February 2022 IEEE Board of Directors

**REPORT** 

ITEM: IEEE Young Professionals Report

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CLASSIFICATION: IEEE Proprietary

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#### **EXECUTIVE SUMMARY**

The report provides information on the progress of the IEEE YP team on key projects and initiatives. For more information, or if you have any questions or comments, please reach out to us at <a href="mailto:yp@ieee.org">yp@ieee.org</a>.

#### **CONTENTS**

- Primary Goals for 2022
- YP Initiative Status
- Current Membership Statistics
- Baseline Statistics
- Region YP Updates
- Society and Council YP Updates
  - o Society/Council YP Representative engagement
  - Individual Society/Council highlights and statistics

#### **2022 COMMITTEE DIRECTION**

- Onboarding new YP committee members and sub-committees
- Micro-mentoring platform enabling YP reps to launch specific micromentoring programs within their OU, e.g. in societies, regions, etc.
- Further expansion of social media channels and online content on IMPACT blog and monthly newsletters
- Improve event strategy to ensure better regional representation and streamlined distribution of funding with focus on organizer and member satisfaction
- Launch of revamped website in Q1 including a collaborative leadership Wiki as a volunteer resource
- Support of MGA priority projects including discounts for GSMs and staggered dues experiments
- Plan for an in person YP committee meeting or ExCom meeting after more than 2 years
- IEEE Volunteering marketing, development of reporting capabilities, data store integration, possible feeds to IEEE app and/or other services volunteer.ieee.org
- Continued collaboration with all IEEE OUs
- Develop and execute Affinity Group Strategy with an extra focus on North American membership recovery
- Improved Hall of Fame winners celebration and engagement of all contenders
- Collaboration with IEEE Day, IEEE Foundation's 50th Anniversary, etc.
- Red Carpet Reception hosted by YP at IEEE Medal of Honor Ceremony
- And more as you will hear from us throughout 2022

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#### **YP INITIATIVE STATUS**

**YP Around the World Video**: IEEE Connecting the new generation of Technology Leaders Around the World Video is released for the IEEE YP 25<sup>th</sup> anniversary with contributions from several YP members as can be seen at the links below.

- IEEEtv
- YouTube



**Social Media Presence** (Change from Jan 2021 to Jan 2022)

- LinkedIn: 8,254 followers (+1,468 followers)
- Instagram: 1,663 followers, 64 posts (+208 followers, +22 posts)
- Twitter: 2,293 followers (+367 followers)
- Facebook: 19,364 likes, 19,983 followers (+154 likes, followers have slight decrease due to YPs beginning to move to other social media platforms, despite still having most followers in facebook)
- Collabratec: 15,036 participants (+208 participants)

### Website

- The new website is under development and is scheduled to be launched in the first quarter of 2022.
- The site will be more user-friendly, as it has a much simpler design. It will be optimized for mobile users to better address the Young Professionals.
- The site will include the Wiki-Style knowledge base, resources for both members and volunteers, links to important information and IEEE sites, and a way to contact the YP team.
- The new editorial team for IMPACT Blog is selected for 2022 and will be featured in the new website.

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### **IEEE Volunteering Platform**

- There are around 1400 active users and more than 20 active opportunities published by different organizational units across IEEE.
- Overarching goals for 2022:
  - Expand reach and usage across IEEE and continue to collect user feedback
  - Development of reporting capabilities as well as Data store integration
  - Mobile integration points such as IEEE App
  - o "aggregate" CV capturing volunteer positions out of platform

# **CURRENT MEMBERSHIP STATISTICS (January 2022 YoY)**

Geographic IEEE Young Professional Membership - January 2022									
	Higher Grade w/o GSM			GSM w/o Students			Total		
Region	2022	2021	% Change	2022	2021	% Change	2022	2021	% Change
1	3,001	3,181	-5.7%	1,545	1,590	-2.8%	4,546	4,771	-4.7%
2	2,536	2,663	-4.8%	1,313	1,351	-2.8%	3,849	4,014	-4.1%
3	3,058	3,336	<b>-</b> 8.3%	2,063	1,972	4.6%	5,121	5,308	-3.5%
4	2,318	2,410	-3.8%	1,413	1,486	-4.9%	3,731	3,896	-4.2%
5	2,916	3,263	-10.6%	1,505	1,491	0.9%	4,421	4,754	-7.0%
6	5,794	6,276	-7.7%	2,285	2,421	-5.6%	8,079	8,697	-7.1%
R 1-6	19,623	21,129	-7.1%	10124	10,311	-1.8%	29,747	31,440	<b>-</b> 5.4%
7	2,534	2,820	-10.1%	1,809	1,819	-0.5%	4,343	4,639	-6.4%
8	13,858	13,872	-0.1%	10,493	9,974	5.2%	24,351	23,846	2.1%
9	3,226	3,074	4.9%	1,194	1,346	-11.3%	4,420	4,420	0.0%
10	25,071	21,916	14.4%	24,040	21,726	10.7%	49,111	43,642	12.5%
R 7-10	44,689	41,682	7.2%	37536	34,865	7.7%	82,225	76,547	7.4%
TOTAL	64,313	62,813	2.4%	47,663	45,176	5.5%	111,976	107,989	3.7%

• We will focus even further on the Region 1-7 membership, while supporting Region 8-10 in parallel.

#### **BASELINE STATISTICS**

Events Held/Reported by AGs in 2021

- **1,110 total events** were reported via vTools in 2021
- 157 (67.97%) of YP AGs held at least 2 events

**Event Survey Results** 

- We received 1,462 survey responses after funded events in 2021 with the following results:
- Overall, how would you rate the event?
  - o 74% Excellent
  - o 25% Good
  - o 2% Fair
  - o 0% Poor

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- How would you rate the networking opportunities at this event?
  - o Great 58%
  - o Good 36%
  - o Poor 3%
  - o N/A 3%
- Would you be interested in attending future IEEE Young Professionals events?
  - o 98% Yes
  - o 2% No
- Which of the following best describes your current occupation?
  - Student 65%
  - o Academia 21%
  - o Industry 10%
  - o Other 4%

# 2021 Applications for YP Funding

- 57 applications in 2021
- Step Funding: \$4,131, 8 events
- Meet-up Funding: \$16,873, 14 events
- Local Activity Funding: \$21,939.25, 17 events
- YP sponsored 39 events for funding

### **AG Vitality**

- In 2021, 4 new YP Affinity Groups were formed
- 168 AGs (72.73%) reported a Chair

#### IEEE THEODORE W. HISSEY OUTSTANDING YOUNG PROFESSIONAL AWARD

The IEEE Theodore W. Hissey Outstanding Young Professional Award is presented at the IEEE Honors Ceremony. Candidates must be an IEEE member and Young Professional as defined by IEEE (within 15 years of first academic degree).

In the evaluation process, the following criteria are considered: Impact on the profession and/or society; succession of significant technical or other contributions; leadership in accomplishing worthwhile goal(s); previous honors, and other achievements such as publications or patents or other evidence; track record of volunteer contributions to the IEEE; and quality of nomination. Previous IEEE Medal recipients are not considered eligible candidates.

We will host the Red-Carpet Reception at IEEE Medal of Honor Ceremony this year in San Diego. You can view brief info on the past recipients here.

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#### **YP STATUS ACROSS REGIONS**

As we are onboarding and starting plans for 2022, here is the status of Region YPs in 2021.

### Region 1

#### Activities to date:

- We made a request at the last BOG for help from the Region to maintain mailing lists for groups like Young Professionals within our Region, to have a better communication path.
- Working with the Region 1 Director-Elect to make a subcommittee in the Region, in order to avoid having a single point of contact. This will allow a wider reach and more views locally of YPs. The Region 1 Director has given a list of 5 people who are interested. I plan to reach out to them to see if they want to serve on the subcommittee. This subcommittee will also help with transitions over time since they will be able to be involved prior to receiving tasks. At this point focus is on getting this active core up and running for next year.

# Region 2

- Create a Region 2 YP Committee to help disseminate region activities more efficiently, as well as to help organize/support said activities
- Find events being put on within the region and spread information through the region. Provide funding support if it proves to be beneficial

# Region 3

- Trailblazers 2021 was organized successfully as part of Region 3
   SouthEastCON events. The event included a series of professional talks, networking opportunities, and amazing social activities for the Young Professionals of the East Coast.
- The first ever IEEE Region 3 Outstanding Young Professional was awarded at SouthEastCON 2021. This award recognizes outstanding service and sustained dedication to furthering the goals of Region 3 Young Professionals.
- Mentoring Program that was initiated in 2020 will continue in 2021.
- IEEE Region 3 sponsored 20 Young Professionals to attend the Rising Stars 2021.
- In the first quarter of 2021 the Region 3 YP Ad hoc committee became complete and we will now proceed towards converting to a standing committee. The succession plan as well as the strategic plan had moved forward smoothly in the first two quarters of 2021.
- Created a new YP SoutheastCon track named Trailblazers 2021 and collaborated with members of Region 1 and Region 3. Invited R1 and R2.
- First ever R3 YP Award was given at 2021 SoutheastCon
- Annual Townhall for YPs organized with the Director-Elect

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• Succession plan for new committee executed to plan for 2022-2023

- Full officer rosters in R3 YP AGS (and no AGs in probation for 2020 and 2021)
- Organized one Inclusion and Diversity panel to support Region efforts with the IDEA ad hoc

#### Region 4

#### Activities to date:

- Working to try to improve student retention. The current idea is that student members drop their IEEE membership because they don't know about YP activities. To this end, we are trying a new initiative in which we invite current senior year students to YP events in hopes it encourages them to become YP members when they graduate.
- Events so far have been held on section levels only as different sections are capable of different levels of face to face interaction depending on that section's virus status.

# Region 5

#### Activities to date:

- YP Affinity Group Chair meeting brought everyone together (virtually) and we shared IEEE best practices
- 1:1 outreach to answer questions and help individual YP chapters in the region

### Region 6

- The 2021 IEEE Rising Stars Conference was a virtual conference that gathered IEEE Region 6 young professionals and a global audience of students and young professionals. The conference was organized with a heavy involvement from Region 6 young professionals volunteers, as well as young professionals from other regions.
- The 2021 IEEE SusTech Conference included a Young Professionals Panel to promote and share experiences from Young Professionals working at tech companies, such as Intel, Microsoft, and JPL, with an impact on sustainability efforts.
- Most chapter activities are still virtual events. Only a few chapters are finding success with consistent events and good attendance.
- I've only seen a couple in-person YP Chapter events, but I'm hoping that Chapters will be hosting more in-person events as members feel more comfortable with the health safety practices and the state of each geographic area.
- Hosted monthly young professional events with technical and professional development topics, the Red Dwarf Stars Series. Partnered with YP Chapters to increase activities and engagement with members at the local level.
- The 2022 IEEE Rising Stars Conference was held as an in-person and virtual conference.

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# Region 7

#### Activities to date:

• IEEE YP Ottawa Solar Eclipse Event and celebration on the morning of 10 June to announce the IEEE YP 5-Part Space Series

- We have also sponsored the IEEE Ottawa Robotics Competition for \$250, held on 29 May.
- We hosted a ceremony during our 8 June meeting to announce elevations of many of our members to newly minted executive positions in light of our recent endeavors. New members were also welcomed aboard.
- Since the beginning of the pandemic, several Young Professional Affinity Groups (YPAGs) in Canada (IEEE R7) became very creative and rapidly switched to very successful online events.
- Ottawa, Montreal, and Vancouver YPAGs have established this strong relationship and been very active with these joint events including workshops on academic and industry carriers, finance tips for YPs, mentoring, Matlab and other software tutorials, IEEE YP Space Series, member elevations, virtual competitions, seminars on 5G, Machine Learning, antennas, and more.
- These collaborations also include other YPAGs from R8 (Turkey YPAG) and other students and WiE branches in Canada.
- In IEEE Canada (Region 7), there are very strong collaborations between multiple Young Professionals Affinity Groups (YPAGs). Indeed, since the beginning of the pandemic, very successful joint events have taken place online. The events include both professional development as well as technical events. The first category includes time management, career opportunities, writing skills and other professional development events. The technical events include next generation networks, smart grids, antenna and propagation, space exploration, and several other events.

# **Region 8**

- IEEE Connecting Experts: the program is consisted of a series of webinars
  that are bringing a technical topic by an expert in a given field in form of a
  conference keynote style presentation of 30-45 minutes duration followed by
  Q&A, to the wide audience of young professionals, including MSc and PhD
  students, young industry professionals, and young tech-entrepreneurs from
  Region 8. The online version is kicked-off as a response to the current
  pandemic confinement with a goal to provide education and engagement to
  the electrical engineering young professionals.
- IEEE Region 8 Entrepreneurship Initiative kicked off in 2018 and we now stand delighted to see the colours of nations and their Young Professionals united in aspiration to serve the needs of societies through technology, to explore the new horizons, to make the world a better place all by hands-on empowering of the sustainable engineering. The initiative consists of three

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main envisioned programs: Entrepreneurship Week, Mentorship Program and IEEE Pitch. Both projects had a huge success in 2020 and scaling up in 2021.

### **Region 9**

# Activities to date:

- Workshops to YP Section Chairs: IEEE and YP Funds, VTools
- Workshops to YP Section Chairs: How make a plan work?, Volunteer strategies
- STEP workshop, how to organize and execute?
- YP Committee Meeting: The work plan was presented to all YP Section Chairs, membership statistics and ideas on new activities were presented
- IEEE YP R9 website update <a href="https://site.ieee.org/r9-yp">https://site.ieee.org/r9-yp</a>
- Collaboration in Webinars Soft Skills for Engineers (TAC EAC)
- IEEE Reading Club: English language learning program through a reading club. The program runs weekly, so far 5 sessions have been held, with an average participation of 25 members.
- IEEE FAQ: Frequently asked questions and answers program for young professionals. 2 sessions have been held: postgraduate programs abroad and LinkedIn
- Creation of the work plan, new ideas of activities: 5 February

### Upcoming:

- Committee meeting, plan presentation to YP Chairs: 22 February
- Work plan progress meeting, next steps: 22 April
- Committee meeting: 14 May
- Scrum workshop for leaders
- Workshop: how to apply for the IEEE YP Awards?
- Workshop: how to apply for senior membership?
- YP R9 Ethics Competition
- Organize a Webinar series on YP tools for recent graduates
- Professional Development Webinar Series
- Launch of IEEE InnovaTech event

### Region 10

- IEEE R10 YP UpSkill: 8 AGs are selected for funding
- R10 YP Student-YP Joint Activity Fund: Round 2, 5 projects are selected for funding.
- IEEE R10 YP REVOL: 13 winners across R10. The winners are provided with
  the opportunity to serve as ambassadors for the IEEE Region 10 Young
  Professionals Committee especially to promote Student to Young
  Professionals membership transitions and the selected candidates will have
  an opportunity to network and work with the IEEE Region 10 Young
  Professionals Committee.
- R10 YP New/Dormant Affinity Group Fund: 3 AGs are selected for funding

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• R10 Young Professionals Awards results announced (R10 YP Outstanding Volunteer Award & R10 YP Outstanding Section Affinity Group Award).

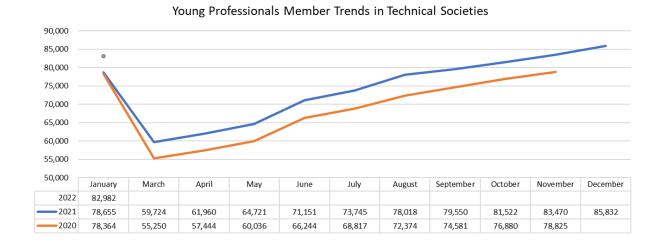
- The second R10 YP training module Event Management & Funding was conducted on 5th June 2021.
- Co-Initiated the R10TALK webinar program. Risks & Opportunities by Prof. Chandima Gomes on 22nd May, Professional Ethics and Getting Ahead by Terence Tan on 26 June and Personal Branding to Double Your Value by Niroshan Madampitige on 21st August.
- The very first Sparklers Summit organized by IEEE R10 Young Professionals was successfully held on the 7th & 14th of August, via Airmeet. The summit is supported and collaborated with IEEE MGA Young Professionals and IEEE MGA Student Activities Committees. The event brought out a quality experience, with 42 distinguished speakers, 900 delegates, and 18 collaborators.
- Interview session with R10 Director (initiated by R10 information management committee, collaborated by R10 YP). This interview session addressed questions raised by R10 Young Professionals related to IEEE Young Professional membership, program, activities and highlights. View complete interview at: https://youtu.be/zhCGlgCIEPk
- The very first IEEE R10 Young Professionals CLAP (Career and Leadership Aid Program) was organized between September 18th September 25th, 2021. Career coaching and training were delivered in an engaging manner. This program assisted participants in developing new insights into the career path they want to pursue, as well as a long-term networking with professionals. IEEE CLAP is organized by IEEE R10 Young Professionals and co-organized with R10 Student Activities Committee, in collaboration with IEEE MGA Student Activities and Young Professionals Committee.
- Linkedin Page was launched. R10 YP WECHAT group was launched to facilitate communications with China base YP AG officers.
- R10 YP AG Mailing list was updated with the latest officer information. R10 YP social media channels and whatsapp groups have been maintained. R10 YP AG officers have been notified through emails and social media with all related news and announcements.

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#### YP STATUS ACROSS SOCIETIES AND COUNCILS

• 2021 IEEE Society membership trends among Young Professionals showed year over year (YoY) growth. January 2022 also shows growth over January 2021.

 Please see the table after the Society/Council updates for individual S/C YP statistics.





#### % of Society/Council Members who are Young Professionals (January 2022)

### S/C YP Representatives Engagement

- Almost all of the Societies/Councils (S/Cs) identified a Young Professionals Representative for 2021. 24 of 46 have been confirmed for 2022 so far. Please email the name of your S/C Rep to <a href="mailto:yp@ieee.org">yp@ieee.org</a>.
- Planning for 2022 activities is underway.
- Primary goals for 2022 include focus on supporting all S/C YP Reps and continuing to increase engagement and enhance collaboration across all YP groups in all IEEE board OUs.

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### **Individual Society/Council Highlights**

As we are on boarding the team and starting plans for 2022, here is some information about S/C activities in 2021.

The S/C YP Representatives actively planned virtual and hybrid events and programs in conjunction with virtual and hybrid conferences in 2021. Mentorship programs were also common, with more S/Cs launching such initiatives. This section highlights some of these activities, sorted by Division and alphabetically within each Division.

(Use the Table of Contents on the next page to hyperlink to a specific Division, Society, or Council)

#### **Division I**

**IEEE Circuits and Systems Society** 

**IEEE Electron Devices Society** 

IEEE Nanotechnology Council

**IEEE Solid-State Circuits Society** 

#### **Division II**

**IEEE Electronics Packaging Society** 

**IEEE Industry Applications Society** 

**IEEE Instrumentation and Measurement Society** 

**IEEE Power Electronics Society** 

IEEE Ultrasonics, Ferroelectrics, and Frequency

**Control Society** 

#### **Division III**

**IEEE Communications Society** 

#### **Division IV**

**IEEE Antennas and Propagation Society** 

**IEEE Broadcast Technology Society** 

**IEEE Council on RFID** 

**IEEE Council on Superconductivity** 

IEEE Electromagnetic Compatibility Society

IEEE Microwave Theory and Techniques Society

**IEEE Nuclear and Plasma Sciences Society** 

#### **Division V & VIII**

**IEEE Computer Society** 

#### **Division VI**

**IEEE Professional Communication Society** 

**IEEE Society on Social Implications of Technology** 

#### **Division VII**

**IEEE Power & Energy Society** 

#### **Division IX**

**IEEE Aerospace and Electronic Systems Society** 

IEEE Geoscience and Remote Sensing Society

**IEEE Information Theory Society** 

**IEEE Intelligent Transportation Systems Society** 

**IEEE Oceanic Engineering Society** 

**IEEE Signal Processing Society** 

**IEEE Vehicular Technology Society** 

#### **Division X**

**IEEE Computational Intelligence Society** 

**IEEE Control Systems Society** 

IEEE Engineering in Medicine and Biology Society

**IEEE Photonics Society** 

**IEEE Robotics and Automation Society** 

**IEEE Sensors Council** 

IEEE Systems, Man, and Cybernetics Society

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#### **Division I**

### IEEE Circuits and Systems Society

- This year there are several new initiatives that we have started in the IEEE CASS for our WiCAS-YP members.
  - o WiCAS-YP Professional Development Events @ Local CASS Chapters
  - o IEEE CASS Mentoring Program
  - o IEEE CASS Senior Membership Drive
  - IEEE CASS MicroLearning Program
- These activities are in additional of our existing programs, such as IEEE CASS Student Design Contest, IEEE CASS Seasonal Schools, WiCAS-YP in Conferences. (YP Reps: Yongfu Li and Nicole McFarlane).

# IEEE Council on Electronic Design Automation

• The YP Subcommittee for the IEEE Council on Electronic Design Automation (CEDA), together with ACM, organized an Early Career Workshop at the 58th Design Automation Conference (DAC), the major EDA conference that was held in San Francisco with a hybrid mode during December 2021. The workshop is a long-tradition forum for young faculty and professionals in EDA and related fields to learn from successful researchers, engineers, and educators on diverse topics, such as how to get research projects funded, how to establish an impactful research group, how to build strong collaboration between industry and academia research, how to grow the career both academically and professionally, and what are the most valuable soft skills and how to apply them towards a successful career. The 2020 workshop was attended by more than 200 young professionals in the field and very well received. We aim to build up on that success to further foster the growth of young professionals in EDA. (YP Rep: Oi Zhu)

# IEEE Electron Devices Society

- EDS ExCom members participated as mentors for the recent <u>SSCS/EDS</u> <u>Young Professionals/WIE mentoring event</u> on 16 September at the 2021 ESSDERC/ESSCIRC conference. EDS promoted the event to EDS members and on social media. Mentors spoke to 20+ attendees on a variety of topics including mentoring and networking in a virtual world, a career in industry/start-ups, becoming a professor, leading a technical team to success, the how-to for virtual job search, and more.
- The EDS Nanotechnology Technical Committee organized a recorded panel discussion on 2 September for 75+ undergraduate and graduate students on How to Develop a Scientific Career in Nanotechnology. The event focused on practical tips on how to prepare successful emails, applications, and networking to increase the chances of students and postdocs to get a positive response from the professors and institutions to which they are applying. Specific questions were answered by the panelists and examples were given. Comments on general strategy publications and applications for funding for postdocs and young group leaders were also shared. There were panelists from various career stages, and a Q&A session for attendees was

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included. The event was recorded and is available for free in the EDS Webinar Archive. (YP Rep: Camilo Velez)

### IEEE Nanotechnology Council

- The activities focused on these main objectives:
  - Increasing number of quality YP activities (virtual/hybrid/F2F)
  - o Ten Regional NTC YP Coordinators and outreach
  - Involve more Young Professionals in the NTC activities
  - Encourage diversity and inclusion
- Six regional NTC YP coordinators have been appointed and started organizing activities in their respective regions.
- Activities, status and plans:
  - Webinars: Organized 8, Planned 6
  - YP presence at the conferences: Completed (NEMS, NANO, NAP), Planning (NANOMED, NMDC)
  - Regional NTC YP Representatives: Appointed (6), To be appointed (R1, R2, R3, R5)
  - Regional NTC YP LinkedIn websites
  - Technical Activities Technical Committees YP initiative (more to follow) (YP Rep: Rafal Sliz)

### IEEE Solid-State Circuits Society

• Virtual mentoring platform: Chronus; Virtual mentoring events with our conferences using GatherTown interactive software; webinars for young professionals webinars (held quarterly). (YP Rep: Zeynep Lulec)

#### **Division II**

#### IEEE Electronics Packaging Society

 EPS schedules various YP virtual events like panel discussion, seminars in flagship conferences. In ECTC 2021, Dr. Subramanian Lyer from UCLA and Kitty Pearsall from Boston Precision shared their career development advice for young professionals based on their experiences and achievements in industry and academia. We had Q&A with YPs in this special session as well. Hosted the career development panel discussion at EPTC in Dec 2021 as well. (YP Rep: Yan Liu)

### IEEE Industry Applications Society

- IAS and PELS had a great interactive YP reception during our ECCE/IAS
  annual meeting conference this year. The main aim of this virtual reception
  was to provide a platform to our students and YP attendees to interact and
  network with their peers. We divided attendees into 3 groups with a mixture
  of people from academia, industry and students. We also celebrated the IEEE
  YP 25th anniversary and IEEE Day during this event.
  - We initiated the conversation with the introduction of people in the group followed by a funny quarantine experience from each.

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 We talked about success stories of some of the YPs and how IEEE and IAS/PELS membership have played a major role in it. The goal was to inspire student members to continue their involvement after graduation and express the importance of networking.

- To conclude the session, we took some recommendations from attendees on how IAS/PELS YP can contribute in enhancing and providing more value towards their membership.
  - The request was to organize more virtual networking and mentoring sessions for new grads and students. Our IAS YP team will work on this idea. (YP Rep: Sumit Chhabria)

### IEEE Instrumentation and Measurement Society

We held a virtual event Student/YP Panel at I2MTC on 17 May 2021. There
were 5 panelists and 15 attendees. We discussed about online interviewers,
virtual networking and digitally marketing yourself. (YP Rep: Lijuan Wang)

# IEEE Power Electronics Society

- On 20 June 1987, IEEE Power Electronics Society (PELS) became a fullfledged society within IEEE. Every year since 2019, annual "IEEE PELS Day" has been culminating month-long celebrations by PELS members and chapters across the globe. The third annual PELS Day celebrations were held in June 2021. The response from PELS members and chapters was so emphatic that we set new records for the number of events conducted, number of participating chapters, etc. 62 PELS chapters spanning 4 continents got together with colleagues for webinar talks, technical/panel discussions, organizing networking and socializing events, or conducting competitions. There were 120 registered events. A photo contest was conducted - 28 photo submissions attracted votes from tens of thousands of people around the world. PELS awarded the top three chapters, and this became a wonderful opportunity for PELS chapters to showcase their activities. PELS chapters were also invited to participate in a 'Diversity Photo Contest', apart from the regular PELS Day photo contest. The contest theme was 'show us what diversity, equity, and inclusion mean to your chapter'.
- "IEEE PELS Students and Young Professionals Symposium: A New Venture! [Society News]," IEEE Power Electronics Magazine
- "Members Passionately Celebrate PELS Day [Society News]," IEEE Power Electronics Magazine (YP Rep: Harish Krishnamoorthy)

### IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society

 My 2021 YP activity was holding an industry leadership panel discussion for IUS 2021, in September 2021. The purpose of this panel was to share industrial perspectives on mass production. I and the moderator had a detailed discussion on the potential question list and the flow of asking questions. The peak number of zoom attendees reached 50. There were >300 views of the events accumulated on IEEE IUS virtual platform. (YP Rep: Changting Xu)

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#### **Division III**

# **IEEE Communications Society**

- IEEE ComSoc YP has the following activities:
  - Event at Conferences: Exclusive YP events at ICC, INFOCOM, and GLOBECOM. Please see more info on events section in our website, yp.comsoc.org
  - Blogs: We have an active blog for our members to contribute to. yp.comsoc.org/blog
  - Videos: We are working on video content for our members, that will be released soon.
  - Webinars: We are organizing monthly webinars for our members, but this is members only and no videos are released.
  - Contest: ComSoc YPs, as individuals or teams, are encouraged to submit a 1-minute video to the "ComSoc Is Where I Connect" video contest by 31 October. One winner from each region will receive a US \$500 prize and have their video featured in ComSoc's membership marketing promotions. (YP Rep: Shashank Gaur)

#### **Division IV**

# IEEE Antennas and Propagation Society

• During this reporting period, AP-S Young Professional Committee (YPC) initiated a new program – IEEE AP-S Young Professional Ambassador Program with a call for nominations (https://www.ieeeaps.org/committees/ypa). Ambassadors were announced in December 2021. Objective of this program is to inspire and inform AP-S Young Professionals on a variety of topics both technical and non-technical to enhance their interest and engagement in the field of Antennas and Propagation by delivering the talks at various chapters/sections "on-demand" virtually. AP-S YPC participated in Region 10 YP Conference, Sparklers Summit 2021 during August 7-14, 2021. YP Activities were conducted at the 2021 IEEE AP-S Symposium on Antennas and Propagation held on 4-10 December 2021, Singapore and at IEEE Global Rising Stars 2022, during January 2-4, 2022 in Las Vegas, NV. To promote AP-S activities that are of interest to YP Community on social media, a LinkedIn page was created at https://www.linkedin.com/company/ieee-aps-yp in July 2021 and now grown with ~750 followers and is still growing. Articles of interest to YPs were published in June 2021 and August 2021 issues and are listed on AP-S YP Page - https://www.ieeeaps.org/committees/yp. Interesting articles were in the October and December issues. (YP Rep: C.J. Reddy)

### IEEE Broadcast Technology Society

 Since June 2021, BTS YP partnered with our Region 9 students and YP's and organized the second industry-led YP webinar of the year. These webinar subjects are focused on subjects intended for students and young

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professionals. The webinar title "Broadcasting: the past and the future in a connected world" was held on August 18.

- We also promoted the participation in the IEEE YP 25th Anniversary video among BTS YP members and several members participated.
- We have also participated in the society administrative committee meetings and Marta has been appointed as ExCom liaison with the aim of having more participation from the YP society members in the society decisions.
- Our next goals are:
  - o Organize another YP webinar before the end of the year.
    - We are having some meetings to brainstorm possible YP activities to be carried out in the BMSB symposium that will take place in June 2022.
    - We are planning new initiatives for 2022. (YP Reps: Marta Fernandez, Jon Montalban)

#### **IEEE Council on RFID**

- The involvement of YPs within CRFID and its activities is further increasing:
  - A new YP has joined the Organizing Committee of our flagship conference (IEEE RFID2022) and a YP is running as the TPC co-chair for the IEEE RFID2022.
  - The IEEE RFID-ta 2021 has seen a good amount of students participating in the conference. Out of 80+ accepted papers, 14 of them had YPs as first authors that were selected to run for the Best Student Paper Award.
  - YPs have done a great amount of work in keeping alive many CRFID activities during 2020 and 2021, and we hope to celebrate them and recognize their efforts during the IEEE RFID 2022 conference. (YP Rep: Francesco Amato)

# IEEE Council on Superconductivity

A young professional (YP) committee within the Council of Superconductivity
was formed this year. It is comprised of approximately 10 YP members from
different countries and superconductivity backgrounds; we meet a few times
a year to plan new events. We are planning a virtual talk webinar series in
addition to planning an outreach event for the following year. (YP Rep: Erica
Salazar)

### IEEE Electromagnetic Compatibility Society

• Throughout 2021, most EMC activities have remained virtual, and our YP initiatives were once again tied to the annual EMC+SIPI Symposium, this year combined with EMC Europe conference. We held two virtual events: 1. Best Student Paper Candidates 5 Minute Webinar Competition, and 2. EMC+SIPI Trivia. The Student Paper candidates shared their work in only 5 minutes, and attendees at the live event voted for their favorite condensed presentation. We had almost 30 attendees and great audience feedback/participation from the audience. The Trivia event had around 10 YPs participating in a fun and educational event that tested the knowledge of

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the players and also made them aware of the different opportunities available in the EMC Society (local Chapters, Technical and Standards Committees, etc.). Prizes were awarded to the top 5 players (Henry Ott book, Amazon gift cards). Looking forward to 2022, we are hoping to expand our global presence, seeking regional representatives and looking for a volunteer to help maintain our YP content on the EMC Society website and social media accounts. We continue to spread the word about YP activities in the quarterly EMC Magazine as well (the imminent Q3 issue will recap these events in detail and promote participation for 2022). (YP Rep: Patrick DeRoy)

### IEEE Microwave Theory and Techniques Society

• 2021 is a turning year for YPs in MTT-S. Now officially elevated to a standalone AdHoc Committee and with 3 YP ex-officio AdCom voting members (approved during our 2021 first AdCom Meeting), there is a transversal effort to include YPs and their experience/input across the several society committees. In addition to the MTT-S Live Talks, driven by YP, and the traditional YP programs (often composed of a meet-up and/or dedicated sessions) at our flagship conferences, we've launched the MTT-S Affiliate Initiative, giving YPs an unprecedented access to the technical committees at the start of their career, be it academic or industrial, as a non-voting member. Throughout this year, we are planning to establish a closer collaboration with the local YP Affinity Groups, Student Branches and MTT-S Student Branch Chapters, through our appointed Regional Coordinators. The aim is to increase the vitality and engagement of our local volunteers through this personalized contact and guidance, as well as training. (YP Reps: Sara Barros, Tushar Sharma)

### IEEE Nuclear and Plasma Sciences Society

 As our conferences continue to be in virtual mode, we have continued to make available virtual talks/mixers/professional events to our YP members. At an upcoming conference, we are also organizing a special YP event to discuss "Benefits and how to successfully apply for Senior IEEE membership". (YP Rep: Srilalan Krishnamoorthy)

#### **Division V & VIII**

#### **IEEE Computer Society**

• We kick-started the year with an IEEE CS-YP Meetup hosted by CS Student and YP Activities Committee, aimed to facilitate a dialogue between CS Leadership and local IEEE YP Affinity Group leaders, to introduce CS activities targeted at Early Career Professionals. Opening remarks delivered by the CS President, followed by an interesting Panel Discussion with the CS VPs, moderated by the SYP Vice Chair for YP Activities. The meetup saw active participation with 50+ IEEE YP AG ExCom members (representing 30+ sections, across Regions 1,6,7,8,9,10) getting an opportunity to learn about activities of the CS Boards - MGAB, PEAB, TCAB, Publications and Standards, from the CS VPs.

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IEEE CS YP Micro Mentoring Program - Call for Mentors launched.
 Submissions are now being accepted from YP volunteers interested to serve as mentors. CS SYP is working on introducing a flagship activity that combines Emerging Tech, Soft Skills Training and Industry Engagement to enhance YP engagement and facilitate a smooth transition from Student to YP

 IEEE Computer Society also hosts FREE monthly interactive webinars on transferable business skills for Early Career Professionals. Topics include communication and presentation skills, interviewing tips, personal branding, effective writing, tips to improve your outside-the-box thinking, and more. (YP Rep: Megha Ben, Federico Iuricich)

#### **Division VI**

### IEEE Professional Communication Society

• IEEE Young Professionals group of IEEE Professional Communication Society has organized an online webcast titled - 'Prosper 2021'. The activity was designed in a unique way to provide insights into the potential opportunities and possibilities of becoming a PCS member and volunteer. Prof. Necia Werner (Past President, IEEE Professional Communication Society) and Mr. Aravindhan (YP Representative, IEEE Professional Communication Society) shared their experiences and insights into ProComm, the event was preceded by an open networking session. 30+ attendees made use of the program and many of them provided their interest to be a part of the community. (YP Rep: Aravindhan Anbazhagan)

# IEEE Society on Social Implications of Technology

- 2021 YP activities primarily focused on following elements:
  - Setting up a revised Charter to define goals, mission and near time objectives. This will reflect back on the work done in 2017.
  - Setting up a Core team by partnering with IEEE Younger professionals and networks to sign-up more members in IEEE - SSIT Youth Professional Committee (YPC).
  - Increase engagement with Youth professionals through newsletter, sharing vision through articles, interviews, social media etc.
  - Outreach effort work with current web team to update available web presence and find avenues to improve IEEE YPC presence
  - Prepare and plan ahead for a SSIT Young professional Mentorship Program (YPMP) and an Annual Summit in 2022. (YP Rep: Ali Muzaffar)

#### **Division VII**

#### IEEE Power & Energy Society

 We have started new initiatives and would like to highlight our key flagship event: <u>Powering the Future Summit 2021</u> is the maiden edition of IEEE Power & Energy Society Young Professionals (PES YP) Global Conference, providing

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the most up-to-date Professional and Technical training to PES members at the early stages of their careers. The online summit was held 23-24 and 30-31 October 2021. The event mission was to 'Empower the Power & Energy leaders of Tomorrow'. The summit provided a premier platform for engineers and students to share their knowledge and ideas with professionals from around the world. The summit aimed to upskill professionals, shed light on advancements in technology and entrepreneurship, and highlight success stories. It featured tutorials, plenary sessions, technical talks, and virtual industrial visits. Distinguished speakers delivered speeches on emerging technologies in the power and energy sector. Attendees had the opportunity to learn from and interact with industry leaders from across the world. The summit also had exciting networking pre-events planned for the attendees - Networking Beyond Borders, Global Outreach Challenge, Know Your Summit and Know Your Industry – Power Station.

• We scheduled YP sessions at PES Key flagship conferences in 2021. (YP Rep: Simay Akar)

#### **Division IX**

# IEEE Aerospace and Electronic Systems Society

- YP events are planned and are in preparation for the Radar Conference 2022, which will be a hybrid conference. The YP event will be a physical meeting.
- Furthermore, a webinar for the AESS YP community is in preparation. The webinar's objective is to provide career mentoring by industry seniors for YPs and interested students.
- Video material and distinguished lectures are provided for students, YPs, and interested young engineers and researchers at the AESS website.
- Finally, the AESS publishes social media posts targeted to YPs and students.
   (YP Rep: Philipp Wojaczek)

### IEEE Geoscience and Remote Sensing Society

• In 2021, because of COVID related uncertainties, we have been holding events virtually. We've had career development sessions targeted at graduating students. Specifically we have held 3 events focusing on prospective jobs in academia, national labs, and industry. The events were very successful and attracted large virtual audiences. In the future we are organizing similar events targeted at students in other IEEE Regions. We are also organizing our annual mixer to coincide with our society's flagship conference and a 3 Minute Thesis competition. We are also looking to hold an in-person networking event in December to coincide with the American Geophysical Union Fall Meeting conference (only if local guidelines allow). (YP Rep: Subit Chakrabarti)

### IEEE Information Theory Society

• We held various mentorship and contest events at the 2021 ISIT Conference, the flagship conference for the information theory society. Specifically, we organized (i) a multi-day virtual mentorship program on topics relevant to

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the student, postdoc and young faculty community (e.g., career advice, work life balance, scientific writing, presentation and networking skills), and (ii) an online challenge, where teams of students would make short videos explaining a technical concept to a broad audience and would compete for prizes. (YP Rep: Parisa Hassanzadeh)

# IEEE Intelligent Transportation Systems Society

• The activities for YP within the context of the ITSS Society are usually held during our major conferences, they include social gatherings and meetings, which foster the development of links among the YP as well as allow them to connect deeper with the Society. Within the two flagship conferences (IV and ITSC) there are social events to foster this connection. Furthermore, the society is offering help and support for young professionals that cover the travels to the conference and offering free registration to young professionals interested in the field, this is done through competition of ideas and encouraging their participation in conferences. (YP Rep: Fernando Garcia)

# IEEE Oceanic Engineering Society

During 2021, several events were organized by the IEEE OES YP team. In cooperation with the Marine Technology Society, a YP Panel was hosted at the IEEE/MTS Global OCEANS Conference in San Diego (Sept 2021). The event was held in presence with YPs and Early Career Ocean Professionals (ECOPs) meeting and discussing with senior professionals from OES and MTS. The re-opening of the IEEE OES YP-BOOST program was announced, and applications are currently being collected to select two new YPs that will be active in 2022-2023. Since virtual participation was not possible during the YP Panel at OCEANS, a webinar will be organized in order to engage with a large audience of YPs and ECOPs. Speakers will be invited, with special attention to gender and geographical balance, and upcoming YP events and opportunities will be announced. The IEEE OES YP team is currently working on dissemination and scientific material in the form of a series of podcasts to reach a large audience of students and young researchers. Finally, the engagement with the United Nation Ocean Decade ECOP initiative is continuing with active participation in several events, thus keeping up on exploring common opportunities and synergies. (YP Rep: Roberto Petroccia)

# IEEE Signal Processing Society

• The IEEE SPS Young Professionals organized two events that took place at IEEE ICASSP (June 2021), the annual SPS flagship conference. The first event was a panel discussion entitled "Career development for signal processing students, researchers and practitioners". We invited panelists from industry so they could share their experience on the hiring process and on career opportunities in the field of signal processing. We also organized a workshop entitled "Storytelling for Scientists", in which essential communication skills will be addressed by Dr. Karin Bodewits. We also organized an IEEE YP Panel Discussion – Career Advice Panel at IEEE ICIP 2021. Finally, we launched the creation of YP subcommittees in order to

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expand our activities beyond the events in the SPS flagship conferences. (YP Rep: Leonardo Duarte)

### IEEE Vehicular Technology Society

 I have been conducting IEEE VTS YP Seminar series - about 15 seminars conducted online. I have also been engaged in IEEE YP online activities and representing VTS as often as possible. I have also been supporting VTS Membership VP on improving memberships for VTS. (YP Rep: Taimoor Abbas)

#### **Division X**

### IEEE Computational Intelligence Society

• Virtual joint-events with the Students Activity subcommittee at CEC2021, CoG2021, and SSCI2021. The joint event for SSCI2021 will take place early December. (YP Rep: Harith Al-Sahaf)

# IEEE Control Systems Society

• CSS YP has started the organization of a conference geared towards YP in the CSS community and beyond. The conference is slated for March 2023 and will be fully virtual. In addition, CSS YP has continued its engagement at conferences, hosting (virtual) social events at CDC in December 2020 and ACC 2021, and a mentoring event at CDC 2021. (YP Rep: Rush Patel)

### IEEE Engineering in Medicine and Biology Society

- During 2021, I organized several webinars addressed to the EMBS YPs, during the year and for the flag online conference EMBC '21.
- In particular, the webinars organized were:
  - 'What can I do next' (2x): webinars organized as a panel discussion dedicated to early YPs for career and professional development;
  - 'Reading and writing a paper with IEEE EMB editors' (1x): webinar where three editors from different EMB journals offer insights and tips on different kinds of papers (original articles, reviews, letters to the editor, etc);
  - $\circ$  'Students and YPs Global Meeting (1x)': webinar to present current and future activities and to offer an opportunity to the audience for any questions. (YP Rep: Marianna Laviola)

### IEEE Photonics Society

 The main themes for the Society's Young Professional initiatives in 2021 were: Mentorship & Mental Health. Conducted through: eMentor Matches, Mentor Hours, a partnership with Dragonfly Mental Health for academics, GatheringTown Meetups, Virtual Photonics Lab Tours, "Mentoring Up" active resources, and devising new program concepts, like a 'Future Thought Leaders' program, in conjunction with the Society's Professional Advancement Committee.

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As for community outreach, (36) major student and young professionals (SYP) driven events were funded by the Society; 100+ other meetings and events were supported locally by affiliated chapters/affinity groups. Examples: Young Professional Journal Clubs (China); an Inter-College Olympiad (Cameroon); Nano-Photonic Devices & Sensors Workshop (Bangladesh); Best PhD Thesis Grants (Sweden); LaserComms Photonics STEM Assembly (UCSB); Light Sensor Awareness Seminars (Uganda); Future Directions QuantumTalk Sessions (Thailand); 3D Printed Microscope Kit Development (Scotland); Early Career Women Paper & Grant Writing (Australia); Arduino Optical Fiber Lighting Series (Malaysia); etc.

- Our SYP groups have also largely been leading our Humanitarian/Public Imperative and IEEE SIGHT collaborations, with strong participation from Africa. Examples include:
  - Kenya: (1) Kenyatta "Nanosatellite Prototype" (2) JKUAT "Solar Installation Project"
  - Uganda: (1) "Pads for Her" project (2) 'Teacher In-Service' programs on "Future Applications of Photonics" (YP Rep: Akhil Kallepalli)

# **IEEE Robotics and Automation Society**

• Two administrative meetings to discuss potential activities, hosting an open virtual forum to gauge needs/interest of YPs in our society to coincide with flagship conferences. (YP Reps: Megan Emmons, Arash Ajoudani, Aleksandra (Sandra) Faust)

#### IEEE Sensors Council

- The YP subcommittee started with a monthly webinar series called YP Engagement Series (YES).
  - Teja Gudena, Senior Vice President, Netradyne, India; "Netradyne AI and IoT" (28 May)
  - Peter Steeneken, Professor, Delft University of Technology, Former Principal Scientist at NXP; "Graphene for next generation nanomechanical sensors" (30 June)
  - Dr Mohsen Kaboli, Asst. Professor of AI, Robotics, Tactile Intelligence
     BMW Group, Director of RoboTac Lab, Radboud University; "Tactile
     Intelligence in Robotics and Cognitive Vehicles" (28 July)
  - Safal Sharma, Technology Specialist, CADFEM India; "Fast-Tracking 5G User Equipment System through Simulation Using Ansys" (27 August)
  - Prof Ramgopal Rao, Director, Indian Institute of Technology (IIT)
     Delhi, India; "Connecting Academic Research to Product Innovation a few case studies and a way forward" (9 September)
- YP @FLEPS 2021:
  - Two Young Professionals events were organized on the first day of the IEEE FLEPS 2021, 21-23 June. For the first event, two invited industry experts, Prof. Deepak Gupta (National Center for Flexible Electronics, IIT Kanpur) and Dr. Neil Chilton (Technical Director of Printed Electronics Limited (PEL)) were invited.

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 The second event was a mentors & mentees interaction session. It was an excellent opportunity for mentees to ask their questions directly to the mentors and have a one-to-one interaction with mentors. (YP Rep: Saakshi Dhanekar)

# IEEE Systems, Man, and Cybernetics Society

 The SMCS organized the usual SAC and YP activities. We provided discounts at conferences, moreover, we organized a summer school as well alongside the IEEE HMS conference. Furthermore, another winter school and a publication contest (including a bigger MD campaign) are under preparation. (YP Rep: György Eigner)

# **Individual Society/Council Statistics (data as of 31 January 2022)**

Society/Council Name || % of members who are YPs || # of YP members

Society/Council Name	<u>% YP</u>	# YPs
Division I		
IEEE Circuits and Systems Society	30.37%	3,196
IEEE Council on Electronic Design Automation	34.77%	3,020
IEEE Electron Devices Society	19.95%	1,961
IEEE Nanotechnology Council	32.56%	4,417
IEEE Solid-State Circuits Society	30.37%	3,196
Division II		
IEEE Dielectrics and Electrical Insulation Society	18.53%	336
IEEE Electronics Packaging Society	17.81%	435
IEEE Industry Applications Society	18.50%	2,499
IEEE Instrumentation and Measurement Society	21.81%	816
IEEE Power Electronics Society	30.25%	3,291
IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society	25.91%	534
Division III		
IEEE Communications Society	29.81%	8,708

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Division IV		
IEEE Antennas and Propagation Society	29.63%	2,754
IEEE Broadcast Technology Society	15.29%	222
IEEE Consumer Technology Society	21.02%	599
IEEE Council on RFID	32.48%	3,165
IEEE Council on Superconductivity	31.95%	2,327
IEEE Electromagnetic Compatibility Society	17.89%	611
IEEE Magnetics Society	23.55%	606
IEEE Microwave Theory and Techniques Society	26.46%	2,928
IEEE Nuclear and Plasma Sciences Society	19.04%	646
Division V		
IEEE Computer Society	14.74%	7,010
Division VI		
IEEE Education Society	18.68%	624
IEEE Industrial Electronics Society	34.07%	3,285
IEEE Product Safety Engineering Society	6.89%	49
IEEE Professional Communication Society	14.26%	70
IEEE Reliability Society	17.69%	266
IEEE Society on Social Implications of Technology	19.04%	302
IEEE Technology and Engineering Management Society	17.55%	460
Division VII		
IEEE Power & Energy Society	21.12%	8,945
Division VIII		
IEEE Computer Society	14.74%	7,010
Division IX		

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IEEE Aerospace and Electronic Systems Society	20.51%	1,079
IEEE Geoscience and Remote Sensing Society	43.25%	2,478
IEEE Information Theory Society	32.92%	1,247
IEEE Intelligent Transportation Systems Society	32.05%	763
IEEE Oceanic Engineering Society	22.39%	388
IEEE Signal Processing Society	31.11%	5,772
IEEE Vehicular Technology Society	31.31%	1,730
Division X		
IEEE Biometrics Council	32.15%	2,972
IEEE Computational Intelligence Society	27.46%	2,194
IEEE Control Systems Society	30.19%	2,488
IEEE Engineering in Medicine and Biology Society	29.04%	2,955
IEEE Photonics Society	20.27%	1,602
IEEE Robotics and Automation Society	28.20%	4,437
IEEE Sensors Council	32.06%	6,462
IEEE Systems, Man, and Cybernetics Society	30.30%	1,500
IEEE Entrepreneurship	39.12%	1,039

For more information regarding any items in this report, or the IEEE Young Professionals program, please contact us at <a href="mailto:vp@ieee.org">vp@ieee.org</a>.