attend school,, She retired as the Deputy Director General, Indian Meteorology Department.



<https://astron-soc.in/wgge/lecture>

Women faculty (%) in elite astrophysics institutions



Glimpses of the 2-hour Plenaries on GenderEquity with Open Discussions



Sumi Krishna: How does Gender Matter in the Physical Sciences

Amrita Banerjee: A New Conceptual Model for 'Diversity'

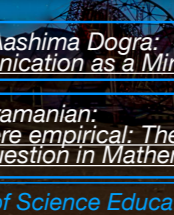


Meera Nanda: Running an Obstacle Race with Miles Still to Go



Rohini Godbole: A Life in Science

Abha Sur: Extraordinary/Ordinary: R Rajalakshmi's Life Science

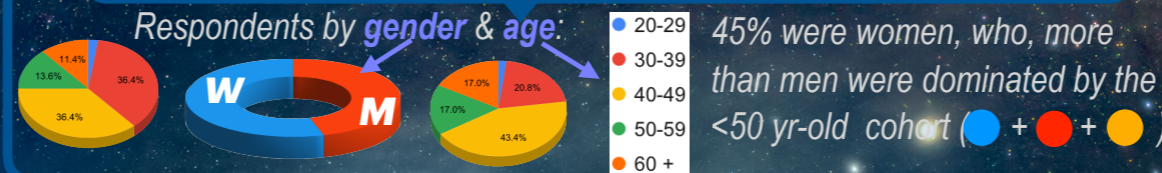


Aashima Dogra: Science Communication as a Mirror to Science



Jayasree Subramanian: They were Axiomatic. We were empirical: The Indian Approach to the Gender Question in Mathematics

Survey of Indian astrophysicists by the WGGE (2021)



SELECT SURVEY RESULTS

W=WOMEN; M=MEN

- 22%W reported having faced sexual harassment
- 38%W & 38%M reported knowing someone who faced sexual harassment
- 83%W & 43%M perceived gender discrimination in academic institutions
- Majority respondents reported absence of workplace child-care
- Most felt that the gender gap was due to societal constraints on women
- 91%W & 85%M felt child-care facilities in the workplace would reduce the gender gap
- 80%W & 70%M: mentoring programmes for young women would help reduce the gap
- Most felt that open discussions on gender discrimination were needed

Hover & follow the links!



Detailed results will soon be on our website!

Visit our website for videos of talks & more!

Follow us on Twitter! @asi_wgge

Author affiliations: 1: Indian Institute of Science Education & Research Mohali; 2: Indian Institute of Astrophysics (retd.); 3: Indian Institute of Astrophysics; 4: Inter-University Centre for Astronomy & Astrophysics; 5: Presidency University, Kolkata; 6: National Centre for Radio Astrophysics; 7: ARIES Nainital. Background Image: the Milky Way from Ladakh, India: Dorje Angchuk

CONTACT

- *WGGE webpage*

- <https://astron-soc.in/wgge/>

- *WGGE Facebook page*


- *Email us at*

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Working Group for Gender Equity

ABOUT WGGE MEMBERS ACTIVITIES ANNA MANI LECTURE SERIES CONTACT



Working Group of Gender Equity

The *Astronomical Society of India* becomes one of the first professional societies in Asia to constitute a committee to work for gender equity. In September 2015, the *Executive Council, ASI* approved the formation of a *Working Group for Gender Equity (WGGE)* to address relevant issues within the Astronomy & Astrophysics community of India.

Please watch this space for our future activities and agenda. Please feel free to contact any of the members of the Working Group to give your suggestions about the issues you feel the working group should be looking into.

Working Group on Gender Equity, Astronomical Society of ...

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Liked Following Share + Add a Button

Create Live Event Offer Job No Rating Yet

Write a post...
Photo/Video Get Messages Feeling/Activ...