**vol 21 no 1-8**
**January-August 2021**

### From the desk of ECC

*My dear esteemed Members,*
Well indeed after a pretty long time the current edition of IEEE Delhi Section e-Newsletter is being issued, in fact after January 31, 2021 when November-December 2020 edition was released last time. You may like to go through the news about the Conferences under the jurisdiction of Section, Industry Academia Engagement Workshop, 2020-2021 MGA Awards and Recognition, Tribute to *former* Section & India Council Chair Dr. Ram Gopal Gupta, MOM of Section AGM (held on March 14, 2021, Sunday), and current strength of Section Membership that are finding place in the e-Newsletter.

With best regards and wishes,

(Dr. Subrata Mukhopadhyay)
IEEE Delhi Section
August 24, 2021 (*Tuesday*)
E-mail: ieeedelhi@ieee.org
Web-site: www.ewh.ieee.org/r10/delhi

### Schedule of Lecture(s)

Surf IEEE vTools Meeting System (https://meetings.vtools.ieee.org/main), then login with User Name and Password, and View Existing Meetings / View Published Meetings (https://meetings.vtools.ieee.org/meeting_view/list) for the Upcoming Meetings in respect of IEEE Delhi Section and its Society Chapters / Affinity Groups.

### List of IEEE Conferences in the geographic area covered by the IEEE Delhi Section
(http://ewh.ieee.org/r10/delhi/event.html)

*Already held in 2021*

- 15th Edition of INDIACom (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/51348) during March 17-19, 2021 at BVICAM, Bharati Vidyapeeth, New Deli, India (having Conference website: http://bvicam.ac.in/indiacom/)
- Second International Conference on Secure Cyber Computing and Communications (ICSCCC), 2021 (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/51823) during May 21-23, 2021 at Dr. B R Ambedkar National Institute of Technology Jalandhar, Punjab, India (having Conference website: https://www.nitj.ac.in/icsccc2021/)

*To be held in 2021*

- 6th International Conference on Signal Processing, Computing and Control (ISPCC2k21) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53510) during October 07-09, 2021 at JUIT Waknagat, H.P., India, *changed to virtual mode* (and having Conference website: http://www.juit.ac.in/ispcc_2021)
- 2021 Sixth International Conference on Image Information Processing (ICIIP 2021) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53038) during November 26-28, 2021 at Jaypee University of Information Technology (JUIT), Solan, Himachal Pradesh, India, *changed to virtual mode* (and having Conference website: http://www.juit.ac.in/iciip_2021/)
- The 10th International conference on Internet of Everything, Microwave Engineering, Communication and Networks (IEMECON) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53809) during December 01-02, 2021 at University of Engineering & Management, Jaipur, Rajasthan, India (and having Conference website: http://iemecon2021.uem.edu.in/)
- 2021 IEEE Indian Conference on Antennas and Propagation (InCAP 2021), the 4th edition of IEEE Indian

Conference on Antennas and Propagation launched and organized by AP-S chapters of India (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/52216) during December 13-16, 2021 at Malaviya National Institute of Technology, Jaipur (MNIT Jaipur), Rajasthan, India (and having Conference website: http://jaipur.incapindia.in)

- International Conference on Intelligent Information Processing and Management-2021 (ICIIPM-2021), later on *changed* as, International Conference on Industrial Electronics Research and Applications (ICIERA-2021) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53202) during December 22-24, 2021 at ECE Department, Maharaja Agrasen Institute of Technology (MAIT), *affiliated to* GGS Indraprastha University, New Delhi, India, *changed to be in hybrid mode* (and having Conference website: http://ece.mait.ac.in/iciera21/)

*Under consideration & to be held in 2022*

- The Maiden Edition of IEEE Delhi Section International Conference on Electrical, Electronics and Computer Engineering IEEE DELCON-2021 in virtual mode during 11th-13th February 2022 at NSUT, New Delhi, India (and having Conference website: https://www.delcon2021.com/) with MOU expected to be approved for IEEE Conf # 54057 with IEEE IAS, PES, CSS, & PELS as Technical Co-Sponsors
- INDIACom - 2022 16th INDIACom; 2022 09th International Conference On Computing for Sustainable Global Development during 23rd – 25th March, 2022 (03 Days) at Bharati Vidyapeeth, A-4, Paschim Vihar, Rohtak Road, New Delhi – 110063 (Conference website: http://bvicam.ac.in/indiacom/)
- 1st International Conference on Sustainable Technology for Power and Energy Systems 2022 (STPES 2022)

during 11-15 April 2022 at NIT Srinagar and at IIT Jammu, India (and having Conference website: https://nitsrinagar.yawun.com/)
- Com-IT-Con-2022: 2nd International Conference on "Machine Learning, Big Data, Cloud and Parallel Computing: *Trends, Perspectives and Prospects*" to be organized during May 26-27, 2022 by the Department of Computer Science & Engineering, Faculty of Engineering & Technology, Manav Rachna International Institute of Research and Studies (MRIIRS), Faridabad, Haryana-121004, India (and having Conference website: https://manavrachna.edu.in/comitcon/)
- 1st International Conference on Innovation and Disruption in Computing, Communication, Control and Automation (ID3CA) during 22-24 June 2022 at Chandigarh University (and having Conference website: www.ID3CA.cuchd.in)

**R10 Industry Academia Engagement Workshop by Delhi Section**

It is to inform you that the two workshops are sponsored by IEEE R-10 and **Delhi Section, UP Section and Kolkata Section** are the collaborating Sections.

*Introduction and Description of the Workshop*: While Research & Innovation happens in all forms and shapes, but Innovation to generate greater benefit for the humanity, is a result of research (fundamental & applied) when applied to the cases. These are classic cases of how Innovation keeps on happening across decades and across geographies. To enable this & make it work – there are two Institutions which are of highest significance – Academia and Industry. Of course government & various other bodies/Institutions have to play a key enabler & constructive role in terms of policies, funding, support, collaboration, creating opportunities etc. With this as a backdrop, its enlightening to see the workshop theme as designed by IEEE R10 Industry Relations Committee. This workshop, as envisaged by us, has been designed with the utmost

importance to the workshop theme & key takeaways for both the Academia (referred as ACD) & Industry (referred as IND) Leaders. Experience has shown that collaboration is of utmost importance for the Win-Win strategy ahead. There are Keynotes, Panel Discussion & Success stories during the workshop. For each sub-section, participation from both ACD & IND has been invited to have wider perspectives, views and Thought leadership. To make it interactive and participants shall be able to ask Questions with the esteem speakers, Q&A has been planned. All this is to excite & motivate participants to hear from the leaders and chart out roadmap for their respective organisation. The workshop has been planned to be conducted in the Webinar mode (given the uncertainty around Covid). Speakers across IND & ACD have been reached out to and they have shown keen interest in participating & contributing to this key need for the Indian Research & Innovation to Jump-start to the next level. Overall, we see the great theme for this Workshop & huge potential ahead.

Theme of Workshop 1 to be held on 25th September'21: Innovations around Applied New Age Technologies (Like AI, ML, IOT)

Theme of Workshop 2 to be held on 23rd Oct'21: Innovations around Power & Communication Sector

Prof. Prerna Gaur
*Co-Chair, Ad-hoc Committee on Industry Relations, IEEE Delhi Section*
August 10, 2021

### 2020-2021 MGA Awards and Recognition

Dear Nominator,

In the second half of last year, MGA launched its Call for Nominations for the MGA Individual Awards. You were one of the nominators who participated by submitting a nomination(s).

Below is the list of the Individual awards open for nominations this year. It includes a brand new Diversity & Inclusion Award.

· [MGA Larry K. Wilson Transnational Award](#)

· [MGA Diversity & Inclusion Award](#)
· [MGA Innovation Award](#)
· [MGA Leadership Award](#)
· [MGA Achievement Award](#)
· [MGA Young Professionals Achievement Award](#)

Even though your nomination(s) were not selected in the 2020 nomination cycle, the MGA Awards & Recognition Committee would like to invite you to resubmit your nomination for the 2021 MGA Individual Awards Program.

**The deadline for nominations is 15 October 2021** *(for completed nomination form and two letters of endorsement).*

If you wish to resubmit your 2020 nomination, click [here](#) – You may need your IEEE credentials to login. From the IEEE Awards home page, go to the 'Login' tab and select 'My Nominations'.

You can help recognize the efforts of outstanding volunteers for one of the prestigious [IEEE Member and Geographic Activities(MGA) Awards](#). Each award has a unique mission and criteria and offers the opportunity to honor distinguished colleagues, inspiring teachers, and corporate leaders.

For more information about the MGA Awards & Recognition Nomination Process, click [here](#)

If you have any questions about your 2019 nomination, please email [mga-awards@ieee.org](mailto:mga-awards@ieee.org)

Best Regards,
Jason Hui
2020-2021 MGA Awards & Recognition Program Chair
August 21, 2021

### Tribute to Dr. Ram Gopal Gupta, Past Chair IEEE Delhi Section and India Council
By Rajendra K. Asthana, LSIEEE,
Chair, IEEE R 10 Life Member Committee,
Ombudsman, IEEE India Council
June 09, 2021

Dr. Ram Gopal Gupta a Doctorate from Indian Institute of Technology (IIT), Delhi, (popularly known as RGG), retired as Senior Director (i.e., SAG / Joint Secretary Rank of GOI) from the then Department of Information Technology / Electronics. In the Department among other activities, he was known for organizing an Exhibition of Electronics annually at all-India level.

Dr. Gupta was a Senior Member of IEEE & Fellow and Life Member of the TEB for the technical publications of the Largest Profession Body in India, IETE (Institution of Electrical and Telecommunication Engineers). He was a Member of the nomination committee for an international award for Techno-entrepreneurship development instituted by The TAKADA FOUNDATION, Japan. Initiated Electronics and IT Expositions (ELITEXs) etc. He made numerous reports to enhance the vision on the "Role of United Nations and Specialized Agencies for Developing IT".

Dr. Gupta, an IEEE Volunteer became Chair of the Joint Chapter IEEE AES COM LEO Society of the India Council.

In 2007 he was appointed as Member Board of Governors for IEEE Technology Management Board; Editorial Board Member of The Open Aerospace Engineering Journal published by Bentham Science Publishers. He also served on the Board of Governors of IEEE AES Society and the Board of Governors of IEEE Photonics Society.

He popularized IEEE in the Government. This innovative efforts led to the sharp increase in IEEE Student Branches in India and the overall membership growth. After taking over as Chair, he retrieved the IEEE AES COM LEO Society of India from IEEE Disqualified Chapters and achieved the Best Chapter Award from IEEE ComSoc for more than five years. His major & contribution and initiatives included series of International Conferences on Wireless Communications (IEEE ICPWC) as Conference Chair in India since 1996 with participants from 22-25 countries. In the early stage of development of the concerned Technology, Dr. Gupta supported Prof. Vijay K Bhargava (of UBC, Vancouver, CC, Canada / University of Victoria). He was also a Member of TPC of world largest IEEE Communication Conference: GLOBECOM and ICC. Other worth mentioning activities undertaken by him were:

- popularize IEEE technical activities for students, academia, and industry;
- initiated two major IEEE Conferences in Communications and ATM;
- Major push in New Students Branches in engineering

After being at the helm of affairs of IEEE Computer Society, Delhi Chapter for couple of years, in 2007 he was appointed IEEE Delhi Section Chair for the two one-year terms 2007 and 2008. As Chair IEEE Delhi Section, he continued his earlier initiatives.

At a time when IEEE India Council was struggling for its survival for over 2 years, immediately after taking over as Council Chair, Dr. Ram Gopal Gupta faced Challenge to revive Council. Dr. Gupta initiated following bold decisions to rebuild India Council.

- He got modified Council Bylaws framed in 1976 which were outdated. New Bylaws duly vetted by MGA were approved in a special GBM held on 17-12-2011 and adopted with immediate effect.
- New Bylaws Stipulated minimum eligibility qualifications for electing a Council Chair.
- Most important inclusion was that "Chair–Elect" will automatically take over as "Incoming Chair" from next (coming) First January even if full ExCom is not finalized. Under No Circumstances present Chair will continue beyond 31st December of current year.
- Officers and various Committees were clearly spelled out.

- Under no circumstances, elections will be held for Chair (No petition permitted) unless Chair-Elect refuses to take up the post of "Council Chair". This was a bold amendment to the Council Bylaws.
- Strict time frame for nominating Slate & elections were redefined.

Many other important decisions were taken during these 2 years and Council could regain some of its lost glory. He continued his previous initiatives to popularize IEEE technical activities for students, academia, and industry and gave push to New Students Branches in engineering, INDICONs etc.

Based on solid foundation laid by Dr. Gupta, next Council Chairs contributed tremendously to take India Council to Newer Heights, which is quite visible year after year.

As a dynamic IEEE Volunteer, Dr. Gupta was honored by following IEEE Awards:
- Outstanding IEEE ComSoc/AESS Chapter Award for year 2002, 2003, 2005, and 2006.
- Outstanding IEEE AESS Chapter Award for year 2005.
- Best Region IEEE Communications Society Chapter Achievement Awards for 2005.
- Region 10 Outstanding Volunteer award in 1999.
- 2011 IEEE AES awarded "IEEE Member and Geographic Activities (MGA) Leadership Award with citation" for his "distinguished leadership and outstanding contributions as a volunteer, at the Section and Regional levels, serving the IEEE for the benefit of its members and the engineering profession by popularizing IEEE in local industry and common engineering students".
- Region 10 – 2012 Academia-Industry Partnership Award for Outstanding contribution in dissemination of information about indigenous R&D and promotes interaction & commercialization among users, industry and R&D institutions.

Dr. Ram Gopal Gupta passed away on April 24, 2021. We all in IEEE pray to God to grant Salvation (*Sadgati*) to the departed soul and give strength to the family members to bear the irreparable losses. Om Shanti!!

**IEEE Delhi Section**
**Minutes of AGM of IEEE Delhi Section held on March 14 2021 (*Sunday*)**

**Agenda for the AGM of IEEE Delhi Section:**

**Part A: 10:30 AM to 1:15 PM**

1. Welcome by the Section Chair
2. Confirmation of minutes of the last AGM held on 22 Feb 2020
3. Presentation of Secretary's Report
4. Financial Report by the Treasurer
5. Declaration of Section Executive Committee for 2021 (*as detailed in the attachment*) and latter assuming the office
6. Appointment of Auditor
7. Appointment of Nomination Committee for 2021
8. Any other point, with the permission of Chair
9. Vote of thanks
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Part B: 12:30 PM to 1:15 PM
Guest Lecture: **Mr. Vipin Tyagi**
**CTO and EVP (Strategic Relationships) at PGi, Former Chairman of the Board and Executive Director at C-DOT**

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**Date (Day) and Time: 14 March, 2021** (*Sunday*) from 10.30 AM to 1.30 PM
**Venue:** Hall No 1, APJ Abdul Kalam Lecture Halls, NSUT, SECTOR-3 Dwarka, NEW Delhi-110078. –those attending in Person
On Line: For those attending in Digital mode.

**Attendance:** 49 In person and 125 attended virtually.
1. Welcome by the Section Chair Prof. Prerna Gaur: Prof. Prerna Gaur, Chair-IEEE Delhi Section welcomed the members and the guests present and declared the meeting open. She informed the achievements of the Section to the members like sponsoring conferences, outreach meetings, DL lectures at various institutes, etc. She

also informed the members about the major technical, administrative and professional activities including many IEEE conferences. The increase in chapters, award nominations from the Section, etc. were highlighted.

2. Confirmation of minutes of previous AGM: The Minutes of the last AGM held on Feb 22, 2020 were presented and approved. (Proposed by Prof Rachana and Seconded by Dr Rajnish).

3. Presentation of Secretary's Report: Ravindra Joshi, Secretary of the Section read the Secretary's report, which was approved by AGM. The report is attached as Annexure-I. (Proposed by Prof Hoda and Seconded by Prof Rachana).
   Report by the Treasurer: The Treasurer of the Section, Dr. Sneha Kabra, presented the financial report for the year 2020. The financial report was approved by the AGM. The report is attached as Annexure-II. (Proposed by Dr Jasdeep and Seconded by Prof Mridula).

4. Mr. Daman asked for Secretary Report with detailed events list. It was clarified by Secretary that it will be circulated along with AGM 2021 MOM.

5. Mr Daman asked "Are Chapter Bank A/Cs being reported to Section. A decision was taken in AGM long back that Chapter to submit A/C statement to Section. It was clarified by past Treasurer that some Chapters were submitting but all Chapters had to submit. Treasurer confirmed that now onwards it would be ensured.

6. In appreciation to the services rendered, the exec com members of 2020 were thanked by all present.

7. Declaration of 2021 Delhi Section Executive Committee and Introduction of Members: Prof. Subrata Mukhopadhyay, Member, Nomination Standing Committee announced the slate for Section Executive Committee for the year 2021 as follows:

| S. No. | Name & Affiliation | Position |
|---|---|---|
| 1. | Prof. Rachana Garg (DTU) | Chairperson |
| 2. | Prof. Abdul Q. Ansari (JMI) | Exec Vice Chairperson |
| 3. | Prof. M. N. Hoda (BVICAM) | Vice Chairperson |
| 4. | Dr. Rajnish Sharma (Chitkara University, Punjab Campus) | Secretary |
| 5. | Dr. Shabana Urooj (GBU, Gr. Noida) | Joint Secretary |
| 6. | Dr. Sneha Kabra (DU) | Treasurer |
| 7. | Prof. Prerna Gaur (NSUT) | Past Chairperson |
| 8. | Mr. Ajay Goel (Altran) | Member |
| 9. | Prof. Mahesh M. Bundele (Poornima University, Jaipur) | Member |
| 10. | Prof. Jasdeep Kaur Dhanoa (IGDTUW) | Member |
| 11. | Dr. Bharat Singh Rajpurohit (IIT Mandi) | Member |
| 12. | Mr. Vijay K. Dutt (ex-Railways) | Member |
| 13. | Dr. Shruti Jain (Jaypee Univ., Waknaghat) | Member |
| 14. | Dr. Rashmi Agarwal (JC Bose Univ. of Sc. & Tech) | Member |
| 15. | Prof. Meenu Khurana (Chitkara University, Punjab Campus) | Member |
| 16. | Mr. Archit Goswami (Co at Gurgaon) | Member |

The new exec com assumed the office. The outgoing Chairperson, Prof. Prerna Gaur and incoming Chairperson Dr Rachana Garg thanked the earlier exec com and welcomed all the new as well as continuing members.

8. Appointment of Auditor for 2021: Mr. Vijay K. Gupta was appreciated for his performance as internal auditor in 2020 and was appointed as the internal auditor for the IEEE Delhi Section for 2021 also.

9. The Exec Vice Chair, Prof. A. Q. Ansari, proposed a vote of thanks and the meeting ended with thanks to the Chair.

10. It was followed by Special lecture by Mr. Vipin Tyagi, CTO & EVP (Strategic Relationship) at PGi, NOIDA, UP.

11. Appointment of Nomination Committee for 2022: The nomination committee for the year 2022 is as follows:
    a. Prof. Prerna Gaur (NSUT) Chair
    b. Prof. Bhim Singh (IIT-Delhi) Member
    c. Prof. Subrata Mukhopadhyay (NSUT) Member

Ravindra Joshi
Secretary
IEEE Delhi Section Exec Com 2020

*In agreement*
Rajnish Sharma
IEEE Delhi Section Exec Com 2021
29 May 2021 (Saturday)

## IEEE DELHI SECTION-SECRETARY REPORT 2020

Delhi Section is under the large section category and is among the fastest-growing sections in IEEE. IEEE Delhi Section has as per the latest (January 04, 2021) statistics 4,034 active Members (including 23 Society Affiliates), consisting of 0 Honorary Member, 7 Life Fellow, 7 Fellow, 33 Life Senior, 434 Senior Member, 7 Life Member, 1330 Member, 25 Associate Member, 681 Graduate Student Member, 1486 Student Member, 1 SA. There are 90+ student branches and branch chapters in Delhi Section. Major Chapter Activities for the year are as follows:

- 285 events across 14 different sections were organized by IEEE Delhi Section.

- Major Student and Affinity Group Activities:

IEEE Delhi Section comprises of four Student and Affinity Groups:

- Life Member Affinity Group organized 47 events
- Consultants Network Affinity Group organized 30 events
- Women in Engineering Affinity Group organized 12 events
- Young Professionals Affinity Group organized 9 events.

IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity, hence, Section is committed towards education, professional development and societal development. Several events were organized this year in different areas of technology.

These activities include Technical lectures by several Society Chapters, Distinguished Lectures, events specially designed for Graduate Student Members, Women Engineers, Young Professionals and

Conferences. IEEE Day has been organized at various institutes with great enthusiasm.

The conferences organized this year were as follows:

- 3rd International Conference on Emerging Technologies in Computer Engineering: Machine learning and Internet of Things (ICETCE-2020) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/46199) held during February 7-8, 2020 (Friday-Saturday) by the Department of Computer Science & Engineering and Information Technology. Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT), Ramnagaria, Jagatpura, Jaipur-302017, Rajasthan, India (having Conference website: http://www.icetce.in/2020)
- Indo – Taiwan 2nd International Conference on Computing, Analytics and Networks (Indo-Taiwan ICAN2020) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/48429) jointly organized by Chitkara University, India & National Chung Cheng University, Taiwan during February 7-8, 2020 at National Chung Cheng University, Taiwan No. 168, Section 1, Daxue Road, Minxiong Township, Chiayi County, Taiwan 62102 & on February 14-15, 2020 at Chitkara University, Punjab, India Chandigarh-Patiala National Highway (NH- 64), Rajpura, Punjab 140401, India (having Conference website: https://www.chitkara.edu.in/cse-can)
- 1st International Conference on Emerging Trends in Communication, Control and Computing (ICONC3) held during February 21-22, 2020 (Friday – Saturday), as re-scheduled,

- at Mody University of Science & Technology (MUST), Lakshmangarh, Rajasthan, India
- 9th IEEE Power India International Conference (PIICON2020) held during February 28 - March 01, 2020, in the Department of Electrical Engineering, Deenbandhu Chhotu Ram University of Science & Technology (DCRUST), Murthal, National Capital Region, Haryana, India
- 14th edition of INDIACom, i.e. INDIACom – 2020; 2020 07th International Conference on Computing for Sustainable Global Development held during March 12-14, 2020 at BVICAM, Bharati Vidyapeeth, New Delhi, India
- 2020 First IEEE international conference on Measurement, Instrumentation, Control and Automation (ICMICA 2020) during June 24-26, 2020 in virtual mode at National Institute of Technology Kurukshetra, Kurukshetra
- 2020 Sixth International Conference on Parallel, Distributed and Grid Computing (PDGC-2020) during November 6-8, 2020 in virtual mode at Jaypee University of Information Technology, Waknaghat, near Solan, HP, India
- 15th IEEE International Conference on Industrial & Information Systems (IEEE – ICIIS) – 2020 during November 26-28, 2020 in virtual mode at Indian Institute of Technology Ropar, Punjab – 140001, India
- 4th International Conference and Workshops on Recent Advances and Innovations in Engineering (ICRAIE 2020) during December 1-3, 2020 at Poornima College of Engineering, ISI 6, RIICO Institutional Area, Goner Road Sitapura, Jaipur, Rajasthan 302022, India and Indian Institute of Technology, NH 65, Surpura Bypass Road, Karwar, Jodhpur, Rajasthan 342037, India
- 2020 IEEE Seventeenth India International Conference (INDICON 2020) during December 11-13, 2020 in virtual mode at Netaji Subhash University of Technology, Sector-3, Dwarka, New Delhi-110078, India
- All India Student, Young Professional, Women-in-Engineering & Life Members Congress 2020 (AISYWLC) is the annual flagship event of IEEE India Council which administers a platform to young professionals, academicians, scholars, entrepreneurs and technocrats from divergent fields and careers to show up together and share a common podium. Congress provides a path to connect with industry experts, successful business professionals and experts working on the latest technologies. Various workshops, seminars led by ace professionals contribute to the diverse opportunities for business networking, professional development and personal growth. This year, AISYWLC was hosted by IEEE Delhi Section at Chitkara University in a unique hybrid mode from 19th to 20th December and 26th to 27th December 2020. The theme of AISYWLC this year was "Erase the Boundaries". The theme revolves around how India Cultures, Sciences and Methods are being used around the world.

In line with IEEE vision of penetration of technology across humanity, IEEE Delhi Section, through its SIGHT wing is actively involved in reaching the underprivileged and deprived section of the society.

It is aimed at bringing overall life into their daily routine, which not only facilitates to connect them closer to the technology but also helps them, to the extent possible, to be closer to the mainstream. As a Community Service, SIGHT volunteers keep on choosing selected clusters of such sections of the society in and around the jurisdiction of the Delhi Section and undertake a variety of the activities/events for their overall welfare, upliftment and betterment.

IEEE Delhi SAC organized various activities. The annual Award ceremony was organized on 25th November 2020 virtually at NCU. Out of approximately 90+ student branches in IEEE Delhi Section, there are now almost 50 student branches that are actively participating and are conducting activities

and events under IEEE.
This year Delhi section and its members have won many awards/laurels, as listed below:
IEEE Delhi Section Industry Award to:

- Mr Mahesh Chand Kala from JV Micronics
- Prof. Sukumar Mishra from Silov Solutions
- Prof. Aparna Akula from CSIO, Chandigarh

Outstanding Chapter Engineer Award for 2019 (with experience more than 15 years) (to Er. S R Narasimhan, Director, POSOCO, New Delhi.

Outstanding Chapter Engineer Award for 2019 (with experience less than 15 years) to Dr Ahteshamul Haque, Assistant Professor, Jamia Millia Islamia, New Delhi.

This is in brief about the activities organised in the section. My sincere and heartfelt congratulations to all the subsection chairs, chapter chairs, affinity group chairs, members, student branches and branch chapters and their respective branch counsellors. Even though the pandemic put a break on the activities this year, but it could not reduce the enthusiasm IEEE has. I look forward to another year of dynamic growth and achievements in the Section. I hope that with the enthusiasm and energy of all members and volunteers the section would scale new heights in terms of activities and

membership count. My sincere best wishes to the new exec com for 2021.

**Ravindra Joshi**
**Secretary**
**IEEE Delhi Section Exec Com 2020**


**Finance Report for AGM 14th March 2021**

- Income Tax Return Filed for FY 2019-20
- Utilization Certificate submitted to IEEE India office (Bangalore) on 30th June 2020
- Financial compliance report application form for year 2020 submitted on 9th Feb 2021, which was later approved on March 2nd 2021 by IEEE MGA (Finance and Administration)
- Bank Data Template uploaded on NetSuite on February 18th 2021, which was approved by IEEE MGA (Finance and Administration) on March 2nd 2021.
- HQ funds for year 2020 disbursed to various Chapters, Societies, Student branches and affinity groups.
- Submitted PST financial report of 17th India Council International Conference, INDICON 2020
- The audited annual financial report as presented by Treasurer is as below:

**IEEE Delhi Section Financial Report for the year 2020**

| SN | Receipts — Item/ Head | 2018 | 2019 | 2020 | SN | Disbursements — Item/ Head | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Opening balance:- | | | | 1 | Execom Meetings | 1,13,853.00 | 1,56,041.70 | 14,500.00 |
| 2 | SBI IIT Delhi as on 1st January | 42,499.18 | 23,318.02 | 9,77,314.62 | 2 | AGM | 1,71,359.00 | 2,02,376.20 | 1,41,572.00 |
| 3 | Cash in hand as on 1st January | 3,395.00 | 2,400.60 | 7,037.00 | 3 | 4.5 Conference Expenses (INDICON2020 ) | 94,82,908.00 | | 8,00,000.00 |
| 4 | Deposit/Sweep Ac 37760148722 | | 5,15,000.00 | 5,15,000.00 | 4 | Special Execom/Finance Committee | 41,501.00 | | |
| 5 | Deposit/Sweep Ac 3133476103 | | 2,03,000.00 | 2,00,000.00 | 5 | Conference- Seed Money (INDICON 2015) | 1,00,000.00 | | |
| 6 | Deposit/Sweep Ac 37368725333 | 45,52,000.00 | 38,27,183.00 | 29,31,183.00 | 6 | | | | |
| 7 | 3.40 Bank Interest | 7,818.00 | 27,039.00 | 52,524.00 | 7 | Technical Activities | 1,00,285.00 | 16,933.00 | Included in S.No 29 |
| 8 | 3.40 Interest received from Sweep Accounts/Deposit account | 2,39,149.00 | 10,837.00 | 4,52,091.00 | 8 | Advance for Outstation Meetings & Travel support | 1,30,000.00 | 1,60,000.00 | |
| | | | | | 9 | Industry Relation/Public Relation & Publicity | 30,416.00 | 17,998.00 | |
| 9 | 3.10 Delhi Section Operating Funds | 13,11,807.00 | 13,24,029.00 | 17,47,311.42 | | Inter society Relation/Global Entrepreneurship Summit | 9,980.00 | | |
| 10 | HTC/Smart Village/Outstanding Branch Councelor-SB awards | 7,452.00 | 17,690.00 | | 10 | 5.15 R 10/HQ Student YP, Student, WIE Section Congress Expense (AISYWLC 2020) | 7,80,446.00 | 13,81,361.24 | 3,84,713.00 |
| 11 | PES HPSBC MSIT | | | 15,120.00 | 11 | 5.2 Travel Execom Members | 1,34,276.00 | 4,93,288.00 | 93,975.00 |
| 12 | PES HPSBC DTU | | | 15,120.00 | 12 | SAC/IM09 | 18,400.00 | | 93,823.00 |
| 13 | PELS Best student branch chapter Award IIT Mandi | | | 75,260.00 | 13 | Membership Dev/Fellow Nomination | 43,312.66 | 60,930.00 | |
| 14 | PES-IAS/PELS-IES /PES Women in Power | 1,49,431.00 | 3,14,554.00 | 44,403.40 | 14 | PES-IAS/PELS-IES/HQ funds | 1,99,393.00 | | 22,201.70 |
| 15 | Seed Money conf/sumer internship/ 2018 SENSORS/from Conference for HQ | 94,82,907.60 | 1,67,650.00 | | 15 | Consultants Network Affinity Group | 16,040.00 | | Included in S.No.25 |
| 16 | MTT-S Chapter | 3,09,363.00 | 4,89,845.00 | 1,06,725.00 | 16 | Rajasthan Subsection | 1,00,000.00 | | 1,00,000.00 |
| 17 | MTTS SBC | | | 106725 | 17 | SSCS/R10 Student Congress BALI | 2,22,023.00 | | |

Mr.Vijay K Gupta (Internal Auditor)          Professor Prerna Gaur (Chairperson)          Dr.Sneha Kabra (Treasurer)

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| SN | Receipts | 2018 | 2019 | 2020 | SN | Disbursements | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|
| 18 | AP/RFID Joint Chapter | | | 22,201.70 | 18 | CAS-Control/CIS/CS/Support | | 3,24,306.00 | |
| 19 | IM09-EMB18 | | | 22201.7 | 19 | WIE | 38,974.00 | | |
| 20 | CNAG | | | 16,557.20 | 20 | APS Jaipur Chapter | | | 99,450.00 |
| 21 | LMAG | | | 22,201.70 | 21 | Computer Chapter | | | 16,557.20 |
| 22 | YP | | | 16,557.20 | 22 | HTC,EPICS/AIYEHUM/SIGHT | 50,000.00 | | |
| 23 | WIE | | | 22,201.70 | 23 | MTT-S | 3,22,745.00 | | 1,06,725.00 |
| 24 | RAS SB Chapter Startup grant IIT Mandi | | | 36,735.00 | 24 | 4.6 Education Society/Activities: | | | 36,041.00 |
| 25 | RAS SB Chapter Startup grant MSIT | | | 36,575.00 | 25 | 5.5 Support to subsections/ Chapters/ Societies | | | 10,91,254.40 |
| 26 | GRSS Delhi Chapter | | | 1,61,150.00 | 26 | EDS | 1,18,954.00 | | 93,351.70 |
| 27 | Section Incentive | | 2,09,190.00 | 1,42,300.00 | 27 | IM-ZBMS/IMS/RA | 13,380.00 | | Included in S.No 25 |
| 28 | Other Incentive Awards (MGM/SYWL)/APS-SBC/SPAA event | 69,075.00 | 90,160.00 | | 28 | TMC/TEM14 | 40,000.00 | | Included in S.No 25 |
| 29 | WIE (SBAG)/SPAC | 64,566.00 | 24,754.00 | 14,326.00 | 29 | 4.8 Student Activities, HQ support SPAx | 3,21,000.00 | 4,96,425.76 | 8,76,045.00 |
| 30 | Education Society/Computer Society Start (NIEC)/AP-CRFID Jr.Chapter | 10,278.00 | 69,791.00 | | 30 | Professional Charges | 57,700.00 | 3,02,264.00 | 1,62,732.00 |
| 31 | Conference TCS fees | | 2,24,000.00 | 1,96,000.00 | 31 | 4.3Office Expenses; Social/ Electronic Communication | | 30,380.00 | 31,870.00 |
| 32 | Student Branch HQ support, SPAz funding | | | 7,39,226.20 | 32 | YP | 45,095.00 | | |
| 33 | 2.5 Conference Revenue (INDICON 2020 Reg fee) | | | 18,27,574.00 | 33 | 6.1 Postage, contingency & Misc | 10,775.00 | 9,389.00 | 6,215.00 |
| 34 | 3.34 HQ Students Branches Operating Fund | 4,75,485.00 | 2,75,577.00 | 4,16,338.00 | 34 | 4.1 Meeting and Social Events Expense | | | 2,46,602.00 |
| 35 | R10 support fund for Global Entrepreneurship Summit/CS SBC funding | 19,576.00 | 10,745.00 | | 35 | 6.2 Other Expense (Reg fee Transaction reversal INDICON 2020) | | | 3,570.00 |
| | | | | | 36 | SERB fund Return | | | 1,50,000.00 |
| 36 | APS Jaipur Chapter | | | 99,450.00 | 37 | 5.6 Bank Charges | 796.50 | 442.00 | 442.50 |

Mr.Vijay K Gupta (Internal Auditor)          Professor Prerna Gaur (Chairperson)          Dr.Sneha Kabra (Treasurer)

| | Receipts | | | | | Disbursements | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37 | Com Soc Chapter | | | 1,36,951.70 | 38 | Total Spent | 12713612.16 (Refund 180946), Total Expenses: Rs. 1,25,32,666.16 | 36,54,954.90 | 45,71,840.50 |
| 38 | EDS Delhi Chapter | 96,789.00 | 70,950.00 | 93,351.70 | 39 | Closing Balance SBI IIT Delhi on 31 December | -23,318.02 | 9,77,314.62 | 33,43,317.54 |
| 39 | Computer Chapter | | | 16,557.20 | 40 | Deposit/Sweep Ac 37268725233 | 38,27,183.00 | 29,31,183.00 | 32,97,781.00 |
| 40 | Education chapter | | | 16,557.20 | 41 | Deposit/Sweep Ac 37760148722 | 5,15,000.00 | 5,15,000.00 | 5,82,143.00 |
| 41 | TEM | | | 16,557.20 | 42 | Deposit/Sweep Ac 3133476103 | 2,03,000.00 | 2,03,000.00 | 2,28,387.00 |
| 42 | Signal processing Society | | | 16,557.20 | 43 | Cash in hand | 2,400.60 | 7,037.10 | 8,785.00 |
| 43 | Other Refunds from Chapters/Members/Prerna Gaur's Travel reimbursement | 1,71,612.00 | 2,84,587.00 | | 44 | Total | 1,72,94,513.78 | 82,88,489.62 | 1,20,32,254.04 |
| 44 | INDICON Seed Money/Received | | 1,00,000.00 | | | | | | |
| | PES HPSBCP | | 6,000.00 | | | | | | |
| 45 | Received from IEEE for Dinner Meet/IIC | 36,311.00 | 190.00 | | | | | | |
| 46 | Received from Google/HDFC | 15,000.00 | | | | | | | |
| 47 | Advance Received Back | 2,20,000.00 | | | | | | | |
| | 1.3 Received from Foundation, Corporation and Publication & other | | | 28,500.00 | | | | | |
| | 1.2 Received from Corporations (For INDICON 2020) | | | 25,000.00 | | | | | |
| 48 | AISYWLC 2020 Reg fee, HQ support from PES and PELS, SPAx funding and support from other Sections | | | 6,02,222.00 | | | | | |
| 49 | 3.7 Income Tax Refund | | | 39,590.00 | | | | | |
| 50 | Total Inflow | 1,26,86,619.60 | 37,17,188.00 | 73,98,719.42 | | | | | |
| 51 | Total | 1,72,94,513.78 | 82,88,489.62 | 1,20,32,254.04 | | | | | |

Mr.Vijay K Gupta (Internal Auditor)    Professor Prerna Gaur (Chairperson)    Dr.Sneha Kabra (Treasurer)

Page 3                                            Financial Report 2020

**Sneha Kabra**
**Treasurer**
**IEEE Delhi Section Exec Com 2020**

## IEEE DELHI SECTION MEMBERSHIP STATISTICS AT A GLANCE

IEEE Delhi Section has as per **latest (August 01, 2021)** statistics **3935 active Members** (*including 28 Society Affiliates*), consisting of **0 Honorary Member, 7 Life Fellow, 7 Fellow, 29 Life Senior, 502 Senior Member, 6 Life Member, 1173 Member, 18 Associate Member, 626 Graduate Student Member, 1522 Student Member, 1 SA, 16 Individual.**

# IEEE

vol 21 no 9-12
September-December 2021

## From the desk of ECC

*My dear esteemed Members,*
This is the second and last issue for the year 2021. You may like to go through the news about the Conferences under the jurisdiction of Section, MGA Awards and Recognition, Slate recommended for the Section Executive Committee in 2022, Reporting on Industry Academia Engagement Workshop, & a related article, and current strength of Section Membership that are finding place in the e-Newsletter.

With best regards and wishes,

(Dr. Subrata Mukhopadhyay)
IEEE Delhi Section
December 31, 2021 (*Friday*)
E-mail: ieeedelhi@ieee.org
Web-site: www.ewh.ieee.org/r10/delhi

**Schedule of Lecture(s)**

Surf IEEE vTools Meeting System (https://meetings.vtools.ieee.org/main), then login with User Name and Password, and View Existing Meetings / View Published Meetings (https://meetings.vtools.ieee.org/meeting_view/list) for the Upcoming Meetings in respect of IEEE Delhi Section and its Society Chapters / Affinity Groups.

**List of IEEE Conferences in the geographic area covered by the IEEE Delhi Section**
(http://ewh.ieee.org/r10/delhi/event.html)

*Held in 2021*

- 15th Edition of INDIACom (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/51348) during March 17-19, 2021 at BVICAM, Bharati Vidyapeeth, New Deli, India (having Conference website: http://bvicam.ac.in/indiacom/)
- Second International Conference on Secure Cyber Computing and Communications (ICSCCC), 2021 (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/51823) during May 21-23, 2021 at Dr. B R Ambedkar National Institute of Technology Jalandhar, Punjab, India (having Conference website: https://www.nitj.ac.in/icsccc2021/)
- 6th International Conference on Signal Processing, Computing and Control (ISPCC2k21) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53510) during October 07-09, 2021 at JUIT Waknagat, H.P., India, *changed to virtual mode* (and having Conference website: http://www.juit.ac.in/ispcc_2021)
- 2021 Sixth International Conference on Image Information Processing (ICIIP 2021) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53038) during November 26-28, 2021 at Jaypee University of Information Technology (JUIT), Solan, Himachal Pradesh, India, *changed to virtual mode* (and having Conference

website: http://www.juit.ac.in/iciip_2021/)
- The 10th International conference on Internet of Everything, Microwave Engineering, Communication and Networks (IEMECON) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53809) during December 01-02, 2021 at University of Engineering & Management, Jaipur, Rajasthan, India (and having Conference website: http://iemecon2021.uem.edu.in/)
- 2021 IEEE Indian Conference on Antennas and Propagation (InCAP 2021), the 4th edition of IEEE Indian Conference on Antennas and Propagation launched and organized by AP-S chapters of India (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/52216) during December 13-16, 2021 at Malaviya National Institute of Technology, Jaipur (MNIT Jaipur), Rajasthan, India (and having Conference website: http://jaipur.incapindia.in)
- International Conference on Intelligent Information Processing and Management-2021 (ICIIPM-2021), later on *changed* as, International Conference on Industrial Electronics Research and Applications (ICIERA-2021) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/53202) during December 22-24, 2021 at ECE Department, Maharaja Agrasen Institute of Technology (MAIT), *affiliated to* GGS Indraprastha University, New Delhi, India, *changed to be in hybrid mode* (and having Conference website: http://ece.mait.ac.in/iciera21/)

*To be held in 2022*

- The Maiden Edition of IEEE Delhi Section International Conference on Electrical, Electronics and Computer Engineering IEEE DELCON-2021 (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/54057) during 11th-13th February 2022 at NSUT, New Delhi, India to be in virtual

mode (and having Conference website: https://www.delcon2021.com/)

- INDIACom - 2022 16th INDIACom; 2022 09th International Conference On Computing for Sustainable Global Development (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/54597) during 23rd – 25th March, 2022 (03 Days) at Bharati Vidyapeeth, A-4, Paschim Vihar, Rohtak Road, New Delhi – 110063, India (and having Conference website: http://bvicam.ac.in/indiacom/)

- 1st International Conference on Sustainable Technology for Power and Energy Systems 2022 (STPES 2022) (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/54789) during 11-15 April 2022 at NIT Srinagar and at IIT Jammu, India (and having Conference website: https://nitsrinagar.yawun.com/)

- Com-IT-Con-2022: 2ndInternational Conference on "Machine Learning, Big Data, Cloud and Parallel Computing: *Trends, Perspectives and Prospects*" (https://conferences.ieee.org/conferences_events/conferences/conferencedetails/54601) during May 26-27, 2022 at Department of Computer Science & Engineering, Faculty of Engineering & Technology, Manav Rachna International Institute of Research and Studies (MRIIRS), Faridabad, Haryana-121004, India (and having Conference website: https://manavrachna.edu.in/comitcon/)

Under consideration

- 9th India International Conference on Power Electronics (IICPE – 2022) during 29th September-1st October 2022 at Chandigarh, India (and having Conference website: www.iicpe2022.com)

- 3rd Edition of International Conference on Computing, Analytics and Networks (ICAN 2022) during November 18-19, 2022 at Chitkara University, Rajpura, Punjab, India (having Conference website: https://chitkara.edu.in/cse-can/)

- 4th International Conference on Artificial Intelligence and Speech Technology (AIST-2022) during 9-10th December 2022 at IGDTUW, Delhi, India (and having Conference Website: https://www.aist2022.com/)

- 2022 IEEE 10th Power India International Conference (PIICON 2022) (Under the aegis of IEEE PES-IAS Delhi Chapter as well as IEEE PELS-IES Delhi Chapter) during November 25-27, 2022 at National Institute of Technology Delhi, India (and having Conference website: www.piicon2022.com)

## MGA Awards and Recognition

Prof. Prerna Gaur received Outstanding Branch counsellor Award

Section too received UD$3,000 under Large Section Category from R0 for its all-round activities

## Slate recommended for the Section Executive Committee in 2022

| S. No. | Name & Affiliation | Position |
|--------|--------------------|----------| 
| 1. | Prof. Rachana Garg (DTU) | Chairperson |
| 2. | Prof. Abdul Q. Ansari (JMI) | Exec Vice Chairperson |
| 3. | Prof. M. N. Hoda (BVICAM) | Vice Chairperson |
| 4. | Dr. Rajnish Sharma (Chitkara University, Punjab Campus) | Secretary |
| 5. | Dr. Manpreet Kaur (Manav Rachna) | Joint Secretary |
| 6. | Dr. Sneha Kabra (DU) | Treasurer |
| 7. | Prof. Prerna Gaur (NSUT) | Past Chairperson |
| 8. | Mr. Ajay Goel (Altran) | Member |
| 9. | Prof. Mahesh M. Bundele (Poornima University, Jaipur) | Member |
| 10. | Prof. Jasdeep Kaur Dhanoa (IGDTUW) | Member |
| 11. | Dr. Chjakradhar C Reddy (IIT Ropar) | Member |
| 12. | Mr. Vijay K. Dutt (ex-Railways) | Member |
| 13. | Dr. Shruti Jain (Jaypee Univ., Waknaghat) | Member |
| 14. | Dr. Rashmi Agarwal (JC Bose Univ. of Sc. & Tech) | Member |
| 15. | Prof. Mayank Dave (NIT Kurkshetra) | Member |
| 16. | Mr. Archit Goswami (Co at Gurgaon) | Member |

## Report on "Industry-Academia Collaboration with Focus on Research and Innovation" WORKSHOP-1 & 2

Industrial Relations Committee, IEEE Delhi Section is delighted to submit the report on two R10 IRC sponsored theme workshop entitled "Industry-Academia Collaboration With Focus on Research & Innovation", emphasizing towards Innovations around Applied New Age Technologies (Like AI, ML, IOT) and 'Innovations around Power and Energy Sector' in two workshops that helped the participants in analyzing barriers and new opportunities thus bridging the gap between academia and practical understanding.

The events were sponsored by the Region 10 Industry Relation Committee chaired by Mr. Sanjay Kar Choudhary, Industry Relation Committee, IEEE Delhi Section, leagued with the IEEE ComSoc, PES-IAS, PELS-IES Delhi Chapters, Consultants Network AG Delhi Section, IEEE Kolkata Section, and IEEE UP Section.

The aim of two workshops was to hear the perspectives & views from the Academia & Industry Leaders on the current state, issues & challenges, to look at the success stories of collaboration on Research & Innovation, to learn/implement the same, figure out ways to identify research projects by Academia that are relevant for industry and chart out the future course of action for collaboration.

These workshop, as envisaged by Delhi Section, were designed with the utmost importance to the theme & key takeaways for both the Academia & Industry Leaders. These aimed to append one's research knowledge and bridge the gap between academia and practical understanding.

These workshops presented the Keynotes, Panel Discussions and success stories with following details:
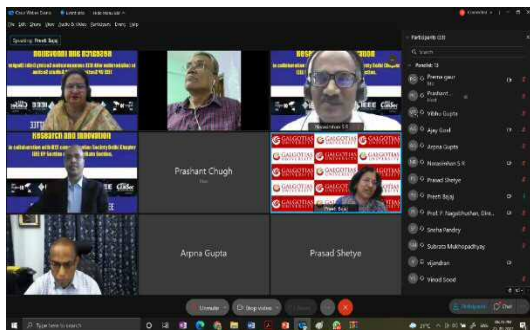
|  | Keynote speakers |
| --- | --- |
| Workshop-1 | Aloknath De, SAMSUNG |

| 25th September'21<br><br>Theme: Innovations around Applied New Age Technologies (Like AI, ML, IOT) | Dr P Nagabhushan, IIIT Allahabad |
| --- | --- |
| Panelists for Panel Discussion | Speakers for Success stories |
| • Mr Sujit Guha, TCS<br>• Mr Vinod Sood, Hughes<br>• Mr Prasad Shetye, Capgemini<br>• Dr J Ramkumar, IIT Kanpur<br>• Dr Sushmita Mitra, Chair IEEE Kolkata Section<br>• Prof. Krishna Sirohi, IIT Delhi | Dr Preeti Bajaj, Vc, Galgotia Univ<br><br>Dr Vijendran G V, Bosch |

|  | Keynote speakers |
| --- | --- |
| Workshop-2<br><br>20th November'21<br><br>Theme: 'Innovations around Power and Energy Sector' | Dr Pankaj Mittal, Chairman AIU |
| Panelists for Panel Discussion | Speakers for Success stories |
| • Mr. Sanjay Kar Chowdhury, Chair-IRC-R-10<br>• Prof Bhim Singh, Professor, IIT Delhi<br>• Prof S N Singh, Prof IIT Kanpur<br>• Mr Meenu Singhal VP, **Schneider**<br>• Prof Subrata Mukhopadhyay, Adjunct Faculty NSUT | Mr N Rajagopal, TCS |

An interactive Q&A section was also planned so that the audience can make most of the knowledge and experience of our esteemed speakers.

The inauguration ceremony were organized in the presence of Mr. Deepak Mathur (R-10 Director) Mr. Sanjay Kar Chowdhury (Chair-R-10-IRC), Dr. HL Bajaj ( Past R-10 Director), Dr Suresh Nair (Chair, India Council), Dr Debabrata Das (Chair Elect-India Council), Dr Zia Ahmad and our collaborating section heads Prof Rachana Garg, Prof. Sushmita Mitra, Prof Satish K Singh, Mr. Prashant Chugh( hair Com-Soc, Delhi Section), Prof. Sukumar Mishra (Chair, PELS-IES Delhi Section) and Prof Subrata Mukhopadhyay (Chair Consulting Networks).

The workshop 1 was attended by 85 IEEE Members from Industry and academia and workshop 2 was attended by 50 IEEE members from Industry and academia.









The organizing Committee:

Prof Prerna Gaur- Chair IRC Delhi Section (Academia)
Mr Ajay Goel- Chair IRC Delhi Section (Industry)
Mr Prashant Chugh- Member IRC and Chair Com Soc Delhi Section
Dr Narasimhan- Member IRC Delhi Section
Ms Sneha Pandey, Student volunteer, Chair IEEE NSUT SB
Mr Gagan Singh, Student Volunteer, NSUT, SSR Delhi Section

Mr Vibhu Gupta, Student Volunteer, Vice-Chairperson, IEEE-NSUT
Ms Apana Gupta, Nagaro

Prof. Prerna Gaur
*Co-Chair, Ad-hoc Committee on Industry Relations, IEEE Delhi Section*
November 28, 2021

### A Review Article on Academy-Industry Collaboration in Research and Innovation in Infrastructure Sectors, such as, Power, Telecommunications, etc.

*Based on contemporary articles published and having more than FIVE decades of journey with a bit over two decades in academia as Teacher, & Educational Administrator, and a little less than three decades as Practicing Engineer, & Technocrat, Section ECC (Subrata Mukhopadhyay) will like to express something as follows.*

Well as I see, academia has engagement in multi-task in order of possible preference

- Teaching-Learning (involving students heavily)
- Research (alone and / or with Research Scholars)
- Industrial Consultancy (again alone and / or in a group)

15

On the other hand, broadly, industry is engaged in goods and services encompassing manufacturing and well being of quality products during their useful life and process to which these are used or otherwise.

Then what for is this collaboration?

For due explanation, let us look at the scenario on various aspects.

- Industrial demand and supply on personnel front
    o Developing new engineering curriculum to satisfy industrial needs by the newly graduating students, increasing competitiveness as well as adapting to socio-economic demand.
    o Professional accreditation and engineering association too may matter for this.
    o In this context very often it arises, which is definitely fact and cannot be denied is that low exposure of academic community to industrial environment (very often due to lack of focus on this aspect by the academia in their organization).
    o Increasing University-Industry relation has mutual positive effect.
    o Interaction by means of development of final degree projects, master degree dissertation, doctoral thesis is highly desirable.
    o It is aimed at increasing synergies around students, academic and members of the industry that results in high degree of satisfaction among participants.
- Indian context
    o India being a developing country as well as populous country, typical requirement of infrastructure may not be the same as the advanced nations.
    o Technology may be the same, but its application

very often may be different even from the point of population to be served combined with the heritage, tradition, etc., as observed from time to time.
- Teaching-Learning process
    o For Engineering (and for a few other fields too) improvement in curriculum over the time is a basic necessity in this competitive world for progress of the nation.
    o Research without application and / or not for any direct or indirect benefit of society-at-large is meaningless.
    o Similarly making of industry-ready, employable graduate as per demand of industry should be the root-cause of motivation behind the concerned initiative.
    o Due to knowledge bank, academia can or rather should take the lead to devising the roadmap in the relevant field of technology, be it for topic, area or alike for the industry to target for production as well as service to be rendered for humanity.
- Role of IEEE and other Engineering professional Bodies at National and international level
    o Relating to IEEE, one can see its proactive role.
    o It can serve the purpose of connecting industry and government Organizations to its vast resources, e.g., IEEE Standards, IEEE Xplore, etc.
    o It can connect University / Institute to an industry or a Government Organization for collaborating research or service project.
    o It can support technology entrepreneurship activities.

- o It can organize / co-organize networking events.
- o It can promote mentorship program.
- o It can facilitate industrial employee training program such as refresher courses for Practicing Engineers on relevant areas of research.
- Research
  - o University research can play a critical role in explanation of ideas involving user-interface design.
  - o Toward this industry and academy can always work together – sometime working well and sometime at cross-purposes complementing each other.
  - o Academic atmosphere can give support, instruction, and a nurturing environment to the early search engines.
  - o Without academic search it would be quite different.
  - o Search engines would have landed on the technology arena without the University, but most often University research must play a critical role in the explanation of ideas to complete the mission.
  - o Academia generates and tests ideas through the medium of graduate students, professors, grants, and proto-type experimentations.
  - o Industry would scale ideas that work into fully operational systems on real-life issues and problems.
  - o Thus no one sphere of research holds a lock on novel ideas or innovations, but mutually there is profit by having relationship allowing ideas and resources to go hand-in-hand to

achieve result-oriented research.
  - o It is more so due to increased competition and globalization facing to join to enhance impact of the research conducted.
  - o Collaboration between academia and industry with different views may make it difficult to manage and hence it needs awareness and skills to meet different expectations.
  - o Under such circumstances industrial and academic perspectives are to be oriented toward development of action to explore how the impact can be enhanced to influence key factors in the research process.
  - o Phases of the problem formulation, methodology, and results are to be managed critically for the successful collaboration; otherwise, counter-productive forces could dilute the progress over time considering that very often combining practical relevance and scientific rigour may face challenges.
  - o High pace of changes may lead to need for new competences and skills to avoid obsolescence.
  - o Mobility of scientific competence from academy to industry enables latter to absorb and utilize knowledge developed in academia.
  - o As a result, several practice-oriented methods have been developed over the years, such as –
    - ▪ Action Research
    - ▪ Collaborative Research

- - - Collaborative Management Research
  - Interactive Research
  - Cooperative Inquiries / Research
  - Engaged Research
  - Even much talked Collaborative Research may be far from easy to manage, and academia continues to address questions how to involve practitioners.
- Key factors in the research process for enhancing impact under Collaborative Research
  - Collaboration with industry is critical for academia to create scientific knowledge and obtain industrial data.
  - In turn, collaboration with university is crucial for industry in joint, scientific-based research projects in order to develop solutions for production-sourced problems.
  - While entering research project expectation of the combination, not only to an academic audience, but also to organization where the problem exists, makes participatory research a suitable approach.
  - Collaborative research may have three phases – designing, conducting, and publishing in terms of linking theory, practice, and collaboration capturing differences while sustaining collaboration and managing quality.
  - Mutual trust and relations must exist among person and organizations involved.
  - Motivation to conduct co-creative research is triggered by the results and values that have been generated from earlier research or from people seeing the potential for new collaboration.
- Conceptual co-created model again may be based on three phases –
  - First it is formulating a common problem that both academic and industrial representatives are interested in from their respective perspectives.
  - Funding and resources phase is important in securing involvement and participation in the research from both industry and academia.
  - In the collaboration work phase, actual research needs to be conducted collaboratively demanding relevant research methodologies and management.
- Goal of collaborative research may be generation of knowledge that is of value to the participants and society-at-large.
  - Challenges may be that practitioners and researchers develop a discrete understanding separately, each needing the other in generation of shared understanding.
  - The fact that researchers investigate a topic important or of interest to practitioner does not necessarily mean that the researchers are to apprehend what the topic means to practitioner and vice versa.
  - Both the parties may work to different timescales, objectives, reward systems, perceptions, and they understand practice of each other differently.
  - Each has to train and educate other both to think

and to apply that thinking systematically and even creatively to the design, running, and improvement of operations.

- o Collaborative relationship may contribute to better access to important processes, more valid data compared to traditional research.
- o Scientific knowledge that does not make required contribution seriously hinders University-Industry collaboration.
- o If University is not creating knowledge to solve industry problems, industry will have less regard for the knowledge provided by the University.
- Impact must be clear and can be narrated as –
  - o Influence (technical / scientific / practical)
  - o Memorable (lasting experience, measurable outcome)
  - o Practical (integrating knowledge about the practitioners)
  - o Actionable (connection based on authenticity)

- o Co-created (through learning-driven collaborations)
- o Transformation (create new ones with further possibilities)

Thus, to summarize with both Industrial and Academic Perspectives overseen, action is to be oriented toward

- Problem formulation
- Methodology
- Results

Considering

- Reflections of time
- Views on knowledge
- Driving forces and rewards
- Power dynamics in organization
- Communications

## IEEE DELHI SECTION MEMBERSHIP STATISTICS AT A GLANCE

IEEE Delhi Section has as per **latest (December 02, 2021)** statistics **4848 active Members** (*including* **30 Society Affiliates**), consisting of **0 Honorary Member, 7 Life Fellow, 6 Fellow, 29 Life Senior, 552 Senior Member, 6 Life Member, 1515 Member, 30 Associate Member, 692 Graduate Student Member, 1980 Student Member, 1 SA.**