ACM India
Annual Report

of the

ACM India Council

2022-23

Reported by-

Venkatesh Raman

President ACM India

1. INTRODUCTION

Welcome to another edition of the annual report of the ACM India Council. Yet again, we had an active and productive year, and the Council is proud to report on its various activities in this report. In this part of the report, we report on some of the activities the Executive committee has been engaged with, and report on our flagship Annual Event that was held in February 2023. We also give a summary of ACM India's DEI initiatives. The committee has been meeting at least once a month to take up strategic and financial aspects of ACM India, plan for the annual event as well as to monitor, update and give directions for the activities of the other committees.

2. COUNCIL AND COMMITTEE STRUCTURE

Since June 2020, ACM India Council has been organized into multiple committees, each chaired by a council member, focusing on specific functions of the organization or catering to a specific segment of its members. The current council and the office bearers (President, Vice President, Secretary/Treasurer) were elected in June 2022.

The Executive Committee (that consists of the above office bearers, the Executive Director and the Chief Operating Officer) in consultation with the past President discussed and made the following changes to the committee structure from the year before.

a) In order to address the need to pay more attention to professional and student chapters, the internal engagement committee was split into two: one for professional engagements and one for student engagements.
b) Similarly the External Engagement Committee was split into two: Academic engagement committee to liaison and work with academic organizations, and Industry Engagement Committee to focus on ACM India's interactions and collaboration with the computing industry.
c) A new committee (Computing for Society) was formed to pay attention to societal aspects of computing.
d) A new committee was formed to ensure DEI (Diversity, Equity and Inclusion) in all of ACM India's activities.
e) A new committee was formed to address gaps in the rules and implementation of our constitution and bye-laws.

The full list of committees, their members and chairs appear below. In what follows, each of these committees has given a report of their activities in the past year.

2.1 ACM India Council

The members of the ACM India Council are listed in the table below. The council undertakes various activities organized under a set of committees. Each committee is headed by a member and listed after the council table.

Name	Position	Term of Office
Venkatesh Raman	President	July 1, 2022 - June 30, 2024
Supratik Chakraborty	Vice President	July 1, 2022 - June 30, 2024
Meenakshi D'Souza	Secretary/Treasurer	July 1, 2022 - June 30, 2024

Name	Position	Term of Office
Shweta Agrawal	Council Member	July 1, 2022 - June 30, 2026
Ponnurangam Kumaraguru	Council Member	July 1, 2020 - June 30, 2024
Rajeev Shorey	Council Member	July 1, 2020 - June 30, 2024
Viraj Kumar	Council Member	July 1, 2020 - June 30, 2024
Ranjita Bhagwan	Council Member	July 1, 2022 - June 30, 2026
Prateek Jain	Council Member	July 1, 2022 - June 30, 2026
Sachin Lodha	Council Member	July 1, 2022 - June 30, 2026
Sudip Misra	Council Member	July 1, 2020 - June 30, 2024
B. Ravindran	Council Member	July 1, 2020 - June 30, 2024
Rijurekha Sen	Council Member	July 1, 2022 - June 30, 2026
Yogesh Simmhan	Council Member	July 1, 2022 - June 30, 2026
Heena Timani	ACM India-W Chair	July 1, 2020 - June 30, 2023
Jayant Haritsa	Past President	July 1, 2022 - June 30, 2024
Hemant Pande	Executive Director	Ex officio
Chandrashekhar Sahasrabudhe	Chief Operating Officer	Ex officio

2.2 Standing Committees

Name	Chair	Term of Office
Executive Committee	Venkatesh Raman	July 2022 - June 2024
Learning Initiatives	Rajeev Shorey	July 2022 - June 2024
Awards	Ranjita Bhagwan	July 2022 - June 2024
Professional Engagement	Yogesh Simmhan	July 2022 - June 2024
Industry Engagement	B. Ravindran	July 2022 - June 2024
DEI	Shweta Agrawal	July 2022 - June 2024
Constitution and Bylaws	Jayant Haritsa	July 2022 - June 2024
Education	Viraj Kumar	July 2022 - June 2024
Research Facilitation	Ponnurangam Kumaraguru	July 2022 - June 2024
Student Engagement	Sachin Lodha	July 2022 - June 2024
Academic Engagement	Sudip Misra	July 2022 - June 2024
Publicity and Membership	Rijurekha Sen	July 2022 - June 2024
Computing for Society	Pratik Jain	July 2022 - June 2024

Name	Chair	Term of Office
ACM India-W	Heena Timani	July 2021 - June 2023

3. ACTIVITY HIGHLIGHTS

During the year in question, the committee signed a memorandum of understanding with the Indian Institute and Science, Bangalore. This supports the India visits of two Distinguished Visitors of ACM and will be funded via Pullur Trust through a generous donation by Ms. Nirmala Govindan. This year, the Pullur grant supported the visit of Natarajan Shankar who gave a keynote address at the ACM India Annual Event 2023 and other prestigious research institutions in India.

One of the key and unique industry initiatives of ACM India is the Institutional Partner Program which serves as a one-stop shop for participation, branding-visibility and leadership opportunities for a non-academic organization in all individual ACM India activities. The annual subscription for the program provides ACM India funds in addition to those received from individual membership subscription, allowing us flexibility to sustain various initiatives. Despite the challenges being faced by the computing industry, we have been successful in growing the list of partners and the funding received from them. More details about this can be found in the report on the industry engagement committee.

We were also honored by the visit of ACM President Yannis Ioannidis and past President Gabriele Kotsis for our annual event, who also participated in the council meeting that happened alongside the annual event. We got to hear the vision of ACM HQ, and had a productive discussion of how ACM India can actively participate in various activities of ACM HQ and how we can help in finding members for some of their committees.

We have been consciously encouraging Indian members to participate in global ACM activities in volunteer and leadership roles. We have also been proactively working with ACM committees to include worthy representatives from India. The membership from India in the ACM boards and committee has continued to grow this year as well, in the award committees, DSP committee, DEI council, ACM Books to mention a few.

Our highly popular PhD clinic, summer and winter schools continue as before (now in physical form compared to earlier years that were affected by COVID). Two of our practitioner initiatives, Minigraphs and Bootcamps, have been approved by the ACM Practitioner Board to be adopted globally. The roll out is slated for the current year. We also have some new initiatives which are explained in detail in the respective committee reports.

4. ACM INDIA ANNUAL EVENT 2023

After a two year hiatus, our flagship annual event was held at the central Indian city of Bhopal in physical attendance. This event, organized annually to discuss trends in science and technology, and to celebrate ACM's spirit and India's accomplishments in computing, is attended by ACM Turing laureates, ACM office-bearers, professionals, researchers and students in computer science and allied areas. The 2023 edition of the ACM India Annual Event was held on 11 February 2023 at Oriental Institute of Science and Technology, Bhopal. As in previous years, we had internationally acclaimed speakers and a well organized award event. The event was also graced by the president of ACM Yannis Ionnadis and former president of ACM Gabriele Kotsis.

After a brief opening remark by the Chairman of Oriental Group and Chancellor of Oriental University Indore, Shri Praveen Thakral, the event started with some remarks by Yannis Ioannidis, President of the ACM. He recalled the ACM's mission, and the task forces he is setting up to achieve its mission, particularly for Globalization, Youthification, membership models and financial models (to name a few) as it completes 75 years and starts its fourth quarter century, ACM 4.0 as he called it. He explained how India is an important part for ACM, and he sought the support of everyone to participate in these task forces to change the world of computing.

This was followed by a report by ACM India President Venkatesh Raman. He outlined the committee structure in the ACM India council and various activities of ACM India, targeting all the way from school students and teachers to undergraduate students, research students, university and college teachers, academic researchers and industry professionals. The sessions by ACM President and ACM India President were hosted by Hemant Pande, Executive Director ACM India.

The technical part of ACM India Annual event began with the main attraction of the event. This was the interview, albeit pre-recorded, of Turing Laureate Shafi Goldwasser (Simons Institute, UC Berkeley), (joint) winner of Turing Award in 2012 for her work in Cryptography. The interview was conducted by Satya Lokam of Microsoft Research India. This session was moderated by Shweta Agrawal of IIT Madras. Shafi Goldwasser has worked on almost all aspects of cryptography and she explained the early days of cryptography, her role models and early courses that inspired her. The discussion centered on how inadvertently she had been a role model to several women cryptographers in the world, doing great research work. She explained her work on some of the societal aspects of cryptography she has been involved in. She explained how in the current data revolution, power comes with data, and cryptographic applications provide mechanisms for privacy and trust to ensure that the power is not abused.

Distributed computing is recognising the interplay between centralized computing and edge computing. The next speaker Tulika Mitra (National University of Singapore) gave an excellent overview of the challenges that arise given the evolution of hardware towards edge computing applications and the evolution of AI and ML algorithms for edge computing. In a captivating talk titled "Computing at the Edge: Specialize or Generalize?", moderated by Yogesh Simmhan of IISc Bangalore, she described the current trend of special purpose computers and the challenges in them. She explained how classical areas like compilers and operating systems have interesting and challenging research issues in the exciting area of edge computing. These were neatly captured by the phrase in the title: "Specialize or Generalize?".

This was followed by the ACM India Awards, compered by ACM India secretary Meenakshi D'Souza. ACM India's Early Career Research Award (ECR), Outstanding Contribution to Computing Education Award (OCCE), Outstanding Contributions to Computing by a Woman (OCCW) and the Doctoral Dissertation Awards (DDA) for the last year were awarded in this event. Researchers from India who were awarded with being an ACM Distinguished Member were also honored in this ceremony

Next, Arjun Jain (UAVIO Labs) highlighted various modules, technologies and limitations that enable autonomous driving in his talk "Autonomy at Scale: Where Are We Headed?". In this talk, chaired by Jayant Haritsa of IISc Bangalore, Arjun Jain also discussed some of the research work in his UAVIO labs on autonomy for the skies.

The final talk of the event was by Shankar Natarajan (Stanford Research International California) who described efforts directed by his group, at code generation from logic within SRI's Prototype Verification

System (PVS), an interactive proof assistant that has been in active use for over thirty years. In his talk titled "Interactive Proof and Code Generation with PVS", chaired by ACM India Vice President Supratik Chakraborty, he gave an overview of this system that generates executable code from a high level description in higher order logic with predicate sub-typing. He also outlined some technological revolution his parent organization (SRI) research groups have been involved in for several decades, as well as the evolution of proofs per se to the extent that provable correctness is becoming important in software reliability.

The last session of the event was the felicitation of the sponsors of ACM India anchored by Hemant Pande. The support by institutional partners and award sponsors was acknowledged. The event concluded with a vote of thanks by Supratik Chakraborty, ACM India Vice-President.

5. DIVERSITY, EQUITY, & INCLUSION FOCUS OF ACM INDIA COUNCIL

ACM India Council maintains a conscious focus on diversity, equity and inclusion in its initiatives. The following aspects bring out the focus during FY'23:

- Gender: The entire ACMI-W activity is representative of our gender diversity effort. We have an active ACMI-W committee focused on empowering and enabling women professionals to succeed in their computing careers. ACMI-W engages in gender-sensitive initiatives such as Grad Cohort, ACMI-W Celebration of Women in Computing (AICWiC), Hackathons, Blogathons, 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 confers an award specifically for "Outstanding Contributions to Computing by a Woman" to honor and celebrate the contributions by women professionals from India. In the few years since their inception, the awards have gone to researchers from industry twice and academia once, which serves as further demonstration of the deserved acknowledgment of applied research carried out by women researchers in industry, where they are underrepresented. It is also noteworthy that two of the four DDA winners (including Honorable Mentions) are women this year. We also boast as many as 43 ACM India-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, Academic Research and Careers for Students (ARCS), Chapter Summit, ACM India-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 the 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), Award Committees (PJ Narayanan and Madhavan Mukund), ACM Books (Meena Mahajan and Sanjiva Prasad), Local Meetup Mentor committee (Sonia Garcha) and last but not the least Diversity Council (Hemangee Kapoor). We continue to proactively suggest suitable candidates from India to key roles in the ACM committees.

- 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. A notable example is the visit of the ACM India TPP teaching faculty who visited institutions like Cummins College of Engineering for Women, an institution that educates women students, delivered topics from the Theory of Computation course, and interacted with the students as well as the local faculty.

- 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. This year, we also had invited some of these mentors and mentees to our flagship event for PhD students, Academic Research and Careers for Students (ARCS).

- Conferences organized by ACM India (such as ARCS and Compute) and 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. Participants from institutions without financial support were provided partial and full financial support for their travel and stay.

- Diversity Council membership: Former ACM India Vice President Hemangee Kapoor continues 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. To reinforce our commitment to DEI, ACM India has formed a DEI committee starting July FY '23, chaired by Shweta Agrawal, who is a council member of ACM India.

6. ACKNOWLEDGEMENT

ACM India Council thanks Chitkara University for help in producing this report.

LEARNING INITIATIVES

1. BASIC INFORMATION

1.1 Members

Rajeev Shorey (chair), Hemant Pande (Council Executive Committee representative), Sachin Lodha, Sudip Misra, Chitra Babu, Venkatesh Kamat, R Venkateswaran, R. Ramanujam

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 through various learning initiatives championed by the Learning Initiatives Committee.

1.3 Subcommittees

- Industry & Education Webinars
  Co-Chairs: Rajeev Shorey, Chitra Babu, Hemant Pande
- Live Interaction
  Co-Chairs: Rajeev Shorey and Hemant Pande
- Industry Bootcamp
  Chair: R. Venkateswaran
- ACM Minigraphs
  Chair: R. Ramanujam
  Editorial Board: Mathai Joseph (Past Chair), Yogesh Simmhan, Sudip Misra, Lipika Dey, Sanjiva Prasad, Hemant Pande, Rajeev Shorey
- Summer and Winter School
  Co-Chairs: Venkatesh Kamat

2. ACTIVITIES SUMMARY

1. ACM Minigraphs
    Chair: R. Ramanujam
    Editorial Board: Mathai Joseph (Past Chair), Yogesh Simmhan, Sudip Misra, Lipika Dey, Sanjiva Prasad, Hemant Pande, Rajeev Shorey

    Description: 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. It is targeted at young practitioners who may take up the area for their career choice.

2. Industry & Education Webinars
    Responsible Persons: Rajeev Shorey, Chitra Babu, Hemant Pande

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

Industry Webinars
o Serene Banerjee on "AI Algorithms for Quality of Service Improvement in Radio Access Networks", 3 November 2022
o Mayur Datar (SVP and Chief Data Scientist, Flipkart) on Onboarding the Next 500 Million Indians: Applied Innovation in Machine Translation, 27 August 2022

ACM India - TCS Research Joint Webinar Series
TCS Research in collaboration with ACM India, presents a series of webinars that brings together renowned people from industry and academia who talk about trending and relevant themes within the tech community.

- ACMI - TCSR joint webinar on "HPC and AI: Two sides of the Same Coin" on 23 January 2023. The webinar included a talk on '"Accelerating AI for Science with a Reconfigurable Dataflow Architecture" by Raghu Prabhakar, Senior Principal Engineer, Sambanova Systems. This was followed by a fireside chat on "AI and HPC: How Far They Can Take Us Together" comprising Yogesh Simmhan(Indian Institute of Science), Sparsh Mittal (IIT Roorkee) and Preeti Malakar (IIT Kanpur) along with Raghu Prabhakar. The fireside Chat was moderated by Rekha Singhal of TCS Research.

- ACMI - ACM iSIGCSE - TCSR joint webinar on "Unlocking the Quantum Advantage '' on 29 September 2022. The webinar included a talk on '"What Can We Do With a Quantum Computer?'' by Andris Ambainis from the University of Latvia. This was followed by a fireside chat on "What to Expect When You are Expecting Quantum Advantage" comprising Anil Prabhakar (Professor, IIT Madras), Aditi Sen De, (Professor, Harish Chandra Research Institute), Rajamani Vijayaraghavan (Associate Professor, TIFR), and Shivaji Sondhi (Oxford University) along with moderator Manoj Nambiar (Chief Scientist, TCS Research).

- ACMI and TCSR joint webinar on "Careers & Opportunities in Computing Research'' in the Fireside Chat format on 28 June 2022. This was moderated by Gautam Shroff from TCS Research. The panel comprised Jeff Ullman from Stanford University, USA, Ranjita Bhagwan, Microsoft research India, Supratik Chakraborty, IIT Bombay and Swaran Lata, Retd. Scientist 'G' & Head, TDIL Program, MeiTy, GoI.

Education Webinars
- Aamod Sane (Professor, FLAME University, Pune, India) on "A New CS Curriculum for Smartphone Generation," 28 January 2023.
- Barbara Ericson (Assistant Professor, School of Information, University of Michigan) on Increasing Use of Active Learning in Computing, 1 August 2022
- M Balakrishnan (CSE Department, IIT Delhi, India) on Embedded Systems Design Projects for Social Impact, 25 May 2022

3. Live Interaction
Responsible Persons: Rajeev Shorey and Hemant Pande

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.

ACM India Live Interaction Session on "Digital Transformation: The Road Ahead", 2 March 2023

Panelists:
1. Monisha Ghosh, University of Notre Dame, USA and Former CTO, FCC, USA
2. Mrs. Pamela Kumar, TSDSI, India
2. Shivkumar Kalyanaraman, Microsoft, India
3. Harrick Vin, Digitate (TCS), India

4. Industry Bootcamp
   Responsible Person: R. Venkateswaran

   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.

   4-day ACM India Bootcamp on "Responsible Computing" was hosted by Indian Institute of Science, Bangalore on 13-16 April 2023. The bootcamp was organized jointly by Learning Initiatives Committee and the Computing for Society Committee of ACM India. 30 participants including industry professionals, academic faculty and PhD students participated in the bootcamp. The bootcamp faculty comprised eminent researchers from industry and academia from India and abroad. Very good participant feedback on quality and organization. Like ACM India minigraphs, this is another practitioner initiative we have in principle agreed to take global through the ACM Practitioner Board.

5. Summer & Winter School
   Responsible Persons: Venkatesh Kamat (chair), Hemant Pande, Sachin Lodha, Abhijat Vichare, Chandrashekhar Sahasrabudhe, Mukta Paliwal

   Description:
   Summer / Winter school objectives:
   ● Inculcating problem solving as a skill, which is not emphasized much in the undergraduate curriculum
   ● 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

   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:
     • senior undergraduate students or those enrolled in Masters or higher degree programs
     • around 40 students per school: from nationwide applicants, selected based on academic performance, Statement of Purpose etc. criteria

- 2 weeks full-time course in June-July or December-January
- Hosted at an academic institution

Summer Schools

4 -16 July 2022	Data Science
11-22 July 2022	Data Science/AI/ML (for women only)
18-29 July 2022	Shape Modeling

Winter Schools

05 - 16 December 2022	Advanced Quantum Computing
12 - 22 December 2022	Topics in Digital Trust
12 - 23 December 2022	Optimization for Machine Learning and Operations Research

3. ACKNOWLEDGMENTS

ACM Minigraphs

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.

The second ACM India Minigraph titled "From Clouds to Hybrid Clouds" was released in March 2023 and is co-authored by Amith Singhee and Praveen Jayachandran from IBM Research, India.

ACM INDIA AWARDS

1. BASIC INFORMATION

1.1 Members
Ranjita Bhagwan (Chair), Kiran Deshpande, Lipika Dey, Jayant Haritsa, Supratik Chakraborty, Pankaj Jalote, Hemant Pande

1.2 Purpose of the committee
To determine purpose, procedure and logistics of handing out annual ACM India awards, and also to expand the awards ecosystem and encourage more applications.

Many professional bodies recognize and respect outstanding contributions by individuals in their field. The goal of the ACM India awards is to recognize such contributions to the field of computing, particularly research and education. In order to recognize outstanding technical and professional contributions to the field of computing from India, the ACM India Council instituted three prestigious annual awards in 2020. It already had the Doctoral Dissertation award since 2012.

2. ACM INDIA AWARDS

2.1 Early Career Researcher (ECR):
The ECR award is presented to individuals in the early stages of their careers who have made outstanding contributions to computing while primarily working in India. The winner is awarded a cash prize of ₹15 lakhs in addition to a certificate. The award is sponsored by the 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. The winner is awarded a cash rize of ₹7 Lakhs in addition to a certificate. The award is sponsored by Google Research India.

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. The winner is awarded a cash prize of ₹7 lakhs in addition to a certificate. The award is sponsored by Microsoft Research India.

2.4 Doctoral Dissertation Award (DDA):
The DDA recognizes the best doctoral dissertation(s) in Computer Science and Engineering from a degree-awarding institution based in India for each academic year. In case of a close tie, Honorable Mention(s) are awarded to nominees not selected for the DDA.

The award was established in 2011. The winner is awarded a cash prize of ₹2 Lakhs (₹1 Lakh for Honorable Mention, divided equally among multiple winners, if any) in addition to a certificate. The award is sponsored by Tata Consultancy Services.

3. OVERALL PROCESS

1. There is an Awards Steering Committee (SC) of ACM India that approves awards and oversees the selection for all approved awards of ACM India.
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 (except for DDA, where some jury members can serve for 1 year), with possibility of multiple terms – some members are changed every two years.
3. For each award cycle, nominations are solicited through ACM India members and Ph.D. degree-awarding institutions (for DDA) and by reaching out to all major institutions/organizations. Guidelines for nominations for each award have been established.
4. After a rigorous review process, the jury shortlists some candidates for further discussion and then discusses them and Identifies a winner.
5. For all awards other than DDA, a fresh nomination is valid for 3 years as long as the eligibility criteria continue to be met.
6. The final recommendations of each award jury are sent to the Steering Committee chair, who sends it to the SC for acceptance.
7. Once the SC accepts the recommendation, the award winners are informed and are invited to give a talk in an ACM conference/event.
8. Public announcements of award winners are sent out by ACM India once the awardees formally accept the award.

4. ACM INDIA AWARDS 2022

4.1 The ECR Award (Sponsor: Persistent Foundation)

Winner: Partha Pratim Talukdar (Google Research India and CDS Department IISc Bangalore). Citation: *Partha Talukdar combines deep scholarship of natural language processing (NLP), graphical knowledge representation, and machine learning to solve problems of great contemporary relevance. He is the most recognized and accomplished young emissary from India to the worldwide NLP community.*

4.2 The OCCW Award (Sponsor: Google Research India)

Winner: Shweta Agrawal (IIT Madras) "*for her outstanding contributions to the field of cryptography and her dedication to mentoring women in science and technology.*"

4.3 The OCCE Award (Sponsor: Microsoft Research India)

Winner: Smruti Ranjan Sarangi of IIT Delhi *"for extensive contributions to the computer architecture community in terms of writing textbooks, remote teaching, and development of educational software."*

4.4 The DDA (Sponsor: Tata Consultancy Services)

Siddharth Sandipkumar Bhandari (TIFR Mumbai) is the recipient of the ACM India 2022 Doctoral Dissertation Award for his dissertation titled "Exact Sampling and List Decoding." Honorable mentions went to Pritish Mohapatra (IIIT Hyderabad) for "Optimization for and by Machine Learning," Sruthi Sekar (IISc Bangalore) for "Near-Optimal Non-Malleable Codes and Leakage Resilient Secret Sharing Schemes," and Deepika Yadav (IIIT Delhi) for "Supporting Ongoing Training of Community Health Workers through Mobile-based Solutions in Rural India."

4.5 Student Chapter Awards (Sponsor: Icertis)

ACM India has instituted several Student Chapter Awards to encourage and recognize exceptional contributions by student chapters in various activities. The awardees for 2022 are:

- Outstanding Chapter Award (India) - Pune Institute of Computer Technology (PICT) ACM STUDENT CHAPTER
- Outstanding Chapter Website Award - Chandigarh College of Engineering and Technology (CCET) ACM STUDENT CHAPTER
- Outstanding Chapter Activities Award - Manipal University Jaipur (MUJ) ACM STUDENT CHAPTER
- Outstanding Community Service Award - Pimpri-Chinchwad College of Engineering (PCCOE) ACM STUDENT CHAPTER
- Outstanding Recruitment Program Award - International Institute of Information Technology (I2IT) ACM STUDENT CHAPTER
- Emerging Chapter Award - Jayawant Shikshan Prasarak Mandal's (JSPM) Rajarshi Shahu College of Engineering (RSCOE) ACM Student Chapter

5. GOING FORWARD

1. The awards chairs Sunita Sarawagi (ECR), M. Balakrishnan (OCCE), and Sandhya Dwarkadas (OCCW) are expected to continue for another year. For DDA, Somesh Jha completed the two-year term as chair of DDA and has handed over the responsibility to Rajeev Alur.
2. Some of the existing committee members continue to provide continuity and some new members are being inducted for the 2023 cycle of the various awards. The updates to the committees will happen during the June-July 2023 timeframe.
3. Based on feedback obtained from committee members of ECR, OCCW and OCCE awards of previous years, the detailed guidelines for these awards are being fine-tuned for the current cycle of the awards.

List of all committee members, subcommittee or subunit chairs and members of various awards committees.

STEERING COMMITTEE
- Ranjita Bhagwan (Chair), Principal Engineer, Google Global Network.
- Supratik Chakraborty, Professor, Indian Institute of Technology Bombay
- Kiran Deshpande, Board Member TiE Global & IITB Alumni Association
- Jayant Haritsa, Senior Professor, Indian Institute of Science (IISc) Bangalore
- Pankaj Jalote, Distinguished Professor, Indraprastha Institute of Information Technology, Delhi
- Hemant Pande, Executive Director, ACM India Council

JURY, ECR AWARD
- Naveen Garg, IIT Delhi
- Arvind Krishnamurthy, University of Washington
- Vipin Kumar, University of Minnesota
- Mausam, IIT Delhi
- Sunita Sarawagi (Chair), IIT Bombay
- Moshe Vardi, Rice University
- Gerhard Weikum, Max Planck Institute for Informatics

JURY, OCCW AWARD
- Pallavi Arora, Vice President CX Centers - APJC, Cisco Systems India
- Ranjita Bhagwan, Principal Engineer, Google Global Network.
- Sandhya Dwarkadas (Chair), Professor and Chair, Department of Computer Science, University of Virginia
- Venkatesh Kamat, Visiting Professor, IIT Goa
- Shwetak Patel, Washington Research Foundation Entrepreneurship Endowed Professor, University of Washington
- Rajeev Rastogi, Vice President Machine Learning, Amazon Bangalore
- Barbara Ryder, Professor Emerita, Department of Computer Science, Virginia Tech

JURY, OCCE AWARD
- M. Balakrishnan (Chair), Honorary Professor, IIT Delhi
- Partha P. Chakrabarti, Professor, IIT Kharagpur
- Manish Gupta, Director, Google Research India
- Susan Rodger, Professor of the Practice of Computer Science, Duke University
- Sartaj Sahni, Distinguished Professor, University of Florida, Gainesville

JURY DDA
- Somesh Jha (Chair), University of Wisconsin-Madison
- Suman Banerjee, University of Wisconsin-Madison
- Kamalika Chaudhuri, University of California, San Diego
- Madhusudan Parthasarathy, University of Illinois at Urbana-Champaign

- Gagandeep Singh, University of Illinois at Urbana-Champaign
- Deepak Vashisht, University of Illinois at Urbana-Champaign
- Rachee SIngh, Microsoft/Cornell University
- Rajalakshmi Nandakumar, Cornell University
- Varun Kanade, Oxford University
- Rishab Goyal, University of Wisconsin-Madison
- Jayaram Raghuram, University of Wisconsin-Madison
- Ashok Veeraraghavan, Rice University

JURY CHAPTER AWARDS

- Ranga Rajgopal (Chair), Acenet Technologies P. Ltd.
- Mini Ullanat, Cochin University of Science & Technology
- Satish Babu, CEO, InApp, Trivandrum
- Bipin Mehta, Past Chair, ACM Ahmedabad Professional Chapter

INDUSTRY ENGAGEMENTS

1. BASIC INFORMATION

1.1 Members

B. Ravindran (Chair), Anand Deshpande, Kiran Deshpande, Ranjita Bhagwan, Meenakshi D'Souza, Hemant Pande (Execom Representative).

1.2 Purpose of the committee

Increase awareness and influence of ACM India and scale the efforts to advance computing through partnership and collaboration with external non-academic entities. The committee is a major source of net revenue for ACM India, the other sources being individual membership subscriptions.

2. ACTIVITIES SUMMARY

a) Institutional Partnership Program
   a. Encourage industries to participate in ACM India activities, provide avenues for their employees to engage with ACM.
   b. Status: Ongoing
   c. Google, Icertis, Persistent, TCS Research were platinum tier partner
   d. IBM was a gold partner until May, but discontinued for one year
   e. Carelon, Cisco, Dell were silver tier partners

DEI INITIATIVES

1. BASIC INFORMATION

1.1 Members

Shweta Agrawal (Chair), M Balakrishnan, Viraj Kumar, Heena Timani, Hemangee Kapoor, Saket Saurabh, Chitra Babu (Members)

1.2 Purpose of the committee

ACM India is committed to fostering an environment of equality and respect amongst all its members, transcending divisions created by gender, background, geography, physical and cognitive abilities, caste, religion and such others.

To implement this commitment within all its activities and mindset, ACM India undertakes numerous initiatives such as (i) creating awareness about challenges related to DEI, (ii) collating resources to assist members to seek assistance, (iii) proactively organizing activities in ACM India workshops and events to promote DEI, (iv) building diverse teams, especially encouraging DEI in leadership roles, (v) incentivizing DEI efforts in applications for ACM India funding.

2. ACTIVITIES SUMMARY

For the DEI committee, the objective is to take initiatives that foster a more inclusive environment. Towards this end, we have undertaken various initiatives, as listed below. For each initiative, we have listed the lead person, who is charged with driving the activity.

Ongoing:

1. Make posters for DEI awareness that can be put up during our events. Prepare statements which can be announced at events.

   Lead: Shweta Agrawal

2. Collect resources about VI (if possible, also other differently abled categories) and organize them on a webpage (which we'll put on ACM India webpage).

   Lead: M. Balakrishnan

3. Work with the website team to create prominence for DEI on ACM India website similar to ACM HQ website. Formulate policy about preferential funding for events with DEI initiatives.

   Lead: Chitra Babu

4. Work with NPTEL to make MOOCs more VI friendly. Prepare a demo of changes needed to be made in presentations/material that faculty use.

   Lead: Viraj Kumar, with help of M. Balakrishnan.

5. Interview successful people from minorities (women, differently abled etc) and compile book/videos about them.

   Lead: Meenakshi D'Souza

6. Create a policy against discriminatory behaviour at ACM India events and figure out a process for taking action against offenders.

   Lead: Shweta Agrawal, Heena Timani.

7. Enable candidates to self identify as being differently abled (or belonging to other underrepresented communities) when applying as a Member, Senior Member, Distinguished Scientist, Fellow, etc. and then extending whatever policies apply to women candidates to candidates from such communities.

   Lead: Saket Saurabh

Completed:

1. Identified resource person for hands on session at ACM India events. As a concrete step, we decided to host an event at ACM India Compute where a VI person will give a live demo about the challenges faced by differently abled in the computing industry. For this, with the help of Viraj and Bala, we have identified Mr. Rakesh Paladugula who has worked for Adobe in Bengaluru for 6+ years. He has nearly 20 years of experience and is visually impaired himself.

2. Planned a DEI activity at CCGrid in collaboration with organizers. Details are listed at the website, and included a keynote talk, a panel discussion as well as a DEI reception and mentoring session.

CONSTITUTION & BYLAWS

1. BASIC INFORMATION

1.1 Members

Jayant Haritsa (Chair), P J Narayanan, Abhiram Ranade, Bipin Mehta, Meenakshi D'Souza, Hemant Pande, Chandrashekhar Sahasrabudhe (Execom Liaison)

1.2 Purpose of the committee

ACM India was founded in 2010, and since then has grown enormously in both scope and impact. The charter of this committee is to revisit its constitution, bylaws, rules and regulations, and harmonize them with the current avatar. Specifically, we wish to craft streamlined documents that support a rationalized and coherent governance structure, including clarifying the relationships with linked bodies such as ACM HQ, Indian student and professional chapters, and ACM India-W.

2. ACTIVITIES SUMMARY

1. Identified a variety of lacuna covering internal, external and international aspects of ACM India. These included issues related to naming, structure, trustees, staff designations, tenure periods, delegation of powers, physical premises, relationships with other ACM entities, identity transfer across regions, etc.
2. Implemented an open nomination process for the ACMI Women Committee, as opposed to the earlier process of internal constitution. A nominations committee comprising Madhavan Mukund, Kalika Bali and Meenakshi D'Souza carefully vetted the 35 nominations that were received, and recommended 7 for the 2023-27 period, representing a broad spectrum of industry, academia, and research communities. All seven had a strong track record of contributions to ACMI and ACMI-W activities. These shortlisted candidates were then ratified by the ACMI Council. They will join the 3 continuing members from the previous committee. (This activity implements a policy decision previously taken by the ACMI Council.)
3. Crafted formal financial delegation letters with temporal and financial limits – these letters were issued by the ACMI President to the ACMI staff. (This activity implements a directive in the ACMI Rules and Regulations.)
4. Conducted detailed discussions with legal counsel and auditors to seek clarity on a variety of administrative issues. As an outcome, provided support documentation to legal counsel for filing change requests with Charity Commissioner, Pune. (This activity implements statutory Government regulation).
5. During the Council meeting at the Annual Event which was attended by Yannis Ioannidis, President, ACM, highlighted issues related to identity transfer across regions (especially important for Indians relocating from abroad), approval processes for national SIG awards, and consistency in SIG nomenclature.

3. COMMENTS

The clearing of the accumulated backlog of documentary changes with the Government authorities may take a year or two to complete since we must file them in chronological sequence of events (it is not permissible to simply fast-forward to the current time).

EDUCATION

1. BASIC INFORMATION

1.1 Members

Viraj Kumar (Chair), Venkatesh Raman, Chitra Babu, Pankaj Jalote, Uday Khedker, R. Ramanujam, Vipul Shah, R. Venkatesh, Neelima Gupta, Neha Karanjkar, Kaarthik Sivakumar, R. Venkateswaran

1.2 Purpose of the committee

Advancing the Science and Profession of Computing Education

2. ACTIVITIES SUMMARY

1. CSPathshala:
   a. Charter: Computational Thinking in Schools (including Bebras Challenge)
   b. Members: Vipul Shah (chair), R. Ramanujam, R. Venkatesh, Chitra Babu, Neha Karanjkar

The Association for Computing Machinery (ACM) India started an education initiative, CSpathshala (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. CSpathshala 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.

Post the pandemic CSpathshala continued the training programs in the hybrid mode and trained 4000+ teachers through 10 awareness workshops and training programs. The 2022 Bebras India Computational Thinking Challenge was conducted in English, Marathi, Gujarati, Hindi, Kannada, Odia, Tamil and Telugu and it was conducted free. The 2022 Bebras India Challenge saw participation of 65,000+ students from 900+ schools across 20 states in age groups 8-18.

Partnerships forged with Pune Knowledge Cluster, Vision Empowers and Ludic Design for Accessibility. In 2023-2024, CSpathshala will continue to focus its efforts with the government to mainstream CT, empower teachers and increase its reach in rural areas.

CSpathshala organized the fourth conference on Computational Thinking in Schools (CTiS2022) on 8 and 9 July, 2022 at IISER, Pune saw participation 300 participants at IISER Pune and Tribal Welfare Schools, Nagpur with 2,000+ online participation from 18 states in India and 7 countries (US, UK, New Zealand, Singapore, Thailand, Brazil, Finland).

2. Faculty Professional Development - CSEDU
   a. Charter: CS Faculty Professional Development initiatives
   b. Members: Viraj Kumar (chair), Pankaj Jalote, R. Ramanujam, Neelima Gupta, Uday Khedker, R. Venkateswaran

ACM India provides financial support for this faculty training programme for CS educators run by IIIT Delhi. These funds support Teaching Assistants and subsidize the registration costs for faculty. There

have been three batches of CSEDU training over the past year. In the August 2022 batch, 138 faculty registered for three modules: Introduction to Programming in Python, Machine Learning, and Effective Teaching Techniques. In January 2023, the number of modules expanded to five: Introduction to Programming in Python, Advanced Programming, Data Structures, Computer Networks, and Theory of Computation. The total number of faculty registrants across these five modules was 98. The Computer Networks module experimented with a hybrid (as opposed to a purely online) approach, with intensive lab sessions taking place in-person at the start and end of the module. These sessions were hosted by a partner institute (SSN College of Engineering), and the module instructors felt that the hybrid approach worked better. In the ongoing (May 2023) batch, one module (Advanced Graph Algorithms) is being offered, and 36 faculty have registered.

3. iSIGCSE
   a. Charter: ACM India Special Interest Group for CS Education
   b. Members: Chitra Babu (chair), Viraj Kumar, R. Venkatesh, Uday Khedker

iSIGCSE organizes ACM India's flagship COMPUTE conference. The report for COMPUTE'22 is presented elsewhere in this report. Further, iSIGCSE organizes a series of webinars and workshops to grow the CS Education research community. Up-to-date information on these activities is available via the website: https://isigcse.acm.org/events

4. Cloud Computing for Colleges
   a. Charter: Exploring affordable ways to make cloud computing resources available to colleges
   b. Members: Kaarthik Sivakumar (chair), Neelima Gupta, Neha Karanjkar

In India, there are a large number of institutions that offer CS or related programs, but with limited or outdated lab equipment. Further, these institutions have limited resources available to acquire and efficiently utilize cloud resources, particularly since there is limited expertise available for the latter. This proposal is exploring how ACM India can assist in two ways. First, by negotiating with cloud service providers to make affordable plans available to consortiums of institutions. Second, by identifying appropriate training programmes/certifications so that adequately trained personnel can efficiently manage institutions' cloud resources. Initial surveys to assess institutional interest are underway.

5. Teaching Partnership Program - TPP
   a. Charter: Support for Teaching Partnership Programme for partnering with colleges to improve specific CS courses
   b. Members: Viraj Kumar, Venkatesh Raman, Meenakshi D'Souza, Abhijat Vichare, R. Ramanujam

The ACM India Teaching Partnership program has been run at a number of institutions thanks to the contributions by a number of ACM India Teaching Partners. Before a semester starts ACM India sends out expressions of interest from its pool of teaching partners and its pool of interested institutions. The possible course offerings by the partners and needs of the institutions are matched. The institutions and the teaching partners mutually decide the contents and the dates of the teaching exchanges. ACM India supports the travel of the ACM India teaching partners while the hosting institutions support the stay and any local travel. The interaction is required to be intense between the ACM India partners, the faculty of the hosting institutions and their students.

This session, 2022-23, had the following ACM India teachers: Saket Saurabh (IMSc, Chennai), Ponnurangam Kumaraguru (IIIT Hyderabad), Venkatesh Raman (IMSc, Chennai), Meenakshi D'Souza (IIIT Bangalore), Viraj Kumar (IISc, Bangalore), R. Ramanujam (IMSc, Chennai), R. Venkateswaran (Persistent Systems Ltd., Pune) and Abhijat Vichare (ACM India).   The participating host institutions were: Thiagarajar College of Engineering (Madurai), PSG College of Technology (Coimbatore), SRM Institute of Science and Technology (KTR Campus), Sri Sivasubramaniya Nadar College of Engineering (Chennai), Pune Institute of Computer Technology (Pune), Pimpri Chinchwad College of Engineering (Pune), Cummins College of Engineering for Women (Pune). The courses shared were: Theory of Computation, Algorithms, Data Structures, Operating Systems, Graph theory, and Computer Networks. Estimating feedback from 10% of the students, this program has reached out to over 3000 students, or over 350 students per ACM India Teaching Partner.

6. ACM Compute 2022

    a. Charter: Provide a platform for computing education research within India towards improving the quality of computing education in the country.

The 15th annual COMPUTE conference was held at Manipal University Jaipur, Jaipur, India from November 9 - 11, 2022. Since 2018, ACM-India has decided to focus the theme of COMPUTE towards improving the quality of computing education in the country. 2022 was the fifth year of this thematic symposium. COMPUTE 2022 was held under the aegis of the iSIGCSE (Special Interest Group on CS Education) Chapter of ACM India. COMPUTE brought together academic and industry researchers working in the area of computing education. This includes tools, techniques and pedagogy to improve teaching for computer science, information technology, and related courses.

COMPUTE 2022 received a total of 37 paper submissions from the industry and academia in India. During the review process, 7 papers were desk rejected due to a mismatch with the theme of COMPUTE. For the remaining 30 papers, each was reviewed by at least three members of the program committees and subsequently discussed during an online discussion phase. 7 papers were accepted, and 5 were accepted provisionally, subject to satisfactory handling of reviewer comments. Three of the provisionally accepted papers were finally accepted after the second round of review. Thus, 10 papers out of 37 are accepted for publication and will be presented at the conference (an acceptance ratio of 0.27). Among the accepted papers, 2 papers are from industry, 1 paper is by a consultant, 6 papers are from academia, and 1 paper is by a mix of authors from consultancy and academia. COMPUTE 2022 proceedings are published in the ACM Digital Library.

The programme for COMPUTE 2022 included 10 accepted paper presentations, 6 Keynote speeches, 1 Keynote by the recipient of the ACM India Outstanding Contribution to Computing Education (OCCE) award, 1 session by the winners of Teaching Challenges, 2 Workshops, and 2 Panel Discussions. The ACM India OCCE award winner, Smruti R. Sarangi (IIT Delhi), delivered a keynote titled "Perspectives on Teaching Computer Architecture in Developing Countries."

The session by the winners of the Teaching Challenges included the following presentations:

1. Inclusive Education - Teaching Data Structures & Algorithms via Models and Activities, by Parthasarathy P D (BITS Pilani)
2. Introduction to sampling through an activity, by Shabana K M (IIT Palakkad)

3. Teaching Deadlocks with experimental demonstration, by Nitin Prakashrao Patil (Pune University)
4. If a Picture is Worth a Thousand Words, Why Not Teach Through Them? by Ullas (IISc)
5. Teaching AI concepts to students from a non-CS background, by Gayatri Venugopal (Symbiosis Institute of Computer Studies and Research. Pune)
6. Table Design in Relational Database, by Bhumika Shah (Gujarat University)

The following workshops were part of the COMPUTE 2022 program:

1. Program Development using Literate Programming and Mapcode, led by Venkatesh Choppella (IIIT Hyderabad)
2. A hands-on introduction to Refute questions, led by Viraj Kumar (IISc) and Arun Raman (Dayananda Sagar University)

The following panel discussions were held at COMPUTE 2022:

1. Relevance of the software engineering course in future software development. The panelists were
   a. Vinita Gera (Moderator) (Sr. Director IT Infrastructure Dell Technologies)
   b. Atul Kumar (Sr Research Scientist, IBM Research)
   c. Mrityunjay Kumar (Vice President & GM - Payments, Zenoti)
   d. Sumitha Prashanth (Director of Customer Experience, Cisco)
   e. Dheeraj Sanghi (Vice Chancellor, JKLU)
   f. Rajveer Singh Shekhawat (Ex Dean - MUJ)

2. National Educational Policy (NEP) and Computational thinking (CT) in Schools. The panelists were
   a. Meenakshi D'Souza (Moderator) (IIIT Bangalore)
   b. R. Venkatesh (TCS Research)
   c. Chandan Dasgupta (IIT Bombay)
   d. Sabitha Vinod (Meghe Group of Schools, Nagpur)

      Organizing Team
      ● Conference Chair
        ○ Venkatesh Choppella, IIIT Hyderabad
      ● Program Chairs
        ○ Amey Karkare, IIT Kanpur
        ○ Chitra Babu, SSN College of Engineering, Kalavakkam, Tamil Nadu
      ● Publication Chair
        ○ Sridhar Chimalakonda, IIT Tirupati
      ● Finance Chair
        ○ Chandrashekhar Sahasrabudhe, ACM India

- Program Committee
  - Ansuman Banerjee, ISI Kolkata
  - Chayan Sarkar, TCS Innovation Labs
  - Deepti Reddy, SIES Graduate School of Technology, Navi Mumbai
  - Neeldhara Misra, IIT Gandhinagar
  - Neeraj Goel, IIT Ropar
  - Prajish Prasad, IIT Madras
  - Renu Mol, CUSAT, Cochin
  - Renuka Sindhgatta, IBM Research
  - Sangaratna Godboley, NIT Warangal
  - Shitanshu Mishra, MGIEP, UNESCO, New Delhi
  - Vandana Naik, Department of Technical Education, Goa

- Steering Committee
  - Venkatesh Choppella, IIIT Hyderabad (Chair)
  - Amey Karkare, Indian Institute of Technology Kanpur
  - Chitra Babu, SSN College of Engineering, Kalavakkam, Tamil Nadu
  - Madhavan Mukund, Chennai Mathematical Institute, Chennai
  - Neeraj Goel, Indian Institute of Technology Ropar
  - Sridhar Iyer, Indian Institute of Technology Bombay
  - Venkatesh R., TCS Research, Pune
  - Venkatesh Raman, Institute of Mathematical Sciences, Chennai
  - Viraj Kumar, Dayananda Sagar University, Bengaluru

- Local Organizing Committee
  - Akhilesh Kumar Sharma, Manipal University Jaipur (Local Organizing Chair)
  - Lokesh Sharma, Manipal University Jaipur (Website Management Chair)
  - Vidit Gupta, Manipal University Jaipur (Web Administrator)

RESEARCH FACILITATION

1. BASIC INFORMATION

1.1 Members

Ponnurangam Kumaraguru (Chair), IIIT Hyderabad; Supratik Chakraborty (Execom representative), IIT Bombay; Amey Karkare, IIT Kanpur; Chester Rebeiro, IIT Madras; Hemangee Kapoor IIT Guwahati; Jibi Abraham, COEP; Niharika Sachdeva, InfoEdge; Rishabh Kaushal, IGDTUW; Rajiv Ratn Shah, IIIT Delhi; Rijurekha Sen IIT Delhi; Saket Saurabh IMSc Chennai; Saurabh Tiwari, DA-IICT; Shelly Sachdeva, NIT Delhi; Siddhartha Aasthana, Mastercard; Suganya R, VIT Chennai; Mainack Mondal, IIT KGP

1.2 Purpose of the committee

To enable research activities, help research students / industry in improving the quality of research

1.3 Sub-Committees of the Research Facilitation Committee

1. ACMI-IARCS travel grants:
   a. Charter: To evaluate the grant proposals, give feedback, accept / reject the proposals
   b. Members: Amey Karkare, IIT Kanpur; Chester Rebeiro, IIT Madras
2. ARCS:
   a. Charter: To plan, and organize the annual ARCS conference
   b. Members: Rijurekha Sen IIT Delhi; Ponnurangam Kumaraguru, IIIT Hyderabad
3. Research Career in Computer Science
   a. Charter: To excite UG students about research in Computer Science; show them the possibilities and opportunities pursuing research in Computer Science
   b. Members: Saket Saurabh, IMSc Chennai; Venkatesh Raman, IMSc Chennai; Ponnurangam Kumaraguru, IIIT Hyderabad
4. Conference / Workshop approvals
   a. Charter: To evaluate the conference / workshop proposals, give feedback, accept / reject the proposals
   b. Members: Shelly Sachdeva, NIT Delhi; Jibi Abraham, COEP; Supratik Chakraborty, IIT Bombay; Hemangee Kapoor IIT Guwahati
5. PhD Clinic
   a. Charter: To facilitate CS PhD students from all over the country to obtain inputs and advice from expert mentors located in premier academic institutions and industry. Mentors spend a few hours each month talking to students and giving concrete and constructive suggestions on their work. Each clinic session is a one-on-one engagement, and a student gets to choose a mentor who works in his/her area from the available list of mentors.
   b. Members: Niharika Sachdeva, InfoEdge; Mainack Mondal, IIT KGP; Ponnurangam Kumaraguru, IIIT Hyderabad
6. Anveshan Setu
   a. Charter:
      i. To provide CS/IT PhD students in India:

1. an opportunity to get up close and personal with best research practices outside their parent institutes.
2. a longer and more intense mentoring experience beyond ACM India PhD Clinic.
   ii. To develop Anveshan Setu into a premium-value program over the next three years—something that every CS/IT PhD student in India would aspire to participate in their PhD career.
   b. Members: Rishabh Kaushal, IGDTUW; Rajiv Ratn Shah, IIIT Delhi; Ponnurangam Kumaraguru, IIIT Hyderabad
7. PhD Workshops
   a. Charter: To organize focussed sessions on different technical and non-technical aspects of PhD life.
   b. Members: Shelly Sachdeva, NIT Delhi; Jibi Abraham, COEP; Saurabh Tiwari, DA-IICT; Siddhartha Aasthana, Mastercard; Suganya R, VIT Chennai; Supratik Chakraborty, IIT Bombay; Hemangee Kapoor IIT Guwahati; Ponnurangam Kumaraguru, IIIT Hyderabad
8. PhD Students Meetup
   a. Charter: To facilitate a platform (in the form of workshops) for PhD students to interact among other PhD students in the country.
   b. Members: Siddhartha Aasthana, Mastercard; Suganya R, VIT Chennai; Supratik Chakraborty, IIT Bombay; Ponnurangam Kumaraguru, IIIT Hyderabad

2. ACTIVITIES SUMMARY

1. ACMI-IARCS travel grants:
   a. 107 applications received
   b. 7 approved
   c. Some are in-progress / evaluation
2. ARCS (See section 4 below):
   a. We successfully conducted the 2023 Symposium https://event.india.acm.org/ARCS/ in Bhopal
   b. 200+ students attended the Symposium
   c. Symposium had Keynotes, Invited talks, Students lightning talks, Poster presentations, PhD Clinic interactions between mentors & students
3. Research Career in Computer Science
   a. We successfully organized two of these events in SRM Chennai & IIT Palakkad
   b. SRM Chennai gathered around 20 participants while IIT Palakkad gathered 230+ participants
4. Conference / Workshop approvals
   a. 10+ proposal reviewed
   b. 7+ proposal approved
5. PhD Clinic
   a. # of mentors: 38
   b. # of mentors added: 4

  c. 75+ sessions between Mentors & Students conducted

  d. Total # of mentees in the program: 250+

6. Anveshan Setu

  a. # of fellowships awarded: 48

  b. # of visits completed: 10

7. PhD Workshops

  a. # of workshops conducted: 8

  b. Topics of workshops; Computational Network Science: Models, Algorithms, and Applications; Research with Multiple arrows in your Artillery; How to Read Research Papers? How to write a good research paper? How NOT to present your results? How to Deliver a Good Research Talk? How to do a Literature Survey?

  c. Institutes that hosted the workshops: TCE, Madurai; PSG Tech; JKLU, Jaipur; DA-IICT; IIT Madras; IIIT Bangalore

  d. Total # of students who attended all the workshops together: 250+

8. PhD Students Meetup

  a. # of meetups conducted: 1

  b. Institutes that hosted the workshops: IIIT Delhi

  c. Total # of students who attended all the workshops together: 50+

3. ARCS 2023

The 17th Academic Research and Careers for Students (ARCS) Symposium 2023 took place in Oriental Institute of Science and Technology, Bhopal on 9 and 10 February 2023.

The annual ARCS symposium is targeted towards the PhD students in Computer Science, working in India. The main participants are PhD students, who present their research work to fellow students across India, and also to domain experts who are attending the ARCS event. This gives the students exposure to what kind of CSE research is happening across different institutes in the country, and also an opportunity to learn how to present their own research, listen to critique constructively and defend their ideas in front of an audience. There are also talks and panels by domain experts, both from the academia and the industry, carefully curated for the PhD students.

Highlights of ARCS 2023

- **Invite-only format:** This year we opted for an invitation-only approach for PhD students to present their work, instead of an open call for submissions as was prevalent in previous editions of ARCS. A committee of Area Chairs (4-5 experts in the four verticals of CS Theory, AI and Machine Learning, Computer Systems and Security and Privacy) was first established by the PC chairs Partha Talukdar and Rijurekha Sen. The Area Chairs then selected papers in top-tier forums, where a PhD student working in India was the primary author. After a review by PC Chairs keeping in mind representation across CS areas and DEI aspects, a subset of the papers were invited for presentation at the conference. This enabled participation of PhD students from top-tier Indian universities, a recurring issue identified in previous ARCS editions, as well as good representation from diverse areas of CS.

- **Inclusion of more PhD students:** In addition to inviting students with published papers in top conferences and journals, fellows from the ACM India Anweshan Setu and PhD Clinic programs were

also invited for presentation and participation at the conference. These fellows did not necessarily have any published paper, but they presented their work in progress, to get valuable feedback, and also see important research being done by fellow students.

- **Lightning talks with poster format:** All invited papers were presented with a 2 minute lightning talk followed by a poster. Participants appreciated this format as it allowed for more interaction during the poster session

- **Longer talks and panels:** There were excellent talks and panels by industry and academic experts, targeted towards the participating PhD students.
  - Keynote talk by Venkat Padmanabhan, ACM Fellow, who described how Microsoft Research India is working on problems such as road safety, eye diagnostics, and pollution monitoring, bringing out both the technical nuances and the rewarding journey, in touching a large and growing number of users.
  - Four talks by Early Career Researchers, to share their journeys during and after PhD, to give the current PhD students in the audience different perspectives of research careers, in academia and industry. Partha Talukdar (Google Research and IISc Bangalore), an ECR 2022 awardee, presented "Inclusive Language Technologies: From India to the World ". Keerti Chaudhary (Assistant Professor, CSE, IIT Delhi) gave an Early Career talk on "Journey in the field of Graph Algorithms". Anand Mishra (Assistant Professor, CSE, IIT Jodhpur) talked on "Pixels and Strings: The Excitement of Vision and Language Research." The final Early Career talk was by Nishant Sinha (Offnote Labs) on the "Making of a Researcher." Each speaker beautifully shared the ups and downs in their own PhD journey, how they chose problems, how they generated key ideas, how they applied for positions after PhD, interesting experiences and anecdotes.
  - There were four talks by ACM India 2022 Doctoral Dissertation Award winners and runner-ups: Siddharth Bahndari, Pritish Mohapatra, Sruthi Sekar and Deepika Yadav. These were strong technical talks show-casing award winning PhD dissertation work from the last year, as chosen by the ACM Award committee, in the diverse areas of CS Theory, Cryptography and Human Computer Interaction.
  - There was an Industry Panel discussion on Indian Startups: Opportunities and Challenges, where Naganand Doraiswamy (Ideaspring Capital), Aditi Vaidya (Quanfluence) and Sorav Bansal (CompileAI, IIT Delhi) were the panelists. The panel was moderated by Kiran Deshpande (Former CEO, TechM).

- **Writing seminar:** This year we introduced a Seminar on Effective Tech Writing by Karthik Ramaswamy from IISc, which was very well received by all students.

Overall the event was very well received by the PhD students, as was unanimously expressed in their exit feedback form. There were some grievances about shared accommodation that we will try to address in upcoming ARCS editions.

STUDENTS & PROFESSIONALS ENGAGEMENTS

1. BASIC INFORMATION

1.1 Members

Student Engagement Committee

Sachin Lodha (Chair), Shekhar Sahasrabudhe (Execom Representative), Akhilesh Kumar Sharma, Aswani Kumar Cherukuri, Geetanjali Kale, Navin Kabra, Prashant Nair, Rajnish Sharma, Ranga Rajagopal, Tejaswini Apte, Venkatesh Kamat, Yogesh Simmhan

Professional Engagement Committee

Yogesh Simmhan (Chair), Shekhar Sahasrabudhe (Execom Representative), Abhijat Vichare, Aswani Kumar Cherukuri, Chitra Babu, Nitin Patil, Ranga Rajagopal, Ravindra Naik, Renuka Sindhgatta Rajan, Sachin Lodha, Tilottama Goswami

1.2 Purpose of the committee

The Purpose of the Student Engagement Committee is to support tomorrow's problem solvers today. Likewise, the purpose of the Professional Engagement Committee is to support professional, SIG and ACM India-W Chapters. Both committees are working in close collaboration on a number of initiatives. One of their key objectives is to achieve a closer integration of student chapters with (the co-located) professional chapter(s).

1.3 Sub-Committees of the Learning Initiatives Committee

1. Activity Funding:
    a. Charter: Nurture vibrant and collaborative chapter initiatives that help in advancing computing as a science and profession
    b. Members: Abhijat Vichare (chair), Geetanjali Kale, RD Naik, Renuka Sindhgatta Rajan, Tilottama Goswami, VV Kamat

2. Awards:
    a. Charter: Judge annual student chapter awards
    b. Members: Satish Babu (chair), Bipin Mehta, Mini Ulanat, Rajnish Sharma, Vineet Kapoor,

3. Chapter Summit:
    a. Charter: Organize the Annual Chapter Summit, one of the important events on ACM India calendar
    b. Members: Geetanjali Kale (chair), Abhijat Vichare, Nitin Patil, Prashant Nair, Rajnish Sharma, Tilottama Goswami

4. ESP:
    a. Charter: Re-imagine and reinvigorate the Eminent Speaker Program (ESP)
    b. Members: Yogesh Simmhan (chair), Rajnish Sharma, RD Naik, Renuka Sindhgatta Rajan, Tilottama Goswami

5. Portal:

a. Charter: Manage, maintain, and enhance the Student Chapter Portal to support various committee initiatives

b. Members: Rajnish Sharma (chair)

6. Chapter Approvals:

a. Charter: Define and manage the process for new chapter approvals across different categories, and help the existing chapters maintain a good standing

b. Members: Ranga Rajagopal (chair), Abhijat Vichare, Geetanjali Kale, Renuka Sindhgatta Rajan

2. ACTIVITIES

The activities of both Student and Professional Engagement Committees are designed to encourage students and professionals to (a) learn from each other, (b) learn from experts, (c) build relevant skills, (d) apply learning/skills and (e) get the appropriate recognition.

As of this report there are 25 active professional chapters including 1 ACM India-W chapter and 243 active student chapters including 42 ACM India-W student chapters.

a) Annual Chapter Summit

ACM India has established a tradition of hosting annual flagship events that serve as platforms for engaging discussions on the latest trends in science and technology. These events not only celebrate the remarkable achievements in computing within India but also embody the spirit of ACM (Association for Computing Machinery) in fostering innovation and advancing the field.

The 2023 edition of ACM India Annual Chapter Summit was held in Hybrid Mode on the 20th and 21st of January at IISER, Pune Maharashtra in association with PICT ACM Student Chapter. The event spanned one and a half days with numerous activities and talks on topics that are a buzz in these times and show prominent capabilities of becoming a trend in the future.

The summit began with a **lecture by R. Ramanujam,** (JAM) Visiting Faculty at Azim Premji University, Bengaluru on the topic - **The buzz around Computational Thinking.** The talk revolved around computational thinking, its relevance, and future applications as we can see it is gaining attention as a valuable skill set that enhances problem-solving abilities, promotes critical thinking, and equips individuals to navigate a technology-driven world. It was conducted on **20th January** involving innovative activity that can easily and efficiently explain the relevance of computational thinking.

On the 21st, the day-long event kicked off with a welcome address by **Sachin Lodha,** who presented good statistical figures of ACM India Memberships, introduced the ACM India Committee for 2022-24 and its objectives to build a common platform for all chapters to actively collaborate and provide mentorship opportunities helping individuals hone their skills, followed by the announcement of ACM India Student Chapter Award Winners 2022-23. **Supratik Chakraborthy**, IIT Bombay, then highlighted the initiatives carried out by ACM India such as **Ph.D. Clinic, Anweshan Setu, Summer and Winter Schools** and many more.

Following the address was a plenary session by **Harshal Hayatnagarkar, ThoughtWorks, Pune** whose vision is to build a community with research organizations, and build tools for scientific exploration that will help discover new frontiers in computer science. **E4R: An Initiative for Accelerating the Scientific Discovery Process** was the topic of the session wherein the attendees were acquainted

with various ventures the company has carried out, is working on, and has plans to focus on in the future along with the design thinking behind their previous initiatives.

After a short break, the ACM India Chapter winners spoke about the various engagement activities conducted under their chapters that promote the holistic growth of its members. This exchange of knowledge motivated chapters to bring innovation in the activities conducted to achieve the goal of promoting computing at the chapter level.

The chapter representatives were then familiarized with the two ACM Portals through a demo video depicting the mandatory details to be updated by the chapters and the key points to keep in mind while updating the details.

The most exciting and awaited part of the day - the breakout sessions were then conducted next wherein the attendees were divided into groups having people from diverse backgrounds, ages, professions, and experiences in the group. Each group was allotted a topic to discuss, to put forth their views, and to come up with a minimum of ten problems and solutions revolving around it. These were then presented to the whole audience so as to increase interaction, and innovation and to brainstorm on the ways of improving the quality of activities conducted, engagement and retention of new members, fostering technical growth, improving inclusion and diversity, and also what would make a good website.

The **Panel Discussion** on - ***Are graduating students ready for the "real world"?*** explored the points that test the preparedness of students to transition from the academic environment to the professional world. It also addressed various questions from the young graduates in the audience related to what companies look for in a candidate. The discussion also highlighted the importance of lifelong learning and the ability to adapt to changing demands in the real world.

Before the concluding remarks, an engaging team activity was conducted to end the day-long event on an enthusiastic note. **Dramatizing the algorithms** made teams brainstorm innovative ways to dramatize the classical algorithms from Data Structures.

The closing remarks and vote of thanks were delivered by Geetanjali Kale concluding the day on a high note.

b) The Student Chapter Awards

The student chapter awards were given this year to six chapters in six categories following a thorough and methodological process by a committee with Ranga Rajagopal (CEO, Acenet Technologies Pvt. Ltd, Coimbatore) as a chair and Satish Babu (CEO, InApp, Trivandrum), Bipin Mehta (Past Chair ACM Ahmedabad Professional Chapter), and Mini Ulanat (Cochin University of S&T) 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 Chapter Award (India)
  - Pune Institute of Computer Technology (PICT) ACM STUDENT CHAPTER
- Outstanding Chapter Website Award
  - Chandigarh College of Engineering and Technology (CCET) ACM STUDENT CHAPTER
- Outstanding Chapter Activities Award
  - Manipal University Jaipur (MUJ) ACM STUDENT CHAPTER
- Outstanding Community Service Award

- ○ Pimpri-Chinchwad College of Engineering (PCCOE) ACM STUDENT CHAPTER
- ● Outstanding Recruitment Program Award
  - ○ International Institute of Information Technology (I2IT) ACM STUDENT CHAPTER
- ● Emerging Chapter Award
  - ○ Jayawant Shikshan Prasarak Mandal's (JSPM) Rajarshi Shahu College of Engineering (RSCOE) ACM Student Chapter

The awards were announced in early 2023 through direct correspondence to all the student chapters and through the ACM portal (https://acmindia-studentchapters.in/). Chapters were asked to report their activities regularly on their respective portal.

One of the major feedbacks received during our Chapter Summit was unavailability of funds for doing high impact activities. In July this year, we are launching a formal Activity Funding Program for the first time wherein we will be soliciting proposals from the chapters on a bi-monthly basis. We have formed a sub-committee that will be doing the evaluations, approvals, financial support disbursals and closure. Currently, we have budgeted for supporting 20 activities per year across all chapters with up to Rs 50,000/- funding per activity.

Our Eminent Speaker Program provides local ACM Professional and Student chapters in India with direct access to top technology leaders and innovators who will give talks on issues that are important to the computing community (https://india.acm.org/education/learning/eminent-speaker-program). It needed a re-think partly because it was not actively used during COVID and because we have had not many additions in recent years. To revive it and enhance its prestige and value to the chapter, we have now put together a process to solicit open nominations (as well as through the ACM India Council) twice a year. The ESP Selection Committee (ESPSC), consisting of exceptional and/or diverse members, will be responsible for shortlisting from these nominations. We thank Jayant Haritsa for agreeing to chair this committee. The committee will also oversee whether to extend the tenure of ESP speakers who have completed their 2-year tenure. The chapter subcommittee will support the selection committee in soliciting nominations, assembling activity/feedback details of retiring ESP, etc.

Manipal University of Jaipur has kindly agreed to host our forthcoming Annual Chapter Summit which is going to be held for two days for the first time. It will again be a joint summit involving both student and professional chapters. Its agenda, schedule, etc. are currently being finalized.

Starting this year, we are planning to introduce a new award called Outstanding Mentor Award to recognize the immense efforts and contribution of the faculty sponsors of student chapters. This will be in addition to the existing prestigious chapter awards spread across six categories.

We will be continuing to enhance our student chapter portal to support various initiatives; for example, this year we will see integration of ESP into the portal that will help synchronize, digitize and organize the interactions between the eminent speakers and the chapters.

ACADEMIC ENGAGEMENTS

1. BASIC INFORMATION

1.1 Members
Sudip Misra (Chair)

Committee Members
Supratik Chakraborty, Jayant R Haritsa, PJ Narayanan, Vipul Shah, Sonia Garcha, Hema A Murthy, Pallab Dasgupta, Viraj Kumar

1.2 Purpose of the committee
- Engaging with academic bodies such as INAE, IASc, NASI, INSA, NCERT, AICTE, NPTEL, IEEE, and CSI.
- Exploring and nurturing synergies between ACM India and these bodies with respect to academic research and education in computing
- Establishing a mutually beneficial relationship
    o Helping academic bodies benefit from ACM India's strengths
    o Benefiting ACM India members from strengths of these bodies

2. ACTIVITIES SUMMARY

a) Speaker exchange between ACM India and Indian National Academy of Engineering (INAE)
    a. Distinguished speakers identified by ACM India can deliver lectures at INAE events and vice-versa.
    b. No separate sub-committee. Sudip Misra and Supratik Chakraborty are in discussion with INAE.
    c. Expected date of Completion: August 2023 (expected). ACM India has already sent the proposal to INAE (Indranil Manna and P J Narayanan). Waiting for a response from INAE.
    d. Status: Ongoing

b) Special coverage of invited articles in the Transactions of the INAE
    a. The intent is to establish cooperation between ACM India and the Transactions of the INAE to cover invited articles from winners of DDA, OCCE, OCCW, ECR awards of ACMI in the Transactions of INAE.
    b. No separate sub-committee. Supratik Chakraborty and Sudip Misra are in discussion with the Editor-in-Chief of INAE (Amit Agrawal).
    c. Expected date of Completion: July 2023 (expected). ACMI has already sent the proposal to the EiC of the Transactions of INAE. Waiting for a response from INAE.
    d. Status: Ongoing

c) Collaboration between ACMI and IARCS to come up with a single model for teaching schools (for college teachers), teaching workshops etc.
    a. Both ACMI and IARCS have their individual programs for training/supporting college teachers. The intent of this collaboration is to liaise between both of these organizations and their respective committees to come up with a common model for disseminating the information about the programs and make them available to the interested stakeholders.

      b.   No separate sub-committee. Sudip Misra and Supratik Chakraborty are in discussion with IARCS (Deepak D'Souza, Rajat Mittal). A common model is being worked on jointly with IARCS.

      c.   Expected date of Completion: July 2023 (expected). ACMI is already drafting the proposal along with IARCS.

      d.   Status: Ongoing

d) Initiating a CS seminar series on the model of Dagstuhl seminar series: There was a workshop series with a similar purpose titled "Mysore Park Workshops'' that ran successfully from 2010 to 2017, with at least 15 workshops/seminars/schools conducted under the programme. This was sponsored by Infosys and was always held in the Mysore Park campus of Infosys. This series however became completely dormant since 2017. The current effort is to resurrect the series, but in a different avatar and ensure its continuity for the long term. The suggested name (tentative) of the series is IndiCS (short for India CS) Seminar Series, to decouple it from Infosys and Mysore Park. The proposal is to locate these seminars/workshops at one of a few locations across India – currently the locations under discussion are Mysore Park campus and CMI's annexure campus. An initial discussion on the desirability to resurrect the series was held in early September 2022 with Jayant Haritsa, Rakesh Agrawal, Y. Narahari, Hemant Pande and Supratik Chakraborty. Subsequently a teleconference meeting was held on Oct 12, 2022 with Sriram Rajamani (Microsoft Research India), Pankaj Jalote (IIIT Delhi), Manish Gupta (Google Research), Madhavan Mukund (CMI) and with Hemant Pande, Sudip Misra and Supratik Chakraborty representing ACM India. A subsequent discussion with Madhavan Mukund was also held during Compute 2022 and in May 2022. Currently, a draft proposal is being reviewed for wider circulation to all stakeholders.

Expected date of finalization: Aug 2023

e) CSpathshala will have its fifth annual conference on Computational Thinking in Schools (CTiS2023) on 7th and 8th July, 2023 at IISER, Pune and hosted by City Pride School, Pune. The conference will address the theme Enhancing teacher preparation for integrating computational thinking. They have received 200+ abstracts from school teachers, organizations and academia working in CT initiatives in schools.

PUBLICITY & MEMBERSHIPS

1. BASIC INFORMATION

1.1 Members

Sachin Lodha (social media), Yogesh Simmhan (website), Hemant Pande (email), Venkatesh Raman (email), Ponnurangam Kumaragaru, Rijurekha Sen, Geetanjali Kale, Abhijat Vichare (budget), Shekhar Saharsrabuddhe (budget)

1.2 Purpose of the committee

The Purpose of the committee is to publicize the activities of all ACM India committees. This is done mainly using three channels - websites, emails and social media channels.

1.3 Sub-Committees of the Publicity Committee

1. Websites:
   a. Update the websites with the latest information about awards, events and all other activities of ACM India.
   b. Members: Yogesh Simmhan (chair), Hemant Pande (WPoets coordinator), Rijurekha Sen (ARCS coordinator), Shekhar Sahasrbuddhe and Abhijat Vichare (Budget management)

2. Emails:
   a. Send emails to relevant mailing lists to publicize about updated web content on awards, events and other activities of ACM India
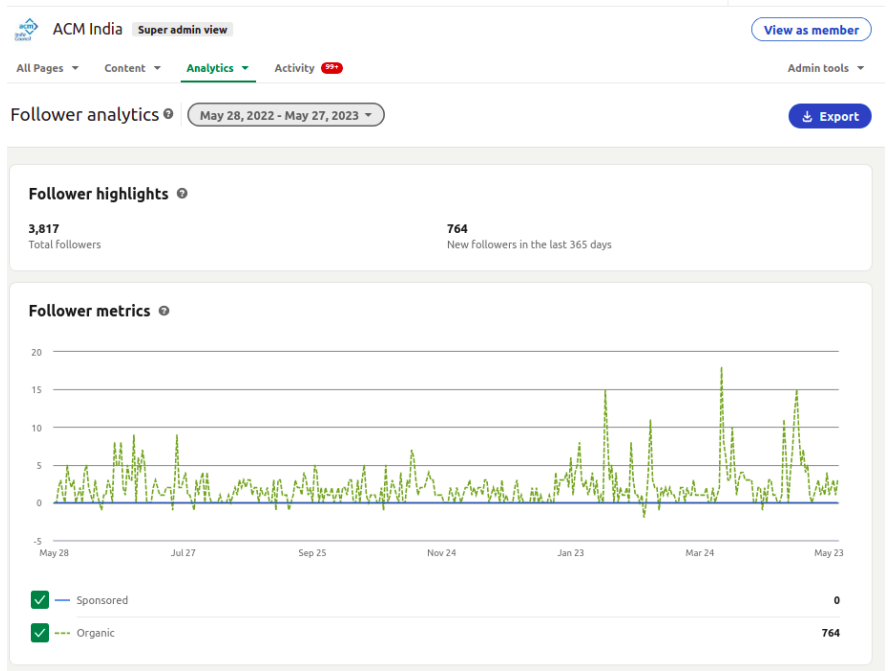   b. Members: Hemant Pande, Venkatesh Raman

3. Social media:
   a. Promote ACM India activities on different social media platforms like Facebook, Twitter, Instagram and LinkedIn
   b. Members: Sachin Lodha (chair), Geetanjali Kale, Ponnurangam Kumaragaru

2. ACTIVITIES SUMMARY

The various activities for publicity have been organized into teams that focus on specific activity. A partial list of contributors appears in the appendix. As mentioned there are three main channels: the website, emails and social media channels. The ACM India website needs constant updating about the various events, awards and offerings that come up from time to time. This is being carried out in association with WPoets since May 2022. Emails to relevant mailing lists to publicize updated web content on awards, events and other activities are managed by Hemant Pande and Venkatesh Raman. As the following example shows promoting ACM India activities on different social media platforms like Facebook, Twitter, Instagram and LinkedIn needs enhancement through targeted advertising. This is being explored by Sachin Lodha, Geetanjali Kale, Ponnurangam Kumaragaru.

ACM India LinkedIn page has ~4K followers, with 764 new followers who joined last year. However, as can be seen in the analytics screenshot below, all these followers have joined organically, possibly through word of mouth or after attending an ACM India event, without any explicit promotion on part of the council. We wish to expedite the process of more follower creation, and reach out to a wider audience, in LinkedIn (4K followers) as well as in other social media platforms like Twitter (1.8K followers), Facebook (692 followers) and Instagram.

COMPUTING FOR SOCIETY

1. BASIC INFORMATION

1.1 Members

Prateek Jain (Chair, Google), Hemant Pande (ACM India), Shweta Agrawal (IITM), M. Balakrishnan (IITD), Tanuja Ganu (Microsoft Research), Amrita Mahale (Armman), Sudip Mishra (IITKgp), Milind Sohoni (IITB), Divy Thakkar (Google)

1.2 Purpose of the committee

Facilitate and recognize significant efforts in the domain of Computing for Society, with focus on

- AI-for-Society
- Computing for infrastructure in India
- Computing for specially abled
- Responsible and ethical computing with data

2. ACTIVITIES SUMMARY

4-day ACM India Bootcamp on "Responsible Computing" was hosted by Indian Institute of Science, Bangalore on 13-16 April 2023. The bootcamp was organized jointly by the Learning Initiatives Committee and Computing for Society Committee of ACM India. 30 participants including industry professionals, academic faculty and PhD students participated in the bootcamp. The bootcamp faculty comprised eminent researchers from industry and academia from India and abroad. Very good participant feedback on quality and organization.

3. PLANS

1. Create a repository to facilitate Computing for Society
   - 1.1. List of experts in related disciplines
   - 1.2. List of popular courses in these domains
   - 1.3. List of datasets
   - 1.4. List of project ideas / open problems

2. Design two courses with detailed curriculum – open-source
   - 2.1. AI-for-Social Good
   - 2.2. Responsible computing with data

3. Facilitate 2-3 projects per year
   - 3.1. Select from invited list of proposals
   - 3.2. Connect the teams with appropriate mentors
   - 3.3. Provide a little bit of funding, and know-how for conducting field studies
   - 3.4. Recognize appropriately by awards/publicity on ACM newsletters

ACM India-W

1. BASIC INFORMATION

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

Heena Timani (Chair), Rutvi Shah (Treasurer), Chitra Babu, Tejaswini Apte, Lipika Dey, Neeldhara Misra, Mukta Paliwal, Manik Gupta, Arati M. Dixit (Past Chair), Meenakshi D'souza (ACM India Execom Representative)

1.2 Purpose of the committee

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

ACM India-W 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 India-W'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 Subcommittees

Standing Committee Chairs (Two members from Council)
 - Chitra Babu, SSN College of Engineering,Chennai
 - Mukta Paliwal, Novartis,Hyderabad

The responsibilities of this committee is to strengthen ACM India-W student chapters and professional chapters, Organize chapter meetings and to prompt activities involving Industry-Academia, identifying speakers and panelists for the ACM India-W workshop that is co-located 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 India-W events- Grad Cohort, ACM India-W Summer /Winter School, ACM India-W Celebrations, Regional celebrations and Hackathon, ACM India-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 India-W Newsletter, Manage social media handles of ACM India-W and to take care of the event updates in the ACM India-W website.

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

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

2. ACTIVITIES SUMMARY

Title of Project	Responsible Person	Starting Date	Status
ACM India-RBCDSAI Summer School on DS/AI/ML Embedded Systems (Women only) hosted by PSG College of Technology,Coimbatore sponsored by Robert Bosh Centre for DS and AI (RBCDSAI)	Mukta Paliwal	11-22 July 2022	Completed
ACM India Celebration of Women in Computing AICWiC 20222 Organized by BITS Pilani, Hyderabad Campus	Manik Gupta, Rutvi Shah, Heena Timani	7-8 October 2022	Completed
Lady Ada National Level Programming Competition BITS Pilani, Hyderabad Campus	Rutvi Shah	Final Round 7th October 2022	Completed
7th ACM W National Level Women's Hackathon organized by Padre Conceicao College of Engineering (PCCE) ACM Student Chapter , Goa	Heena Timani, Rutvi Shah,	Final Round: 14-15th October , 2022	Completed
4th ACM W Grad Cohort Workshop organized by IIT Jodhpur	Neeldhara Mishra Heena Timani	21-22 July 2022	Completed
ACM W India Decade Celebration 2023 One day Colloquium with the theme of "Women in Computer Science Research" COlocated with ACM India Annual Event organized by Oriental Institute of Science and Technology, Bhopal.	Chitra Babu Manik Gupta, Rutvi Shah, Heena Timani	10th February, 2023	Completed

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 India-W Grad Cohort Workshop For Women	Meenakshi D'Souza, Rutvi Shah Bhavana Kanukurthi, Sriparna Saha	7,8 July 2023 work in progress. To be conducted at IISc Bangalore	
ACM India Celebration of Women in Computing AICWiC 2023	Rutvi Shah Mini Ulanat	September 2023	
Lady Ada National Level Programming Competition for girl students	Manik Gupta Renuka Sindhgatta	September 2023	
8th ACM India-W National Level Women's Hackathon	Geetanjali Kale	October 2023	
ACM India-W Regional celebrations	Geetanjali Kale	December 2023	
ACM India Summer/Winter school (Women only)	Mukta Paliwal, Jayashree Mohan, Alpana Dubey	July 2023 January 2024	
ACM India-W Workshop 2023	All ACM India-W Committee Members	February 2024	

3.2 List important changes or milestones in active projects of ACM Women during the coming year.

1. Strengthening Existing Chapters: ACM India-W will prioritize efforts to strengthen and support its existing chapters. This includes providing resources, guidance, and mentoring to chapter leaders, facilitating networking opportunities among chapters, and fostering collaboration between chapters to share best practices.
2. Increase in ACM India-W Student Chapters: A key focus for ACM India-W is to increase the number of ACM India-W Student Chapters. This involves actively promoting the establishment of new student chapters in universities and colleges, encouraging student leadership and involvement, and providing support and resources to help these chapters thrive.
3. Targeted Mentoring for ACM India-W Professional Chapters: ACM India-W will launch a targeted mentoring program aimed at ACM India-W professional chapters. This program will focus on increasing industry participation and engagement within professional

chapters. It will provide guidance on forging partnerships with industry organizations, organizing industry-focused events, and creating opportunities for professional development and networking for women in computing fields.

4. Increased Participation in Programming Contests and Hackathons: ACM India-W aims to enhance the participation of women students in programming contests and hackathons. This includes promoting awareness of these events among women students, organizing workshops and training sessions to enhance their skills and confidence, and providing mentorship and support to women participants during these competitions.

5. Outreach and Collaboration: ACM India-W will actively seek collaborations and partnerships with other organizations, both within and outside of the computing community, to further its mission of supporting women in computing. This may involve joint events, conferences, and initiatives aimed at increasing diversity and inclusion in the field of computing.

6. Expansion of Scholarships and Grants: ACM India-W will continue to expand its scholarship and grant programs to provide financial support and recognition to women pursuing studies and research in computing. These programs will be tailored to support students, early-career professionals, and researchers at various stages of their academic and professional journeys.

7. Advocacy and Policy Initiatives: ACM India-W will actively engage in advocacy and policy initiatives to promote gender equality and representation in the computing field. This includes advocating for inclusive policies in academic institutions and workplaces, collaborating with policymakers and industry leaders to address gender disparities, and supporting initiatives that promote diversity and inclusion in computing education and workforce.

These initiatives collectively aim to create a more inclusive and supportive environment for women in computing, enabling them to excel in their studies, careers, and leadership roles.

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

1. Enhanced Women Empowerment Initiative: Implementing a comprehensive series of talks and workshops specifically tailored to address women-specific issues in computing, such as gender equality, diversity, and inclusion. These sessions will also focus on skill-building, offering training in technical and non-technical areas to empower women in the field.

2. Global Collaboration through Buddy System: Introduce a buddy system that fosters collaboration and knowledge sharing among ACM India-W student chapters across various cities, regions, states, and countries. This initiative aims to connect students from different backgrounds and geographical locations, enabling them to exchange ideas, collaborate on projects, and provide mutual support.

3. Interdisciplinary Computing Promotion: Establish a dedicated focus on promoting computing in an interdisciplinary approach. This initiative will encourage collaboration between computer science and other fields such as biology, healthcare, social sciences, arts, and more. By highlighting the value of computing in various disciplines, this program aims to expand the reach and impact of computing knowledge in diverse domains.

These proposed projects and programs aim to empower women in computing, enhance global collaboration, and promote the interdisciplinary nature of computing, fostering innovation and inclusivity in the field.

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 consists of 8 members representing diverse geographical locations in India, including Tamil Nadu, Hyderabad, Pune, Ahmedabad, Gandhinagar, Nagpur, and Delhi. Out of these members, 5 come from academia while 3 represent industries, ensuring a well-maintained balance between the two sectors. The age distribution among the members is as follows: 2 members are younger than 40, 3 members fall between the ages of 40 and 50, and 3 members are older than 50.

Looking ahead, we plan to enhance representation from all the regions of India in the committee. We aim to include more young women (undergraduate, postgraduate, and PhD students) from local chapters who have actively contributed to their ACM India-W student chapters. These individuals will be welcomed as volunteers in the council.

5. NOTES

1. ACM W Committee proposes the implementation of monthly interdisciplinary computing sessions aimed at a diverse audience. These sessions would focus on the theme of "Exploring Computing in Various Disciplines" and would specifically target female participants from different academic backgrounds. This approach will help promote computing skills across disciplines and encourage greater participation from women.

2. ACM W Committee recommended a collaboration between ACM India-W and ACM India's CSpathshala initiative to promote computer science skills among underprivileged girls. By joining forces, we can create a comprehensive program that provides resources, mentorship, and educational opportunities to empower these girls in the field of computer science.

3. ACM W Committee suggest the introduction of a quarterly talk series organized by local ACM India-W chapters, specifically targeting women professionals. These talks would cover topics such as career guidance, innovation, and entrepreneurship, aiming to inspire and empower women in their professional journeys. This series will provide a platform for successful women in computing to share their experiences and insights, fostering a supportive community and encouraging more women to pursue leadership roles in the field.

ACM India-W is thrilled to celebrate its 10th anniversary!! This significant milestone calls for a series of exciting activities and events throughout the year, with one highlight being a joint celebration with ACM W India and ACM-W Europe in the month of June.

The theme for this year's anniversary celebration is "A Decade of Empowering Women in Computing." It serves as a reflection of the progress made in promoting gender diversity, inclusivity, and empowerment within the field of computing over the past ten years. It is also a testament to the achievements and contributions of women in various computing disciplines.

The joint celebration with ACM-W Europe in June is a special collaboration aimed at fostering global connections and exchanging best practices in supporting women in computing. The event will bring together professionals, researchers, educators, and students from both regions to engage in meaningful discussions, share experiences, and explore collaborative opportunities.

This joint celebration not only celebrates the accomplishments of ACM India-W/ACM-W Europe but also highlights the broader impact and global reach of ACM India-W initiatives.

[ACM India-W Decade Celebration | ACM India-W supporting, celebrating, and advocating for Women in Computing](#)

APPENDIX

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