



# **ACM India Annual Report**

of the  
**ACM INDIA BOARD**

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**2021-22**

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Submitted by - Jayant Haritsa  
*Committee Chair*

## 1. BASIC INFORMATION

### 1.1 Members of the Board

Name	Position	Terms of Office
Jayant R Haritsa	President	July 1, 2020-June 30, 2022
Hemangee Kalpesh Kapoor	Vice President	July 1, 2020-June 30, 2022
Venkatesh Raman	Secretary/Treasurer	July 1, 2020-June 30, 2022
Supratik Chakraborty	Council Member	July 1 2020-June 30, 2024
Meenakshi D'Souza	Council Member	July 1, 2018-June 30, 2022
Gargi B Dasgupta	Council Member	July 1, 2018-June 30, 2022
Manish Gupta	Council Member	July 1, 2018-June 30, 2022
Pankaj Jalote	Council Member	July 1, 2018-June 30, 2022
Venkatesh Kamat	Council Member	July 1, 2018-June 30, 2022
Viraj Kumar	Council Member	July 1 2020-June 30, 2024
Ponnurangam Kumaraguru	Council Member	July 1 2020-June 30, 2024
Rajeev Shorey	Council Member	July 1 2020-June 30, 2024
Vasudeva Varma	Council Member	July 1, 2018-June 30, 2022
Abhiram Ranade	Past President	July 1, 2020-June 30, 2022
Heena Timani	ACM-W Chair	July 1 2022-June 30, 2024

### 1.2 Standing Committees

Committee Name	Chair	Terms of Office
<a href="#">Research Facilitation</a>	Supratik Chakraborty	July 1, 2020-June 30, 2022
<a href="#">Academic Research &amp; Career for Students (ARCS)</a>	Meenakshi D'Souza	July 1, 2020-June 30, 2022
<a href="#">Assessments</a>	Gargi B Dasgupta	July 1, 2020-June 30, 2022
<a href="#">External Engagements</a>	Manish Gupta	July 1, 2020-June 30, 2022
<a href="#">Awards</a>	Pankaj Jalote	July 1, 2020-June 30, 2022
<a href="#">Summer/Winter Schools</a>	Venkatesh Kamat	July 1, 2020-June 30, 2022
<a href="#">Education</a>	Viraj Kumar	July 1, 2020-June 30, 2022
<a href="#">Publicity/Membership Development</a>	Ponnurangam Kumaraguru	July 1, 2020-June 30, 2022
<a href="#">Learning Initiatives</a>	Rajeev Shorey	July 1, 2020-June 30, 2022
<a href="#">Internal Engagements</a>	Vasudeva Varma	July 1, 2020-June 30, 2022
<a href="#">CSpashshala</a>	Vipul Shah	July 1, 2020-June 30, 2022
<a href="#">ACM-W</a>	Heena Timani	July 1, 2020-June 30, 2022

### 1.3 Ad Hoc Committees

NA

## 2. PROJECT SUMMARY

**Title of project: ACM India Annual Event**

**Responsible Committee: Executive Committee**

**Start Date: February 13, 2022**

**Budget: INR 15,00,000/- Spent: INR 0**

ACM India has been organizing annual flagship events to discuss trends in science and technology, and to celebrate ACM's spirit and India's accomplishments in computing. This event is attended by ACM Turing laureates, ACM office-bearers, professionals, researchers and students in computer science and allied areas. The 2021 edition of the **ACM India Annual Event** was held in **virtual mode** (due to the pandemic) on **February 13th** at PSG College of Technology, Coimbatore. Taking advantage of the virtual mode, the event was held over an entire day to accommodate the various time zones of the keynote speakers, and was also thrown open to the public at large with completely free registration.

The day-long event kicked off with a stimulating fireside chat with **Dr. Edwin Catmull**, who received the 2019 Turing award for his pioneering work on computer graphics for the motion picture industry. The interview was compered by **Prof. P J Narayanan**, Director of IIT Hyderabad, former ACM India President, and a veteran graphics researcher. Their wide-ranging talk covered considerable ground from Dr. Catmull's early student years to the frontline position in Pixar and Walt Disney Studios, and seamlessly brought out both his technical magic and the persona behind it.

The second keynote featured **Prof. Milind Sohoni** of IIT Bombay, who spoke about how our students need to internalize an interdisciplinary mindset to holistically address future societal challenges. That is, computing engineers need to view themselves as agents of social change and entrepreneurs, not just employees in the software industry. He evangelized this worldview through the deceptively simple but conceptually deep exemplar of public transport.

Later, in the afternoon, we were treated to an illuminating theoretical exposition on the fair division of discrete goods by **Prof. Kurt Mehlhorn**, Director, MPI Informatics, Germany. He covered a variety of problem formulations and brought the audience abreast of the latest results in these diverse scenarios. In particular, he showed that approximating fairness through the notion of envy-freeness up to any good (EFX) could result in practical solutions for common valuation mechanisms.

Finally, **Prof. Amanda Randles**, a Grace Murray Hopper awardee from Duke University, provided a captivating ringside view of how high-performance computing could be effectively leveraged for patient-specific modeling of blood flows, a critical input for identifying disease progression and customization of surgical planning and drug delivery systems. She presented the design and development of Harvey, a parallel fluid dynamics application designed to model hemodynamics in patient-specific geometries, and how such models could address a range of health applications.

In the late evening session, which was expertly compered by **Prof. Hemangee Kapoor** (IIT Guwahati and ACM India Vice President), the agenda began with a succinct report on the

ACM India activities by **Prof. Jayant Haritsa** (IISc Bangalore and ACM India President). He introduced the audience to the new Council, and explained how the current scale of operations motivated the creation of a streamlined organizational framework that evolved from the earlier largely volunteer-driven phase. Under this restructuring effort, eleven committees were set up, with each Council member chairing a committee, and a designated member of the Execom serving as the liaison to the committee.

Prof. Haritsa then surveyed recent initiatives undertaken by ACM India in computing education, research, professional development, recognition, networking, gender equality, pedagogy, assessment, policy contributions, and industry-academia alliances. In particular, he highlighted the introduction of major new awards celebrating outstanding educators, women contributors, and early career researchers. Also, a new PhD Clinic for mentoring research students from developing institutions on a sustained and one-on-one basis by experts in academia and industry.

The new ACM President, **Prof. Gabriele Kotsis** (JKU Austria), then gave an international perspective of ACM, relating to its core objectives of advancing computing as both a science and a profession. She highlighted how computing advances have helped negotiate the pandemic and facilitated the continuation of our work despite the external crisis. She stressed the diversity, equity and inclusion goals of ACM, and the need to create a role model for ethical and socially responsible computing. Major activities planned for the ACM Digital Library include improved exploration and interaction with supplementary content and metrics, and making it fully open access within the next few years. She concluded by emphasizing how computing machinery shapes our future, including fighting the carbon footprint, improving medical research and health care, and protecting democracy.

The above presentations were followed by the eagerly awaited award ceremony, which is described in detail later in this report. This time, apart from the usual Distinguished Doctoral Dissertation and Best Student Chapter awards, the first recipients of the newly instituted awards (Education, Women Contributor, Early Career Research) were also felicitated.

The closing remarks and vote of thanks were delivered by **Prof. Venkatesh Raman** (IMSc Chennai and Secretary/Treasurer ACM India), ending the day's program on a high note.

The event witnessed a large participation from students, researchers, faculty members, and professionals from all over India and abroad. More details of the event, including all the presentation videos, are available at the [event website](#).

**Title of project: ACM India IARCS Joint Events**

**Responsible Committee: Executive Committee**

**Start Date: On-going**

**Budget: INR 12,50,000/- Spent: INR 1,50,000/-**

IARCS (Indian Association for Research in Computing Science) is an organisation started about thirty years ago, by the team of researchers who were spearheading the annual FSTTCS (Foundations of Software Technology and Theoretical Computer Science) conference.

Apart from continuing to run FSTTCS, IARCS has established highly successful programs including the preparation of students for Informatics Olympiads, teacher training workshops, and a travel grant scheme for facilitating participation of students in international conferences. In the last few years, the travel grant scheme has been jointly administered by ACM-India.

Given the commonality of interests and objectives of IARCS and ACM-India, it was felt to strengthen the relationship to harmonize their activities and derive synergistic benefits for Indian computing as a whole. In fact, several IARCS members actively participate in ACM-India activities including being part of the council and some of them have played a key role in founding ACM-India about a decade back.

With this in mind, ACM-India offered to provide administrative support to run FSTTCS and Informatics Olympiad including managing the funds and registration.

While IARCS maintains its independence in the academic programs and in other functionings. This proposal was accepted in the IARCS business meeting of December 2020, and an MOU was signed in May 2021 between the two presidents to operationalise the proposal. A steering committee with members from both organisations were formed to oversee the agreement.

FSTTCS 2021 and the subsequent informatics olympiad activities were run under the joint IARCS-ACM-India banner. This arrangement has freed up IARCS from the routine legal and accounting tasks and allow it to focus its entire expertise and energies on enriching program quality and quantity in cooperation with ACM India. For ACM India, tying up with the highly respected banner of IARCS has helped in attracting greater visibility and achieving enhanced traction within Indian academia and industry.

### **3. PLANS**

NA

### **4. DIVERSITY, EQUITY, & INCLUSION**

ACM India Council maintains a conscious focus on diversity, equity and inclusion in its initiatives. The following aspects bring out the focus during FY'22:

- **Gender:** The entire ACM-W India activity is representative of our gender diversity effort. We have an active ACM-W India committee focused on empowering and enabling women professionals to succeed in their computing careers. ACM-W India engages in gender-sensitive initiatives such as Grad Cohort, ACM-W Celebration of Women in Computing, Hackathons, Blogathons, Summer/Winter Schools, Coding/Poster/Idea presentation competition. We ensure gender diversity in our summer/winter school student selection (in addition to one school always reserved for women students), in the India Council and subcommittees, and webinar speakers. ACM India Council in FY'21 instituted an award specifically for "Outstanding Contributions to Computing by a Woman" to honor and celebrate the contributions by women professionals from India. In the two years since its inception, the awards have gone to researchers from industry, which serves as further demonstration of the deserved acknowledgment of applied

research carried out by women researchers in industry, where they are underrepresented. We also boast as many as 44 ACM-W chapters across India which promote contributions by women in computing.

- **Geography:** Geographical diversity and inclusion play a significant role in the events we organize (such as Compute, Annual Event, ARCS, Chapter Summit, ACM-W Grad Cohort/AICWiC) by choosing locations across India and ensuring equity among tier 1 / tier 2 cities. The geographical diversity also features in selecting the 40-50 students chosen from the applications received for the summer/winter schools. Also helping to enhance the geo-diversity of ACM committees, India-based members are now part of many ACM global committees which select worthy recipients for honors or determine computing strategies. To name a few, we now have representation on ACM Council (Pankaj Jalote), Special Interest Group (SIG) Governing Board (Pankaj Jalote), Education Advisory Committee (Abhiram Ranade, R Venkatesh), CS202x Committee (Pankaj Jalote), Global Technology Policy Council (P. J. Narayanan), Practitioner Board (Hemant Pande), and Distinguished Speaker Program Committee (Yogesh Simmhan, Madhavan Mukund), ByteCast committee (Mayur Datar) and last but not the least Diversity Council (Hemangee Kapoor).
- **Education:** In order to promote aspirational academic institutions to raise their research standards, the Travel Grants Program is updating its policies to provide travel support to students from such institutions to attend and present at premier research conferences. “Teaching Partnership Program”, an initiative of ACM India Education Committee since FY’21 fosters inclusivity by improving and positively impacting pedagogy in aspirational academic institutions. Through this program, experts from industry and premier academic institutes partner with aspiring college faculty to teach core or elective courses in the college during their regular course offering. These experts work with the local faculty to give lectures and to provide suggestions on content, delivery, and resources while offering the course through the semester. Like many initiatives, ACM India Council is supporting these programs financially in addition to the human resources.
- **Research:** In order to enhance the quality of research, PhD clinic is a program by which PhD students (typically from aspirational institutions) are paired with expert mentors in the country for one-on-one consultations. More than hundreds of students have benefited from this program. The research facilitation committee has extended this program to have a few selected students spend some time at the mentor's institution for more active immersion. Such students are offered a fellowship by ACM-India under the Anveshan Setu program.
- **Conferences organized by India SIGs** also make special efforts for Diversity and Inclusion. For example, the CODS-COMAD 2022 conference organized by IKDD has included a special track for Diversity and Inclusion. Apart from keynotes, special mentoring sessions are included in this track.
- **\*Diversity Council membership:** We are happy to report that ACM India Vice President Prof. Hemangee Kapoor has been invited to be a member of the “ACM Diversity, Equity, and Inclusion (DEI) Council”. The ACM DEI Council is focused on enhancing the governance, programs, activities, etc. to drive a more inclusive culture within ACM and

the global community we serve. Reflecting the same values on the ACM India front with Hemangee as interface, we are committed to creating an equitable and inclusive environment that respects diversity, welcomes new ideas and perspectives, and where hostility or other antisocial behaviors are not tolerated.

## 5. COMMENTS

NA

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects.

**Name: Jayant R Haritsa**

IISc Bangalore

Email: haritsa@iisc.ac.in

Responsibility within the Committee: Committee Chair: EXECOM Liaison for Awards, ARCS

**Name: Venkatesh Raman**

IMSC

Email: vraman@imsc.res.in

Responsibility within the Committee: EXECOM Liaison for Education, CSpathshala, Summer/Winter Schools

**Name: Hemangee Kalpesh Kapoor**

IITG

Email: hemangee@iitg.ac.in

Responsibility within the Committee: EXECOM Liaison for Assessment, Research Facilitation, ACM-W

**Name: Hemant Pande**

ACM India

Email: hemant\_pande@india.acm.org

Responsibility within the Committee: EXECOM Liaison for External Engagement, Publicity, Learning

**Name: Chandrashekhar Sahasrabudhe**

Email: shekhar\_sahasrabudhe@persistent.com

Responsibility within the Committee: EXECOM Liaison for Internal Engagement, Finance



# ACM India Annual Report

of the  
**RESEARCH FACILITATION  
COMMITTEE**

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# **2021-22**

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## 1. BASIC INFORMATION

### 1.1 Committee Members

The current members of the Research Facilitation Committee are

1. Supratik Chakraborty (Chair)
2. Meenakshi D'Souza
3. Venkatesh Raman
4. Hemangee Kapoor (Executive Committee liaison)
5. Ponnurangam Kumaraguru
6. Vasudeva Varma

The committee was set up in July 2020, with a tenure (tentatively) of 2 years.

### 1.2 Charter of Committee

The charter of the Research Facilitation Committee includes the following:

- (a) Facilitating cross-institutional internships and associateships of students/teachers with expert faculty/researchers in CS and related areas
- (b) Enabling access to expert faculty for CS PhD students working in India
- (c) Conducting a periodic survey for understanding the state of CS PhD programs in India
- (d) Facilitating successful ACM higher grade nominations from India

### 1.3 Sub-units of Committee

In general, all committee members worked together to give shape to the activities initiated by the committee. The following table lists member(s) who served as the primary coordinator for each activity.

Program	Brief description	Coordinator(s)
Ph.D. Clinic	Forum for one-on-one sessions between expert faculty members/researchers and CS Ph.D. students	Ponnurangam Kumaraguru
Anveshan Setu	4-month paid internship for selected Ph.D. students with expert faculty members transcending institutional boundaries	Ponnurangam Kumaraguru, Supratik Chakraborty
ACM Higher Grade Nomination Sub-Committee	To increase successful nominations from India for ACM Distinguished Membership and ACM Fellowship	Ganesan Ramalingam (external member) chairing Committee of Fellows
Ph.D. Production Survey	2-yearly survey of state of CS Ph.D. programs in India. Last survey done of 2018-19. Next survey to be done on as-needed basis	Meenakshi D'Souza, Vasudeva Varma
Research Mentoring Portal	Facilitating internship/associateship of Tier 2 institute students/teachers with Tier 1 institute faculty/researchers	Supratik Chakraborty, Hemangee Kapoor, Venkatesh Raman, Vasudeva Varma

Program	Brief description	Coordinator(s)
Journal/conference extra page grant	Financial aid to researchers for open access top-tier journal publications and for top-tier conference publications that have charges for additional pages	Hemangee Kapoor, Supratik Chakraborty

#### 1.4 Dates of meetings

During the financial year 2021-22, the committee had most of its discussions online over email.

In addition, there were a few Google Meet sessions, on the dates listed below.

3 Mar 2022, 4 Dec 2021, 30 Oct 2021, 8 July 2021, 28 April 2021, 3 April 2021 (with Pankaj Jalote, for initiating the Research Mentoring Portal project)

## 2. PROJECT SUMMARY

For a brief description of each project listed below, please see item 1.3 above

Project	Responsible person	Starting date	Status	Funds budgeted	Funds spent
Ph.D. Clinic	Ponnurangam Kumaraguru	Aug, 2020	Ongoing (39 mentors, 180+ mentees of which 40+ added in FY'21-22, 60+ sessions held in FY'21-22)	Nil	Nil
Anveshan Setu	Ponnurangam Kumaraguru, Supratik Chakraborty	March, 2021	Ongoing (37 fellowships, 2 physical visits, 10+ online interactions during FY'21-22, 2 cases of mentor not wanting to host mentee)	INR 7.4 lakhs	INR 6.75 lakhs
ACM Higher Grade Nomination	Ganesan Ramalingam (external), Chair of Committee of Fellows	April 2021	Ongoing (7 successful DM nominations, 2 successful Fellow nominations)	Nil	Nil
Research Mentoring Portal	Supratik Chakraborty	April 2021	Ongoing (portal almost ready for deployment)	INR 1 lakh	INR 50000

Journal/conference extra page grant	Hemangee Kapoor, Supratik Chakraborty	Mar 2022	Ongoing (policy guidelines being framed)	Not yet budgeted	Nil
Ph.D. Production Survey	Meenakshi D'Souza, Vasudeva Varma	July 2017	On hold (last report submitted in Oct 2020)	Nil	Nil

### 3. PLANS

#### 3.1 Projects that will be completed or terminated in the coming year.

All projects other than Ph.D. Production Survey are of an ongoing nature. None of these expected to be terminated in the coming year. Ph.D. Production Survey is currently on hold (after the last report filed in Oct 2020) and will be undertaken next on an as-needed basis.

#### 3.2 Important changes or milestones in active projects during the coming year.

**Ph.D Clinic:** Targeting total mentee count 250, mentor count 50, 80-100 sessions in FY'22-23

**Anveshan Setu:** There were disruptions in visits of mentees to mentor host institutions last year due to the pandemic. We are trying to restore these visits (or get commitments for these visits) by July-Aug 2022. Next announcement of Anveshan Setu expected in August 2022.

**ACM Higher Grade Nomination:** Committee of Fellows to decide how many nominations to be filed for DM and Fellow grades. Expected 5 DM and 3 Fellow nominations (tentatively)

**Research Mentoring Portal:** Rollout of portal expected in July 2022. First set of mentor mentee matchings expected by Dec 2022. Initial target 20 matches

**Journal/conference extra page grant:** Policy guideline expected by July 2022. Scheme expected to be launched in August 2022. Target 15-20 beneficiaries in FY'21-22

#### 3.3 New projects or programs which are proposed or contemplated.

Depending on how the Research Mentoring Portal project evolves, a scheme like Anveshan Setu can be formulated to help teachers from Tier 2/Tier 3 institutes to spend significant time during summer/winter with expert faculty in Tier 1 institutes on a longer term basis, possibly leading to joint research projects or enrolment in Ph.D. programs

#### 3.4 Diversity in committee composition

The committee has 2 (out of 6) women members. This should be improved to have equal count of members of all genders. The committee has all senior faculty members from Tier 1 institutes and no representation from the industry. We should include junior faculty members, faculty members from Tier 2 institutes, and also members from the industry.

### 4. DIVERSITY, EQUITY, & INCLUSION

In consultation with the ACM India Council, we will try to induct (a) junior faculty members, (b) faculty members from at least one Tier 2 institute, (c) members from the industry and

(d) more women and members from under-represented communities in the Research Facilitation Committee.

## 5. COMMENTS

We wish to bring to the Council's attention the extremely positive feedback we have received from beneficiaries of the Ph.D. Clinic and Anveshan Setu programs.

**Ph.D. Clinic** is among the most successful of the Research Facilitation Committee's projects. A page containing some basic information and feedback from participants is available at <https://india.acm.org/research/phd-clinic>. Currently, Ph.D. Clinic has 40 mentors, over 180 mentees and has conducted more than 100 one-on-one sessions between mentors and mentees so far.

**Anveshan Setu** is an ambitious project of the Research Facilitation Committee that was started in 2021. A page containing some basic information about the project is available at <https://india.acm.org/research/anveshan-setu>. Currently, 37 fellowships have been awarded in this program based on the applications received in 2021. Of these, 2 mentees have done their visits to the mentor institutions. Another 10 have done online interactions with their mentors, given the pandemic induced travel restrictions.

## APPENDIX

Names and email addresses of all committee members

**Name: Supratik Chakraborty**

Email: supratik@cse.iitb.ac.in

**Name: Meenakshi D'Souza**

Email: meenakshi@iiitb.ac.in

**Name: Venkatesh Raman**

Email: vraman@imsc.res.in

**Name: Hemangee Kapoor**

Email: hemangee@iitg.ac.in

**Name: Ponnurangam Kumaraguru**

Email: pk.guru@iiit.ac.in

**Name: Vasudeva Varma**

Email: vv@iiit.ac.in

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# **ACM India Annual Report**

of the  
**ARCS COMMITTEE**

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**2021-22**

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Submitted by - Meenakshi D'Souza  
*Committee Chair*

## 1. BASIC INFORMATION

### 1.1 Chair

1. Meenakshi D'Souza, Chair
2. Jayant Haritsa
3. Ponnurangam Kumaraguru
4. Hemant Pande
5. Chandrashekhar Sahasrabudhe

### 1.2 Purpose of the Committee

To run the ARCS event annually (deciding on organizers for the event, program committee chairs), coordination with organizing committee, program chairs, logistics support, sponsorship, support for research scholars, event promotion etc.

ARCS event strives to serve as a dedicated forum to foster a sense of community, participation and collaboration among Indian research scholars, faculty and industry researchers. The Symposium also provides an opportunity for research scholars to meet role model researchers and get mentored by them. Short abstracts of their papers accepted in top tier conferences and journals are invited for submissions from research scholars and selected abstracts are presented by the research scholars at the venue. The venue also hosts talk(s) by ACM India Doctoral Dissertation Awardee(s) (DDA) and by ACM India Early Career Researcher (ECR) Awardee(s). These talks provide excellent exposure to research scholars on the award-winning research carried out by young research professionals in the country. We also organize short talks by researchers from a spectrum of fields (academia, industry R&D and start-ups) on their career choices and research experience and learnings in their career. This serves as a guiding platform for the research scholars attending the Symposium.

### 1.3 Sub-Committees of the Learning Initiatives Committee

The entire committee works for organizing ARCS, there are no sub-committees. For logistics and planning of dates, we coordinate with the ACM-W India Council and the committee organizing the annual event

### 1.4 List of dates of committee meetings

We meet once a month, on the last Friday of the month.

## 2. PROJECT SUMMARY

ARCS 2022 : ARCS Completed Committee

## 3. PLANS

3.1 ARCS 2022 was successfully organized virtually, hosted by PSG College of Technology, Coimbatore, India. Program Committee Chair was Sayan Ranu, IIT Delhi. The ARCS 2022 event hosted 19 oral presentations and 15 poster presentations by research scholars. Prof. Amit Kumar, IIT Delhi, gave a keynote talk on "Online algorithms with recourse." Prateek Jain, Google Research, the ACM India ECR awardee gave a lecture on the topic "Pitfalls of deep learning." All three ACM India DDA awardees gave presentations on their award-winning thesis work at



the Symposium. The DDA awardees and their talks are: Suprovat Ghoshal on “New Algorithmic and Hardness Results in Learning, Error Correcting Codes and Constraint Satisfaction Problems”, Vrunda Dave on her research on “On Some Fundamental Problems and Applications of Word Transducers” and finally, Suhail Sherif on “Query Complexity: Simple, Structured and Significant.”

The event also hosted four talks by eminent early career researchers from the industry and academia: Shweta Jain, IIT Ropar, Chaya Ganesh, IISc, Parul Ganju, Ahammune Biosciences Pvt. Ltd., and Karthik Ramachandra, Microsoft Azure Data SQL R&D, India. A panel discussion on a trending topic “Fairness, Accountability and Transparency” with panelists Abhijnan Chakraborty, IIT Delhi, Anupam Guha, IIT Bombay, Balaji Parthasarathy, IIIT Bangalore, Diptikalyan Saha, IBM Research, India, and Manjira Sinha, IIT Kharagpur, generated much interest amongst the participants. In addition, the event also hosted an industry panel discussion on the topic “Relevance of Computer Science Theory in Industry” with Shweta Agrawal, IIT Madras, Mukta Paliwal, Persistent Systems, Nishanth Chandran, Microsoft Research India, Prahlad Sampath, MathWorks and R. Venkatesh, TCS highlighted the importance of research in Computer Science theory.

3.2 Organizers of ARCS 2023 have been finalized to be Oriental Institute of Science and Technology, Bhopal, India. Program Committee Chair is Partha Pratim Talukdar, Indian Institute of Science, Bangalore.

3.3 The committee consists of ACM India Council members with the COO managing all the financial aspects along with interacting with the organizing committee for local arrangements. The program committee chair is decided and invited by the three members from academia who are in the ACM India Council and also in the committee of ARCS. Executive Director helps with organizing the industry sponsorships and the entire committee decides on promotional events for the sponsors and for ACM India.

Moving forward, we plan to inculcate a practice through which the program committee chair of the former year is inducted into the Steering Committee for ARCS for a period of two more years. This will bring new ideas into the event and also provide continuity for the committee.

#### **4. DIVERSITY, EQUITY, & INCLUSION**

We strive to ensure that the program committee has women faculty members who are competent in their area of research. We also ensure that the panel discussions hosted as a part of ARCS have women members in the panel and the early career researcher talks include speakers from diverse career choices.

#### **5. COMMENTS**

N/A

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects.

**Name: Meenakshi D'Souza**

IIIT Bangalore

Email: meenakshi@iiitb.ac.in

Responsibility within the Committee: Committee Chair

**Name: Jayant Haritsa**

IISc, Bangalore

Email: haritsa@iisc.ac.in

Responsibility within the Committee: Overall Guidance

**Name: Ponnurangam Kumaraguru**

IIIT Hyderabad

Email: pk.guru@iiit.ac.in

Responsibility within the Committee: Publicity

**Name: Hemant Pande**

ACM India

Email: hemant\_pande@india.acm.org

Responsibility within the Committee: Industry Liaison

**Name: Chandrashekhar Sahasrabudhe**

ACM India

Email: shekhar\_sahasrabudhe@persistent.com

Responsibility within the Committee: Registration, Finance

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# **ACM India Annual Report**

of the  
**ASSESSMENT COMMITTEE**

**2021-22**

## 1. BASIC INFORMATION

### 1.1 Chair

- Gargi Dasgupta

#### Members

1. Hemangee Kapoor
2. Madhavan Mukund
3. Manish Gupta
4. Rajeev Shorey
5. Yogesh Simmhan

### 1.2 Purpose to the committee

Its current charter. If an ad hoc committee, state the termination date. Approve Conference proposals, travel grants and ACM India speaker nominations

### 1.3 Sub-Committees of the Learning Initiatives Committee

Indicate the organization of the committee into subcommittees or other subunits; give a one sentence description of each subunit's charter. Name the individual responsible for each subunit.

- Travel grant representation: Yogesh Simmhan will represent assessment committee in the ACM-IARCS travel grant meetings and contribute in the application scrutiny and shortlisting. (Name of sub-committee member: Yogesh Simmhan)
- Conference approvals: To review the ICPS and in-cooperation requests received from conference organisers. Submit the recommendation, giving reasons, on to the ACM ICPS portal. (Name of sub-committee members: Hemangee Kapoor, Manish Gupta, Rajeev Shorey)
- ESP/DSP nominations: Review applications submitted for ESP nominations. Recommend speakers from the approved list for conferences. Name of sub-committee members: Gargi Dasgupta, Madhavan Mukund)
- Bringing conferences to India: Play a role in bringing key conferences to India. Talk to steering committees and convince them to have India as venue.

(Name of sub-committee members: Gargi Dasgupta, Manish Gupta)

### 1.4 List dates of committee meetings

June 2021, Oct 2021, Feb 2022. In addition email discussion among sub-committee members takes place regularly.

## 2. PROJECT SUMMARY

List all projects, of the committee or its subunits that have been active at any time during the fiscal year.

The "status" indicates whether the project is ongoing, terminated (give date), about to terminate (give expected date), etc.

*Not Applicable*

Please list active projects before passive or completed ones; and list the most important projects first.

*Not Applicable.*

### **3. PLANS**

3.1 The committee looks after routine matters related to approvals. There is no new project planned.

3.2 Milestones and achievements are listed below:

The role of the assessment committee is to help with evaluating various requests that come to ACM India on grants for conferences, grants for student travel and eminent speaker nominations.

In 2022 the committee approved nine conferences and rejected four proposals.

The approved conferences include

CODS-COMAD-2023, ICDCN 2023, HiPC 2022, COMPUTE 2022, COMSNETS 2023, AIML Systems 2022, HCI 2021, FIRE 2021, IndiaHCI'21, ISEC-2021,

The rejected conferences were:

ICRCICN'21, ISCOMM'21, IC-TELCON'21, ICMNWC'21, ISCOMM-2021, IC-TELCON 2021, WDAR-2021, ASCAT2022, IMCEST - 2021, ICCCS - 2021, ICAICR - 2021, SIC- ETRCS-2021, DATA 2022, ICACCT 2022

The rejections were mostly on account of incomplete information and scope of the proposal.

As per information received some time back, on student travel grants the committee received 42 proposals out of which 2 were approved, 33 were rejected, and some have decision pending. The first six months of the year saw a very low number of proposals. This can be attributed to the reduced need of travel. However the committee's endeavours are targeted at helping grant these awards to more students outside of the top institutions.

Under the Speaker Nominations, we have 4 ESP candidates and the committee has started the "Featured Speaker of the Month" series. In light of all disrupted schedules, and very low engagement from universities who invite our speakers, the committee decided to push a profile each month (from among our speakers) to all ACM chapters. This will keep the program alive. The committee aims to bring 2 big conferences to India in 2022/2023: The initial plan is to target CCGrid 2023 and a conference on AI/ML.

3.3 List new projects or programs which are proposed or contemplated.

The travel grants committee handles funding related to travel for conferences. However there is seen a need from scholars to get additional support to attend knowledge workshops, prestigious forum like HLF and pay charges for extra pages in journal publications. Seeing this need a request was made and this will be handled by the RFC sub-committee of ACM India.

3.4 Indicate how well the committee composition reflects diversity with respect to younger members, geographic representation, a balance with respect to industry/academia, gender, and other under-represented groups. If there are areas that need improvement, list the details of a plan to increase the diversity of the committee membership.

The committee has a good mix of gender and industry/academia diversity. There is 2:4 ratio of women:men. Also, there is a 2:4 ratio of industry:academia. The committee has a good DEI representation and that we do not see any immediate need for improvement.

#### **4. DIVERSITY, EQUITY, & INCLUSION**

The travel grants committee approves conference travel support for students having research paper at reputed venue. To improve the diversity in terms of higher level institutions, another committee was formed to include diversity across institutions in the approval procedure. The travel grants committee is diverse and does not any distinction between male and female applicants, in that they are treated at-par.

For conference approvals, many times the committee recommends that local diversity and local experts be included in the organisation. It also recommends the organisers of rejected conferences to approach relevant ACM India sub-committees for advice in improving the conference quality.

#### **5. COMMENTS**

N/A

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects. Use this format:

**Name: Gargi Dasgupta**

Email: gaargidasgupta@in.ibm.com

Responsibility within the Committee: ESP nomination approvals, and bringing new conferences to India

**Name: Hemangee Kapoor**

Email: hemangee@iitg.ac.in

Responsibility within the Committee: conference approvals and related activities.

**Name: Manish Gupta**

Email: manishgupt@google.com

Responsibility within the Committee: conference approvals and related activities. Bringing new conferences to India.

**Name: Madhavan Mukund**

Email: madhavan@cmi.ac.in

Responsibility within the Committee: ESP nomination approvals

**Name: Rajeev Shorey**

Email: rajeevshorey@gmail.com

Responsibility within the Committee: Conference approvals and related activities.

**Name: Yogesh Simmhan**

Email: simmhan@iisc.ac.in

Responsibility within the Committee: Travel grants committee member

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# **ACM India**

# **Annual Report**

of the  
**EXTERNAL ENGAGEMENTS**  
**COMMITTEE**

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# **2021-22**

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Submitted by - Manish Gupta  
*Committee Chair*

## 1. BASIC INFORMATION

### 1.1 Chair

1. Manish Gupta (Chair)
2. Anand Deshpande
3. Neelam Dhawan
4. Geetha Kannan
5. Viraj Kumar
6. P.J. Narayanan
7. Hemant Pande
8. S. Sadagopan

### 1.2 Purpose to the committee

Have ACM play a role in formulating and shaping national policies and interfacing with other organizations and society at large

### 1.3 Sub-Committees of the Learning Initiatives Committee

Cybersecurity task force:

- a. Charter: Create community, input to curriculum, position papers / recommendation, influence government policy
  - b. Members: Rajat Moona (chair), Souradyuti Paul, Manoj Prabhakaran, Shweta Agarwal, Chaya Ganesh; Pandurang Kamat, Sachin Lodha, Vivek Raghavan
- b) Institutional Partner Program:
- a. Charter: Create one-stop-stop for Indian computing organizations to partner with ACM India, to contribute, participate, lead as well as derive benefits as sponsors of the ACM India activities
  - b. Members: Hemant Pande (chair), Anand Deshpande, Manish Gupta, Neelam Dhawan
- c) Pingala Interactions on Computing:
- a. Charter: India flavor of Heidelberg Laureate Forum to bring together best-in-class Indian and international research leaders with early career researchers in an immersive forum for 3-4 days, comprising talks, discussions, debates, panels and social interaction
  - b. Steering committee: Manish Gupta, Gargi Dasgupta, Amith Singhee, S Sadagopan, P J Narayanan, Hemant Pande, Sriram Rajamani

### 1.4 Dates of committee meetings

All interactions of the committee took place over email, except a Zoom meeting on 10<sup>th</sup> March primarily focused on Pingala Interactions on Computing plans.

## 2. PROJECT SUMMARY

The "status" indicates whether the project is ongoing, terminated (give date), about to terminate (give expected date), etc.

Please list active projects before passive or completed ones; and list the most important projects first.

- a) Online workshop on Cybersecurity hosted by IIT Bhilai, with ~25 cybersecurity experts from government, industry, academia:
  - a. Objective to create a timeline for cybersecurity aware community, provide input to curriculum, submit position papers / recommendation, influence government policy
  - b. Under Cybersecurity task force, organized by Prof Rajat Moona and Prof Souradyuti Paul
  - c. Date: 31 July 2021
  - d. Status: completed
- b) Cybersecurity winter school: Online, for women only, hosted by IIT Bhilai in January 2022.
- c) Institutional Partnership Program:
  - a) With goal to create one-stop-stop for Indian computing organizations to partner with ACM India, to contribute, participate, lead as well as derive benefits as sponsors of the ACM India activities
  - b) Under Institutional Partnership Program subcommittee, chaired by Hemant Pande
  - c) Start date: October 2018
  - d) Progress during FY22: Huawei and IBM Research joined at Gold tier; Facebook (Meta) joined at Silver tier
  - e) Status: Ongoing
- d) Pingala Interactions on Computing
  - a. With the goal to organize the first forum in January 2023, work in progress as below.
  - b. Start date: October 2021
  - c. Progress during FY22: Approach Infosys for Mysore Campus as host venue (confirmation awaited), started identification of industry sponsors, created timeline for identification of selection committee, invited laureates, profile of participants,
  - d. Status: ongoing

### 3. PLANS

- a) Institutional Partnership Program:
  - a. Organizations such as Wipro, Flipkart as potential candidates for partners in the coming year
  - b. Industry leaders roundtable on 25<sup>th</sup> June 2022 to bring eminent computing leaders from Pune region together, describe ACM India relevance and solicit support, partnership subscription
- b) Pingala Interactions on Computing
  - a. Important milestone in June: confirmation (or otherwise from Infosys as host). Rest of the plan contingent upon the decision

### 4. DIVERSITY, EQUITY, & INCLUSION

Part of the charter for the External Engagements Committee to bring parity in ACM India's engagement with academia and industry, perceived to be heavier with academia and research. Conscious effort to bring equity over the last 3 years with significant success. The cybersecurity winter school for was women-only students. The committee as well as subcommittees have gender

diversity build in, with focus on including gender-diverse participants, all tiers are academic institutions, all types of industry partners (startup, product companies, enterprises). There will be reserved representation for women and students from aspiring academic institutions (as against elite institutions) in the selection process for Pingala Interactions on Computing forum.

Funds Estimated: INR 0, Funds Spent: INR 0

## 5. COMMENTS

NA

## APPENDIX

List of members, email IDs and their responsibilities in the committee:

**Name: Manish Gupta**

Email: manishgupt@google.com: Chair,

Responsibility within the Committee: Overall responsibility of the committee charter, external engagements of ACM India with academic, industry and government organizations

**Name: Hemant Pande**

Email: hemant\_pande@india.acm.org:

Responsibility within the Committee: Promote institutional partner program and anchor the effort to organize Pingala Interactions on Computing

**Name: Anand Deshpande**

Email: anand@persistent.com:

Responsibility within the Committee: Promote institutional partner program, engage with organizations such as NASSCOM, UIDAI

**Name: Neelam Dhawan**

Email: neelamd2210@gmail.com:

Responsibility within the Committee: Promote institutional partner program, explore gender diversity opportunities in ACM India association with external agencies

**Name: Geetha Kannan**

Email: geetha@wequity.tech:

Responsibility within the Committee: Explore gender diversity opportunities in ACM India association with external agencies

**Name: P J Narayanan**

Email: pjn@iiit.ac.in:

Responsibility within the Committee: Anchor the effort to organize Pingala Interactions on Computing

**Name: Viraj Kumar**

Email: viraj.kumar.cs@gmail.com:

Responsibility within the Committee: Anchor ACM India interface with educational institutions and govt agencies pertaining to education (e.g. AICTE)

**Name: S Sadagopan**

Email: ss@iiitb.ac.in:

Responsibility within the Committee: Anchor the effort to organize Pingala Interactions on Computing

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# **ACM India**

# **Annual Report**

of the  
**AWARD STEERING  
COMMITTEE**

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**2021-22**

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Submitted by - Pankaj Jalote  
*Committee Chair*

## 1. SCOPE / OBJECTIVES

- 1.1 Many professional bodies recognize and respect contributions by individuals in their field. The goal of the ACM India awards is to recognize contributions to the field of computing, particularly research and education.
- 1.2 In order to recognize outstanding technical and professional contributions to the field of computing from India, the ACM India Council is instituting three prestigious annual awards, starting from year 2020. (It already had the Doctoral Dissertation award from before.)
- 1.3 Establishing of awards was initiated by Prof. Pankaj Jalote, who was on the committee of ACM Prize for four years. The processes used for ACM India awards benefited from his learnings from being on the committee, and the ACM guidelines for awards.

## 2. ACM INDIA AWARDS

- 2.1 **Early Career Researcher (ECR):** The ECR award will be presented to individuals in the early stages of their careers who have made outstanding contributions to computing while primarily working in India.  
Winner prize of ₹15 lakhs, sponsored by Persistent Foundation.
- 2.2 **Outstanding Contributions in Computing by a Woman (OCCW) Award:** The OCCW award will be presented to women professionals who have made outstanding contributions to the computing field and to the empowerment of women in computing while primarily working in India.  
Prize of ₹7 Lakhs, sponsored by Google.
- 2.3 **Outstanding Contribution to Computing Education (OCCE) Award:** The OCCE award will be presented to individuals who have made outstanding contributions to the computing education field, primarily working in India.  
Prize of ₹7 lakhs, sponsored by Microsoft Research India.
- 2.4 **Best Doctoral Dissertation Award (DDA):** This award recognizes the best doctoral dissertation(s) in Computer Science and Engineering from a degree-awarding institution based in India for each academic year.  
Established in 2011; Prize of ₹2 Lakhs (Rs 1 Lakh for Hon mention); sponsored by TCS.

## 3. OVERALL PROCESS

- 3.1 There is a Steering Committee (SC) of ACM India – that approves awards and oversees the selection for all approved awards of ACM India.
- 3.2 For each ACM India award, there is a jury – The jury Chair is decided by the Steering Committee, and then the rest of the jury is decided in consultation with the Chair. Jury membership term is for two years, with possibility of multiple terms – some members are changed every two years.
- 3.3 For each award cycle, nominations are solicited through ACM India members and by reaching out to all major institutions/organizations. Guidelines for nominations for each award have been established.
- 3.4 The jury shortlists some candidates for further discussion and then discusses them; Identifies a winner, as well as suggests names of some candidates to be carried forward.

- 3.5 The recommendations are sent to the Steering Committee chair, who sends it to the SC for acceptance.
- 3.6 The award winners are informed and are invited for giving a talk in an ACM conference/ event.
- 3.7 Announcements of award winners are sent out by ACM India.

#### 4. ACM INDIA AWARDS STEERING COMMITTEE

- Pankaj Jalote (Chair) Distinguished Professor, Indraprastha Institute of Information Technology (IIIT) Delhi.
- Anand Deshpande, Chairman, and MD, Persistent Systems Ltd.
- Jayant Haritsa, Senior Professor, Indian Institute of Science (IISc) Bangalore.
- Supratik Chakraborty, Professor, Indian Institute of Technology Bombay.
- Hemant Pande, Executive Director, ACM India Council.
- Sriram Rajamani, MD, Microsoft Research India.
- Chandrashekhar Sahasrabudhe, Chief Operating Officer, ACM India Council.

#### 5. ACM INDIA AWARDS, 2021

##### 5.1 The ECR Award (Sponsor: Persistent Foundation)

**Winner:** Prateek Jain (Google India) for “his fundamental research contributions to the area of rigorous machine learning including non-convex optimization, stochastic methods, and robust learning.

**Jury:** Vipin Kumar (U. Minn.), Mausam (IITD), Venkat Padmanabhan (Microsoft Research India), Jaikumar Radhakrishnan (TIFR), Sunita Sarawagi (IITB), Moshe Vardi (Rice Univ.), Gerhard Weikum (Max Planck, Germany), S. Sudarshan (IITB) (Chair).

**Process:** Received 8 nominations, 6 met eligibility criteria; each nomination was read in detail by 4 jury members and rated/ranked. Shortlisted candidates were discussed in detail online, with feedback from external sources. Online meeting to finalize decisions; 4 candidates being carried forward.

##### 5.2 The OCCW Award (Sponsor: Google Research India)

**Winner:** Gargi B Dasgupta, IBM India. The citation: "An excellent researcher and business leader, with the distinction of being the first ever woman Director of IBM Research India, Dr. Dasgupta has enabled enterprise transformation through the use of AI in business automation and information technology. She has been promoting collaborations across academia, government and industry, and personally advocating for and mentoring women in computing."

**Jury:** Neelam Dhawan – Chair (former MD HP India, MS India), Sandhya Dwarkadas (University of Rochester), Niloy Ganguly (IIT Kharagpur), Geetha Kannan (Wequity), Shwetak Patel (University of Washington), Balaraman Ravindran (IIT Madras), Barbara Ryder (Professor emerita, Virginia Tech), Gaurav Sharma (IBM).

**Process:** 11 nominations (1 industry, 10 academia), 5 shortlisted for the second round, while 1 chosen as winner other 4 carried forward to next year as strong candidates.



## 6. THE OCCE AWARD (SPONSOR: MICROSOFT RESEARCH INDIA)

**Winner:** C. V. Jawahar, IIT Hyderabad for “selfless service in teaching of computing, and nurturing a generation of students who now serve the larger society, have led to an impact in multiple dimensions of computing education.

**Jury:** M. Balakrishnan (IIT Delhi), Manish Gupta (Google Research India), Deepak Phatak – Chair (Professor Emeritus IIT Bombay), Susan Rodger (Duke University), Anil Sahasrabudhe (AICTE), Sartaj Sahni (University of Florida, Gainesville).

**Process:** 8 nominations (0 female candidates), 5 shortlisted for the second round, while 1 chosen as the winner; None were recommended for carrying forward.

## 7. THE DDA AWARD (SPONSOR: TCS)

**Winner:** Suhail Sherif (TIFR), Thesis title: “Communication Complexity and Quantum Optimization Lower Bounds via Query Complexity”.

**Honorable Mention** 18 nominations, each reviewed by 2 jury members, 6 shortlisted for the second round; 1 chosen winner and 2 for honorable mention (special situation)

**Jury:** Somesh Jha (Chair), Shipra Agrawal, Raman Arora, Pranjal Awasthi, Suman Banerjee, Abhishek Chandra, Kamalika Chaudhuri, Mohit Gupta, Dakshita Khurana, Madhusudan Parthasarathy, Nirupam Roy

**Process:** 18 nominations, each reviewed by 2 jury members, 6 shortlisted for the second round; 1 chosen winner and 2 for honorable mention (special situation)

## 8. STUDENT CHAPTER AWARDS (SPONSOR: Icertis)

- Outstanding Chapter Award (India): [MUJ ACM STUDENT CHAPTER](#)
- Outstanding Chapter Website Award: [PICT ACM STUDENT CHAPTER](#)
- Outstanding Chapter Activities Award: [VIT ACM W STUDENT CHAPTER](#)
- Outstanding Community Service Award: [UPES ACM W STUDENT CHAPTER](#)
- Outstanding Recruitment Program Award: [I2IT ACM STUDENT CHAPTER](#)
- Emerging Chapter Award: [GMRIT ACM W STUDENT CHAPTER](#)

Funds Budgeted: INR 31,50,000/- Funds Spent: INR 31,50,000/-.

## 9. GOING FORWARD

- 9.1 The two-year term of the Chairs of ECR, OCCE, and OCCW, has finished - our thanks to Prof. Sudarshan and Phatak and Neelam for their help.
- 9.2 New Chairs are: Profs Sunita Sarawagi (ECR), M. Balakrishnan (OCCE), and Prof. Sandhya Dwarkadas (OCCW).
- 9.3 Some of the existing committee members are continuing to provide continuity and onboard some new members.
- 9.4 The detailed guidelines are being refined based on inputs from the three committees.

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects.

### STEERING COMMITTEE

Pankaj Jalote (IIIT-Delhi) jalote@iiitd.ac.in, Chair of Steering Committee

Anand Deshpande (Persistent Systems Ltd.), anand@persistent.com, Member

Jayant Haritsa (IISc Bangalore, haritsa@iisc.ac.in, President ACM India), Member

Supratik Chakraborty (IIT Bombay), supratik@cse.iitb.ac.in , Member

Hemant Pande (ACM India), hemant\_pande@india.acm.org , Member

Sriram Rajamani (Microsoft Research India), sriram@microsoft.com, Member

Chandrashekhar Sahasrabudhe (ACM India), shekhar\_sahasrabudhe@persistent.com, Member.

### JURY, ECR AWARD

S. Sudarshan (IITB), sudarsha@cse.iitb.ac.in, Chair

Members: Vipin Kumar (U. Minn.), Mausam (IITD), Venkat Padmanabhan (Microsoft Research India), Jaikumar Radhakrishnan (TIFR), Sunita Sarawagi (IITB), Moshe Vardi (Rice Univ.), Gerhard Weikum (Max Planck, Germany),

### JURY, OCCW AWARD

Neelam Dhawan (former MD HP India, MS India), neelamd2210@gmail.com, Chair

Members: Sandhya Dwarkadas (University of Rochester), Niloy Ganguly (IIT Kharagpur), Geetha Kannan (Wequity), Shwetak Patel (University of Washington), Balaraman Ravindran (IIT Madras), Barbara Ryder (Professor emerita, Virginia Tech), Gaurav Sharma (IBM).

### JURY, OCCE AWARD

Deepak Phatak (Professor Emeritus IIT Bombay), dbphatak@gmail.com, Chair

Members: M. Balakrishnan (IIT Delhi), Manish Gupta (Google Research India), Susan Rodger (Duke University), Anil Sahasrabudhe (AICTE), Sartaj Sahni (University of Florida, Gainesville).

### JURY DDA AWARD

Somesh Jha (University of Wisconsin, jha@cs.wisc.edu, Chair

Members: Shipra Agrawal, Raman Arora, Pranjal Awasthi, Suman Banerjee, Abhishek Chandra, Kamalika Chaudhuri, Mohit Gupta, Dakshita Khurana, Madhusudan Parthasarathy, Nirupam Roy

### JURY CHAPTER AWARDS

Ranga Rajgopal , Acenet Technologies P. Ltd , rangagopal1@gmail.com, Chair

Members - Mini Ulanat , Satish Babu

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# **ACM India**

# **Annual Report**

of the

**SUMMER & WINTER  
SCHOOL COMMITTEE**

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**2021-22**

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Submitted by - Venkatesh Kamat  
Committee Chair

## 1. LIST OF STEERING COMMITTEE MEMBERS

### 1.1 Chair

- Venkatesh Kamat

### Members

1. Neeldhara Misra
2. Abhijat Vichare
3. Tejaswini Apte
4. Hemant Pande
5. Chandrashekhar Sahasrabudhe
6. Execom Representative: Venkatesh Raman

### 1.2 The purpose of the committee is to organize Summer and Winter schools for undergraduate students, with an objective of:

- Inculcating problem solving as a skill.
- Providing exposure to leading experts, advanced topics, and taste of research to motivated students.
- Exposing students to research opportunities in the career, whether in academia or industry.
- Connecting students to potential advisers for research opportunities.
- Conduct one special school for women candidates in the contemporary research topic.
- Connecting research communities working in an area for potential collaborations.

#### Salient Features of the Schools:

- Organized at multiple geographical regions in the country.
- Conducted by faculty comprising leading experts from academia and industry on advanced topics in computing.
- Target audience: around 50 students per school, from senior undergraduate programme or those enrolled in master's or higher degree programme
- Receive nationwide applications, students selected based on academic performance, statement of purpose, parity in College Tier, Geography and Gender.
- Two weeks full-time course held in the month of June-July or December-January.
- Hosted at an academic institution.
- Sponsored by industry partners with industry personnel participating as resource persons.

### 1.3 Indicate the organization of the committee into subcommittees or other subunits; give a one-sentence description of each subunit's charter. Name the individual responsible for each subunit.

No separate committees were appointed. However, for each school, a Point of Contact (PoC) is identified from the members of steering committee, for coordinating with each school coordinator.

### 1.4 List dates of committee meetings.

All meetings were held in online mode using Google Meet

- Wed Aug 25, 2021 8:30pm – 9:30pm IST
- Fri Sep 17, 2021 8:30pm – 9:30pm IST
- Thu Oct 7, 2021 8:30pm – 9:30pm IST
- Tue Apr 12, 2022 9pm – 10pm IST
- Wed Apr 20, 2022 9pm – 10pm IST

- Mon May 23, 2022 9pm – 10pm IST

## 2. SUMMARY OF THE SCHOOLS ORGANIZED

Due to the pandemic, all summer schools and winter Schools during 2021-22, were held in online mode.

Following five summer schools were held in the month of June-July 2021.

Sr. No	Title	Host Institution	Industry Sponsor
1	Shape Modelling	DA-IICT, Gandhinagar	Dassault Systèmes Foundation India
2	Program Execution	IIT Goa	Hewlett Packard Enterprise
3	Natural Language Processing	IIIT Hyderabad	Microsoft
4	Programming Language Analysis and Optimisations	IIT Hyderabad	NVIDIA
5	IoT and Embedded Systems (for women only)	IIIT Bangalore	Micron Technology

We received all together 1109 applications in the ratio of 1:1.4, Men: Women. Total 181 candidates registered for the summer school and received certificates. The feedback from the school has been encouraging.

Sr. No	Title	Host Institute	Selected	Registered	Expenditure
1	Shape Modelling	DA-IICT, Gandhinagar	61	32	₹ 85,500.00
2	Program Execution	IIT Goa	53	24	₹ 94,300.00
3	IoT and Embedded Systems (for women only)	IIIT Bangalore	74	40	₹ 48,875.00
4	Natural Language Processing	IIIT Hyderabad	79	58	₹ 71,500.00
5	Programming Language Analysis and Optimizations	IIT Hyderabad	65	27	₹ 1,31,000.00
	Total				₹ 4,31,175.00

During January 2022, we organized following four Winter Schools. We received 446 applications in the ratio of 1:1.09, Men: Women. Total 190 candidates registered for the winter schools and received the certificates.

Number of applications we received for winter schools were much less as compared to summer schools. But this was partly due to the short winter break and the disturbed academic schedules across various academic institutions on the account of pandemic.

Sr. No	Title	Host Institute	Industry Sponsor
1	Algorithms and Lower Bounds (in association with CMI-NASI)	IIT Madras	
2	Quantum Computing	IIT Madras	TCS
3	Security, Privacy and Trust in Cyberspace (for Women only)	IIT Bhilai	TCS

Sr. No	Title	Host Institute	Industry Sponsor
4	Design, Implementation and Verification of Computer Systems	IIT Kanpur	Qualcomm

On the financial front, we noticed that the cost of organizing the school in online mode is almost one tenth of the cost of organizing it in physical mode. We also received good response from the industry for sponsorship. The sponsorship amount and registration fees were just enough to cover the cost.

Sr. No	Title	Host Institute	Selected	Registered	Expenditure
1	Algorithms and Lower Bounds (in association with CMI-NASI)	IIT Madras	75	66	
2	Quantum Computing	IIT Madras	57	50	
3	Security, Privacy and Trust in Cyberspace (for Women only)	IIT Bhilai	79	40	
4	Design, Implementation and Verification of Computer Systems	IIT Kanpur	52	34	
	Total		263	190	

### 3. PLANS

At present, most of the academic institutions have resumed their operations in offline mode. For the coming summer 2022, we plan to hold the following three schools in physical mode in the month of July 2022.

Sr. No	Title	Host Institute	Industry Sponsor
1	Data Science (in association with IKDD)	IIT Gandhinagar	ShareChat
2	Data Science/AI/ML (for Women only) in association RBCDSAI, IIT Madras	PSG College of Technology, Coimbatore	
3	Shape Modelling	IIIT Delhi	

Currently preparations are on for hosting these schools in physical mode. We received 419 applications in the ratio of 1:1.3, Women: Men. Majority of the applications are for the two schools on Data Science. We also observed that this year we received much less applications compared to previous years, maybe due to the delayed academic terms in majority academic institutions across the country due to the pandemic. The talk is on with the industry partners for sponsorship.

At present composition of our committee reflects diversity with respect to younger members, geographic representation, a balance with respect to industry/academia, gender, and other under-represented groups.

#### 4. DIVERSITY, EQUITY AND INCLUSION

While selecting students for the summer and winter schools, we try to ensure parity in College Tier, Geography and Gender (except for women only school).

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects.

**Name: Venkatesh Kamat**

Email: vvkamat@iitgoa.ac.in

Responsibility within the Committee: Committee Chair

**Name: Neeldhara Misra, IITGN**

Email: neeldhara.m@iitgn.ac.in

Responsibility within the Committee: Coordination with ACM-W and NPTEL

**Name: Abhijat Vichare, Consultant**

Email: abhijatv@gmail.com

Responsibility within the Committee: Application and selection process

**Name: Tejaswini Apte, Consultant**

Email: apte.tejaswini@gmail.com

Responsibility within the Committee: Coordination with ACM-W

**Name: Hemant Pande, ACM India**

Email: hemant\_pande@india.acm.org

Responsibility within the Committee: Industry Liaison

**Name: Chandrashekhar Sahasrabudhe, ACM India**

Email: shekhar\_sahasrabudhe@persistent.com

Responsibility within the Committee: Registration, Finance

**Name: Venkatesh Raman, IMSC**

Email: vraman@imsc.res.in

Responsibility within the Committee: EXECOM Liaison

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# **ACM India Annual Report**

of the  
**EDUCATION COMMITTEE**

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# **2021-22**

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## 1. BASIC INFORMATION

### 1.1 Chair

1. Viraj Kumar
2. Chitra Babu
3. Pankaj Jalote
4. Uday Khedker
5. Venkatesh Raman
6. R. Ramanujam
7. Abhiram
8. Ranade, R. Venkatesh

The terms for all members started on October 2020.

### 1.2 Purpose of the Committee

Purpose: To advance the Science and Profession of Computing Education

### 1.3 Sub-Committees of the Learning Initiatives Committee

Details in the PROJECT SUMMARY table below.

### 1.4 Dates of Committee Meetings

The full committee last met on May 12, 2021. Thereafter, sub-groups focused on individual projects (listed below) have met on a regular basis (about 2 times per month).

## 2. PROJECT SUMMARY

Title of Project	Responsible Person	Starting Date	Status	Funds Budgeted INR	Funds Spent INR
Teaching Partnership Program (TPP). This project pairs one or more faculty from top-tier institutions with courses taught at institutions outside the top-tier, and seeks to improve those courses.	Venkatesh Raman	Fall 2021	Ongoing (two cycles completed)	5,00,000	2,28,000
CSEU: Certificate Program in CS Education. In this program, faculty at institutions outside the top-tier are given 12-14 weeks of training in teaching specific courses. This online	Pankaj Jalote and Viraj Kumar	January 2022	Ongoing (one cycle completed)	15,00,000	9,70,000

Title of Project	Responsible Person	Starting Date	Status	Funds Budgeted INR	Funds Spent INR
training is conducted by experienced faculty at top-tier institutions.					
Provided inputs to the revised AICTE model curriculum.	Pankaj Jalote (Chair of AICTE Curriculum Committee); Abhiram Ranade (Report on the design of the Introductory Programming course)	May 2021 to May 2022	Complete	Nil	Nil

### 3. PLANS

#### 3.1 List projects that will be completed or terminated in the coming year.

We hope to scale the faculty training activities in the coming year, building on our experiences thus far.

#### 3.2 List important changes or milestones in active projects during the coming year.

Faculty training initiatives will be scaled up on the basis of the revised AICTE curriculum. A key change is expanding the scope of the Education Committee to include *CSPathshala* (an ACM India supported project to introduce Computational Thinking at the K-12 level).

#### 3.3 List new projects or programs which are proposed or contemplated.

We are currently working on a Position Paper on Computational Thinking. This paper will form the basis of inputs to the ongoing development of the National Curricular Frameworks for School Education and Teacher Education.

#### 3.4 Indicate how well the committee composition reflects diversity with respect to younger members, geographic representation, a balance with respect to industry/academia, gender, and other under-represented groups. If there are areas that need improvement, list the details of a plan to increase the diversity of the committee membership.

The committee has good geographic diversity. However, all other facets of diversity require improvement: age, gender, industry/academia balance, and representation from other groups. We will develop a plan to address these issues at our next meeting.

#### 4. DIVERSITY, EQUITY, & INCLUSION

While our committee itself lacks diversity, all our projects are strongly motivated by a desire to improve equity and inclusion. This is reflected in our efforts to create useful resources for faculty outside top-tier institutions, which cater to the vast majority of computing students in India.

#### 5. COMMENTS

We are in the process of writing reports that evaluate our projects. While some preliminary results have been published (e.g., <https://dl.acm.org/doi/10.1145/3430665.3456384>), our projects have now generated data to enable deeper insights. We are in the process of writing reports and other communications.

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects:

**Name: Viraj Kumar**

Email: virajkumar1@acm.org

Responsibility within the Committee: Chair, contributor to TPP and CSEDU projects.

**Name: Chitra Babu**

Email: chitra@ssn.edu.in

Responsibility within the Committee: Organizing faculty training/webinars as iSIGCSE Chair

**Name: Pankaj Jalote**

Email: jalote@iiitd.ac.in

Responsibility within the Committee: Chair of CSEDU Steering Committee, Chair of AICTE Curriculum Committee

**Name: Uday Khedker**

Email: uday@cse.iitb.ac.in

Responsibility within the Committee: Contributor to AICTE model curriculum

**Name: Venkatesh Raman**

Email: vraman@imsc.res.in

Responsibility within the Committee: Executive Committee liaison, TPP project lead, contributor to AICTE model curriculum

**Name: R. Ramanujam**

Email: jam@imsc.res.in

Responsibility within the Committee: Contributor to TPP project, co-author of CT position paper

**Name: Abhiram Ranade**

Email: ranade@cse.iitb.ac.in

Responsibility within the Committee: Lead author of Introductory Programming report, led several Faculty Development Programs (including MOOC-based)

**Name: R. Venkatesh**

Email: r.venky@tcs.com

Responsibility within the Committee: Industry representative, co-author of CT position paper, contributor to AICTE model curriculum.

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# **ACM India**

# **Annual Report**

of the  
**PUBLICITY & MEMBERSHIP  
COMMITTEE**

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# **2021-22**

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Submitted by - Ponnurangam Kumaraguru  
*Committee Chair*

## 1. BASIC INFORMATION

### 1.1 Prof. Ponnurangam Kumaraguru, IIT Hyderabad

### 1.2 State the purpose to the committee –

- To evangelize COMPUTING in India
- To manage the website, social media handles
- To help other committees for publicity
- Increase visibility of events / activities of ACM India
- Identify, & interact with champions in institutions, industry, states / cities, to take their help in evangelizing computing

### 1.3 Dates of Committee Meetings:

12 Aug 2020; 9 Nov 2020; 30 Nov 2020; 14 Dec 2020; 28 Dec 2020; After this we started interacting on demand and over email.

## 2. PROJECT SUMMARY

Increase the visibility of ACM on social media – Entire committee – July 2020 - Ongoing

Below is the progress we made on increasing the visibility on social media.

Social Media	Aug 12, 2020	Oct 17, 2020	Feb 5, 2021	June 7, 2021	Oct 8, 2021	Feb 3, 2022
Twitter Followers	564	870	1305	1434	1589	1704
Facebook Followers	X	337	529	573	617	646
Linkedin Followers	X	414	1162	1465	1957	2856
Instagram Followers	X	168	505	593	759	804
YouTube Subscriber			563	625	686	711

We have a PhD student helping us part-time with posting, he is doing a great job! Posts daily

Interaction with other committees.

- All external content through the designer; reduced activities from last meeting
- All non-members emails sent through our mailing lists
- Helping other committees for promoting events / activities – ARCS

Funds Budgeted: INR 96,000/-. Funds Spent: INR 32,000/-.

## 3. PLANS

3.1 We will continue increasing the visibility of ACM India on social media; help all other committees to help promote their events / activities.

3.2 Currently represented with diversity of members from industry, academic, gender. Of course, we can increase the number of members, currently, the members are doing well with the activities, in future if needed, we will add more members.

#### **4. DIVERSITY, EQUITY, & INCLUSION**

We promote activities in all tier colleges and institutes.

#### **5. COMMENTS**

NA



## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects:

**Name: Prof. Manu Awasthi**

Ashoka University

Email: manu.awasthi@ashoka.edu.in

**Name: Prof. Rajiv Ratn Shah**

IIIT Delhi

Email: rajivratn@iiitd.ac.in

**Name: Mr. Raj Sharma**

Goldman Sachs

Email: ksharma.raj@gmail.com

**Name: Prof. Neeldhara Misra**

IIT Gandhinagar

Email: neeldhara.m@iitgn.ac.in

Responsibility within the Committee: Evangelise ACM India initiatives on various social media channels

**Name: Prof. Hemangee Kapoor**

IIT Guwahati

Email: hemangee@iitg.ac.in

Responsibility within the Committee: Interface with ACM-W and gender diversity related initiatives

**Name: Dr. Hemant Pande**

ACM India

Email: hemant\_pande@india.acm.org

Responsibility within the Committee: Periodic newsletter “What’s up Lately at ACM India” to the India member list, coordination with HQ and respective India committees for relevant ACM India website content update.

**Name: Mr. Chandrashekhar Sahasrabudhe**

Persistent Systems

Email: Shekhar\_sahasrabudhe@persistent.com

Responsibility within the Committee: Interface with SIG, professional and student chapters in India.

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# **ACM India**

# **Annual Report**

of the  
**LEARNING INITIATIVES**  
**COMMITTEE**

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**2021-22**

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Submitted by - Dr. Rajeev Shorey  
*Committee Chair*

## 1. BASIC INFORMATION

### 1.1 Chair

- Rajeev Shorey

### Members

1. Hemant Pande, ACM India Executive Director
2. Mathai Joseph
3. Sorav Bansal, IIT Delhi
4. Gargi Dasgupta, IBM Research
5. Lipika Dey, TCS Research
6. Viraj Kumar, Bangalore
7. Sudip Misra, IIT Kharagpur
8. Yogesh Simmhan, IISc Bangalore

### 1.2 Purpose of the committee:

To ensure that computing professionals from diverse backgrounds are well served with regard to upgrading their knowledge and skill sets.

### 1.3 Sub-Committees of the Learning Initiatives Committee

- Industry & Education Webinars  
Hemant Pande, Rajeev Shorey, Chitra Babu
- Live Interaction  
Rajeev Shorey, Sorav Bansal
- Industry Bootcamp  
Gargi Dasgupta, Hemant Pande
- ACM India Minigraphs  
Chair: Mathai Joseph  
Editorial Board: Yogesh Simmhan, Sudip Misra, Lipika Dey, Sanjiva Prasad
- ACM India Quarterly Magazine  
Yogesh Simmhan, Hemant Pande

### 1.4 Dates of committee meetings

- 26 June 2021
- 26 January 2022
- 5 February 2022

## 2. PROJECT SUMMARY

### 1. ACM Minigraphs

Responsible Person: Mathai Joseph

Editorial Board: Yogesh Simmhan, Sudip Misra, Lipika Dey, Sanjiva Prasad

Description: ACM India Minigraphs represent a new initiative mainly for early career practitioners, intended to bridge the gulf between “too shallow” and “too deep” resources. Specifically, each Minigraph is focused on a contemporary topic and expertly guides the reader from an introductory level to the stage where they can understand the problems in the field and the challenges that need further investigation. A carefully

curated set of references point those interested in additional learning towards authoritative sources for further reading.

Starting Date: August 2021

Status: Ongoing

Funds Budgeted: INR 50,000/-

Funds Spent: INR 37,002/-

## **2. Industry & Education Webinars**

Responsible Persons: Hemant Pande, Rajeev Shorey, Chitra Babu

Description: The Industry and Education webinars attract students, faculty members and organizations, including start-up organizations. The topics include current areas of interest to Industry, Academia, respectively.

Starting Date: October 2020

Status: Ongoing, once a month alternatively industry and academic webinars

Funds Budgeted: INR 60,000/-

Funds Spent: INR 5,000/-

## **3. Live Interaction**

Responsible Persons: Rajeev Shorey, Sorav Bansal

Description: Live interaction includes carefully chosen and current topics in a Panel Discussion format. The moderator of the Live Interaction poses pertinent questions to the panelists. The panelists are also carefully selected to ensure gender diversity and deep expertise in the area.

Starting Date: October 2020

Status: Ongoing

Funds Budgeted: Nil

Funds Spent: Nil

## **4. Industry Bootcamp**

Responsible Person: Gargi Dasgupta, Hemant Pande

Description: The industry bootcamp provides intense hands-on training on current and important topics to the industry. They serve to train the learners so as to ensure that they gain fundamental knowledge in the chosen topic.

Starting Date: October 2020

Status: Ongoing

Funds Budgeted: Nil

Funds Spent: Nil

## **5. ACM India Quarterly Magazine**

Responsible Persons: Yogesh Simmhan & Hemant Pande

Description: ACM India Learning Initiatives Committee plans to commence a quarterly magazine loosely based on CACM and IEEE IoT Newsletter. The quarterly magazine will include (i) standard reporting and news sections on ACM India, (ii) human interest sections

and (iii) technical content/contributions on a special issue theme.

Proposed starting Date: June/July 2022

Status:

Funds Budgeted: Nil

Funds Spent: Nil

### 3. PLANS

- 3.1 List projects that will be completed or terminated in the coming year  
The Learning Initiatives Committee plans to continue all the activities in the coming year. There is no plan to terminate any activity.
- 3.2 List important changes or milestones in active projects during the coming year.  
The Learning Initiatives Committee plans additional ACM Minigraphs and globalize the Minigraphs initiative in the coming year. Further, there is a plan to focus on start-up organizations that have done well in the last few years.
- 3.3 List new projects or programs which are proposed or contemplated.  
ACM India Quarterly Magazine from June/July 2022.
- 3.4 Indicate how well the committee composition reflects diversity with respect to younger members, geographic representation, a balance with respect to industry/academia, gender, and other under-represented groups. If there are areas that need improvement, list the details of a plan to increase the diversity of the committee membership.  
We believe, there is excellent diversity in the committee membership. This is evident from the fact that (i) there are two eminent women in the committee, (ii) there is a good mix of experts from Industry and Academia, and (iii) there is a healthy regional diversity in the committee – members have been invited from across the country, including young members from industry and academia.

### 4. DIVERSITY, EQUITY, & INCLUSION

The Learning Initiatives Committee has tried to ensure diversity in all the activities of the committee. The committee has taken great care in ensuring that there is a healthy gender and regional diversity.

### 5. COMMENTS

List any comments you wish brought to Council's attention.

Please provide a brief (paragraph) summary of one or two of your activities that would be of interest to the broad ACM community (or provide a link to a write-up of such information).

#### ACM Minigraphs

ACM India Minigraphs represent a new initiative intended to bridge the gulf between “too shallow” and “too deep” resources. Specifically, each Minigraph is focused on a contemporary topic and expertly guides the reader from an introductory level to the stage where they can understand the problems in the field and the challenges that need further

investigation. A carefully curated set of references point those interested in additional learning towards authoritative sources for further reading.

The idea of Minigraphs was first mooted by Mathai Joseph, a doyen of Indian computer science, and developed further in consultation with Hemant Pande (Executive Director, ACM India) and Rajeev Shorey (Chair of the ACM India Learning Initiatives Committee). Their deliberations led to the creation of an Editorial Board chaired by Mathai with Lipika Dey, Sudip Misra, Sanjiva Prasad and Yogesh Simmhan as members. A rigorous process of publishing the Minigraphs has been set up where each Minigraph manuscript is reviewed by an international committee of experts and then professionally copy-edited to conform to the standard ACM India Minigraph style.

The inaugural ACM India Minigraph on “Privacy of Personal Information: Going Incog in a Goldfish Bowl”, is authored by Sutapa Mondal, Mangesh S. Gharote and Sachin P. Lodha of TCS Research.

We believe, the ACM Minigraphs is a huge feather in the cap of ACM India and fills a gap in the ACM publications. It would be a worthwhile global initiative for ACM. We have proposed it at the Practitioner Board meeting on 19<sup>th</sup> May 2022 and have received positive response.

### **Industry Bootcamp**

Description: The industry bootcamp provides intense hands-on training on current and important topics to the industry. They serve to train the learners, typically early career practitioners from academia and industry, so as to ensure that they gain fundamental knowledge in the chosen topic. We have conducted two bootcamps online so far, and believe that this initiative is worthy of global adoption at ACM level. We have proposed it at the Practitioner Board meeting on 19<sup>th</sup> May 2022 and have received positive response.

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects. Use this format:

**Name: Dr. Rajeev Shorey**

Email: rshorey@iitd.ac.in

Responsibility within the Committee: Chair, Learning Initiatives Committee & Co-Chair, Industry Webinars, Co-Chair, Live Interaction

**Name: Dr. Hemant Pande**

Email: hemant\_pande@india.acm.org

Responsibility within the Committee: Co-Chair, Industry & Education Webinars & Co-Chair, ACM India Quarterly Magazine

**Name: Dr. Gargi Dasgupta**

Email: GaargiDasgupta@in.ibm.com

Responsibility within the Committee: Chair, Industry Bootcamp

**Name: Dr. Mathai Joseph**

Email: mathaijos@gmail.com

Responsibility within the Committee: Chair, ACM Minigraphs

**Name: Prof. Sorav Bansal**

Email: sbansal@iitd.ac.in

Responsibility within the Committee: Co-Chair, Live Interaction

**Name: Prof. Sudip Misra**

Email: sudipm@iitkgp.ac.in

Responsibility within the Committee: Editorial Board, ACM Minigraphs

**Name: Dr. Viraj Kumar**

Email: viraj.kumar.cs@gmail.com

Responsibility within the Committee: Member, Learning Initiatives Committee

**Name: Prof. Yogesh Simmhan**

Email: simmhan@iisc.ac.in

Responsibility within the Committee: Co-Chair, ACM India Quarterly Magazine & Editorial Board, ACM Minigraphs

**Name: Dr. Lipika Dey**

Email: lipika.dey@tcs.com

Responsibility within the Committee: Editorial Board, ACM Minigraphs

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# **ACM India**

# **Annual Report**

of the  
**INTERNAL ENGAGEMENTS  
COMMITTEE**

**2021-22**

Submitted by - Vasudeva Verma  
*Committee Chair*



## 1. BASIC INFORMATION

### 1.1 Scope/Objectives:

Internal engagements committee is responsible for smooth functioning of various ACM entities such as SIGs, and all its student/professional/ACM-W chapters.

### 1.2 Committee

Chair: Vasudeva Varma

Execom Rep: Chandrashekhar Sahasrabudhe,

Members:

1. Neeldhara Misra
2. Abhijat Vichare
3. Rajnish Sharma
4. Ranga Raj Gopal
5. Geetanjali Kale
6. Chitra Babu

### 1.3 Sub-committees:

Chapter Activities: Neeldhara Misra, Abhijat Vichare, Rajnish Sharma, Ranga Raj Gopal, Geetanjali Kale, Chitra Babu

Student Chapters: Rajnish Sharma, Ranga Raj Gopal

Professional Chapters: Abhijat Vichare, Ranga Raj Gopal, Geetanjali Kale, Chitra Babu

ACM-W Chapters: Neeldhara Misra, Geetanjali Kale, Chitra Babu

SIG Chapters: Shekhar, Vasudeva Varma

New Chapter Approval: Neeldhara Misra, Abhijat Vichare, Shekhar, Vasudeva Varma

### 1.4 Dates of committee meetings:

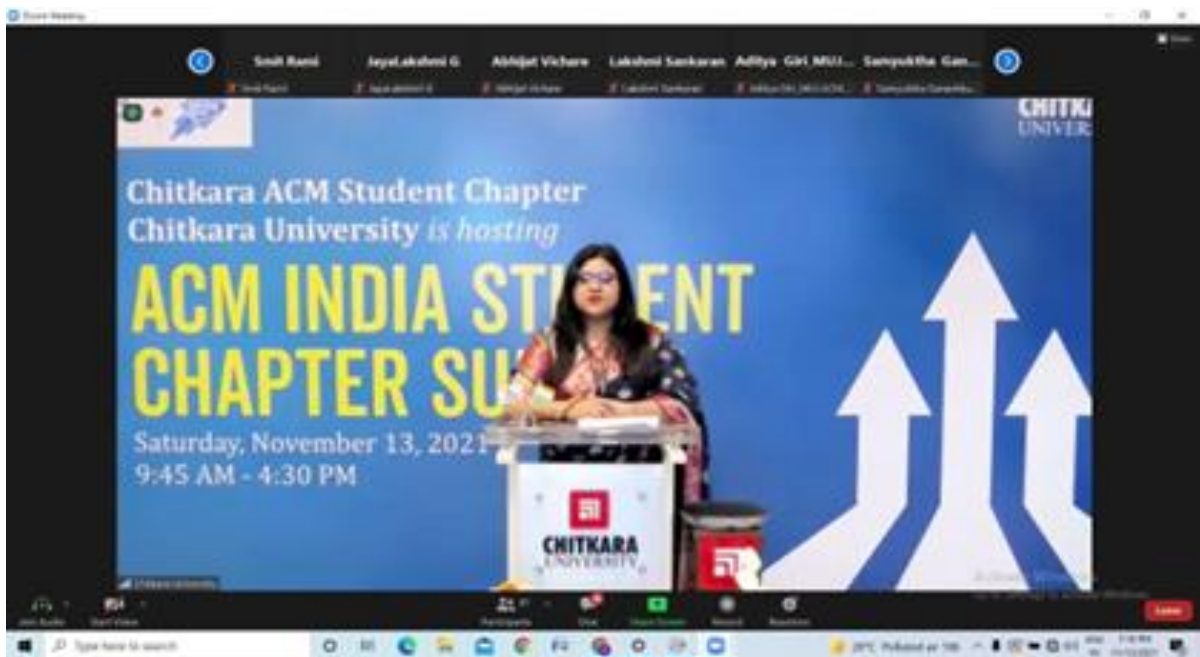
- 6<sup>th</sup> March, 2021
- 27<sup>th</sup> March, 2021
- 19<sup>th</sup> May, 2021
- 5<sup>th</sup> June, 2021
- 20<sup>th</sup> October, 2021
- 8<sup>th</sup> November, 2021
- 11<sup>th</sup> November, 2021
- 5<sup>th</sup> April, 2022
- 3<sup>rd</sup> May, 2022

## 2. ACTIVITIES

Internal Engagements Committee is focused on providing necessary support to various kinds of ACM chapters in India - including student chapters, professional chapters, ACM-W chapters as well as SIG chapters. In the past year, we have reviewed activities of all these types of chapters and made efforts to improve their effectiveness.

## 2.1 Student Chapter Summit

Student chapters form a major chunk of ACM India. We conduct an annual summit for the student chapters and along with this flagship event, we also conduct several competitions. Chitkara ACM Student Chapter, hosted ACM India Student Chapter Summit 2021 on 13 November 2021. Aim of the summit to bring and allow student chapters to share their journeys, grow their impact and grow themselves. This summit provided participants with a great opportunity to listen to the stalwarts of technology and industry experts, Prof. Jayant Haritsa (President, ACM India council), Prof Vasudeva Varma (Professor, IIIT Hyderabad and Chair, Internal Engagement committee of ACM India council), Dr Archana Mantri (Vice Chancellor Chitkara University), Prof Yogesh Simmhan (Professor, IISc Bangalore) and Ms Shalini Kapoor (AI Fellow, IBM).



Welcome Address by Dr. Kamali Singla from Chitkara ACM Student Chapter



Welcome Address By Prof. Jayant Harista, Prof. Vasudeva Varma and Dr. Archana Mantri (13 November 2021)

In addition, there were presentations by top three prize winning chapters (PICT ACM student chapter, PPCOE ACM Student Chapter and Chitkara ACM Student Chapter) and a quiz competition was also conducted. The summit included a panel discussion on How to Build your skills and profile

to have dream jobs with Prof. Ranjani Parthasarathi (Chairman, Faculty of Information and Communication Engineering, Anna University, Chennai), Prof. Abhijat Vichare (Faculty at the Department of Computer Science, University of Pune), Prof. Sheetakumar Rawandale (Dean, Industry-Institute Interaction, PCET, Pune) and Mr. Satish Palaniappan (Applied ML Engineer Microsoft, Redmond, Washington, U.S.A). The Moderator was Prof. Chitra Babu (SSN College of Engineering, Chennai). The final event of the summit was Ask Me Anything (AMA) session conducted by Mr. Chandrashekhar, Dr. Rajnesh Sharma and Dr. Abhijat discussing the ACM India activities

### 3. THE STUDENT CHAPTER AWARDS

The student chapter awards were given this year to seven chapters in six categories following a thorough and methodological process by a committee with Dr. Ranga Rajagopal, CEO, Acenet Technologies P. Ltd, Coimbatore as a chair and Mr. Satish Babu, CEO, InApp, Trivandrum, Dr. Mini Ulanat, Cochin University of S&T and Dr. Suresh Satpathy, KIIT, Bhubaneswar as its members. The committee also came up with a report explaining the rationale of the process followed and a set of recommendations for conducting future competitions. The winners are:

Outstanding Website: ICT ACM Student Chapter

Outstanding Recruitment: I2IT ACM Student Chapter

Outstanding Chapter Activities: VIT ACM W Student Chapter

Outstanding Community Activities: UPES ACM W Student Chapter

Outstanding Emerging Chapter: GMRIT ACM W Student Chapter

Outstanding Chapter: MUJ ACM Student Chapter (Winner) And CCET ACM Student Chapter (Spl. Mention)

We have created a portal for all information about student chapters: <https://acmindia-studentchapters.in/>

### 4. PROFESSIONAL CHAPTER SUMMIT

The committee spent a lot of its energy and time to revive the professional chapters of ACM in India. We have met and brainstormed with several professional chapters in various cities. We have gathered insights on what is working well and what are the areas for improvement. We have studied successful strategies of other professional bodies and other ACM professional chapters across the globe. We have documented all our learnings and coming up with a set of recommendations to revive several dormant professional chapters.

One of the recommendations by the committee is to conduct a professional chapter summit. We have implemented this recommendation by conducting the summit in a virtual mode on May 22, 2022. It was attended by more than two dozens of participants from various professional chapters (including city based, ACM-w and SIG chapters). The program began with a welcome address by Prof. Vasudeva Varma, Chairman ACM India Internal Engagement Committee followed by presidential address by Prof. Jayanth Haritsa, President ACM India. Later Dr. Hemant Pande, Executive Director ACM India talked about ACM India Activities for Professionals. Goa and Hyderabad professional Chapter Representatives talked about their activities and learnings that can be useful to other chapters. The event also consisted of explaining how to use ACM resources to all professional chapter representatives.

There was an emphasis to explore the synergies between student, professional, and SIG chapters. Speakers have appealed to the professional members to participate in the electoral process and

increase the voting percentage so that all the professional members will be properly represented in the ACM India Council during the upcoming elections.

## **5. COMMENTS AND CONCLUSION**

The year 2021-22 has been a very productive year in terms various types of chapter activities and establishing connections and creating synergies between student, professional, SIG and ACM-W chapters. We have conducted two summits, one for student chapters and other for professional chapters.

One major gap that need to be filled in the coming year is to enhance and revive professional chapters across the state. Barring a handful chapters, most of the city based professional chapters are inactive.

Funds Budgeted: INR 5,00,000/- Funds Spent: INR 2,33,768/-.

## APPENDIX

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects:

**Name: Neeldhara Misra, IIT Gandhinagar**

Email: neeldhara.m@iitgn.ac.in

Responsibility: Chapter Activities, ACM-W Chapters, Chapter Approvals

**Name: Abhijat Vichare, Consultant**

Email: abhijatv@gmail.com

Responsibility: Chapter Activities, Professional Chapters, Chapter Approvals

**Name: Rajnish Sharma, Chitkara University**

Email: rajnish.sharma@chitkarauniversity.edu.in

Responsibility: Chapter Activities, Student Chapters

**Name: Ranga Raj Gopal, Acenet Technologies P. Ltd**

Email: rangagopal1@gmail.com

Responsibility: Chapter Activities, Student Chapters, Professional Chapters

**Name: Geetanjali Kale, Pune Institute of Computer Technology**

Email: gvkale@pict.edu

Responsibility: Chapter Activities, ACM-W Chapters

**Name: Chitra Babu, SSN College of Engineering**

Email: chitra@ssn.edu.in

Responsibility: Chapter Activities, ACM-W Chapters, Professional Chapters

**Name: Chandrashekhar Sahasrabudhe, ACM India**

Email: shekhar\_sahasrabudhe@persistent.com

Responsibility: SIG Chapters, Chapter Approvals

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# ACM India Annual Report

of the  
CSpathshala

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## 2021-22

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## 1. BASIC INFORMATION

The Association for Computing Machinery (ACM) India started an education initiative, CSpashshala ([www.cspathshala.org](http://www.cspathshala.org)) in 2016, to teach computing as a science in all schools. The key objectives are to popularise Computational Thinking (CT) and influence education policy to enable its introduction into the curricula. CSpashshala advocacy efforts paid off and the [National Education Policy 2020](#) recommends that computational thinking be taught from foundational stages. CT curriculum has been piloted by 4,00,000+ students in 1500 schools across 11 states in 4 languages and Tamil Nadu SCERT has adopted the unplugged computational thinking curriculum as part of its mathematics curriculum for 30,000 schools from 2018.

## 2. PROJECT SUMMARY

Owing to the COVID-19 pandemic and the two successive lockdowns in 2020 and 2021 created multiple challenges for schools and students were unable to attend school in person for the second year in a row. In light of the pandemic, CSpashshala pivoted its programs and trained nearly 1500 teachers through 21 awareness workshops and training programs. Bebras India Challenge 2021 was conducted from 15th November to 7th December 2021 for age groups 8-18. It was offered in English, Gujarati, Marathi, Kannada, Odia, Tamil and Telugu and saw encouraging participation of 22,600 students from 260+ schools across 16 states in India. From the CTiS2020 submission 4 abstracts were submitted for the CTE-STEM2021 conference and all 4 were selected for presentation. Pooja Palaparthi from APSWREIS was selected for CTE-STEM 2021 Best Paper Award. Third Online conference on Computational Thinking in Schools (CTiS2021) was hosted by School of Scholars (SOS) Nagpur from 29th September to 2nd October 2021 with participation of 1,100+ teachers, educators and organization across 15 countries, across 19 states in India.

The three year Naipunya Vikasam, a government program to build English and IT/CT skills for students from socially weaker sections of the society. 427 social and tribal welfare schools in Andhra Pradesh were implementing CT under this program which was completed successfully in May 2021. CSpashshala has continued working with APSWREIS with the Math teachers for academic year 2021-2022. Additionally 400 zilla parishad schools in Khed taluka, Maharashtra, Meghe group of Schools as well as many other schools across the country have been implementing CSpashshala curriculum.

Partnerships forged with Pratham, DHE Goa, TCSlon and Google India. In 2022-2023, CSpashshala will continue to focus its efforts with the government to mainstream CT, empower teachers and increase its reach in rural areas. In this report we highlight the details of the various activities carried out.







Funds Budgeted: INR 10,00,000/- Funds Spent: INR 1,15,234/-

### 3. PLANS

- 3.1 List projects that will be completed or terminated in the coming year.
- 3.2 List important changes or milestones in active projects during the coming year.
- 3.3 List new projects or programs which are proposed or contemplated.

In 2022-2023, CSpashala will continue to focus its efforts with the government to mainstream CT, empower teachers and increase its reach in rural areas. We are writing a position paper on Computational Thinking Education in Schools. The fourth conference on Computational Thinking in Schools (CTiS2022) will be held on 8th and 9th July, 2022 at IISER, Pune in partnership with the Kaveri Group of Institutes - Dr. Kalmadi Shamarao High Schools, Pune and SCTR's PICT ACM Student Chapter (PASC). TACTILE ACCESSIBLE COMPUTATIONAL THINKING (TACT) GRAND CHALLENGE for the design of accessible games or challenging activities using tactile materials, i.e. activities which use touch as the principal medium will also be conducted part of CTiS2022. The 2022 Bebras India Challenge is planned for November 2022.

### 4. DIVERSITY, EQUITY, & INCLUSION

CSpashala has continued its efforts to work with the various state governments to provide an opportunity to learn computational thinking to the rural students. 80,000 students were from socially weaker sections of the society. In 2021-2022, working in partnership with Google India we have been able to train 800+ Science and Math teachers across 440+ government schools in Bihar, Maharashtra, Andhra Pradesh, Tamil Nadu and Telangana. 2021 Bebras India Challenge saw participation of 22,601 students of which 11,485 were girls and 11,116 were boys. The challenge is conducted at no cost so that and offered in addition to English, the challenge is also conducted in Gujarati, Marathi, Kannada, Odia, Tamil and Telugu to enable inclusion:

## APPENDIX

### Steering Committee

**Name: R Ramanujam, IMSc**

Chennai

Email: jam@imsc.res.in

**Name: Sonia Garcha**

Cspathshala

Email: soniag70@hotmail.com

**Name: Madhavan Mukund**

CMI, Chennai

Email: madhavan@cmi.ac.in

**Name: R Venkatesh**

TCS, Pune (Chair)

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**Name: Venkatesh Raman**

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**Name: Vipul Shah**

TCS, Pune

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# **ACM India Annual Report**

of the  
**ACM W COMMITTEE**

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**2021-22**

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Submitted by - Heena Timani  
*Committee Chair*

## 1. BASIC INFORMATION

### 1.1 Chair

List of committee members, terms of office; begin with chair. As an appendix, attach the list of the committee's members.

**Please refer to Appendix 1**

### 1.2 Purpose to the committee

ACM-W India seeks to take forward the tasks of the ACM community, with a particular focus on the empowerment of women in computing in India.

ACM-W India aims to provide social and professional support for women in computing, and its proposed activities include:

1. Facilitate technical growth of women by organizing invited lectures, seminars, workshops and informal meetings
2. Provide a platform for the sharing of information, resources, ideas and experiences
3. Support women in their professional career growth and help them to face the challenges in their work environment
4. Encourage them to participate in computer-related studies and research

ACM-W India's goal would be also to promote computer literacy, particularly in rural India, with the objective of empowering underprivileged women and children, to enable them to be independent and self-reliant.

### 1.3 Sub-Committees of the Learning Initiatives Committee

#### **Standing Committee Chairs (Two members from Council)**

- Chitra Babu, SSN College of Engineering, Chennai
- Mukta Paliwal, Persistent System Ltd., Nagpur

The responsibilities of this committee is to strengthen ACM-W student chapters and professional chapters, Organize chapter meetings and to prompt activities involving Industry-Academia, identifying speakers and panelists for the ACM-W workshop that is colocated with the ACM India Annual event.

#### **Regional Activities Committee Chairs (Two members from Council)**

- Neeldhara Misra, IIT Gandhinagar
- Tejaswini Apte, Symbiosis Institute of Computer Studies and Research, Pune

The responsibilities of this committee is to organize the various ACM-W events- Grad Cohort, ACM-W Summer /Winter School, ACM-W India Celebrations, Regional celebrations and Hackathon, ACM-W Workshop.

#### **Communications Committee Chairs (Two members from Council)**

- Lipika Dey, TCS Research Delhi & Kolkata
- Manik Gupta, BITS Pilani, Hyderabad Campus

The responsibilities of this committee is to design and publish the ACM-W India Newsletter, Manage social media handles of ACM-W and to take care of the event updates in the ACM-W India website.

### Treasurer

- Rutvi Shah, Chimanbhai Patel Institute of Computer Applications, Ahmedabad

The responsibilities of treasure is to maintain minutes of the ACM-W council meetings, account of ACM-W India council, To help communications committee with information to be disseminated through social media handles and newsletter.

#### 1.4 List dates of committee meetings

ACM-W Council Meetings:

1. 12/6/2021
2. 25/9/2021
3. 11/12/2021
4. 5/2/2022
5. 21/5/2022

## 2. PROJECT SUMMARY

Title of Project	Responsible Person	Starting Date	Status	Funds Budgeted INR	Funds Spent INR
ACM India Summer School on IoT and Embedded Systems (Women only) that was sponsored by Micron Technology, hosted virtually by IIIT-Bangalore	Chitra Babu	7-14 July 2021	Completed	75,000	48,775
ACM India Winter school on Security, Privacy and Trust (Women only) that was sponsored by TCS Research, hosted virtually by IIT Bhilai	Tejashwini Apte	3-14 January 2022	Completed	75,000	92,750
ACM India Celebration of Women in Computing AICWiC 2021 A Virtual Event	Rutvi Shah, Heena Timani	30th October 2021	Completed	Nil	Nil
Lady Ada National Level Programming Competition	Chitra Babu	Final Round 29th October 2021	Completed	37,000	37,000
6th ACM W National Level Women's Virtual Hackathon	Heena Timani, Tejashwini Apte	Final Round: 27- 28th November, 2021	Completed	1,00,000	43,800

Title of Project	Responsible Person	Starting Date	Status	Funds Budgeted INR	Funds Spent INR
ACM-W Ahmedabad Regional celebrations	Heena Timani, Rutvi Shah	6th December 2021	Completed	50,000	Nil
ACM W Workshop 2022 "Women in Computer Science Research and Entrepreneurship" A Virtual Event colocated with ACM India Annual Event	ACM W India Council Members	9th February, 2022	Completed	Nil	Nil

### 3. PLANS

#### 3.1 List projects that will be completed or terminated in the coming year

Title of Project	Responsible Person	Starting Date	Status
ACM-W Grad Cohort Workshop For Women	Neeldhara Misra	<u>July,2022</u>	
ACM India Celebration of Women in Computing AICWiC 2022	Manik Gupta	September, 2022	
Lady Ada National Level Programming Competition for girl students	Manik Gupta/Chitra Babu	September, 22	
7th ACM-W National Level Women's Hackathon	Tejaswini Apte and Heena Timani	October,22	
ACM-W Regional celebrations	Heena Timani	December,22	
ACM India Summer/Winter school (Women only)	Tejaswini Apte	July,22/ january,23	
ACM-W Workshop 2023	All ACM-W Committee Members	February,23	

#### 3.2 List important changes or milestones in active projects during the coming year.

- Focusing more on strengthening existing chapters and increasing the number of ACM-W Student Chapters
- Targeted mentoring to ACM-W professional chapters to increase industry participation
- Increasing the participation of women students in programming contests and hackathons.

### **3.3 List new projects or programs which are proposed or contemplated**

- Conduct more relevant talks and workshops on women specific issues and skill building.
- Introduce buddy system to increase the collaboration across the ACM-W student chapters belonging to different cities, regions, states and countries.
- To have more focus to promote computing in an Interdisciplinary approach.

### **3.4 Indicate how well the committee composition reflects diversity with respect to younger members, geographic representation, a balance with respect to industry/academia, gender, and other under-represented groups. If there are areas that need improvement, list the details of a plan to increase the diversity of the committee membership.**

The committee comprises 8 members from various geographical locations of India such as Tamilnadu, Hyderabad, Pune, Ahmedabad, Gandhinagar, Nagpur, Delhi. With 5 from academia and 3 from industries, the industry/academia balance has been maintained well. There are 2 younger members in the <40 age group and 3 in 40 -50 and 3 in >50 age group.

In future, we will consider including more people from the north and northeast regions of India. We will try to get more younger women (UG/PG/PhD) from local chapters into the council as volunteers who have played an active role in their ACM-W student chapters.

During summer/winter schools and hackathon (only for women) we are focusing on different geographical regions and encouraging the female participants to participate.

## **4. DIVERSITY, EQUITY, & INCLUSION**

Our entire set of efforts is primarily focused on improving gender diversity. Whether it is a Programming Contest, Hackathon or Summer/Winter schools, all these events are exclusively meant for female students from all over India and we endeavour to improve participation from across all local chapters.

## **5. COMMENTS**

- For the last 2 years, due to COVID-19 pandemic, the grad cohort was organized in online mode. In order to make this program more effective, we will be conducting it in physical mode this year at IIT Jodhpur campus.
- Received very good responses on women-only summer and winter schools.
- To promote computing in an interdisciplinary approach and to reach a broad audience, we can have monthly sessions. The theme of the sessions could be "Various Disciplines and Computing", which will highly catch up female participants from different disciplines to implement computing skills.
- Promoting CS skills to underprivileged girls through a collaboration between ACM-W and the ACM India's CSpaathshala initiative.
- Introduce a quarterly talk series focused primarily on women professionals organized by the different local ACM-W chapters on Career guidance, innovation and entrepreneurship.

Please provide a brief (paragraph) summary of one or two of your activities that would be of interest to the broad ACM community (or provide a link to a write-up of such information).

[ACM-W Grad Cohort 2020: Women Conquering Computing Online | IITGN News](#)

[ACM-INDIA School: Empowering Women in Computational Technology | IITGN News](#)



## APPENDIX

### Appendix 1

#### ACM-W India Committee (1 July 2021 to 30 June 2023)

**Chair:** Heena Timani, Director, iAnanya DataLytx Pvt. Ltd.

**Treasurer:** Rutvi Shah, CPICA, Ahmedabad (1 July 2021 to 30 June 2025)

#### Members-at-Large (1 July 2021 to 30 June 2023)

Chitra Babu, SSN College of Engineering, Chennai

Tejaswini Apte, Independent Consultant

Lipika Dey, TCS Research

Neeldhara Misra, IIT Gandhinagar

#### Members-at-Large (1 July 2021 to 30 June 2025)

Mukta Paliwal, Persistent Systems Ltd., Nagpur

Manik Gupta, BITS Pilani, Hyderabad

#### Past Chair

Arati M. Dixit, Applied Research Associates, Raleigh, USA

#### ACM India Execom Member | ACM India Liaison

Hemangee Kapoor, IIT Guwahati

### Appendix 2

List of all committee members, subcommittee or subunit chairs and members, and other persons responsible for projects. Use this format:

Sr. No.	Project	Remarks
1.	ACM India Summer School on IoT and Embedded Systems (Women only) that was sponsored by Micron Technology, hosted virtually by IIIT-Bangalore. Name: Chitra Babu Email: chitra@ssn.edu.in, Responsibility within the Committee: One of the representative from ACM W Council	ACM India Council is organizing all summer and winter school
2.	ACM India Winter school on Security, Privacy and Trust (Women only) that was sponsored by TCS Research, hosted virtually by IIT Bhilai. Name: Tejaswini Apte Email: apte.tejaswini@gmail.com Responsibility within the Committee: One of the representative from ACM W Council	
3.	ACM India Celebration of Women in Computing AICWiC 2021 A Virtual Event. Name: Rutvi Shah, Heena Timani	<b>Host Institute</b> Oriental Institute of Science & Technology, Bhopal

	<p>Email: rutvirshsh@gmail.com,heenaltimani@gmail.com</p> <p>Responsibility within the Committee: To identify the host / place for the event.To work with the host institute for executing the event and handling the virtual environment of the event.</p>	and ACM Bhopal Professional Chapter
4.	<p>Lady Ada National Level Programming Competition.</p> <p>Name: Chitra Babu, Heena Timani</p> <p>Email: chitra@ssn.edu.in, heenaltimani@gmail.com</p> <p>Responsibility within the Committee: To identify the host / place, Judges for the event.Handling the virtual environment for the event and coordinating with the host institute.</p>	Mr. Navin Kabra from Reliscore company provides virtual environment, Problem statements for Programming Competition
5.	<p>6th ACM W National Level Women's Virtual Hackathon.</p> <p>Name: Dr. Heena Timani, Dr. Tejaswini Apte</p> <p>Email: heenaltimani@gmail.com, apte.tejaswini@gmail.com</p> <p>Responsibility within the Committee:To identify the host / place ,theme , problem statements and judges for hackathon Conducting online preliminary rounds , handling the virtual environment for the event and coordinating with the host institute.</p>	<b>Host Institute -</b> Manipal University Jaipur and MJU ACM Student Chapter
6.	<p>ACM-W Ahmedabad Regional celebrations</p> <p>Name: Dr. Heena Timani, Dr. Rutvi Shah</p> <p>Email: heenaltimani@gmail.com, rutvirshsh@gmail.com</p> <p>Responsibility within the Committee: To identify the host / place, theme , problem statements and judges for various events organized during the regional celebration Conducting online preliminary rounds , handling the virtual environment for the event and coordinating with the host institute.</p>	<b>Host Institute -</b> L.D Engineering College, Ahmedabad and ACM Ahmedabad Professional Chapter
7.	<p>ACM W Workshop 2022 “Women in Computer Science Research and Entrepreneurship” A Virtual Event</p> <p>Name: ACM W India Council Members</p> <p>Responsibility within the Committee: To decide the theme of the workshop, identify keynote speakers and panel discussion speakers, handle the virtual environment for the event and coordinate with the host institute.</p>	<b>Host Institute-</b> PSG College of Technology, Coimbatore

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