

National Board for Higher Mathematics www.nbhm. dae.gov.in

# IWM ANNUAL CONFERENCE 2017 13 – 15 July, 2017

Department of Mathematics Indian Institute of Science Bengaluru – 560 012





Committee for Women in Mathematics

IWM WEBSITE: https://sites.google.com/site/iwmmath/

**CONFERENCE WEBSITE:** https://sites.google.com/site/iwmconference2017iisc/

# Report on the 2017 Annual Conference of IWM

#### 1. Introduction

The 2017 annual conference of IWM (IWM 2017) was held at the Indian Institute of Science (IISc), Bengaluru, during the period July 13 to July 15, 2016.

This conference is in continuation of a successful series of events, beginning in 2012, organized by the Indian Women and Mathematics (IWM). Information on previous IWM annual conferences can be found in the Archives page of the IWM website (https://sites.google.com/site/iwmmath/archives).

The conference at IISc was aimed at bringing together women students, college and university teachers and early-career researchers with practising mathematicians, especially women mathematicians — from both India and abroad — working in the frontiers of Mathematics, to exchange mathematical ideas and share their views and experiences.

The organizing responsibilities were handled by the following persons:

#### **Organizing Committee:**

E.K. Narayanan	Indian Institute of Science
Gadadhar Misra	Indian Institute of Science
Gautam Bharali (Chair)	Indian Institute of Science
Pooja Singla	Indian Institute of Science

#### Scientific Committee:

E.K. Narayanan	Indian Institute of Science
Gautam Bharali	Indian Institute of Science
Mahuya Datta	Indian Statistical Institute, Kolkata
Manjunath Krishnapur	Indian Institute of Science
Neela Nataraj	Indian Institute of Technology Bombay
Vijaylaxmi Trivedi	Tata Institute of Fundamental Research, Mumbai

#### 2. List of IWM Executive Committee members and senior participants

The following is a list of members of the IWM Executive Committee (EC) and of participants who were at the conference by invitation in various capacities.

	Name & Affiliation	Role
1.	Amber Habib, Shiv Nadar University, NOIDA, Uttar Pradesh	EC Member
	amber.habib@snu.edu.in	
2.	Anisa Chorwadwala, IISER, Pune	EC Member
	anisa@iiserpune.ac.in	
3.	Apala Majumdar, University of Bath, Bath, UNITED KINGDOM	Plenary Speaker
	A.Majumdar@bath.ac.uk	
4.	Atreyee Bhattacharyya, IISER, Bhopal	Invited Speaker
	atreyee@iiserb.ac.in	

5.	B. Sri Padmavati, University of Hyderabad	EC Member
	<u>bspsm@uohyd.ernet.in</u> , <u>bs.padmavathi@gmail.com</u>	
6.	B.V. Rajarama Bhat, ISI Bangalore Centre	
	<u>bhat@isibang.ac.in</u>	
7.	Gautam Bharali, IISc., Bengaluru	EC Member
	<u>bharali@math.iisc.ernet.in</u>	
8.	Geetha Venkataraman, Ambedkar University Delhi	EC Member &
	<u>geetha@aud.ac.in</u> , <u>geevenkat@gmail.com</u>	Moderator, Panel
		Discussion
9.	Indira Narayanaswamy, Ramaiah Univ. of Applied Sciences, Bengaluru	Panelist
	indira.sr.seg@msruas.ac.in	
10.	Kavitha Telikepalli, TIFR, Mumbai	Plenary Speaker
	kavitha@tcs.tifr.res.in	
11.	Krishna S. Athreya, Iowa State University (Retd.), Ames (Iowa), U.S.A.	Panelist
12	ksathreya@iastate.edu	
12.	M. Sundari, Chennai Mathematical Institute	Invited Speaker
13.	sundari@cmi.ac.in	EC Member
13.	Mahuya Datta, ISI, Kolkata mahuya@isical.ac.in	EC Member
14.	Mousomi Bhakta, IISER, Pune	Invited Speaker
14.	mousomi@iiserpune.ac.in	invited Speaker
15.	Mythily Ramaswamy, TIFR-CAM, Bengaluru	EC Member
15.	mythily@math.tifrbng.res.in	
16.	Neela Nataraj, IIT Bombay	EC Member
-0.	neela@math.iisc.ernet.in	
17.	Pooja Singla, IISc., Bangalore	EC Member &
	pooja@math.iisc.ernet.in	Invited Speaker
18.	Riddhi Shah, JNU, New Delhi	EC Member
	rshah@jnu.ac.in, riddhi.kausti@gmail.com	
19.	Radha R., IIT Madras	Invited Speaker
	<u>radharam@iitm.ac.in</u>	
20.	Rukmini De, ICTS, Bengaluru	Invited Speaker
	<u>rukmini@icts.res.in</u>	
21.	Sachi Srivastava, University of Delhi	EC Member
	sachi srivastava@yahoo.com	
22.	Šárka Nečasová, Czech Academy of Sciences, Prague, Czech Republic	Panelist
	matus@math.cas.cz	
23.	Shreemayee Bora, IIT Guwahati	EC Member
	shbora@iitg.ernet.in	
24.	Sujatha Ramdorai, University of British Columbia, Vancouver, CANADA	Plenary Speaker
25	sujatha@math.ubc.ca	& Panelist
25.	Surjeet Kour, IIT Gandhinagar	
26	surjeetkour@iitgn.ac.in	
26.	Usha Bhosle, TIFR, Mumbai (Retd.) & IISc., Bengaluru	
27.	<u>usnabh07@gmail.com</u> Vaidehee Thatte, Queen's University, Kingston (Ontario), CANADA	
27.	valdenee Thatte, Queen's University, Kingston (Untario), CANADA vmt2@queensu.ca	
28.	Vijaylaxmi Trivedi, TIFR, Mumbai	EC Member
20.	vija@math.tifr.res.in	
L	Mag mathan com	L

# 3. Timetable

Below is the timetable at a glance for the 3 days of the conference, followed by a detailed timetable featuring names and titles of the talks presented.

9.00-	9:30-	9:35-		11:00	)-11:50		12:00-		14:30-		15:50-	16:40-18:00
9.30	9:35	10:35	т		Contributed talks: 3 parallel sessions		12:35	L	15:30	т	16:35	
Sign-	Open-	Kavitha	Ε	1 Poornapush	- Samarpita		Mou-	U	Sujatha	E	Rukmini	Panel
in	ing words	Telike- palli	A	kala Narayanan	Ray		somi Bhakta	N	Ramdorai	A	Dey	Discussion*
				2 Gurleen Kaur	Saudamini Nayak			С				
				<b>3</b> Rani Kumari	Alok K. Yadav			н				

# Day 1: Thursday, 13<sup>th</sup> July, 2017

# Day 2: Friday, 14th July, 2017

9:00-9:35	9:35-		10:55-	11:40-		14.30-			15.4	0-16:40		16	5:40-	17:25-
	10:35	т	11:40	12:35	L	15:15	т	c	Contributed ses	talks: 3 pa ssions	rallel	17	7:25	18:00
Atreyee Bhattacharya	Apala Majum- dar	E A	R.	<i>Mini- course</i> B.V. Rajarama Bhat	U N C H	M. Sund- ari	A		Sarika Goyal N. Karimilla Ankita Jindal	Asha Dond Seema Kush- waha Eshita Mazum- dar	Pos- ter set- up time Mar Balo		Post- er Sess- ion	Surjeet Kour

# Day 3: Saturday, 15<sup>th</sup> July, 2017

	9:30-10:15	10:15-11:15		11:35-12:35	L	14:30-15:30	15:30-16:05	16:05-16:15	
-	Рооја	Mini-course	т	Usha Bhosle	U	Mini-course	Vaidehee	Valedictory	Т
	Singla	B.V. Rajarama	E		N	B.V. Rajarama Bhat	Thatte	session	Ε
		Bhat	A		с				Α
					н				

\*K.S. Athreya, A. Majumdar, I. Narayanaswamy, Š. Nečasová, **MODERATOR:** G. Venkataraman

#### DETAILED TIME-TABLE

# 13<sup>th</sup> July, 2017

0.00	<b>C</b> <sup>1</sup>
9:00 am-9:30 am	Sign-in
9:30 am-9:35 am	Inaugural
9:35 am-10:35 am	Kavitha Telikepalli
	Popular matchings in the stable marriage problem
10:35 am-11:00 am	Теа
11:00 am-11:50 am	Contributed talks 1-6 (Sessions 1, 2, 3)
12:00 pm-12:35 pm	Mousomi Bhakta
	Nonlocal equations with critical & supercritical
	nonlinearities
12:30 pm-2:30 pm	Lunch
2:30 pm-3:30 pm	Sujatha Ramdorai
	Residual Galois representations
3:30 pm-3:50 pm	Теа
3:50 pm-4:30 pm	Rukmini Dey
	Some aspects of minimal surfaces, maximal surfaces &
	solitons
4:40 pm-6:00 pm	Panel Discussion
	Women in Mathematics: perspectives in Science &
	Mathematics

14<sup>th</sup> July, 2017

9:00 am-9:35 am	Atreyee Bhattacharya
	On Riemannian curvature functionals
9:35 am-10:35 am	Apala Majumdar
	The mathematics of liquid crystals: theory, simulations &
	applications
10:35 am-10:55 am	Теа
10:55 am-11:40 am	Radha R.
	Sampling theory in shift-invariant spaces: some recent
	developments
11:40 am-12:35 pm	B.V. Rajarama Bhat
	Mini-course: Spectral theory of normal operators, LECTURE 1
12:35 pm-2:30 pm	Lunch
2:30 pm-3:15 pm	M. Sundari
	Uncertainty principles in harmonic analysis on Lie groups
3:15 pm-3:40 pm	Теа
3:40 pm-4:50 pm	Contributed talks 7-13 (Session 1, 2, 3)
4:40 pm-5:25 pm	Poster Session
5:25 pm-6:00 pm	Surjeet Kour
	Simple derivations on tensor products of polynomial
	algebras

15<sup>th</sup> July, 2017

9:30 am-10:15 am	Pooja Singla
	Representations of linear groups over finite rings
10:15 am-11:15 am	B.V. Rajarama Bhat
	Mini-course: Spectral theory of normal operators, LECTURE 2
11:15 am-11:35 am	Теа
11:35 am-12:35 pm	Usha Bhosle
	Syzygy bundles and coherent systems
12:35 pm-2:30 pm	Lunch
2:30 pm-3:30 pm	B.V. Rajarama Bhat
	Mini-course: Spectral theory of normal operators, LECTURE 3
3:30 pm-4:05 pm	Vaidehee Thatte
	Ramification theory for arbitrary valuation rings in positive
	characteristic
4:05 pm-4:15 pm	Valedictory Session
4:15 pm	Теа

#### CONTRIBUTED TALKS SCHEDULE

July 13, 11:00 to 11:50 p.m.

Session 1	Session 2	Session 3
Poornapushkala Narayanan	Gurleen Kaur	Rani Kumari
Samarpita Ray	Saudamini Nayak	Alok K. Yadav

#### July 14, 3:40 to 4:50 p.m.

Session 1	Session 2	Session 3
Sarika Goyal	N. Karimilla Bi	Ankita Jindal
Asha Dond	Seema Kushwaha	Eshita Mazumdar
		Mamta Balodi

#### July 13, 11:00 to 11:50 p.m.

#### Session 1

- *Poornapushkala Narayanan* (IIT Madras): On the semistability of certain Lazarsfeld– Mukai bundles on Abelian surfaces
- Samarpita Ray (Indian Institute of Science): Coherator and torsion theory on sheaves of algebraic stacks

#### Session 2

- *Gurleen Kaur* (Panjab University): Character triples and Shoda pairs
- Saudamini Nayak (Harish-Chandra Research Institute): On Schur multiplier of nilpotent Lie superalgebras

#### Session 3

- *Rani Kumari* (Harish-Chandra Research Institute): The cone  $\mathcal{D}_{k,l}$  of  $\mathcal{U}$ -invariant kernels
- *Alok K. Yadav* (Jawaharlal Nehru University): Dynamics of distal actions on certain compact spaces

#### July 14, 3:40 to 4:50 p.m.

#### Session 1

- *Sarika Goyal* (Bennett University): Fractional Hardy–Sobolev operator with sign-changing and singular nonlinearity
- Asha Dond (Indian Institute of Science): Edge patch-wise local projection nonconforming FEM for convection-diffusion problem

#### Session 2

- *N. Karimilla Bi* (Institute of Mathematical Sciences): Residues modulo powers of two in the Young–Fibonacci lattice
- Seema Kushwaha (Harish-Chandra Research Institute):  $\mathcal{F}_{2^l}$ -graphs and  $\mathcal{F}_{2^l}$ -continued fractions

#### Session 3

- Ankita Jindal (IIT Delhi): Irreducibility and Galois groups of generalized Laguerre polynomials
- Eshita Mazumdar (IIT Bombay): An extremal problem in zero-sum theory
- Mamta Balodi (Institute of Science): Euler totient for interval of finite groups

#### 4. Scientific Programme

- There were 4 plenary talks of 55 minutes' duration each followed by 5 minutes of discussion each.
- There were two categories of invited talks. There were longer invited talks 4 in number — of 40 minutes' duration each followed by 5 minutes of discussion each. A special effort was made to reach out to early-career mathematicians. Thus, there were 4 talks, designated as "Talks by Young Mathematicians", of 30 minutes' duration each followed by 5 minutes of discussion.

The names and affiliations of all plenary and invited speakers are listed in Section 2. Among the invited speakers listed in Section 2, Atreyee Bhattacharya, Mousomi Bhakta, Surjeet Kour and Vaidehee Thatte gave talks designated as "Talks by Young Mathematicians".

 A mini-course entitled "Spectral theory of normal operators" was conducted by Prof. B.V. Rajarama Bhat of the Indian Statistical Institute–Bangalore Centre over three sessions of an hour's duration each on Days 2 & 3. To supplement the lectures, participants of the mini-course were given a copy of the textbook *Operators on Hilbert Space* by V.S. Sunder (Texts and Readings in Mathematics **71**, Hindustan Book Agency, 2015).

- There were 13 contributed talks of 20 minutes' duration followed by 3 minutes of discussion each. Talks 1-6 were held on the first day in 3 sessions and talks 7-13 were held on the second day of the conference in another 3 sessions. Details of the contributed talks are presented in Section 3.
- A poster session was held on the second day after the contributed talks.
- On the first day, there was a panel discussion entitled *Women in Mathematics: Perspectives from Science and Mathematics* moderated by Geetha Venkataraman (Ambedkar University Delhi). The panelists were Krishna S. Athreya (Iowa State University), Apala Majumdar (University of Bath), Indira Narayanaswamy (M.S. Ramaiah University of Applied Sciences), Šárka Nečasová (Czech Academy of Sciences), and Sujatha Ramdorai (University of British Columbia). There was a spirited exchange of views among the panelists and between the panel and members of the audience. A report on the panel discussion are presented in the next section.
- There were 70 participants, including the speakers and IWM Executive Board members. Of these, about one-third of the participants were students. While, expectedly, there were many participants from the states of South India, about half the Indian participants came from the other regions of India. The list of all participants is given in Appendix A of this report.

## 5. Panel Discussion

A panel discussion was held on 13<sup>th</sup> July 2017 entitled *Women in Mathematics: Perspectives from Science and Mathematics*.

Moderator: Geetha Venkataraman (Professor of Mathematics, Ambedkar University Delhi)

## Panelists:

Krishna S. Athreya (retired from Iowa State University, USA; has completed a 3-year term as Chair, the Diversity Advisory Committee for the American Association for the Advancement of Science)

Apala Majumdar (Reader of Mathematics and EPSRC Research Fellow, University of Bath, UK)

Indira Narayanaswamy (retired as Technology Director, ARD (Aerodynamics & Performance), Ministry of Defence, Govt. Of India; currently Research Professor at M.S. Ramaiah University of Applied Sciences, Bengaluru)

Šárka Nečasová (Head of the Department of Evolution Differential Equations, Czech Academy of Sciences)

Sujatha Ramadorai (Professor of Mathematics and Canada Research Chair, University of British Columbia, CANADA)

The moderator introduced the speakers and the theme for the panel. Each panelist spoke for about 5-8 minutes on their experiences as academics in mathematics and science. A brief description of the issues raised by the speakers is given below:

All the speakers described their trajectories in attaining a successful teaching and research career. They also spoke about their roles as administrators. While many of them had not faced significant roadblocks, they recognised both societal and systemic impediments that may be preventing an increase in the number of women taking up careers in science and mathematics. It was also noted that as one ascends either the academic or the administrative ladder, one sees that the presence of women is almost non-existent.

Sujatha Ramadorai talked about the initiatives taken by the Indian Academy of Sciences in publishing *Lilavati's Daughters*, which had short autobiographical sketches of women in science and mathematics; and an EPW issue on gender in science, which had intersectional autobiographies from women and gender minorities in mathematics and sciences. She also highlighted the activities of the Committee for Women in Mathematics (CWM), a subcommittee of the International Mathematics Union and the gender gap project of the International Council for Science (ICSU). She also felt that that networking conferences, workshops have proved to have an impact.

Apala Majumdar, one of the plenary speakers, briefly described her career trajectory and why she finds mathematics to be a challenging and rewarding profession spanning cutting-edge research, international networking, teaching, training the next generation of researchers and non-academic impact. She then described the Athena Swan initiative in the United Kingdom:

#### http://www.ecu.ac.uk/equality-charters/athena-swan/ .

The Athena Swan Charter is dedicated to advancing gender equality in the STEM (Science, Technology, Engineering and Mathematics) subjects. It is aimed at understanding the gender statistics, improving representation of women at all levels, equal access to career progression opportunities, and creating a better working environment for everybody. The vast majority of British universities apply for an Athena Swan award. The application procedure requires departments and institutions to critically review their statistics at the undergraduate, postgraduate, PhD and faculty levels, recognize any potential gender-relates issues and devise a systematic action plan and milestones to address these issues.

Krishna S. Athreya said that Women (and other under-represented minorities) in STEM face many challenges in functioning at their intellectual best. Some are rooted in external constraints resulting from social conditioning that sets differential expectations in communication styles: for example, women are expected to be confident and assertive up to a point, beyond which they would be considered aggressive, whereas a similar style in men would be seen as an asset. She also spoke about the "Impostor Syndrome" and about implicit bias, which decision makers ought to be aware of. She stressed the importance of making changes in the system to recognise these phenomena and avoid them as these changes lead to a better learning environment and optimize potential and learning.

Šárka Nečasová highlighted her own trajectory and the role of the key people who had helped and supported her at times when there seemed to be career-threatening choices. She felt that one had to be strong and be ready to do double the work in comparison with women staying at home: that without support, help and respect from family and friends, managing a career and family would be impossible. In her own country, she said, there isn't, in general, equal pay for men and women in the same position; that they do not satisfy Brussel's requirement, which states that women should have their own representative at every level; that women coming back from maternity leave often find themselves without a job; that women were designated to less important positions without any specific reasons. For women scientists, she felt, maternity leave while on projects was still an issue and that women scientists with small children are usually excluded from important committees. On the positive side, she said that the President of their Academy is a women and the head of the Grants Committee too is a women. However, she did feel that child-care duties and other societal impositions meant that women would never be able to compete at the same level as men.

Indira Narayanaswami spoke about her path from an initial training in pure mathematics to becoming the first woman scientist to be designated as Technology Director at the Aeronautical Development Agency (ADA) under the Ministry of Defence, Government of India. In general she felt that while the presence of girl students in schools and colleges is high and their levels of achievement commendable, the participation of women in research in science is low; their presence in senior posts in academics / R&D labs is minuscule. She said that the pipeline of women from college to university to scientific careers pursuing mathematics and science is still dreadfully leaky and that there also exists the "science glass ceiling" for women scientists, who struggle for acceptance, appreciation and rewards / awards at various levels. She then highlighted the following initiatives: a standing committee towards promoting women in science set up by the Department of Science and Technology (DST); the Role Model Program initiated by the IAS Panel on Women in Science; career development workshops by the UGC and DST for young women who are already into a science career. However she felt that there needs to be both empirical and qualitative studies to shed light on both the leaky pipeline and glass ceiling phenomena.

After the panellists had spoken, the moderator summed up some of the issues raised along with highlighting similar phenomena she had noticed during her career as a mathematician. The discussion was then thrown open to the audience. There were several audience members who spoke about their own experience in managing a family and an academic career, emphasising again the need for women to work and be doubly better to reach anywhere. A male member of audience questioned this when he said that this expectation was grossly unfair as no such requirement was imposed on him. Young women spoke about parental pressure to not continue in research, and to get married instead. Other young women married to fellow academics spoke about the two-body problem and the unwritten rule, which often prevented institutions from hiring both of them. One young post-doctoral student spoke about the aggressive questions women speakers were subject to at academic conferences. There was some anecdote or some systemic problem that almost all the women academics had encountered. These were shared, commiserated with; and it is fair to say that the

gathering felt that much more needed to be done to understand these complex issues, to intervene from a systemic point of view and to also bring about changes to societal practices.

#### 6. Summary Observations and Expected Impact

Given that one of the aims of the IWM Annual Conference, since the inception of this event (see the Activities page of the IWM website for a background of this annual event: https://sites.google.com/site/iwmmath/activities), is to provide networking opportunities for the many women delegates — especially those who are in the early stages of postgraduate studies or research — IWM and the organizers of the 2017 IWM annual conference have grounds for cautious optimism. Going by the questions posed to, and contact information sought from, the senior participants of the conference, it is hoped that early-career participants have made contact with colleagues who would be a resource to them in the near- to medium-term. *Specific* impacts that are relevant to the *specific* mission of IWM that are expected are as follows:

- The hard work of building more lasting bridges with early-career women mathematicians, and to provide them role-models and better exposure to good mathematics, falls upon the Regional Mini-workshops Programme and the IWM Visitor Programme (see <a href="https://sites.google.com/site/iwmmath/activities">https://sites.google.com/site/iwmmath/activities</a> for more information). This conference has made many delegates drawn from different regions of India aware of the existence of IWM. It is expected that these delegates will generate positive word-of-mouth for the more region-focused activities, mentioned above, that are planned in their region.
- Given that some of the initiatives presented in the panel discussion *Women in Mathematics: Perspectives from Science and Mathematics* were described in such specificity, it is expected that participants — specifically, participants in decision-making positions, on awards committees, and the like — would adapt initiatives that have worked to workplaces that would benefit from them.

## 7. Appendices

	Name	Affiliation
1	Achala Nargund	P.G. Dept. of Mathematics, MES College, Bengaluru
2	Alok Kumar Yadav	Jawaharlal Nehru University, New Delhi
3	Amber Habib	Shiv Nadar University, Greater NOIDA (Uttar Pradesh)
4	Ananya Chaturvedi	TIFR Centre for Applicable Mathematics, Bengaluru
5	Anisa Chorwadwala	IISER Pune
6	Ankit Ruhi	Indian Institute of Science, Bengaluru
7	Ankita Jindal	IIT Delhi
8	Apala Majumdar	University of Bath, U.K.
9	Arundhathi Krishnan	IIT Madras, Chennai
10	Asha Dond	Indian Institute of Science, Bengaluru
11	Atma Ram Tiwari	IISER Thiruvananthapuram
12	Atreyee Bhattacharya	IISER Bhopal

#### Appendix A: List of Participants

13	B. V. Rajarama Bhat	Indian Statistical Institute — Bangalore Centre
14	E. K. Narayanan	Indian Institute of Science, Bengaluru
15	Eshita Mazumdar	IIT Bombay, Mumbai
16	Gautam Bharali	Indian Institute of Science, Bengaluru
17	Geetha Venkataraman	Ambedkar University Delhi
18	Gurleen Kaur	Panjab University, Chandigarh
19	Harindri Chaudhary	Deshbandhu College, University of Delhi
20	Indira Narayanaswamy	M.S. Ramaiah University of Applied Sciences,
		Bengaluru
21	K. N. Meera	Amrita School of Enggineering, Bengaluru
22	Karimilla Bi	Institute of Mathematical Sciences, Chennai
23	Kavitha Telikepalli	TIFR, Mumbai
24	Krishna B. Athreya	IIT Bombay (Honorary) <i>and</i> Iowa State University
	,	(Emeritus), Ames (Iowa), USA
25	Krishna S. Athreya	Iowa State University (retired), Ames (Iowa), USA
26	M. Sundari	Chennai Mathematical Institute
27	Makeshwari M.	Central University of Tamil Nadu, Thiruvarur
28	Mamta Balodi	Indian Institute of Science, Bengaluru
29	Maya Verma	IISER Bhopal
30	Mousomi Bhakta	IISER Pune
31	Mythily Ramaswamy	TIFR Centre for Applicable Mathematics, Bengaluru
32	Nabanita Goswami	Gauhati University, Guwahati (Assam)
33	Najiya K. Z.	Cochin University of Science & Technology
34	Narayani G.	Central University of Tamil Nadu, Thiruvarur
35	Nibha Dua	Netaji Subhas Institute of Technology, New Delhi
36	Nidhi Rathi	Indian Institute of Science, Bengaluru
37	Papri Majumder	Indian Institute of Science, Bengaluru
38	Pooja Singla	Indian Institute of Science, Bengaluru
39	Poornapushkala Narayanan	IIT Madras, Chennai
40	Preeti Dharmarha	Hansraj College, University of Delhi
41	Rachita Sethi	G.D. Goenka University, Gurgaon (Haryana)
42	Radha R.	IIT Madras, Chennai
43	Radha Ramani Vanam	Amrita School of Engineering, Bengaluru
44	Ramana Raju	Jain University, Bengaluru
45	Ramya Shetty	Ramaiah Univ. of Applied Sciences, Bengaluru
46	Rani Kumari	Harish-Chandra Research Institute, Allahabad
47	Riddhi Shah	Jawaharlal Nehru University, New Delhi
48	Rohit Kumar	Delhi Technological University (formerly DCE)
49	Rucha Kulkarni	Indian Institute of Science, Bengaluru
50	Rukmini Dey	International Centre for Theoretical Sciences,
		Bengaluru
51	Ruma Maity	IIT Bombay, Mumbai
52	Sahana Prasad	Christ University, Bengaluru
53	Samarpita Ray	Indian Institute of Science, Bengaluru
54	Sarika	Bennett University, Greater NOIDA (U.P.)
55	Šárka Nečasová	Czech Academy of Sciences, Prague, CZECH REPUBLIC
56	Saudamini Nayak	Harish-Chandra Research Institute, Allahabad

Seema Kushwaha	Harish-Chandra Research Institute, Allahabad
Shailaja Shirkol	SDM College of Engg. & Technology, Dharwad
Sharvari Tikekar	IISER Thiruvananthapuram
Shivangi Asthana	North-eastern Hill University, Shillong (Meghalaya)
Smita Sahu	Dibru College, Dibrugarh (Assam)
Sonika Singh	Motilal Nehru NIT, Allahabad
Sruthy Murali	Institute of Mathematical Sciences, Chennai
Sujatha Ramdorai	University of British Columbia, Vancouver, CANADA
Sumana Pal	Aliah University, Kolkata
Surjeet Kour	IIT Gandhinagar
Syeda Darakhshan Jabeen	Birla Institute of Technology, Mesra (Jharkhand)
Usha Bhosle	TIFR (retired), Mumbai
Vaidehee Thatte	Queen's University, Kingston (Ontario), CANADA
Vikas Jorwal	Janki Devi Memorial College, University of Delhi
	Shailaja Shirkol Sharvari Tikekar Shivangi Asthana Smita Sahu Sonika Singh Sruthy Murali Sujatha Ramdorai Sumana Pal Surjeet Kour Syeda Darakhshan Jabeen Usha Bhosle Vaidehee Thatte

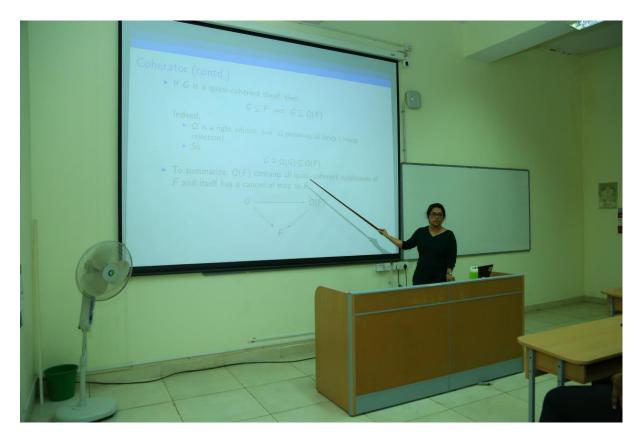
# Appendix B: Photographs



Group photograph



Audience at one of the parallel sessions



Speaker presenting a contributed talk