IEEE REGION 10 CONNECT
THIRD EDITION 2022
# IEEE REGION 10 CONNECT

**THIRD EDITION 2022**

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Dear IEEE Colleagues,

We are already in the middle of the 3rd quarter of 2022. There have been many activities carried out in the Region, be it by the Region or by local organizational units. Two Region 10 flagship events were successfully carried out in recent weeks; the 2022 IEEE Region 10 Symposium (TENSYMP) in July, and the 2022 Region 10 Student, Young Professionals, Women in Engineering and Life Members Congress (SYWL) earlier this month.

TENSYMP2022 was organized in hybrid mode from 1st to 3rd July 2022 at the iconic Victor Menezes Convention Centre (VMCC), Indian Institute of Technology (IIT) Bombay, India. With the chosen theme of “Technologies on the horizon for the benefit of humanity”, the symposium attracted more than 400 paper submissions, of which 276 papers were accepted for presentation at the symposium. You can read the full report on TENSYMP 2022 hosted by the Bombay Section in this newsletter issue.

After successfully conducting the event virtually in 2020, the SYWL Congress is back to physical mode this year, hosted by the Seoul Section on the beautiful island of Jeju, Korea. Under the excellent leadership of General Chair Cheon Won Choi, the individual Chairs of Region 10 Committees of Students Activities, Young Professionals, Women in Engineering, and Life Members, together with a very dedicated organizing committee, all worked extremely hard to prepare and organize the Congress from 11th to 14th August 2022. The congress was a tremendous success, attended by 133 delegates from 31 Sections in the Asia Pacific region. The congress featured many well-known speakers and arranged many sessions and activities that are beneficial to the members and volunteers. We also took this opportunity to have the first physical R10 ExCom meeting in over 2.5 years, in conjunction with congress. A full report on SYWL Congress 2022 will be published in the next newsletter issue.

We will hold two more flagship events this year. The 2022 IEEE R10 Humanitarian Technology Conference (R10HTC) will be hosted by the Hyderabad Section from the 16th to 18th of September, while the 2022 IEEE Region 10 Conference (TENCON) will be hosted by the Hong Kong Section from 1st to 4th of November. Please give your full support to these events as well as other events and activities planned by the Region and your local Section and Chapters.

As we are returning to pre-COVID times, I encourage you to be diversified and think beyond the boundaries of your own Student Branch, Chapter, Section, and Region to collaborate, learn and broaden your horizons to create more opportunities to learn. I look forward to working with you to further the mission and vision of IEEE.

Wishing you and your family lots of happiness, health, peace, and joy.

Best regards,

Deepak Mathur
IEEE Region 10 Director
Dear Region 10 Members,

It is my pleasure to welcome you to the third edition of IEEE Region 10 Connect for 2022. This edition continues to feature exciting reports and articles from members and organizational units across Region 10. These include reports on IEEE TENSYMP 2022, Region 10 Director’s recent visit to Australia, and video interviews with 2023-2024 IEEE Region 10 Director-Elect candidates, Prof. Takako Hashimoto and Dr. Michael Ong.

Our Know Your R10 Volunteers and Know Your R10 Organizational Units columns continues to feature exciting R10 personnel organizational units. In this edition, we have four more volunteers and four more organizational units featured in the respective columns for your reading pleasure. Our technical column features an article by CESC Limited, a fully integrated power utility company, on their work in adopting artificial intelligence and machine learning in predicting underground HT cable faults. Activities and events reporting from various Sections, Affinity Groups, and Student Branches, as well as a compilation of current calls for awards nominations and conference calls for papers, round up this newsletter issue.

My utmost appreciation goes to the newsletter team: Prashant, Tridibesh, Bee Theng, Redwan, Wathmini, Garima, Naila, Nabeel, and Vaishali. My appreciation also goes to all the content contributors, without whom, this newsletter issue would not have been possible. I hope you will enjoy this latest edition of the IEEE Region 10 Connect. As always, you can reach us at r10-ecn@ieee.org if you have any comments or suggestions to share with us regarding the newsletter.

Thank you and kind regards,

Mohammad Faizal Ahmad Fauzi
Chair, IEEE R10 Newsletter Committee

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IEEE Region 10 Symposium 2022 (TENSYMP2022)
9th January 2022, Virtual Meeting
Satyanarayana Bheesette, Chair for IEEE Bombay Section and General Chair for IEEE TENSYMP2022

Bombay Section has successfully organized TENCON1989, the flagship conference of the Regional 10. Attended by more than 3000 delegates from across 29 countries, it was simultaneously organized in three top hotels in, then, Bombay. The conference organizational standard TENCON1989 has set can be gauged by noting that those were the non-internet snail mail days!

Inspired by this rich legacy, the Bombay Section has successfully bid to organize TENSYMP2022. The Section was grateful to IEEE Region 10 for trusting us to host another one of its flagship events. The Symposium was organized in hybrid mode from 1st to 3rd July 2022 at the iconic Victor Menezes Convention Centre (VMCC), Indian Institute of Technology (IIT) Bombay, India.

The chosen theme of the Symposium was “Technologies on the Horizon for the Benefit of Humanity”. The topics of the Symposium included Sensors and IoT Applications in Health and Agriculture; Antenna, Microwave, and RF Engineering; New Engineering and Technologies for Electric Vehicles; Technologies at Work for Natural Disaster and Pandemic Mitigation; Signal Processing and Machine Vision; Low Power VLSI Devices; Circuits and Systems; Power Electronics and Systems; Renewable Energy Technologies; Technology Enablers for Industry 5.0 and Automation; AI and Blockchain Paradigms for the Changing World; Novel Education Technologies in the New Normal; and Humanitarian and Social Impacts of Technologies.

One of the unique features of this edition of TENSYMP is the design of a special logo for the event. The logo very creatively incorporates the R10 geography along with motifs that represent the diverse Indian culture as well as prominent landmarks of the venue city, Mumbai. A very informative and up-to-date web page (https://www.ieeebombay.org/tensymp2022/), multiple WhatsApp groups, and a user-friendly payment gateway have provided efficient communication and a pleasant experience for the Symposium authors and participants.

The Symposium was immensely benefited by the distinguished panel of the International Advisory Committee as well as the Technical Programme Committee (TPC) consisting of well-known experts of international repute in various domains as
listed in the topics above. In response to the Call for Papers (CFP), about 640 papers were received covering original research, advances, and emerging applications on state-of-the-art topics. EDAS was used as the integrated conference management platform. Out of the 404 papers considered for review, 276 papers were accepted (68.3% acceptance rate) for presentation after a thorough review process by about 500 specialist track chairs and reviewers of the respective tracks. In all, about 550 participants attended the Symposium. Manuscripts of 238 authors who presented their papers are going to be submitted to Xplore for publication.

TENSYMP2022 has been very proactive in encouraging young student authors to publish original research papers. 17 registered IEEE student first authors of meritorious papers were awarded grants to cover their TENSYMP2022 conference registration fees. Similarly, eight travel grants were awarded to student authors of meritorious papers to present their research work at TENSYMP2022. Further, to encourage the poster presenters, four best poster awards – two each among the physical and virtual presenters, were also declared.

The technical program of the Symposium was comprised of four keynote talks by eminent personalities and eight invited talks by practicing researchers of the Symposium tracks. Besides, four tutorial sessions by industry and academia leaders were organized especially for the benefit of younger participants and students. Finally, the Symposium program was also comprised of R10 and IEEE tracks such as IEEE Standards, Life Members Committee, and Industry Relations Committee, besides an Industry track by MathWorks.

The Symposium had a great start with the inaugural event graced by Dr. Suresh Nair (Chair, India Council), Prof. Yashwant Gupta (Centre Director, NCRA-TIFR and TPC Chair, TENSYMP2022), and Prof. K.V.S. Hari (IISc Bengaluru) and their very inspiring and motivating addresses. The highlight of the inaugural session was a video message by Prof. K. J. Ray Liu (President and CEO, IEEE), in which he shared his views on the vision for IEEE and exhorted that IEEE must be all our professional home.

The keynote talks were delivered by Prof. K.V.S. Hari (Indian Institute of Science, Bengaluru, India, and Vice President-Membership, IEEE Signal Processing Society) on “Sensing and Signal Processing for Autonomous Navigation Applications - Case Studies”, Prof. Ashok Jhunjhunwala (President, IITM Research Park, IITM Incubation Cell and RTBI, India) on “Moving India Towards Net-Zero”, Dr. Anthony Butler (Professor and Head Department of Radiology, University of Otago, Christchurch, New Zealand) on “Colour X-ray for Medicine” and Prof. Sanghamitra Bandyopadhyay (Director, Indian Statistical Institute, Kolkata, India) on “AI in Healthcare”. 
The invited talks were delivered by Prof. Rahul Banerjee (Director LNMIT Jaipur) on “A Blockchain-Enabled Trustworthy Intelligent Advisory System Architecture for Assisting Sports Coaches”, Prof. Amit Prakash (IIIT Bangalore) on “Embedding Inclusion in Technology Designs: Some Cases, Some Reflections”, Prof. Shriganesh Prabhu (TIFR Mumbai) on “Tera-Hertz (THz) Spectroscopy: Recent Trends”, Prof. Anil Prabhakar (IIT Madras) on “Empowering People with Assistive Devices”, Prof. Chirag Paunwala (Dean R&D, Sarvajanik College of Engineering & Technology, Surat) on “Early Diagnosis of Dyslexia based on EEG”, Dr. Satya Gupta (CEO, EPIC Foundation & President, VLSI Society of India) on “Making India a Semiconductor Nation”, Prof. Sandeep Anand (IIT Bombay) on “Role of Power Electronics in Renewable Integration” and Mr. Bikash Chandra Mallick (Chief Engineer, Thermal Project Renovation & Modernization, CEA) on “Carbon Net Zero and Sustainability”.

The tutorial sessions were organized by Dr. Arun Agarwal on “MIMO-OFDM and Channel Coding Techniques for 5G Networks”, Dr. Jayant Joshi on “Wearable and Flexible Antennas for Wireless and Mobile Communication Systems”, Dr. Mayuri Mehta on “The Increasing Role of AI and Explainable AI (XAI) in Healthcare” and Dr. Deepak Waikar on “Integrated Multidisciplinary-Holistic Engineering Education: An Alternative Pragmatic Perspective”.

And finally, the IEEE track sessions were conducted by Mr. Sri Chandra and Mr. Subramanian Chidambaram (IEEE Standards), Mr. R. K. Ashthana, Prof. Juzer Vasi and Mr. R. Muralidharan (R10 LMC track), Mr. Sanjay Kar Chowdhury (R10 IRC track) and Mr. Ramana Anchuri (Industry track).

The oral and virtual poster contributions were scheduled in 33 parallel sessions, besides a physical poster presentation. Besides the experienced session chairs who provided excellent guidance to the presenters, the energetic and efficient student volunteers, serving as session secretaries and technical experts have provided an excellent contribution to the success of the Symposium. A special mention must be made to the Bombay Section student volunteers for their outstanding contributions to every aspect of the Symposium, which has made a big difference to its outcome.

One of the biggest spin-offs of the TENSYMP2022 was a special initiative called the “Student-Expert Interaction Program: DISHA”. The objective of this initiative was to provide a platform for discussions and interactions between expert invitee speakers with school children of low-income schools to inspire, encourage and motivate them towards STEM education and careers. About 50 students attended the interaction sessions by two of the invited speakers (Profs. Rahul Banerjee and Anil Prabhakar) at the conference venue and were full of questions to the experts.
The valedictory function too was concluded on a high note with Mr. Deepak Mathur (R10 Director) as the Chief Guest. He appreciated the outstanding efforts of the Bombay Section in organizing the Symposium in spite of all the difficulties and uncertainties, such as the prevailing Covid-19 pandemic, and severe monsoon, to name a few. He also informed us about various opportunities which are now available at the Region level for the growth of the young volunteers. Finally, Mr. Mathur has also announced that the Australian Capital Territory (ACT) Section will host the TENSYMP2023. So, it is bye-bye, Bombay, see you in Canberra!

Special Tributes to Prof. Byung-Gook Park
We miss Prof. Byung-Gook Park very much, as he was our very good friend through many IEEE activities. He was a dedicated IEEE volunteer, served as Seoul Section Chair 2014, Region 10 Secretary 2017-2018, Region 10 50-Years Celebration Coordinator 2017, Region 10 Strategic Planning Committee Chair 2019-2020, MGA Strategic Planning Committee member 2019, MGA Sections Congress Coordinator 2020, Region 10 Vice Chair for Membership Activities 2021-2020, and many others. He was a candidate for the 2023-2024 Region 10 Director-Elect.

We all know his sincere working style; he was friendly but doesn’t waste a lot of time talking, and he gets the jobs done in time. His work is reliable, and so he was a very important member of our Region 10 Executive Committee. We would like to follow his great passion and dedication in our IEEE volunteer work and in our daily life. He will always be in our hearts. I heard that he had a heart attack. I actually had a heart attack in February this year. I guess the good die and the unimportant survive in similar circumstances. We all miss him very much. May his soul rest in peace. My sincerest condolences to his family and loved ones.

- Akinori Nishihara, Tokyo Institute of Technology, Region 10 Past Director 2019-2020

Prof. Byung-Gook Park worked with me as R10 Secretary from 2017 to 2018, and he was a person who was thorough in everything and always prepared ahead of time. Thanks to him, I was able to serve as Director. The big events we held were the R10 AGM in Tokyo in March 2017 and the IEEE Sections Congress in Sydney, which was the 50th anniversary of Region10.

He must have been busy with his research as an IEEE Fellow, but he was sincerely doing everything in Region10 with all his heart. Even after the 2018 TENCON conference, he devoted his time to events with attendees in Seoul and IEEE President Jim Jefferies’ visit to Seoul National University.

Professor Byung-Gook Park was truly a person who pursued his work without speaking much, was loyal to the group he belonged to, and showed meekness and consideration for others.

I miss Prof. Park.

- Kukjin Chun, Region 10 Past Director 2017-2018

Prof. Byung-Gook Park was not only a great scholar academically, but he was also respected as a human being. He is remembered as a perfect person with a gentle and warm personality, who puts all his heart into even the smallest things. Although he is not here, his soul and spirit will remain in our hearts and will be remembered. Rest In Peace.

- JeongYon Shim, IEEE Region 10 Seoul Section WIE Chair

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REGION 10 UPDATES
I met Prof. Byung-Gook Park for the first time on 13th January 13, 1996, which is 26 years ago now. I still remember that time when I was a high school student who applied for Seoul National University and met him as an interviewee. While conducting the entrance verbal test, he coached me to answer with more proper electrical terminologies and physics having a very warm smile on his face. I wanted to enter the university so that I could meet him. The dream came true soon.

After taking some undergraduate courses with him and completing military service, I joined his lab and spent 6 years getting a Ph.D. degree. I wanted to go with him wherever he went, not just for conferences and events, but also along the ways of his thinking and attitudes to work, research, electrical engineering, and people including students and colleagues.

I believe that he was a person of great affection for humans and had paved less traveled roads. The last place in which I saw him have reached was IEEE. Several years ago, he thought about being promoted to an IEEE Fellow to be more responsible for IEEE. He asked me for the initial nomination letter for the procedure although he had famous researchers and engineers as his colleagues, which had me recollect the modesty and humbleness that he had always pursued. He wanted to make contributions to IEEE Region 10 and IEEE societies through his services and make the betterment in daily lives of unknown people through his teaching and research. I have been really happy with him since my twenties, and I am still happy in memory of him. I miss him so much.

- Seongjae Cho, Senior Member, IEEE Seoul Section, Associate Professor at Gachon University

I met Prof. Byung-Gook Park for the first time when I was the Chair of the IEEE Malaysia Section in 2017 and he was the Secretary for IEEE Region 10, and we worked together to host the IEEE TENCON 2017 in Penang, and the IEEE Region 10 Annual General Meeting 2018 in Langkawi, Malaysia. He was always very easy to work with, and the news of his passing was met with huge sadness. My sincerest condolences to his family and loved ones.

- Mohammad Faizal Ahmad Fauzi, IEEE Region 10 Newsletter Chair

I treasured the times working together with Prof. Byung-Gook Park. His pleasant, soft-spoken, and kind-hearted character will always be in my memory. His contributions will never be forgotten, and his gentle demeanor will be missed.

- Ewell Tan, IEEE Asia Pacific Office
Visit by Region 10 Director to Australia

4th – 11th July 2022

Lance Fung, IEEE Region 10 Director-Elect

Amidst his busy schedule, Region 10 Director Deepak Mathur visited four Australian Sections from 4th to 11th July 2022. He was accompanied by Region 10 Director-Elect, Lance Fung, for a series of meetings with Section Officers and leaders at Perth (Western Australia Section), Townsville (Northern Australia Section), Sydney (New South Wales Section), and Canberra (Australian Capital Territory Section).

On 4th July 2022, and upon his arrival, an evening Meet and Greet with Western Australia (WA) Section officers and members was held at the Camfield, outside Optus Stadium. It was an occasion for participants to interact in an informal and friendly environment. On 5th July, a Breakfast Meeting with Section Past Chairs and Section Officers took part at the Botanical Café, King Park. This meeting gave the Region Director the opportunity to discuss the issues and challenges faced by the Section. He then visited Curtin University and met Professor Ahmed Abu-Siada (who was the Interim WA Section Chair), and colleagues, Professor Arindam Ghosh and Dr. Ehsan Pashajavid, who updated the Region Director with further information.

After an overnight flight from Perth to Townsville, Deepak and Lance were met by Professor Janina Mazierska (R10 Director, 2007-2008), and Dr. Zia Ahmed (R10 Vice Chair, Technical Activities), followed by a quick tour of Townsville. An evening Meeting with Northern Australia (NA) Section Officers was held at James Cook University. Deepak gave an overview of R10 while A/Prof Mostafa Rahimi Aghadi presented operations and projects from the NA Section. Assistance for small sections for participation in regional events was discussed and suggestions were made. Prior to departing from Townsville for Sydney, a working lunch was used to discuss strategic planning for R10 in the coming years with experienced advice and knowledge from Professor Janina Mazierska.
On 8th July, the New South Wales (NSW) Section held the IEEE UNITE 2022 at Mercure Sydney Hotel. It was a successful event with over hundreds of participants who attended five parallel streams on Professional Development, Multidisciplinary, Electrical, Sensors & Smart Cities, and Communications & Computing. Deepak and Lance presented a session on "Maximizing Professional Development Opportunities with the IEEE". The UNITE program featured speakers from industries, academics, professionals, researchers, students, and IEEE Fellows. This was followed by NSW Awards Ceremony, student posters, and cocktail dinner. The event was very well organized. Dr. Sasha Nikolic, Chair of the UNITE 2022, and members of the organizing team deserve the credit and appreciation for their hard work and efforts!

Following an early flight from Sydney to Canberra on 9th July, Deepak and Lance participated in a Tree Dedication Ceremony at the National Arboretum Canberra. The event was organized by Australian Capital Territory (ACT) Section Chair, Ambarish Natu, and the dedication was made to "IEEE Members and volunteers, whose passion is to thrive for technological excellence to serve humanity, in the presence of Shri Deepak Mathur, Institute of Electrical and Electronics Engineers, Region 10 Director, 9 July 2022". The event was also attended by Fouad Karouta (past ACT Section Chair), Russell Gentle (ACT Section Treasurer), Hieu Nguyen and Thien Troung (ACT Section Committee members), Vicki Brown and Julie Long (ACT Children’s Week), and Michael Matthews (Canberra Convention Centre).

During the visit to Canberra on 9th and 10th July, arrangements were also made by the ACT Section Chair to visit the Mount Stromol Observatory, NASA Deep Space Communication Complex, as well as the Australia Parliament House where the banquet for the 2023 IEEE R10 TENSYMP will be held. The excellent and fruitful arrangements were greatly appreciated by Deepak and Lance.
Within the short period of six days, it has been a productive and meaningful visit for the Director and Director-Elect. Not only the opportunities to meet members and volunteers, but the interaction with past Region Director and R10 Vice Chair on discussions, planning, and exchange of ideas in a face-to-face environment is what has been missed out in the virtual environment during the past two years. It is hopeful that the gradual restoration of the pre-pandemic environment will start a new phase of growth and activities within IEEE Region 10 in the near future.

Interviews with 2023-24 IEEE R10 Director-Elect Candidates

Lau Bee Theng, Editor for IEEE R10 Newsletter Committee

With the 2022 IEEE Annual Election around the corner, R10 Newsletter Editor, Prof. Lau Bee Theng interviewed the two IEEE Region 10 Director-Elect candidates, Prof. Takako Hashimoto and Dr. Michael Ong for their mission and plan for Region 10.

https://www.youtube.com/watch?v=_51uK-Ov4Y

https://www.youtube.com/watch?v=g755UYTE7J4
Life Members Committee

Rajendra Asthana, Chair for IEEE R10 LM Committee

Region 10 Life Members Committee (LMC) organized several activities this year:

**LCM Meet**
The first Region 10 LMC Meet was organized on 20th March 2022, which was attended by all 8 Committee Members. R10 Director, Mr. Deepak Mathur inaugurated the meeting. He highlighted that Region 10 today has 6 Councils and 60 Sections, and is the largest Region in IEEE. Region 10 has several affinity groups such as Young Professionals (YP), Women in Engineering (WIE), Consultant Network (CN), and Life Members (LM). Region 10 has 43 milestones, exceeded the Senior Member Elevation target in 2021, and NSW Section will celebrate its 50th Anniversary this year. Region 10 bi-annual SYWL Congress is being held from 11th to 14th August 2022 at Jeju Island, South Korea. He also highlighted the contributions of 150 volunteers in various R10 Committees.

The second R10 LMAC meet was organized on 12th June 2022 which was attended by all 8 Committee members. The committee deliberated on SYWL Congress, LMC and Region 10 awards and contests, Life Member tracks in R10 flagship conferences (TENSYMP & HTC), anniversary celebrations by R10 LMAGs, etc.

**LMAG Meet**
The first LMAG meet of the year was organized on 26th March 2022. 15 LMAG Chairs and R10 Director, Mr. Deepak Mathur attended the meeting. Participants deliberated on issues like the constitution of LMC 2022, LMC and R10 awards, expenses report filing procedure for individuals as well as Section/LMAG reimbursements, anniversary celebrations by R10 LMAGs, LM conferences as well as issues faced by LMAGs.
**Life Member Awards**
LMC launched the following new awards in 2022 for each IEEE Region.
- Regional LMAG Achievement Award (1 for each Region)
- Regional Life Member Individual Service Award (1 for each Region)

The call for the nomination was issued on 1st March 2022 with the closing date of 15th April 2022. Based on nominations received, the following are awardees from Region 10.

- Regional LMAG Achievement Awardee is Delhi LMAG (Certificate plus USD500 for future LMAG Activities)
- Regional Life Member Individual Service Awardee is Dr. Harbans Lal Bajaj, LF, LMAG, Delhi (Plaque)

**Region 10 SYWL Congress**
IEEE Region 10 Student, Young Professionals, Women in Engineering, Life Members (SYWL) Congress 2022 was held in Jeju Island, South Korea from 11th to 14th August 2022. The venue for the congress is Shinhwa World Marriott Resort, Jeju, South Korea. The theme of this year’s congress is “Sound and Young Influence for World Leading”. The congress started at 1300 on 11th August 2022 and close at 12 Noon on 14th August 2022. Three sessions of 2 hours each are planned for LMs. Two sessions are organized on 12th and 13th August 2022. LM sessions include LMAG Meet for R10 LMAGs and invited/technical/industrial talks. Details can be accessed at the SYWL Congress website [http://sywl2022.ieeer10.org/](http://sywl2022.ieeer10.org/).

**New Initiatives**
1. Introducing Life Member Track in Region 10 flagship conferences. To start with, the LM track is planned for R10 TENSYP held in Bombay from 1st to 3rd July 2022 and the R10 HTC Conference at Hyderabad from 16th to 18th September 2022.
2. Anniversary celebrations by LMAGs on completion of 5, 10, 15 & 20 years. LMAGs at Delhi and Nagoya are planning anniversary celebrations during October 2022 along with IEEE Day.
3. Induction of YPs into the Life Member Committee of Region 10 will be a great experience for both YPs and LMs.

**Other Updates**
1. Region 10 Life Member Coordinators meet was held on 12th March 2022 for Sections/Council not having LMAGs.
2. New LMAGs were formed at the Australian Capital Territory Section on 23rd March 2022 with Dale Siver as Chair, and Daejeon Section on 10th June 2022 with Hyeong Ho Lee as Chair.
3. Up to May 2022, 63 activities are organized by R10 LMAGs.
R10 Volunteer – Mallellu Sai Prashanth

[Hyderabad Section]

2021 R10 EAC & SAC Outstanding Volunteer

M. Sai Prashanth became an IEEE member in 2009 and has been actively contributing as an IEEE volunteer since. He is a Computer Science Engineer who graduated from Vardhaman College of Engineering, Hyderabad. He has worked as a blockchain developer at Tech Mahindra, Hyderabad, and presently pursuing his master’s degree from the same university and has been driven in passion to appear and crack the civil services examinations. For him, IEEE is an opportunity, which it provided enormous learning and commendable volunteer opportunities in Region 10. He scaled through various roles including the Student Branch Chair of IEEE Vardhaman SB and Section Student Representative of IEEE Hyderabad Section, on his path to the responsible position of Computer Society Regional Student Ambassador for Region 10. His exemplary volunteering and leadership bestowed him with the prestigious IEEE R10 SAC Outstanding Volunteer Award, IEEE R10 Educational Activities Outstanding Volunteer Award, IEEE Education Society Student Leadership Award, IEEE R10 YP Revol Winner, and IEEE MGA Member-Get-Member Winner (first in R10 and first at the Section in recruiting more members since 2020-2021 and with a cash prize of USD1000).

He is presently volunteering as YP Representative of IEEE Education Society BOG and Deputy Chair, IEEE WICE Comsoc. He volunteered as a Webinar & Training Coordinator, IEEE R10 Student Activities Committee, IEEE Collabratec Coordinator IEEE R10 SAC, and Technical Coordinator of the IEEE R10 Talk Webinar Series. He also contributed as Vice-Chair, IEEE India Council Student Coordination Team 2021 and also held the responsibility as Section Student Representative of IEEE Hyderabad Section and also being part of the Student Network Team, IEEE Hyderabad Section (2019-2021). He was the Chair for IEEE Vardhaman College of Engineering (SBC02391), Chair for IEEE Vardhaman College of Engineering Computer Society Chapter, Chair for IEEE Vardhaman College of Engineering Education Society Chapter, and IEEE Vardhaman College of Engineering Robotics and Automation Society, and has been the IEEE Collabratec Coordinator under IEEE R10 SAC in spreading the word and main motto of IEEE Collabratec and IEEE Students community across the Section in various events and student branches. For his outstanding leadership abilities as an organizer and volunteer, the Vardhaman College of Engineering IEEE Student Branch awarded him with an outstanding volunteer for excellence in the year 2021. He has also been actively engaged in startup hackathons, codeathons, and the Idea Pitching

KNOW YOUR R10 VOLUNTEERS
sessions in India. He is an active, ambitious, enthusiastic, and passionate leader who continuously strives to work toward the betterment of the community.

Sai Prashanth always believes that without leaps of imagination and dreaming, we lose the excitement of possibilities. IEEE is a form of planning to organize events, engage in volunteering, acquire knowledge, and work on community outreach projects that make the prospect more precious. He has been selected as the Global Nominee of the NASA Space Apps Colombo Hackathon to represent India in International NASA Space Apps Challenge. He presented his start-up idea ‘REJOLT’ in the NextGen student Entrepreneurship Challenge and received third place in India. It is a student-teacher-friendly platform, where the students can access courses and internships using chatbots that involve AI and Python. He was the runner-up in the start-up hackathon 2020 organized by the center for innovation and entrepreneurship and Asia Inc 500. He has received the ICT Student Innovator award from the government of Telangana for the project titled ‘D.N.A Fountain’. He has received the Pitch Innovator award by the Atal Innovation Mission, NITI Aayog for the incubation title, "Technology for Social Impact” organized at the International Institute of Information Technology, Hyderabad.

One of the major contributions of Sai Prashanth towards IEEE and humanitarian activities is the "AI-Enabled Chat Bot", a new initiative established towards fighting against COVID-19. Sai Prashanth initiated and lead this project under the IEEE Vardhaman Student Branch, IEEE Hyderabad Section, and funded by IEEE R10 Student Activities Committee (R10 SAC). The “AI-Enabled Chat Bot” is an open-source project launched to help the health sectors in India by providing interaction facilities with doctors/patients, generating disease prediction rates, and providing e-prescriptions. The “AI-Enabled Chat Bot” has been very useful during the COVID-19 lockdown to support society in ensuring their safety and fraternity. In recognition of his efforts, Sai Prashanth was one of the invited speakers at the "Role of Humanitarian Projects" organized under the IEEE MGA Virtual Speaker Bureau where he shared his experience executing humanitarian projects under IEEE R10. He was invited to IEEE R10 SYWL Congress 2020 to share his experiences working with "AI-Enabled Chat Bot". The “AI-Enabled Chat Bot” stood among the top 5 selected projects in R10 and among the top 3 selected projects from India, under the Special Call for Covid-19 projects organized by IEEE R10 SAC. The “AI-Enabled Chat Bot” initiative was also featured in the IEEE R10 Newsletter as well as at the India Council Newsletter. Sai Prashanth has been the lead and mastermind behind this project and the reason for its successful accomplishments.

Mr. Sai Prashanth has been an active volunteer for IEEE India Council for the past 4 years focusing on member engagement. He extended his endless support by volunteering for the All India Computer Society Student Young Professionals Congress 2019, in publicity and registration domains, where he demonstrated exceptional leadership abilities and teamwork. He was in the core team of All India Student Young Professionals Women in Engineering and Life Member Congress 21, as an intimate support for the whole team and played his role in the successful execution of hybrid congress and received special appreciation from the IEEE India Council. He was on the core team of All India Student Young Professional Women in Engineering Congress 2021, where he led and demonstrated his abilities working with a multicultural team.

He volunteered for IEEE India COVID Move Challenge, organized under IEEE India Council in collaboration with Hyderabad, Pune, UP, Bangalore Sections and contributed selflessly and dedicately to IEEE activities during the pandemic time. As the Student Chapter representative for IEEE TEMS India, he organized more than 20 activities to connect all the student members and professionals globally under one TEMS community. He also served as social media team lead (2020) focusing on collaboration within Chapters & Student Branches across the 12 sections of IEEE India Council and bringing them under a single platform. As a result of his dedicated work, he has been elected as the Vice-chair of IEEE India Council Student Coordination Team 2021. He is the only India Council delegate at global-centric IEEE entrepreneurial events. Prashanth was awarded the IEEE India Council Outstanding Student Volunteer award 2019, for his exemplary roles and initiatives at his Student Branch, Hyderabad Section, and India Council.
Prashanth is an active humanitarian and a very enthusiastic social worker. For the past four years, Prashanth has conducted many IEEE membership-driven activities as a Student Network member in the Hyderabad Section, especially increasing the awareness of IEEE Membership benefits in collaboration with Section, India Council, and R10. He helped Student Branches in creating opportunities for student membership development and retention in the Section, by which in 2021 the student member count has reached above 5000. As part of membership development initiatives, he established 30 new student branches and more than 100 new Student Branch Chapters across the Hyderabad Section. As a student network member, he organized numerous technical webinars, code contests, and hackathons under IEEE Hyderabad Section, and Student Activities Committee in collaboration with other Student Branches and Chapters.

He pioneered organizing over 200 events during the COVID-19 pandemic which include major events like IEEE R10 MDLT Summit-Hyderabad, IEEE AISYWLC’21, and IEEE WIE ILS Nagpur. Among his impactful initiatives, IGEN 2020 an IEEE R10 MDLT Summit-Hyderabad is worth highlighting which articulated the technological leadership in students. Most of the events he volunteered for and/or spearheaded involved boot camps, workshops, technical training, and meetups that helped students to upgrade skills in staying industry-ready. He organized various global collaborative events with eminent speakers like Susan Kathy Land, Deepak Mathur, Leila De Floriani, Elisa Barney, and IEEE MGA SAC Committee Members (Hossam Ali, Adil Usman), IEEE R10 Committees, and India Council Leadership Team, where in total over 6,000 participants were reported globally. Mr. Sai Prashanth Mallellu has been elected as the Section Student Representative for 2021 of IEEE Hyderabad Section for his innovativeness and intellectual initiatives, and for creating impact over the past two years serving in the Student Coordination team of his Section in various roles and leading numerous activities. All his services made him win IEEE Education Society Student Leadership Award in 2021.

“I would advise anyone to maintain focus because IEEE is a huge ocean. Not all options are for you. But you must be wise enough to pick the right ones that come your way. Once you’ve taken something, try to do your best. Try to give your all when you take on something. Be the best, not the second-best; aim to be the best. Always be prepared to put forth more effort than everyone else on the team. That’s what motivates you to go above and beyond. Never forget that helping others is greater than being grateful. Try giving back to the community, whether it may be knowledge or your teamwork.” - Sai Prasanth

R10 WIE Volunteer – Maheshi Dissanayake [Sri Lanka Section]

Sri Lanka Section Chair 2021-2022, Sri Lanka WIE Chair 2020, R10 WIE Committee Member 2019-2020

Dr. (Mrs.) Maheshi Dissanayake (Ph.D.), a Senior Member of IEEE, started her IEEE journey in 2011 and has been actively contributing as an IEEE volunteer at the University of Peradeniya Sri Lanka, the Central Region Subsection of Sri Lanka, the Sri Lanka Section as well as at the Region 10 level. She got her first taste of IEEE and its widespread volunteering services during the IEEE R10 Student/GOLD/WIE Congress 2011 held in Auckland, New Zealand. This event introduced Maheshi to the then R10 WIE coordinator Prof. Takako Hashimoto and with her close guidance, Maheshi was able to establish the first WIE Student Branch.
The IEEE WIE Sri Lanka Section was formed at the invitation of Prof. Supavadee Aramvith, the then R10 WIE coordinator, at the R10 SYW Congress 2015 held in Colombo, Sri Lanka. Since Maheshi pioneered this initiative, she was invited to serve as the first chairperson of IEEE WIE Sri Lanka from 2015 to 2016 for a two-year term. During her tenure, the WIE membership in Sri Lanka grew rapidly. The Student Branch AG members from different universities were given the opportunity to collaborate with each other at WIE Sri Lanka activities. She inspired not only the student members but also the general membership, to accept challenges and grow within to reach great heights in IEEE and beyond. Over the past decade, she successfully spearheaded and delivered highly impactful member engagement and empowerment activities within as well as outside IEEE Sri Lanka, with a special focus on WIE membership. She has exhibited a keen interest and commitment to nurturing potential future female leaders of Sri Lanka through her engagement with IEEE WIE Sri Lanka. Besides membership development activities, one of her major contributions to IEEE WIE Sri Lanka has been the establishment of the 1st International Women in Engineering Symposium (WiESymp) in 2020, which has now become an annual event of the WIE Sri Lanka Section.

Maheshi has served on the executive committee of the IEEE Sri Lanka Section in various capacities including as the Section Chair. She served as the Assistant Treasurer (2010-2011) and Assistant Secretary (2012) of the IEEE Sri Lanka Section, and the Treasurer (2012 - 2013) of the IEEE Central Region Subsection of Sri Lanka. Her pinnacle of volunteering with IEEE was achieved in 2020 by being elected as the Chair-Elect of IEEE Sri Lanka. Being the first female chairperson of IEEE Sri Lanka, she served her term in 2021. Maheshi, as the Chair of IEEE Sri Lanka, was instrumental in introducing major and challenging initiatives which include the initiation of the graduate 3 Min Thesis (3MT) Competition with the scope of increasing graduate member engagement, tri-lingual TechNarrator with the scope of the dissemination of knowledge in local languages, IEEE member benefit programs to enhance membership growth and a comprehensive member recognition program under IEEE Sri Lanka Section awards to recognize the volunteers and their service. She regularly and actively collaborates and communicates with Student Branches in Sri Lanka through guest talks and various other engagements. During her term in office, she took active leadership in promoting senior membership among the eligible members, while making others aware of the process. The Section received the Gold Award at IEEE Outstanding Section Membership Recruitment and Retention Performance for 2021, reflecting the success of these member engagement activities.

Maheshi has served in Region 10 Educational Activities subcommittee (2016) and WIE subcommittee (2019-2020) as well as in the IEEE Global HAC Communication Subcommittee (2020). She has served as an organizing committee member and TPC Member of many IEEE conferences, and as a reviewer in IEEE journals in the area of molecular communication and image processing. Dr. (Mrs.) Maheshi Dissanayake received the B.Sc. Engineering degree with First Class Honours in Electrical and Electronic Engineering from the University of Peradeniya, Sri Lanka, in 2006, and the Ph.D. in Electronic Engineering from the University of Surrey, the United Kingdom in 2010. Since 2013, she has been a Senior Lecturer with the department of Electrical and Electronic Engineering, Faculty of Engineering, University of Peradeniya. She has been a visiting research fellow at King’s College London from 2015 to 2017. Her research interests include error correction codes, robust video communication, molecular communication, machine learning in communication networks, deep learning for video/image analysis, and biomedical image/clinical data analysis.
R10 YP Volunteer – Aishwarya Bandla [Singapore Section]

Dr. Aishwarya Bandla, trained in electrical engineering and biomedical engineering, is passionate about developing patient-centric technological solutions and translating health technology to positively impact patient care. She leads a research group working towards wearable and digital health solutions for supportive care in cancer. She was named in inaugural Singapore’s 100 Women in Tech list 2020, which celebrates women who have made significant contributions to tech in Singapore and for their ability to influence, inspire and impact on community and industry.

An IEEE Senior Member, Aishwarya's volunteering journey started seven years ago with the IEEE Engineering in Medicine and Biology Society's (EMBS) Singapore Chapter which she currently chairs, and the IEEE Women in Engineering (WiE) Singapore affinity group. During her term as the Chairperson of WiE Singapore (2019 & 2020), Aishwarya and her team designed and launched a range of activities themed under three pillars – WiE Tech, WiE Mentor, and WiE Network. One such initiative that she fondly remembers is the ‘WiE Singapore Networking Nights’. As envisioned, this initiative brought together engineers, technologists, and tech enthusiasts from academia, industry, start-ups, and government organizations to interact and engage on a variety of topics. This series of events amongst others led to WiE Singapore being recognized as the 2019 Best Chapter by the IEEE Singapore section.

Passionate about mentorship and paying it forward, Aishwarya and colleagues, as part of the R10 WiE executive committee (2021 & 2022) conceptualized and developed 'MentorHer' - a first-of-its-kind mentorship program at the regional level. 'MentorHer' connected IEEE students and young professional mentees to senior IEEE professionals as mentors and was very well received. This idea stemmed from a WiE Leaders discussion which she chaired as part of IEEE R10 SYWL Congress 2020. The program was designed to also include a mentorship toolkit and went hand-in-hand with ‘We as WiE’ - a professional development talk series that was also co-developed by Aishwarya and her dear friends of the R10 WiE team. Look out for the upcoming ones!

Aishwarya adds that IEEE can be an excellent sandbox for professional and life skill development. In 2021, she was invited to Chair the IEEE Singapore Section’s Professional Activities. Aishwarya initiated ‘Re-Engineer’, a series of leader-led discussions on professional skills and emerging technologies. This was an effort to share with her fellow volunteers the avenues to hone qualities such as leadership, empathy, a growth mindset to embrace diverse perspectives, and an attitude of continuous learning.

Aishwarya cherishes the fact that volunteering with IEEE has connected her to a lovely network of friends and mentors across the region, globally, and across disciplines. Being part of international leadership events, such as speaking at the WiE International Leadership Summit 2020, and helping organize the R10 Young Professionals Sparklers Summit 2021, CLAP 2021, and the WiE International Leadership Conference 2022, she says, were rich and brilliant experiences in teamwork and collaboration. She is also part of the first-ever EMBS Young Professionals ExCom which she says has been a memorable experience working with a brilliant team from across 5 countries and 4 continents.
KNOW YOUR R10 VOLUNTEERS

R10 Student Volunteer – Zheming Zhuang [Beijing Section]

Zheming Zhuang, the outreach coordinator of the IEEE R10 Student Activities Committee, became an IEEE member in 2017 and has been actively contributing as an IEEE volunteer since then. Zheming actively promotes Chinese students to participate in international academic competitions and volunteer services and has engaged with more than 30 Student Branches and hundreds of Chinese teachers and students. With his own experience, he dedicated himself to the ‘3I’ volunteer system and achieved great outcomes. As a result, he received the Chinese Student Best Practice award in 2018. 5 years as an IEEE member - especially as an active volunteer - has made a significant impact on his professional as well as personal life.

IDEA: In 2017, Zheming learned from IEEE China that IEEE has dozens of competitions for students, and the one he was most interested in was the Robotics Design Challenge. He gained enough basic knowledge through platforms such as IEEE Xplore, gradually formed creative ideas, and designed his first work. Completely new to the competition, Zheming only won the Silver Award. But through this experience, he learned how to make an excellent design. He then joined the team of Prof. Jian S. Dai, who is an IEEE Fellow, and started his journey of scientific research.

INNOVATION: Under the guidance of his tutor, Zheming successfully created practical products from his idea for the Robotics Design Challenge, and applied for 43 patents. In 2018, having enjoyed the fun of IEEE student activities, he took the initiative to apply for cooperating with the IEEE China Representative Office to organize the Tianjin University Robot Festival. He set up a competitive robot competition on the main track, and innovatively...
added robot-related posters, novels, and other peripheral product competitions, accumulating nearly 1,000 participants. Zheming set up a stage for students to integrate multiple disciplines and made the Robot Festival a common festival for students of Tianjin University. Organizing Tianjin University Robot Festival.

**IMPACT:** In 2019, Zheming started his work in R10 SAC and is responsible for contacting the Chinese Student Branches. He has actively promoted Chinese students to participate in international academic competitions and volunteer services and has engaged more than 30 Student Branches and hundreds of Chinese teachers and students. With his work, the performance of Chinese students in prestigious events, such as IEEE Xtreme 15.0, showed a significant increase. More and more Chinese students are getting involved with IEEE because of Zheming’s efforts.

"Where there is a will, there is a way. I believe we can make a great difference in the further."

- Zheming Zhuang (zhuangzheming@tju.edu.cn)
3. KNOW YOUR R10 ORGANIZATIONAL UNITS

R10 Large Section - IEEE Delhi Section

Rachana Garg, Chair for IEEE Delhi Section

IEEE Delhi Section, one of the largest Sections (geographically) of India, comprises 2 Subsections (Rajasthan and Chandigarh), 23 Technical Society/Council Chapters, 4 affinity groups, and more than 120 Student Branches/Student Chapters.

IEEE Delhi Section, which started on 13th May 1976 (after existing as a Subsection since 1974) presently covers the entire northern part of the country consisting of the four states of Rajasthan, Haryana, Punjab, Himachal Pradesh, and the National Capital Territory of Delhi, Union Territories of Chandigarh, Jammu & Kashmir and Ladakh.

A series of activities were conducted during the COVID-19 pandemic to keep the spirit of IEEE high and active. This year, the Delhi Section conducted 935 activities in the calendar year. A distribution table for a variety of activities conducted is presented below. Details of all these activities have been reported in vTools.

<table>
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<th>No.</th>
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<tr>
<td>6</td>
<td>Pre-U- Stem Program</td>
<td>04</td>
</tr>
</tbody>
</table>

IEEE R10 Director, Mr. Deepak Mathur has visited Delhi Section and interacted with the members of the Delhi Section ExeCom and LMAG ExeCom. He was very happy with the way the Section is progressing and has conveyed his best wishes to the Section.

Initiatives Taken:
- In line with INDICON and TENCON, Delhi Section organized the maiden edition of Section conference DELCON 2022 from 11th to 13th February 2022.
- The IEEE Delhi section has initiated industry awards since 2021 and this year one more category has been added.
- In line with IEEE guidelines, the Section now has a new logo.

Best Practices of the Section:
- Conducting regular ExeCom meetings and encouraging all subsection/chapter/standing committee chairs to report their activities through a template ppt format has helped Section leadership to keep track of the progress of the Section units.
- The section gives lots of emphasis on professional and continuing education activities and has organized 9 conferences.
- A series of measures were taken to ensure that the membership count keeps on increasing throughout the year. Student Branches are encouraged to organize membership drives in their institutes to increase the membership count. The Section holds IEEE Day along with Student Branches at their institutes to increase their visibility by providing funds for organizing these activities.
To retain the student members, the Section provides various incentives like partial funding to attend the All India Student/YP/WIE Congress (AISYWC) and R10 SYWL Congress.

The Section has also initiated student awards, namely Dr. J K Pal Memorial Award, Outstanding Student Volunteer Award, Outstanding WIE Student Volunteer Award, and Outstanding Branch Counselor Award. One of the criteria for these awards is the duration of their student membership.

In line with IEEE’s 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 society. It is aimed at bringing overall life into their daily routine, which not only facilitates connecting them closer to the technology but also helps them, to the extent possible, to be closer to the mainstream. A large number of activities were conducted in 2021 to support COVID19 victims.

To further increase the reach of the Section, IEEE Delhi Section supports and participates in the activities jointly organized by IEEE along with sister societies IETE and IEI.

Other Achievements:
- 2021 R10 Women in Engineering Outstanding Student Volunteer Award has been bagged by Virendra Pratap Singh from Delhi Section
- 2021 R10 Young Professionals UpSkill | Delhi Section won the award
- 2021 MGA Achievement Award was bestowed upon Rajendra Kumar Asthana from Delhi Section for outstanding efforts in developing innovative strategies, and improving engagement and growth of Life Member Affinity Groups in Region 10
- Prof. Prerna Gaur, Immediate Past Chair of the Section got an award for Outstanding Branch Counselor.
- Prof. Mayank Vatsa from IIT Jodhpur was elevated to the position of Fellow for contributions to secure biometric recognition
- The conference Leadership Program organized by R10 was attended by volunteers from the standing committee (Technical and Professional activities).
- The Section has been recognized for meeting both its recruitment and retention goals for the 2021
- The Section has also received USD3000 as an incentive from R10 for activities held between October 2020 to November 2021.
- The Section has won many awards/projects from IEEE MGA, R10, and India Council.

R10 Council – IEEE Australia Council

Daniel Eghbal, Chair for IEEE Australia Council

The Australia Council was established on 30th May 1986 following the formation of state-based sections in New South Wales, Victoria, Western Australia, and Queensland. IEEE Australia Council celebrated its 30th anniversary on IEEE Day in 2021 with a great panel of keynote speakers followed by face-to-face networking events hosted by the Queensland and Western Australia Sections.

Australia Council conducts the following activities on behalf of its constituent Sections:
- Facilitate collaboration among Australian Sections,
- Promotes IEEE through national activities,
- Establish collaboration between IEEE and other national professional organizations,
- Establish member benefit programs focused on local products available to members in Australia,
- Supports Australian Section hosting major IEEE conferences,
- Acts or responds on behalf of the Australian Sections as required from time to time.

During the Region 10 annual meeting, Australia Council executive committee set up a plan for the coming year. This meeting was disrupted by COVID-19 travel restrictions and was held virtually. In 2022, the executive committee met face to face in Brisbane with some members joining online to discuss strategic activities that the council should take to maximize the benefits to members.

Following the successful rollout of a member benefit program by the Western Australia Section, Australia Council established a member benefit program with two Australian partners; private health insurance...
KNOW YOUR R10 ORGANIZATIONAL UNITS

years. Being a unique event of its kind, it brings together the leadership from 10 IEEE Sections across Australia and New Zealand, as well as two Regional Councils. This event will help to reinvigorate the Young Professional sections in South Australia and across Australia and New Zealand. ANZSCON is an event wherein engineering students and young professionals can meet with each other and network with local industry and academic leaders. The event runs for two days and covers a wide range of activities, from technical talks to workshops, and networking opportunities. This year, IEEE South Australia Section will host the 2022 ANZSCON at the University of Adelaide on 1st and 2nd October 2022 and look forward to welcoming students and young professionals to Adelaide - further details are on the website https://attend.ieee.org/anzscon-2022/.

Facilitating collaboration among Australian Sections is one of the key objectives of the Australia Council. Australia Council established the Women In Engineering (WIE) forum as a platform for WIE volunteers to collaborate and coordinate events and major conferences. The forum contributed significantly to the successful delivery of the 2018 IEEE Women In Engineering International Leadership Summit (WIE ILS) in Brisbane. Victoria Section is hosting the 2022 WIE ILS on 4th and 5th August 2022 in Melbourne. This event is an opportunity for the professionals to tap into the world’s largest technical professional organization and network with influential speakers and leaders in their field from industry, government, NFP, and academia both at a local and global level. Please contact Sudha.Mokkapati@Monash.edu for more information.

IEEE NSW UNITE2022 is a unification event of all chapters, affinity groups, and members. New South Wales Section established UNITE in 2018 and was repeated in 2019. Unfortunately, due to COVID19, the event was canceled in 2020 and 2021. This event unites all NSW IEEE Members (students, Young Professionals, Women In Engineering, Life Members, Academia & Industry, etc.) in one place with free food, exhibits, technical talks, professional development workshops, and networking with a goal of making the most from IEEE. Discover the latest trends, discover opportunities provided by the various IEEE societies, discuss membership elevation options, engage with TISP, and much more! UNITE is FREE for IEEE Members and is a way for the NSW Section to provide its members with a valuable service in recognition of the fees paid.

With COVID-19 restrictions being lifted gradually across Australia, Sections have been organizing more face-to-face events that also support online participation. On 10th March 2022, IEEE Northern Australia Section hosted a face-to-face event in Townsville, QLD. The event was also made available online, for the
talk entitled "Plasma applications old and new: Arc welding, wire-arc additive manufacturing, and ammonia production", by De Tony Murphy, Chief Research Scientist, Leader, Materials and Process Modelling, at CSIRO. This talk was well received and attended by 50 participants from IEEE and James Cook University and was the Northern Australia Section’s first face-to-face event in 2022.

On the evening of 5th May 2022, Western Australia Section held a networking event at the Pan Pacific Hotel, Perth. The event introduced the incoming committee of the WA Section to IEEE members and non-members and provided a welcome opportunity for members and non-members to network and meet each other in person, which was welcomed by all in the current pandemic climate. The executive committee members are Mr. Harry McDonald (Chair), Ms. Jacquiline Thomas (Vice-Chair), Mr. Vijay Kumar (Treasurer), and Mr. Hossein Dehghanitafti (Secretary). The WA Section Chair gave a presentation detailing the current committee volunteers, where the WA Section is headed for 2022, and asked for additional volunteer support, which was well received.

IEEE Brac University Student Branch has been devotedly contributing to technological breakthroughs for the benefit of humanity while carrying the torch of IEEE’s goal to the highest degree of professionalism. The IEEE Brac University Student Branch has functioned exceedingly hard to establish itself as one of the most remarkable branches in Bangladesh Section, Region 10, and beyond. It has grown into one of the most active and engaged student organizations at Brac University. BRAC University (BracU) established in 2001 is located in the heart of Dhaka city, Bangladesh. The 2019-2020 and the following 2020-2021 sessions have been really thrilling for the branch, with so many possibilities and accomplishments, despite the global COVID-19 upheaval. It would not have been possible without ExCom’s positive energy and the student members’ unwavering commitment. The pandemic indeed slowed down our regular lives at some point, but our spirited student members didn’t fall behind. They retained their excellent work and tremendous dedication throughout the trying times.

R10 Student Branch – IEEE BRAC University Student Branch

2020 IEEE Regional Exemplary Student Branch
Md. Abrar Hossen Faiyaz, Chair for IEEE Brac University Student Branch
The IEEE Brac University Student Branch began its adventure on 6th July 2008. The IEEE Brac University Student Branch was founded by a dynamic EB panel comprising undergraduate students and extremely motivated advisors. The branch is committed to achieving surprising accomplishments in the upcoming years. IEEE BracU SB encourages new members to join by organizing a large membership campaign on campus, as well as encouraging current members to renew their membership. The program is managed by dedicated student volunteers who use presentations and films to explain and demonstrate the global relevance and benefits of becoming a member of the IEEE Student Branch and its student chapters. Regardless, all university faculty members (lecturers, professors, teaching assistants, and research associates) are encouraged to promote the benefits of IEEE membership. The campaign also manifests IEEE posters, leaflets, and board designs to draw more new members. In 2019, IEEE BracU SB had the highest retention rate. 2020 and 2021 are just the continuation of the previous year by maintaining the highest number of IEEE Members which are 283 and 271 respectively. It is expected that this figure will continue to rise in the following years.

IEEE Brac University Student Branch has four successful chapters running under its wings. IEEE Power and Energy Society (PES) BracU SBC started its journey on 7th October 2018. Accordingly, IEEE Computer Society BracU SBC started on 9th April 2019, IEEE Robotics and Automation Society BracU SBC on 27th May 2020, and lastly, IEEE Aerospace and Electronic Systems BracU SBC on 8th June 2021. In the upcoming years, the SB aims to introduce three more societies within the branch which are the IEEE Oceanic Engineering Society (OES), IEEE Communications Society (ComSoc), and IEEE Signal Processing Society (SPS). The IEEE Brac University Student Branch is actively involved in organizing scientific seminars, webinars, and competitions. The Student Branch also strives to achieve the organization’s scientific, educational, and professional objectives. The branch has invested much in its professional seminars, workshops, and boot camps in order to enthral students with engineering challenges and help them find the finest solutions. With this purpose in mind, the IEEE Brac University Student Branch hosted webinars on a variety of engineering topics, including data science, traffic control algorithm development, PCB design, and system design, among many others. In addition, the IEEE Brac University Student Branch hosted activities focusing on the technical aspects of their study. The SB also actively participates in the IEEE Day celebrations. The 2nd National CanSat Competition, Satellite Expedition Contest, DORCHESTRA: An Online Video Contest on Informational Documentary & Promotional Advertisement, and DATACON 1.0, were the successful events organized in the previous years. Last year, the SB invited Prof. Saifur Rahman to the University to congratulate him on becoming the 2022 President-Elect of IEEE.

Previous awards received by the Student Branch include:
1. Winner of IEEE Regional Exemplary Student Branch Award 2021
2. Winner of IEEE Regional Exemplary Student Branch Award 2020
3. Richard E. Merwin Student Scholarship, Fall 2020, received by Zawaril Munshad Abedin, Former Vice-Chair, IEEE CS BracU SBC
4. The Darrel Chong Student Activity Award (Bronze Category): Satellite Expedition Contest, Brac University, STB66551, Bangladesh Section, Region 10.
5. MGA Achievement Award 2015 for initiating and leading the successful IEEE volunteer-led project received by the Counselor Prof. AKM Abdul Malek Azad.
6. IEEE SIGHT USA funds were approved for a technical project of BracU CARG (Bangladesh) SIGHT.

Please follow us here to stay up-to-date with the SB activities: ieee.bracu.ac.bd (Official Website)
KNOW YOUR R10 ORGANIZATIONAL UNITS

Technology (RIT) Student Branch has made a mark for itself over the years. From being a part of various inter-SB IEEE programs to hosting our own events, the SB has come a long way. In 2013, IEEE RIT SB was adjudged as the Best Student Branch. It is one of the oldest and most active Student Branches in the Kerala Section, consisting of five student chapters—IAS, PES, Computer Society, RAS, and recently formed SPS, and an affinity group—WIE. IEEE RIT SB has always believed in providing its student members with opportunities to develop and showcase their skills and research on higher platforms. The enthusiasm with which its members participate in various programs is awe-inspiring. This SB is sure to scale great heights in the years to come. With the help of its benevolent student chapters, IEEE RIT SB has made milestones by conducting virtual panel discussions which housed experts from various continents, and national events like AKIASSC ’22, REX 2.0, Urga 21, etc.

The SB’s STeM (Sanitisation-Temperature-Mask Detection System) has been one of the major achievements this year. It is a project approved under the IEEE Humanitarian Activity Community/SIGHT Projects 2021. STeM enables a system to automatically verify that everyone is wearing a mask properly. It also records their temperature and checks for any inconsistencies while ensuring that they are sanitized. The project was brought to successful completion through the joint efforts of the IEEE RIT Student Branch, IEEE RIT PES, RAS, IAS, WIE, CS Student Chapters, and the NSS RIT unit. It was implemented at RIT Kottayam, P.H.C. Pampady, Pampady Grama Panchayat and Govt. Higher Secondary School, Pampady. The project was implemented in seven phases, spread over 17 weeks, starting in August 2021.

Another remarkable event by IEEE RIT SB was the All Kerala Industry Applications Society Student Conclave 2022 (AKIASSC’22). IEEE IA/IE/PELS Joint Chapter Kerala and IEEE RIT SB jointly organized the AKIASSC’22 from 6th to 8th May 2022 at the Rajiv Gandhi Institute of Technology, Kottayam. With the goal of overall development of IEEE RIT SB Student Members, IEEE RIT IAS Student Chapter launched Urja’21 on 31st July 2022 at 05.00 PM virtually. The prime importance of the event was that it aimed to impart energy awareness among budding engineers, with the theme for the year is “Renewable Energy and Sustainability”.

The IEEE RIT Robotics and Automation Society Student Chapter, in association with IEEE RAS Kerala Section, conducted REX 2.0—the second edition of the month-long hybrid robotics specialization program to help students pursue their passion in the field of robotics and automation. The 3-day workshop conducted offline provided the participants who were from different parts of the state, with a transition from being a beginner to an advanced level in the field of computer vision and programming for robotics.

IEEE RIT SB has bagged several awards and accolades. Some of the recent achievements include:

- 2022 - Prof. Dolly Mary A has received the Outstanding Student Branch Counselor Award from MGA SAC
IEEE Regional Exemplary Student Branch Chapter Award
2021 - Third in global score in the IEEE PES High Performing Student Branch Chapter Program.
2021 - Two Bronze Positions in The Darrel Chong Student Activity Award for the RAS Chapter
  - Bronze position for Robotics Experience Program (REX)
  - Bronze position for ZEAL 2.0
2021 - In the IEEE IAS CMD Outstanding Awards 2021, the IAS chapter was awarded
  - Outstanding Student Branch Chapter Award
  - Outstanding Student Branch Chapter Chair Award for Nithin V M (IEEE RIT IAS SBC Chair, 2019-20).
  - Most Happening Chapter Award - Third Position
2020 - Prof. Anu George has received the Outstanding Student Branch Counselor Award for the year 2019 from the IEEE Kochi Subsection.
2020 - IEEE RIT SB has been awarded the Best Student Branch Award 2019 from IEEE Kochi Subsection.
CESC Adopts Artificial Intelligence & Machine Learning in Predicting Underground HT Cable Faults

Debashis U Banerjee, Managing Director (Distribution), CESC Limited
Arnab Kundu, Senior Executive, Business Intelligence & Analytics, CESC Limited

About the Company:
CESC Limited is a flagship company of RP-Sanjiv Goenka Group. It is a fully integrated power utility, with its operation spanning the entire value chain: from generation to distribution of energy. CESC is the sole distributor of electricity within an area of 567 square km of Kolkata and its neighboring areas, serving around 3.4 million customers, which includes domestic, industrial, and commercial users, and has been delivering safe, cost-effective, and reliable energy, since 1899. Recently, CESC has been presented with the coveted IEEE milestone for establishing the first commercial electric supply company in South Asia. CESC switched on the 1000kW thermal power generation plant at Prinsep Street in Kolkata on 17th April 1899. The event heralded the era of electricity in the Indian Subcontinent.

Defining the Problem:
To cater power to 3.4 million customers, almost 6800 circuit-km of High Tension (HT) (11/6 kV) distribution network is spread over the entire licensed area. This network consists of 1800 HT feeders emanating from 116 distribution stations, feeding around 1700 HT customers and 8500 distribution transformers, which in turn step down the voltage to 415/230V level to feed the low voltage customers. Hence, the HT distribution network plays a key role in maintaining the reliability of the distribution system.

In CESC, in order to have situational awareness and remote controllability, SCADA (Supervisory Control and Data Acquisition) system has been installed for the entire HT network. This system helps monitor the respective feeder loading in real time. Should any HT feeder becomes overloaded, an alarm is generated in the control room through the help of SCADA in real time. Depending on the load, the then network topology, and the available redundancy of the system, the HT field team relieves the overloaded feeder by reducing its loading, through suitable network reorganization, by shifting the partial load onto the adjoining HT network. This process helps in controlling the probable HT feeder tripping in the system due to the exceeding overloading thresholds of the particular protective relays installed for this feeder. In spite of all this precaution, it has been observed that there are several scenarios, in which feeder trippings take place in spite of the HT cables operating within their permissible loading limits/capacity, primarily owing to cable faults (either due to breakdown of HT cable insulation or discontinuity of the conductor inside the cable joint). Besides the overloading factor, many other factors (e.g. cable aging, cable surrounding conditions, weather, and external influences) also play a significant role in underground cable fault occurrence.
The Inspiration Behind the Solution-Exploration:
Random HT cable faults, spread across the license area, result in unavoidable short-term disruptions to the distribution system, causing inconvenience to the customers at large. Primarily, HT cable faults are being addressed in a reactive manner, so much so, that all efforts are focused on repairing the HT cable faults promptly the moment an HT cable fault occurs and the HT feeder trips, stopping the feeding of the fault and restoring the services fed from the tripped feeder, automatically. In our continued journey towards migration from a relatively reactive regime to a more proactive and predictive regime, a need was felt from within the organization to predict and hence pre-empt an HT cable fault, using contemporary statistical tools and techniques, further enhancing customer experiences.

Brief Solution to the Problem:
A cross-functional team (CFT), working on this issue, brainstormed to arrive at several factors influencing the tripping of HT feeders due to cable faults. Factors like deterioration of cable health due to aging, cable surrounding conditions, weather changes, and factors of external influences contribute to fault occurrences leading to an HT feeder trip. In such circumstances, it has become extremely important to find out the statistical interference of these influencing parameters towards a cable fault occurrence, so that preventive actions can be initiated or strengthened in order to increase system reliability. By analyzing the historical fault occurrence, we have zeroed in on 30 factors that have been found to be having moderate/strong co-relation with fault occurrence. Primarily, these factors encompass 4 broad categories: cable-related, cable surrounding-related, load-related & weather related as depicted in Table 1.

<table>
<thead>
<tr>
<th>Cable related parameters</th>
<th>Cable surrounding related parameters</th>
<th>Load related parameters</th>
<th>Weather related parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Length</td>
<td>Cable Depth</td>
<td>Maximum /Average Load</td>
<td>Variance in Temperature</td>
</tr>
<tr>
<td>No. of Joints</td>
<td>Parallel Cable Running or not</td>
<td>Co-efficient of Variation in Load</td>
<td>Max / Min / Mean Temperature</td>
</tr>
<tr>
<td>Average Length between 2 joints</td>
<td>Cable Disturbance</td>
<td>Peak Load Generation</td>
<td>Max / Min / Mean Humidity</td>
</tr>
<tr>
<td>Age of Cable</td>
<td>Road Traffic</td>
<td>Peak Load Duration</td>
<td>Rain Perception</td>
</tr>
<tr>
<td>Cable Size</td>
<td>Soil Condition</td>
<td>Peak Heat Generation</td>
<td></td>
</tr>
<tr>
<td>Cable Type</td>
<td>Frequency of Disturbances</td>
<td>Heat Dissipation Factor</td>
<td></td>
</tr>
<tr>
<td>Armour Condition</td>
<td>Health Score</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cable and its surrounding related parameters are only static parameters. However, load and weather-related parameters are the only dynamic parameters that vary daily. The limitation in the existing monitoring system in handling the dynamicity and finding the correlation of all these parameters simultaneously for accurate HT cable fault prediction necessitated the development of a dynamic statistical model for predictive analytics.

Approach Framework:
In the journey of transformation towards digital utility, we leverage contemporary technologies like predictive analytics using artificial intelligence (AI) & machine learning (ML). A predictive model is developed for Day-Ahead Fault Prediction. This model considers historical fault data (for the last 6 years) and associated parameters to trigger the suspected feeder in real-time. This hybrid model also handles historical weather and associated loading parameters for 1800 HT feeders (378 million data points) to forecast the feeder-wise day ahead loading pattern across 96 intervals in a day. These forecasted loads in turn feed the main component of the predictive model to generate the day ahead suspected feeder list. In addition to that, the output of the model is verified with the actual fault occurrence which feedbacks the model in a closed loop chain for further tuning of the model as a part of reinforcement learning. The schematic diagram of the entire solution is presented in Fig. 1. The major steps involved in the solution are described next.
Step I: Day-ahead load forecasting at 15-minute intervals for 1800 HT feeders

Load-related parameters are one of the crucial dynamic parameters which play a significant role in the core model of fault prediction technique. Hence, an accurate 15-mins interval load forecast of each feeder plays a key role in respect to the accuracy of the fault prediction model. From the load profile analysis, a seasonal trend can be observed in the time series data. Also, a repeated cycle of loading value is found to have a strong correlation with the seasonal variation in temperature, humidity, and rainfall.

Earlier significant studies had been performed on Short Term Load Forecasting (SLTF) for one hour to month-ahead load forecast since it has a high impact on the economy. Statistical method-based forecasting like exponential smoothing models (ESM), multiple linear regression (MLR), auto-regressive and moving average (ARMA) [1], artificial intelligence method-based forecasting like artificial neural networks (ANN) [2], fuzzy regression models (FRM), and support vector machines (SVM) are the most popular forecasting methods. A comprehensive review of models & techniques used in load forecasting is presented in [3,4]. As per [5], the VARMA model outperforms the standard univariate ARMA and Winters’ methods for time series forecasting.

In our problem, we have extended the univariate forecasting problem to multivariate time series forecasting. The feeder load and corresponding weather data are analyzed as correlative time series and are reconstructed to the multivariate phase space. We have deployed a multivariate vector-ARMA (VARMA) model for day-ahead 15-mins interval load forecasting of 1800 such HT feeders. The day-ahead load prediction of one such feeder with respect to the actual load is presented in Fig. 2. The day-ahead forecasted load of all HT feeders is used to derive the load-related parameters which have been used as input parameters for the fault prediction model, whereas the day-ahead weather forecast data is scrapped from the website and fed to the fault prediction model.
Step II: Day-ahead prediction of probable fault-prone feeders

The binary class dataset used for the fault prediction model suffers from a class imbalance problem since the count of faulty feeders is much less than healthy feeders. The decision trees do not require any prior assumption about the probability distributions addressed by the class and other significant discrete and continuous attributes [6]. Also, the accuracy of any decision tree is not affected by the presence of redundant attributes and outlier data. C4.5 decision tree classifier was chosen over the ID3 decision tree due to its higher accuracy & lower average CPU execution time [7]. We have used the J48 consolidated decision tree, implemented in Weka, an open-source data mining software developed by the University of Waikato in New Zealand [8]. J48 consolidated classifier is an implementation of the C4.5 decision tree algorithm [9] with a minor deviation in the knowledge extraction process [10]. The mechanism behind the knowledge extraction process is said to be built on the consolidated tree construction (CTC) algorithm [11] for providing better structural stability to the tree. The resampling technique used in the J48 consolidated decision tree also aids in equilibrating the class distribution problem.

Benefits

The fault prediction model equips the control room to take corrective actions based on the network topology and orientation of the HT feeders, suspected feeders in the system, the redundant capacity of reliever feeders, and other feasible factors, with 72% prediction accuracy. Also, the critical/essential services fed from the suspected feeders can be shifted to the healthy feeder. All of these preventive activities not only increase the system availability by improving SAIDI/SAIFI but also increase customer delight by avoiding service interruption for a large number of customers. In addition to the above, the Just-in-Time (JIT) approach for Operational Expenditure (OPEX), as well as Capital Expenditure (CAPEX) planning has been adopted for the underground HT cable network based on such data-driven insights/decisions.

References:


IEEE REGION 10 CONNECT
THIRD EDITION 2022

TECHNICAL COLUMN
Mr. Debasish Banerjee, the Managing Director (Distribution) of CESC Limited is an Electrical Engineer with proficiency in Business Management, having 38 years of rich and diverse industry experience. He commenced his professional career at Areva and moved on to Crompton Greaves and Schneider Electric, heading Business Operations in the Dealer, Industry & Utility domains. In his last stint as CEO of Reliance Energy, he contributed to improving Operational Efficiency and Optimizing Costs through Business Processes Reengineering & Automation, thus increasing the bottom line and customer delight. In his current capacity as MD (Distribution) of CESC, he has ushered in a transformational journey for leapfrogging CESC to newer heights of excellence with enhanced operational resilience and efficiency for effective business continuity during and after any crisis. The adoption of Industry 4.0 and sensor-based IoT along with Big Data Analytics and Immersive Technologies / Digital Twins has enabled the shift from preventive to predictive maintenance, thus making CESC more agile, customer-centric, cost-effective, and a digital utility of the future. Being a firm believer in the process of technology, he has also initiated the integration of various AI/ML-driven applications in key processes, thus transforming them into proactive edge-based decision-making. In pursuit of his passion to deploy cutting-edge technologies for radical change, he is constantly engaged in embracing disruptive technological innovations, for enhancing Customer & Employee Experience (CX & EX). Rapid deployment of digital platforms like ChatBot, WhatsappBot & unique vernacular VoiceBot embedded with AI/ML and NLL/NLP technologies has further enriched Customer Service delivery. He has been instrumental in demonstrating sustainability, which is one of the core values of CESC through Digitization & Decentralization for providing safe, cost-effective, and reliable electricity. He is engaged in developing a responsible and diverse value chain for powering a sustainable future & creating a positive societal impact for a better planet and people.

Mr. Arnab Kundu is a Senior Executive in the Business Intelligence & Analytics of CESC Limited, Kolkata. He is an M.Tech. in Computer Science from Indian Statistical Institute in 2016 & B.E. in Electrical Engineering from Jadavpur University in 2013. He is also the recipient of a gold medal for the best student project award from the Indian Statistical Institute in 2016. Currently, he is responsible for designing and implementing various Business Intelligence & Analytics projects, across the organization.
On 26th May 2022, the Australian Capital Territory organized a tour of the NASA Canberra Deep Space Communications Complex (CDSCC). CDSCC was built specifically to support interplanetary spacecraft exploring the solar system. Originally constructed in 1965 at the Honeysuckle Creek Tracking Station for the Apollo missions (and known by the designation HSK), this antenna has had an amazing history. The first human spaceflight mission it supported was Apollo 7 in October 1968. On 21st July 1969 (Australian time) this antenna received and relayed to the world the first television images of Neil Armstrong’s historic first steps on the Moon. The Honeysuckle Creek station was converted for use in NASA’s Deep Space Network after the end of the Apollo and Skylab programs, with the antenna given the new designation DSS-44. The antenna supported many missions, including those to Venus, Mars, Jupiter, Saturn, and the Sun, until the closure of the Honeysuckle Creek Tracking Station in December 1981. In 1983 the antenna was moved to its current location at Tidbinbilla, re-designated DSS-46, and modified to expand its capabilities for early launch acquisition (tracking a spacecraft after it has launched from the earth). The X-Y configuration and small dish size allowed it to move rapidly, making it ideal for tracking near-earth spacecraft. The antenna continued to support NASA and international missions studying the sun, earth, moon and planets in our solar system until its retirement from deep space service in December 2009. Each day the antennas are directed to receive or transmit data to any number of robotic spacecraft exploring our solar system and beyond. Around 40 space missions are currently being tracked from this station. This schedule is worked out months in advance by the mission controllers at the Jet Propulsion Laboratory in Pasadena, California USA.
IEEE Bombay Section

Event Report of IEEE Bombay Section

Arghya Mitra, Newsletter Chair for IEEE Bombay Section

IEEE Bombay Section SAC conducted its flagship bi-annual event "IEEE Bombay Section Students Congress 2022". The two-day event was held on 26th and 27th February 2022 on the Cisco Webex platform and was also live streamed on YouTube. Day 1 of the congress had sessions by prominent speakers Dr. Satyanarayana Bheesette, Mr. Krishnan Sundararajan, Mr. Chintan Oza, Mr. Vidyut Mohan, and Dr. Umar Zakir Abdul Hamid. The sessions ranged from autonomous vehicles, and green waste to market utilization and metaverse, to entrepreneurship and niche career opportunities for engineers. Day 2 of the congress witnessed insightful discussions on the future of AR-VR and robotics.

IEEE Teachers Congress was conducted from 25th to 27th March 2022 at Hotel Ibis Nashik. More than 60 Professors from 24 different institutes participated in this event. The theme of this event was 'Empowering Leadership Transformation'. This program was inaugurated by Deepak Mathur, IEEE Region 10 Director. B. Satyanarayana provided a thorough presentation on research fields, methodology, and financing prospects. Prof. B. N. Chaudhari discussed his significant expertise in the field of engineering education as a teacher and administrator. Dinesh Israni spoke about "Know your inner self and SWOT analysis" and 'Know your leadership style'. Sameer Karkhanis did a workshop on 'Team Building'. Abhay Phansikar spoke about 'Conflict management and the art of confronting them', Deepaq V. Vartak spoke about 'Self-branding and collaboration', Kiran Talele spoke on the various government schemes of funding for University Start-Ups and research, Kaustubh Dhargalkar trained on 'Design thinking', Ganga S spoke about 'Entrepreneurship', and the session ended with Mr. Anand Gharpure training on 'Difference between leader and boss'.

The IEEE EXECOM Induction meeting 2022 was conducted at the Royal Bombay Yacht Club in Mumbai on 23rd April 2022. B. Satyanarayana led the first session. Saurabh Mehta spoke on the organizational structure of the IEEE Bombay Section, as well as the many chapters, societies, and activities that are a part of it. Mr. Anand Gharpure presented the next session, which focused on IEEE's many volunteering tools. The final session was about accounting and procedure. Abhay Phansikar, Chair for AESS chapter, presented a quick review of section chapters at the end of the meeting. The meeting came to a close with a vote of gratitude to all of the attendees and closing remarks by Saurabh Mehta.

The Department of Electronics and Communication Engineering, VNIT, Nagpur organized the 1st International Conference on the Paradigm Shifts in Communication Embedded Systems Machine Learning and Signal Processing (PCEMS 2022) on 6th - 7th May 2022. PCEMS 2022 is a flagship VNIT conference, conceptualized by the Department of Electronics and Communication Engineering, VNIT. The conference was technically sponsored by IEEE Bombay Section. Mr. Sudheer Kumar N, Director of Capacity Building Program Office, ISRO, acted as the chief guest at the inaugural ceremony of PCEMS 2022. Prof. Emil Björnson of KTH Royal Institute of Technology, Sweden, Prof. A. N. Rajagopalan of IIT, Madras, and Prof. A. K. Ray, Padma Shri awardee and Ex-Director of IIEST Shibpur delivered keynote speeches.
IEEE Delhi Section

CS Chapter Delhi Activities March-April 2022
Daman Dev Sood, Chair for IEEE Delhi CS Chapter

The IEEE Delhi CS Chapter has organized 15 activities between March to May 2022.
- “Machine Learning Algorithms and Behaviour of Data” on 4th March 2022
- “The Art of Drone Technologies” on 12th March 2022
- “Randomization Based Deep and Shallow Learning for Classification” on 19th March 2022
- “Digital Humanities” on 26th March 2022
- “Cyber Forensic Audit: Changing Role of Auditors” on 2nd April 2022
- “Cyber Warfare, Cyber Security and Cyber Citizenship” on 9th April 2022
- “Elements of New 5G Radio Access Networks: Open, Cloud Native & Intelligent” on 16th April 2022
- “Technology Trends and Revolution in Mobile” on 23rd April 2022
- “Copyrights: What, Why and How” on 30th April 2022
- “Research in Digital Age: Problems and Opportunities” on 7th May 2022
- “Zero UnEmployment: through Employability Enhancement of the Youth - Live in conversation” on 21st May 2022
- Artificial Intelligence (AI) and Media

IEEE Karachi Section

Dr. Umair Ahmed Korai, Vice Chair for IEEE Karachi Communication Society Chapter

IEEE Karachi ComSoc Chapter in collaboration with IEEE MUET ComSoc Student Chapter, IEEE Karachi Section, and QS World-Merit organized the second talk of distinguishing lecture series – IEEE ComSoc Karachi Chapter (DLS-ICSKC) titled “Navigation Graphs for 360 Degrees Tile Based Video Streaming Systems” on 8th March 2022. The guest speaker for the talk was Prof. Klara Nahrstedt, University of Illinois Urbana-Champaign, USA. DLS-ICSKC is an initiative of the IEEE Karachi ComSoc Chapter. The aim of this series is to promote the latest technological information among students, young professionals, and professionals. The total number of registered participants was 120 (36 IEEE and 84 non-IEEE members). With great efforts and management, Dr. Umair Ahmed Korai, Vice-Chair for IEEE Karachi ComSoc Chapter, and his team, organized and manage this workshop. IEEE Karachi ComSoc Chapter and IEEE MUET Student Chapter received huge appreciation from Prof. Dr. Bhawani Shankar Chowdhry, Chair of IEEE Karachi Section.
IEEE Malaysia Section

Bio Networking with MyEMBS

Siti Anom Ahmad, Chair for IEEE Malaysia EMBS Chapter

In conjunction with EMB DAY 2022, IEEE Malaysia EMBS Chapter (MyEMBS) has successfully conducted a bio networking event on 23rd March 2022. This event was in collaboration with the University of Kuala Lumpur and the University of Malaysia Kelantan. The objective of the program was to bring enhanced value to IEEE-EMBS members and non-members and to promote EMB to the greater biomedical research community. The program includes a forum on “Linkage and Grant: Towards Industry-Driven Research” and a mini-workshop on “Edge Computing Embedded AI”. About 80 participants registered for the event. The Chapter will also be organizing our flagship conference IECBES2022 on 7th – 9th December 2022. All are invited to participate and submit your paper. For further information on MyEMBS, please visit https://embs.my/ or follow our Facebook: https://www.facebook.com/myembs.

Robotics in Healthcare

M.K.A. Ahamed Khan, Chair for IEEE Malaysia RAS Chapter

Since 2010, the demand for industrial robots has accelerated considerably due to the ongoing trend toward automation and the continued innovative technical improvements in industrial robots. In the last 10 years, the uptake of surgical robots throughout the world especially in the US, Europe, the UK, and Australia is extensive. In Asia, these machines are becoming popular with hospitals in major cities and their usage is progressively increasing. The international webinar on “Robotics in Healthcare” was held on 29th April 2022. The webinar started with a welcoming speech by the event coordinator Dr. G. Kulanthaivel, Head, Center for International Affairs, National Institute of Technical Teachers Training and Research, Ministry of Education, Chennai, India. During his speech, he introduced to the audience the main speaker Dr. M.K.A. Ahamed Khan, Chair for IEEE Malaysia RAS Chapter, who is currently working as Assistant Professor at UCSI University, Malaysia about his profile and the topic of interest. Almost 200 participants were present.
IEEE Australian Capital Territory Section

LMAG

Inaugural Meeting of the Newly Established ACT LMAG

Ambarish Natu, Chair for IEEE Australian Capital Territory Section

The ACT Section Life Member Affinity Group (LMAG) was recently established in the month of March 2022. Dale Siver is the current chair of this affinity group. The inaugural activity for the IEEE ACT LMAG was held on 20th April 2022. The location for its inaugural meeting was the central village of the National Arboretum. Three members attended this inaugural meet and greet event. This is the same location where Region 10 Director eventually dedicated a tree to IEEE members and volunteers on 9th July 2022. Region 10 and all Australian Sections including the Australia Council contributed funds to make this event possible.

Upcoming events that life members may be interested in attending were discussed, including the regular RENEW Meetings held at the Ian Ross Building ANU, usually on a Wednesday 7:30pm. Other conversations included upcoming conferences such as TENSYMP 2023. All life members are welcome to attend such activities and events and may be asked to volunteer for planning or organizing as needed.

The Arboretum was very busy due to school holidays and the parking lot and cafe were full of a variety of people and families. The cafe is the perfect venue for catch-ups because of the view overlooking Lake Burley Griffen, Civic, and some National icons near Parliamentary Triangle. We hope to have more coffee catchups in the future and continue developing ideas for other activities, and the possibilities of generating Life Member newsletter-worthy articles to be forwarded to IEEE Region 10 and head office.
IEEE Kolkata Section LMAG

One Day Industry Visit Jointly Organized by IEEE Kolkata LMAG and IEEE Kolkata IAS Chapter

Arjit Basuray, Chair for IEEE Kolkata Section LMAG

IEEE Kolkata LMAG with IEEE Kolkata IAS Chapter jointly organized an industry visit on 21st May 2022 to High Voltage Testing Equipment in one Manufacturing Unit, Neo Tele-Tronix Pvt. Ltd. (NTPL) located near Rajpur, Kolkata. The industry visit mainly targeted engineering students. There were about 24 student participants in this industry visit, 20 students from the Electrical Engineering Department of GNIT, an Engineering Degree College under MAKAUT, and 4 M.Sc students from the Department of Instrumentation Science, Jadavpur University. The students were divided into small groups to get introduced to different medium voltage and high voltage equipment and manufacturing. IEEE members from LMAG, IAS, and Power Electronics, Kolkata Chapter were present to guide and inspire the students during the visit. An introductory lecture on electrical safety was delivered to the students.

IEEE Tokyo Section LMAG

LMAG-Tokyo Activities 2022 (Q2)

Naohisa Ohta, Vice Chair for IEEE Tokyo Section LMAG

LMAG-Tokyo Annual General Assembly

The 2022 LMAG-Tokyo General Assembly was held online (Zoom) on Thursday, 10th March 2022 from 14:10 to 14:40, with 26 participants. In the beginning, this year's officers introduced themselves to the audience. Chair for LMAG-Tokyo, Imai then gave an address and proceeded to the meeting as chairman. All the agenda items were discussed and approved.

LMAG-Tokyo Officer Meetings

Two officer meetings for management were held from 15:00 – 16:00 on 10th March 2022 (face-to-face) and from 10 -11:20 on 5th May 2022 (Zoom). All officers participated in the meetings and discussed the details of our activity.
Lecture Meeting Co-hosted by TPC and IEEE Tokyo Section LMAG
This online lecture meeting was held on 10th March 2022 from 16:20 to 17:30. The talk titled "Unpredictable Age: Big Data Reveal Way of Life, Company, and Happiness" was delivered by Kazuo Yano, a recipient of IEEE Frederik Philips Award 2020. The number of participants was 46.

Co-sponsored Lecture Meeting
LMAG-Tokyo co-sponsored a lecture meeting (Webinar) hosted by IEEE Tokyo Section Educational Activities (Tokyo EA) on 12th March 2022 at 10:00 – 11:30 with 35 participants. The talk was given by Susan K. (Kathy) Land, the 2021 IEEE President.

Communication with Life Members and Activity Publication
- Welcome messages to new Life Members in Tokyo Section were sent out from chairs of the Tokyo Section and LMAG-Tokyo on 17th January 2022.
- LMAG-Tokyo Newsletter No. 34 was published on 25th April (Newsletter No.34).
- Messages to encourage applying for Senior Member (Life Senior) were sent out to LM of LMAG-Tokyo in January 2022, and one member has been successfully elevated to Life Senior Member.
- LMAG-Tokyo submitted an article to the IEEE Life Members newsletter (April Issue)

R10 Activity
- LMAG-Tokyo officers participated in R10 LMAG Meet on 26th March 2022.
IEEE APU Student Branch [Malaysia Section]

Al Gaming Competition
Antonnio Lim Ji Gong, Secretary for IEEE APU Student Branch

Al Gaming Competition was held on 9th April 2022 using Microsoft Teams and the aigaming.com site. This 4-hour event involved 24 participants learning and writing code in Python to take part in live games. It specifically required the participants to make use of Azure Cognitive Services in order to participate. This provides an interesting and fun way for people to be introduced to Microsoft's AI and Machine Learning services. The challenge used in this competition is called The Match Game. Each participant was presented with a set of tiles, and each tile contains an image. Each tile image has one matching image and the goal of the game was to match all pairs of images in a way that earns the highest score possible. The tournament randomly paired and played registered participants against each other every round until the winner was determined.

IEEE MUET Student Branch [Karachi Section]

Umair Ahmed Korai, Advisor for IEEE MUET ComSoc Student Chapter

IEEE COMMUNICATION SOCIETY MEET-AND-GREET
IEEE MUET ComSoc Student Chapter and IEEE Karachi ComSoc Chapter organized a Meet-and-Greet event on 24th March 2022 at MUET Pakistan. The objective of this event was networking among IEEE and IEEE ComSoc members. The total number of
registered participants were 34, all of whom were IEEE members. IEEE Karachi Section Treasurer, Moiz Rahman Memon, attended the event as Chief Guest. Moiz delivered an interactive talk on leadership skills and shared with students his knowledge and experience about leadership and gave some important lessons to the students to practice in the life ahead of them. Students also participated in the discussion and shared their thoughts on the concept of leadership. A few ice-breaking games and activities were also organized such that the attendees can interact with each other. A few general knowledge questions were asked to encourage fun learning. In the end, pizzas were distributed among all participants.

**DISCOVERING THE ABILITIES IN GRADUATE STUDENTS TOWARDS THE SELF ASSESSMENT, JOB READINESS, AND JOB-HUNTING TECHNIQUES**

IEEE MUET ComSoc Student Chapter and IEEE Karachi ComSoc Chapter organized a career counseling and roadmap workshop on 10th May 2022 at MUET, Pakistan. The objective of the workshop was to provide career counseling and awareness about the possible job opportunities to fresh graduates. The guest speaker of this workshop was Mr. Waqas Soomro, CEO of Smart Mentor.io. Dr. Umair Ahmed Korai, Vice Chair for IEEE Karachi ComSoc Chapter coordinated and organized this workshop along with his IEEE MUET ComSoc Chapter team. Prof. Dr. Aftab Ahmed Memon, DEAN FEECE, MUET Pakistan, attended the workshop as the chief guest. Mr. Waqas made the students aware of general questions being asked during an interview. He also discussed the main skills required in a job and further gave directions for writing a personal resume. The total number of participants in this workshop was 94 (23 IEEE members and 71 non-IEEE members).

**IEEE University of Asia Pacific Student Branch [Bangladesh Section]**

**Co-located Conferences 2022 Jointly Organized by IEEE Bangladesh Section & Department of EEE, University of Asia Pacific**

Marzan Rhaman, Member of IEEE University of Asia Pacific Student Branch Documentation Team

On 24th and 25th June 2022, five co-located Conferences were held at the campus of UAP. These day-long events were jointly hosted by IEEE Bangladesh Section and the Department of EEE of UAP. The esteemed guests; Prof. Dr. Celia Shahnaz, IEEE WIE Committee Chair-Elect, Prof. Dr. M. Moshiul Haque, Chair for IEEE BDS, Prof. Dr. Qumrul Ahsan, Honorable Vice Chancellor of UAP and Dr. Tasnia Hossain, Head of the EEE Department, UAP were present in the inauguration ceremony.

Student-LED CON started with keynote speech, followed by competition of thesis and research paper. YPCon consisted of panel discussion about research publication. SympSIST comprised of humanitarian project design idea contest and a workshop on case study.
On the second day, INDCon contained training sessions about the preparation of a budget and business model and an entrepreneurship idea contest. Lastly, ProCon consisted of a pitching contest and debate competition. The successful hybrid event was attended by 80 students.
2022 Eric Herz Outstanding Staff Member Award

Ewell Tan, Project Manager, IEEE Asia-Pacific Limited is the recipient of the 2022 Eric Herz Outstanding Staff Member Award for consistently high-level performance serving IEEE Region 10.
2022 IEEE Outstanding Branch Counselor and Branch Chapter Advisor Award

Congratulations to all the winners of IEEE Outstanding Branch Counselor and Branch Chapter Advisor Award (2022) from Region 10!

- Srishti Sharma, STB11841, Delhi Section
- Dolly Mary A, STB65421, Kerala Section
- Bos Mathew Jos, STB32041, Kerala Section
- Deena George, STB32041, Kerala Section
- M. Benisha, STB10731, Madras (Chennai) Section
Call for Nominations – 2022 IEEE MGA Individual Awards

CALL FOR NOMINATIONS
2022 MGA INDIVIDUAL AWARDS

Larry K. Wilson Transnational
Diversity & Inclusion
Innovation
Leadership
Achievement
YP Achievement

Nominate by
25 September 2022

CLICK HERE TO NOMINATE

To learn more about the MGA Awards and Recognition program, visit mga.ieee.org/awards/mga-awards-and-recognition-program

IEEE R10 Sections/Subsections Website Competition

This competition is open to all IEEE sections and subsections in the Region 10. Only one (1) submission per section and per subsection.

Submission Deadline: 31 August 2022

**PRIZES**

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**IMPORTANT DATES**

1. 18 JUNE 2022
   Contest Open

2. 31 AUGUST 2022
   Submission Deadline

3. 1-7 SEPTEMBER 2022
   Processing Period

4. 8-30 SEPTEMBER 2022
   Assessment Period

5. 7 OCTOBER 2022
   Winner Notification

**ASSESSMENT CRITERIA**

- Aesthetics (25 points)
- Content and Functionality (40 points)
- Engagement (25 points)
- Required Elements (10 points)

**FURTHER INFORMATION**

https://ieeer10.org/website-competition

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2022 IEEE IAS Global Conference on Emerging Technologies (GlobConET)

Dr. Rabindra Nath Shaw, Conference Chair for IEEE IAS GlobConET 2022

The 2022 IEEE IAS Global Conference on Emerging Technologies (GlobConET) was organized from 20th to 22nd May 2022 through virtual mode with 100% financial sponsorship by the IEEE Industry Applications Society, USA. GlobConET provided an opportunity for practicing engineers, academicians, and researchers to meet in a forum to discuss various issues and the future direction of various emerging technologies. The aims of the conference were to put together the experts from the relevant areas to disseminate their knowledge and experience for the relevant future research scope. The conference was organized in online mode with 10 partner universities from all around the world; (1) University of Wollongong Australia; (2) Loughborough University, United Kingdom; (3) Vietnam Maritime University, Vietnam; (4) University of Peradeniya, Sri Lanka; (5) University of Tennessee, USA; (6) Deakin University, Australia; (7) Aurel Vlaicu University of Arad, Romania; (8) University of Teramo, Italy; (9) University of Auckland, New Zealand; (10) Bharath Institute of Higher Education & Research (Deemed to be University), Chennai, India.

The inaugural session of 2022 GlobConET started with the welcome address of the Chief Guest Prof. Wei-Jen Lee, IEEE IAS President. In his talk, the IEEE IAS President praised this conference as a very selective conference with more than 750 paper submissions and strict acceptance. He also stated that the conference has very interesting topics and keynotes and paper presentations on the latest trend and future challenges of the electrical power industry. The President conveyed that the IEEE IAS Society is proud to be a 100% financial sponsor of this conference. He ended his talk with congratulatory wishes to all the authors, participants, and organizers and to meet in the next version of the conference in person.

The guests of honor of the conference were Prof. Georges Zissis, IEEE IAS Past President; Dr. Manfred Schindler, IEEE Division IV Director; Prof. Vincenzo Piuri, IEEE Region 8 Director-Elect; Prof. Ayman El-Refaie, Publication Chair IEEE IAS; Prof. Akshay Rathore, Award Committee Chair, IEEE IAS; Dr. Nishad Mendis, IEEE IAS Executive Board Member; Prof. Kathleen Kramer, Professor of Electrical Engineering, University of San
IEEE REGION 10 CONNECT

Diego; Prof. Fushuan Wen, Tallinn University of Technology (Taltech) Estonia; Prof. Bhim Singh, IIT Delhi India; Prof. S N Singh, Director ABV-IIITM Gwalior, India, and Prof. Joydeep Mitra, Michigan State University, USA. The vote of thanks was given by the Conference Secretary.

The conference commenced with four parallel technical paper presentation sessions FD1 to FD4, followed by technical sessions 2 and 3 from FD5 to FD8 and FD9 to FD12 respectively. On the first day, 80 papers were presented with the participation of more than 100 authors.

The technical session was followed by two keynote speeches on (1) "Modulation Techniques for High-Frequency Pulsating DC-link Three-Phase Inverters" by Prof. Akshay Rathore, IEEE Fellow, Professor Singapore Institute of Technology (SIT), Singapore, and (2) "Energy Conversion for a Sustainable Future Revived Role of Power and Energy" by Prof. Ayman El-Refaie, FIEEE, Professor, Electrical Engineering, Marquette University, Milwaukee. Both the keynote speeches were very informative and numerous questions were raised by the participants. The second day began with a keynote speech by Prof. Kathleen Kramer, Professor of Electrical Engineering, the University of San Diego, the USA on the very interesting topic of "Feature Object Extraction – Fusing Evidence, Not Rolling the Die". This was followed by 2 parallel technical sessions SD1 to SD4 and SD5 to SD9, totaling 60 papers presented by more than 90 authors.

At the end of the technical sessions, the following keynote speeches were delivered: (1) "Accommodating High Renewable Energy Share into the National Grids, What Challenges and Strategies?" by Prof. J.B. Ekanayake, IEEE Fellow, Professor, Electrical and Electronic Engineering University of Peradeniya, (2) "Synergizing IoT, Data and Intelligence towards Future Digitized and Industrialized Healthcare", by Prof. Liming (Luke) Chen, Research Director for the School of Computing Ulster University, United Kingdom, and (3) "SSR - Sub-Synchronous and Super-Synchronous Resonance in the Power Systems", by Prof. Wei-Jen Lee, IEEE Fellow, Professor, Department of Electrical Engineering, the University of Texas at Arlington. The day ended with great enthusiasm and motivation from the IEEE IAS President.

Day three started with an eminent keynote speech "Cost-Effective Integration of Second-Life EV Batteries with Solar PV Systems for Commercial Buildings" by Prof. Chris Mi, Fellow IEEE & SAE. The talk was very informative and interactive. This was followed by 2 parallel technical sessions TD1 to TD4 and TD5 to TD8, totaling 53 papers presented by the respective authors. At the end of the technical sessions, the final keynote speech was delivered by Prof. Vincenzo Piuri, IEEE Fellow, Professor, University of Milan, Italy on "Artificial Intelligence for Industry, Environment and Ambient". 2022 GlobConET concluded with a vote of thanks by the conference chair.
IEEE R10 HTC (Conference id:54060) is a premier annual cross disciplinary conference that will bring together technologists, engineers, scientists, investors, representatives from NGOs, governments, academia, and industry. The conference will promote discussions and development of Electrical, Communication, Computing, Security and Disaster Relief areas to present results of recent advancements in technology in order to help improve the lives of the impoverished. It will have plenary talks, keynote addresses by reputed academicians, tutorials & workshops by domain experts, research paper presentations, events for Women in Engineering and Young Professionals. IEEE R10 HTC 2022, which is organized and hosted by IEEE Hyderabad Section, will be held in Hyderabad, 16-18 September 2022. The theme of the conference, “Internet of Things (IoT) and Industry 4.0 - a world of engineering challenges” is to draw special attention to the societal expectation on humanitarian technologies’ ability to provide practical and lasting solutions.
IEEE Region 10 Conference (TENCON) 2022

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