



IEEE
COMPUTER
SOCIETY

2023 ANNUAL REPORT



A Year of Progress:

Empowering the Global Computer
Science and Engineering Community

www.computer.org

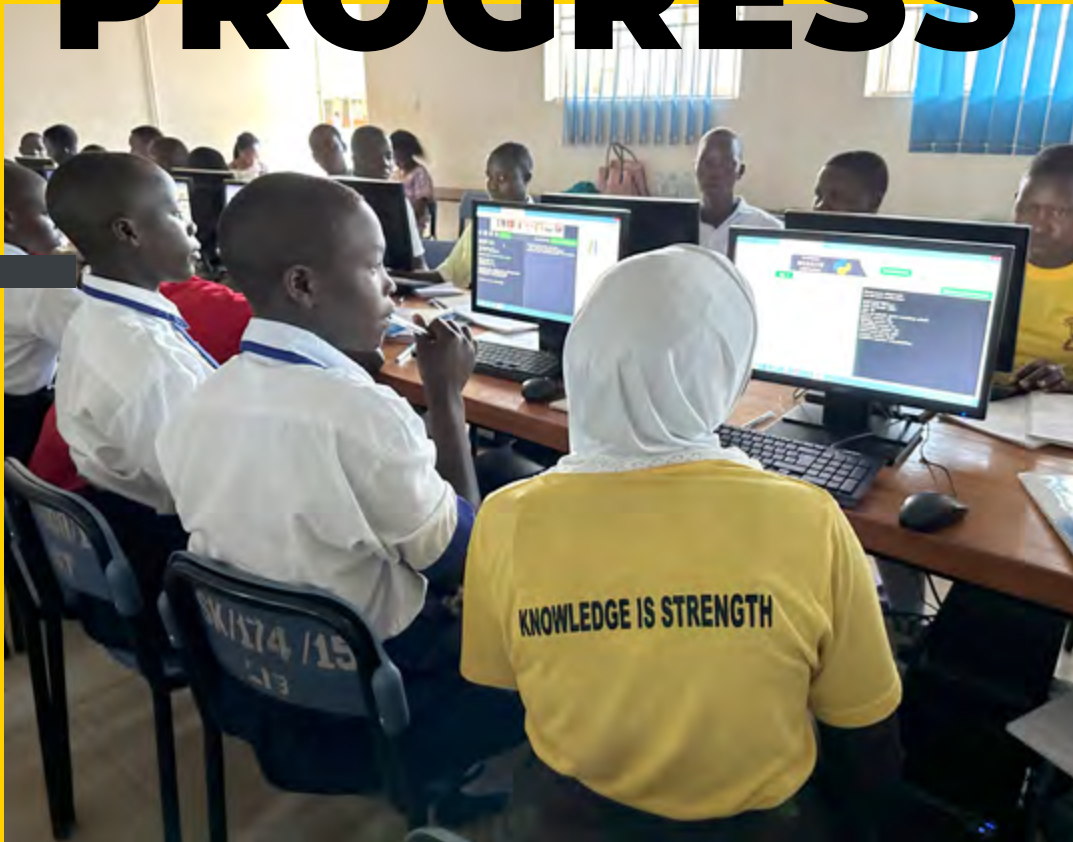


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A YEAR OF **PROGRESS**



A MESSAGE FROM THE PRESIDENT

As I reflect back on 2023, I am amazed at the impact of our community. Together, we have accomplished much, striving to make the world a better place through our contributions. Whether we're increasing investments in diversity and inclusion or spurring on the next generation of technological solutions, we strive each day to do better than the one before and to give back to this global computing community.



In considering our successes this year, I am profoundly proud of our growing commitment to diversity and inclusion. To date, we have applied USD\$750,000 to the IEEE Computer Society D&I Fund of the IEEE Foundation, ensuring robust resources to engage all communities in computer science and engineering. It's not about the donation, though, but that, through the donations, we have supported numerous programs aimed at expanding access to computer science and engineering for underserved populations. In addition, we addressed our governance, renewing our commitment to empower and diversify our volunteer base.

This year, we also reiterated the importance of emerging technologies to the advancement of our community.

We witnessed a significant increase in the number of proposals submitted to the Emerging Technology Fund, and we were able to award larger-dollar grants to enable bigger visions for fresh, next-generation solutions.

As computer science and engineering continues to advance, the diverse expertise and relationships of IEEE Computer Society members will enable new opportunities to better serve our world. I hope you will join me in continuing to contribute to the field,



to guide new solutions, to encourage burgeoning talent, and to remain engaged. Because it is in joining together that we will make a difference.

Serving as your Computer Society President has been nothing short of an honor. The computer science and engineering community is shaping the future, and IEEE Computer Society members stand at the heart of that evolution. **Thank you for a wonderful year, and may your professional journey continue to include the Computer Society.**



Sincerely,

NITA PATEL

2023 President





CONVENING **GLOBAL LEADERS**

As a pivotal part of its mission, IEEE CS assembles the global computer science and engineering community to facilitate the discussions, research, and collaborations that advance the field. Through leadership, technical groups, and other member activities, the Computer Society supports growth and development.



15,500
VOLUNTEERS



625
**COMMITTEES/
BOARDS**

BOARD OF GOVERNORS

This year, the Board of Governors focused on deepening engagement and enhancing existing programs and initiatives in the following ways:

- **Strategic Focus:** This year, the Board of Governors emphasized representing members by inspiring strategic alignment; engaging more students and early career professionals, engaging more industry,



375,000
COMMUNITY
MEMBERS



157
COUNTRIES WITH
IEEE CS MEMBERS



936
CHAPTERS



USD\$750,000+
DONATED BY IEEE CS TO THE DIVERSITY
& INCLUSION FUND THROUGH 2023

leading the way in new technological areas, and guiding operations to better the field.

- **Efficient Governance:** The Board of Governors approved new efficiencies in governance to simplify society oversight, including streamlining to one Vice President on the Board of Governors beginning in 2025.
- **Inclusive Engagement:** Diversity and inclusion (D&I) remained a top priority for the Board this year, and they [quadrupled](#) the Society's contribution to its D&I Fund for 2023 activities. There was also a continued focus on ensuring

diverse representation in the volunteer base, with the Nominating Committee placing additional attention on D&I as it considered a slate of candidates.

- **Next-Generation Leadership:** In 2023, the Board of Governors launched a more targeted focus on cultivating the next generation of computer science and engineering leaders. The Society sought to engage young professionals through the Student & Young Professional Activities Committee (SYP) and new initiatives like the "20 in their 20s" recognition.

TECHNICAL LEADERSHIP



IEEE CS TECHNICAL COMMUNITIES

IEEE CS Technical Communities nurture the development of computer science and engineering. Members in these communities organize conferences, engage with publications, influence the development of standards, develop programs for student activities, and create added resources with the financial

backing and staff support of the IEEE Computer Society. They support evolving technology areas, including cloud computing; computational life sciences; data engineering; pattern analysis and machine intelligence; microprocessors; high-performance computing (HPC); and software engineering.

LEADING THE WAY

In terms of technical leadership, this year, IEEE CS took action to address what's next in the field; for example:

Technology Predictions

Each year, a committee of technical experts convenes to forecast how technology will unfold. [2023 predictions](#) spoke to 19 different advancements, including: remote healthcare and wearables; augmented reality; software for the Edge2Cloud continuum; open hardware; AI-assisted DevOps; 3D printing in personalized healthcare; generative AI; IT for sustainability; autonomous driving; digital distributed manufacturing; trusted computing;

huge graph neural networks; adaptive, generative pharmaceuticals; autonomous robots and brain-machine I/F; artificial general intelligence; global digitalization of monetary transactions; space ITC; sustainable space manufacturing; and disinformation detection/correction.

At [year's end](#), the committee noted that progress was made in each area in 2023, with AI-based solutions ranked highest in their evaluation.

Emerging Technology Activities

During IEEE Education Week in April, IEEE CS announced the 10 emerging technology programs funded to foster further understanding and



2023 was a huge year for AI in all forms. Its influence on a wide variety of other technological solutions created a ripple effect that has launched a whole new set of possibilities.

DEJAN MIJOJIC

2014 IEEE Computer Society President
IEEE Fellow
HPE Fellow and VP at Hewlett Packard Labs



development of newer technologies within the computing industry. Grants of upwards of USD\$30,000 were awarded to:

- *AI Perceptions Workshop Series*, which strove to educate stakeholders about AI, gather cross-cultural perspectives on ethical and societal concerns around it, and explore future implications and applications of the technology.
- *Metaverse Hackathon*, which helped foster greater understanding in the use of new and futuristic technology in applications such as healthcare, smart cities, transport, and more.
- *Cybersecurity Capture the Flag (CTF) Event*, which worked to increase cybersecurity awareness and engagement among K-12 students.



300%

**INCREASE IN
SUBMISSIONS TO
THE EMERGING
TECHNOLOGY GRANT
PROGRAM IN 2023**

- *Digital Platforms and Societal Harms Tech Forum*, which aimed to identify research and policy advances to detect, measure, and mitigate societal harms such as hate speech, extremism, exploitation, disinformation and misinformation on digital platforms.

These programs helped to advance community discussions around new areas of technical interest and began to shape how IEEE CS can support their evolution.



Emerging tech has transformative power: the power to solve business problems, the power to broaden accessibility, the power to better connect, and so much more. To be able to support community efforts that advance emerging technologies is a huge win, not only for the computing community, but the larger, global ecosystem as well.

NITA PATEL

2023 IEEE Computer Society President



A COMMUNITY OF LEADERS

Overall, IEEE CS advances the field by assembling global leaders to address challenges and new areas of opportunity. Through this facilitated collaboration across a community of 375,000+, in 2023, IEEE CS leaders addressed the burgeoning topics in areas as diverse as HPC, AI, quantum computing, and more.



IEEE CS Leaders Recognized in TIME100 Most Influential People in Artificial Intelligence List

A testament to the impact of the global IEEE CS community, eight IEEE CS authors, speakers, and leaders were named to the 2023 TIME100 Most Influential People in Artificial Intelligence (AI) List. The inaugural TIME100 AI List honors the 100 most influential people in AI around the world and recognized:

- **Yejin Choi** | Professor, University of Washington / [CVPR 2023](#) and [CVPR 2020](#)
- **Pushmeet Kohli** | Vice President of Research, Google Deep Mind / [CVPR 2020](#)
- **Yann LeCun** | Chief AI Scientist, Meta / [ICCV 2023](#)
- **Fei-Fei Lei** | Professor, Stanford University / [CVPR 2021](#)
- **Arvind Narayanan** | Professor of Computer Science, Princeton University / [IEEE Computer Society Digital Library \(CSDL\) Author](#)
- **Dan Hendrycks** | Executive Director, Center for AI Safety / [CVPR 2022](#)
- **Elham Tabassi** | Associate Director of Emerging Technologies, NIST / Former IEEE CS Member and [IEEE CS Author](#)
- **Raquel Urtasun** | CEO and Founder, Waabi / [CVPR 2023](#)

IEEE CS 2023 EXECUTIVE COMMITTEE OF THE BOARD OF GOVERNORS

The Board of Governors and Executive Committee oversee the direction and strategy of the IEEE Computer Society.

Exceptional contributions were made in 2023 by three BoG appointed Ad Hoc committee chairs. Their invaluable efforts and unwavering commitment helped advance IEEE CS special focus areas.

- Ad Hoc on the Computer Society in 2050—Chair: Hironori Washizaki, 2024 IEEE CS President-Elect
- Ad Hoc Committee on Scientists-At-Risk—Chair: Nils Aschenbruck, 2024 Second Vice President
- Development & Engagement Advisory Board—Chair: Michela Taufer, 2023 Treasurer



**NITA
PATEL**

2023 President



**JYOTIKA
ATHAVALE**

2024 President



**WILLIAM D.
GROPP**

2022 President

2023 EXECUTIVE COMMITTEE CONTINUED



**HIRONORI
WASHIZAKI**

First Vice President



**GRACE A.
LEWIS**

Second Vice President &
Vice President, Technical &
Conference Activities



**FERNANDO
BOUCHE**

Vice President, Member &
Geographic Activities



**DEBORAH
SILVER**

Vice President,
Professional &
Educational Activities



**GREGORY T.
BYRD**

Vice President,
Publications



**ANNETTE D.
REILLY**

Vice President,
Standards Activities



**CAROLYN
MCGREGOR**

Secretary



**MICHELA
TAUFFER**

Treasurer



**CECILIA
METRA**

2022–2023 IEEE Division
V Director



**LEILA
DE FLORIANI**

2023–2024 IEEE Division
VIII Director



**CHRISTINA M.
SCHOB**

2023 IEEE Division V
Director-Elect



**MELISSA A.
RUSSELL**

Executive Director

CONNECTING THE GLOBAL COMMUNITY



CVPR

#1

**RANKED COMPUTER
SCIENCE CONFERENCE**

The Computer Vision and Pattern Recognition Conference (CVPR) secured the top ranking on [Research.com](https://www.research.com)'s 2023 Best Computer Science Conferences List



195

**INTERNATIONAL
CONFERENCES**



3,779

**TECHNICAL
& NETWORKING
EVENTS**

Engaging computer engineers, scientists, academia, and industry professionals from all areas of computing, IEEE CS strengthens and empowers the global community through conferences, publications, and programs, setting the standard for the education and engagement that fuels continued advancement.

In 2023, conferences and publications excelled, again capturing top industry rankings. But not one to rest on its laurels, the IEEE CS community continued to brainstorm and expand impact through new products and services launching in 2024. Highlights include the planned SustainTech Expo and Leadership Forum and launch of *IEEE Transactions on Privacy*, among others.

CONFERENCES

Setting the standard for excellence in computer science and engineering, IEEE CS provides conferences that convene global leaders to advance the field. These events provide a forum for the research dissemination, technical discussion, collaboration, and connection that spark innovative ideas and expand the positive impacts of computer science and engineering. Specifically, IEEE CS events are:

INTERNATIONALLY RENOWNED

In 2023, Computer Society events received the highest honors in [industry rankings](#), with the Computer Vision and Pattern Recognition Conference (CVPR) touted as the top computer science event by Research.com. Overall, 31 IEEE and IEEE CS conferences were recognized as the premier events in the field.



TECHNOLOGY FORWARD

IEEE CS conferences seek to bridge the gap between new scientific advancements and the development of an industry surrounding them. For example, the IEEE International Conference on Quantum Computing and Engineering, also known as Quantum Week, assembles more than 400 program hours to address original research, innovations, and insights in quantum computing and engineering.

INDUSTRY BELLWETHERS

Globally, computer science and engineering leaders look to IEEE CS conferences and forums as an indicator of new research and technology developments. IEEE CS events serve as predictors of the trends to come. For instance, CVPR 2023 revealed the top [five trends](#) in computer vision: more realistic technology; autonomous ecosystems; convergence of image and language models; cross-disciplinary collaboration; and diversity and inclusion to mitigate bias. These areas remained topics to watch throughout the course of the year and will set the trajectory for 2024 programs.

IEEE CS Announces Launch of IEEE SustainTech Expo and Leadership Forum

November 2023 brought with it the [announcement](#) of a new global event from IEEE CS: SustainTech Expo and Leadership Forum. Aimed to bring together leading industry change-makers for discussions and innovative solutions, SustainTech will focus on sustainable technology impacting buildings and factories and convene 27–28 August 2024, in San Diego, California.

Learn more about [SustainTech](https://ieeesustaintechexpo.org) at <https://ieeesustaintechexpo.org>.



TECHX BRINGS OUT THE BEST OF THE STUDENT CHAPTER EXPERIENCE

IEEE CS continues to impact the lives of computing students around the globe through its TechX program—a series of local events that combined workshops, panels, soft skill development, compelling competitions, networking opportunities, and other interactive activities for the benefit of computing students.

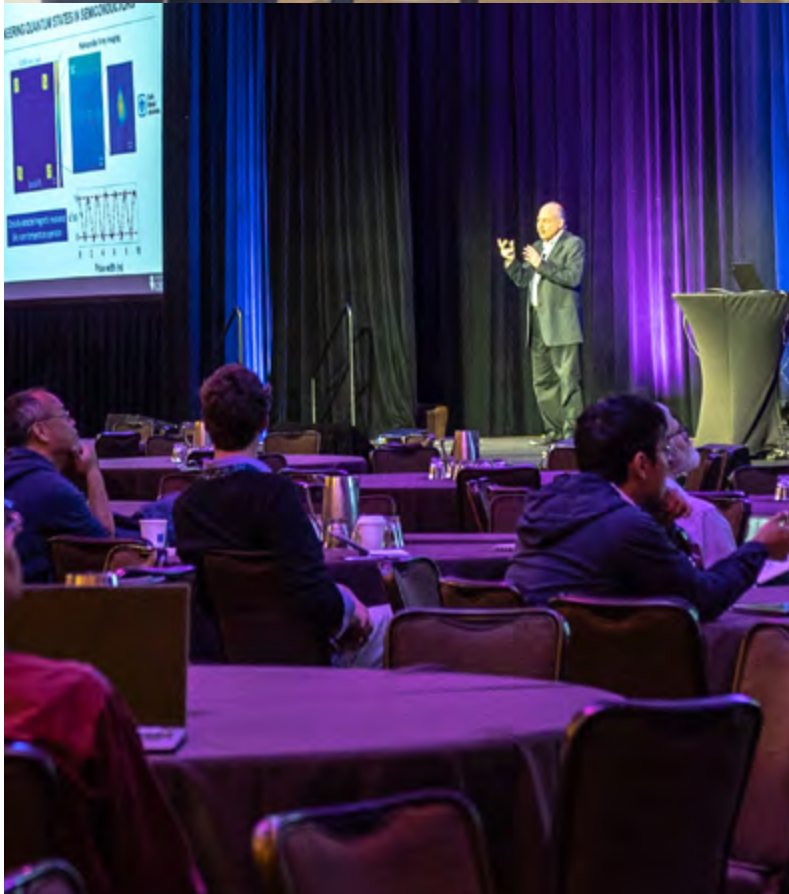
[Above all, IEEE CS conferences draw leaders in computer science and engineering to problem-solve and shape the future direction of the field.](#)



IEEE Quantum Week explores the full potential of quantum computing and aims to redefine the boundaries of what's computationally possible. This groundbreaking potential isn't just about technology—it's about shaping the future of numerous fields.

HAUSI MÜLLER

General Chair, IEEE Quantum Week 2023





IEEE TRANSACTIONS ON
PATTERN ANALYSIS AND
MACHINE INTELLIGENCE

#1

RANKED AI JOURNAL

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) secured the top spot among artificial intelligence journals in 2022 Journal Impact Factor™ rankings



49

MAGAZINES & JOURNALS



926,000+

ARTICLES IN COMPUTER
SOCIETY DIGITAL LIBRARY

PUBLICATIONS

IEEE CS publications drive discovery for the computer science and engineering community. With over 926,000 highly rated peer-reviewed papers published in the Computer Society Digital Library (CDSL), IEEE CS offers the most robust archive of global research available to the community. In addition to breadth of information, IEEE CS publications also offer the highest caliber of research, influencing the global scientific landscape in the following ways:



International cooperation is key for speeding up technological innovation. The IRDS plays a decisive role in this area and helps identify possible next generation and emerging technologies in advanced computation and functionalities for future systems and applications. This joint effort will be instrumental for the new electronics industry and in the digitalization of many domains to reduce footprint, as well as the electronic monitoring targeting societal challenges using sustainable electronic technologies.

FRANCIS BALESTRA

SiNANO Institute, the IRDS International Roadmap Committee representative for Europe

HIGHEST CITATIONS

IEEE CS journals consistently hold top spots as relates to Journal Impact Factor™ (JIF™) rankings. In 2023, IEEE CS [announced](#) that *IEEE Transactions on Pattern Analysis and Machine Intelligence* earned the top spot among artificial intelligence journals and secured the highest ranking of all IEEE CS publications. In addition, 11 IEEE CS journals hold the coveted top impact factor ranking in their specialty field.

GLOBAL POLICY IMPLICATIONS

IEEE CS contributes to global work efforts that shape policy outcomes in computer science and engineering. For instance, in [December 2023](#), it became apparent that the broad utilization of the IEEE International Roadmap for Devices and Systems (IRDS) is influencing the various Chips Acts worldwide. “Initiatives in Europe, Japan, and the U.S. are engaging the IRDS roadmap for guidance as their activities develop,” said Tom Coughlin, 2024 IEEE President.

OPEN ACCESS AVAILABILITY

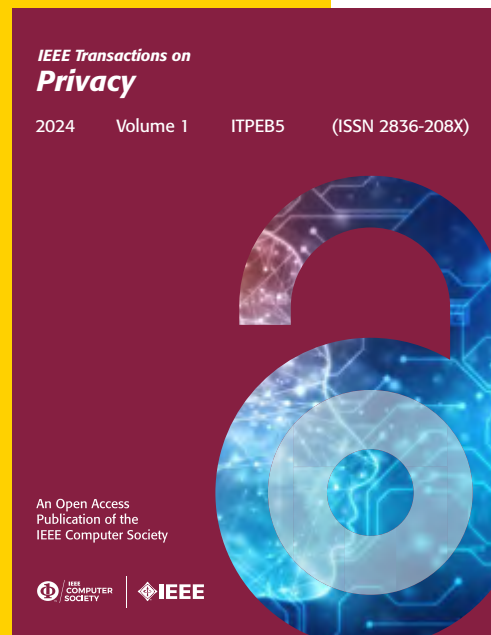
IEEE CS' Gold Open Access (OA) journal, the *IEEE Open Journal of the Computer Society (OJ-CS)*, is dedicated to publishing high-impact articles on emerging topics and trends in all aspects of computing. The publication has received its first impact factor of 5.9 in 2023. In addition, all IEEE CS publications offer authors the opportunity to publish OA. In 2023, IEEE reached an important milestone in publishing over 100,000 open access articles overall.

IEEE CS publications have supported the growth of computer science and engineering for the past 75 years and will continue to aid in the evolution of the field into the future.

IEEE CS to Launch New Publication, *IEEE Transactions on Privacy*, in 2024

In December 2023, IEEE CS announced the launch of *IEEE Transactions on Privacy*, which will begin accepting submissions in 2024. Led by inaugural editor-in-chief Christopher W. Clifton from Purdue University, IEEE Transactions on Privacy is a fully open access, rigorously peer-reviewed forum for rapid publication of high-impact articles related to privacy and data protection.

For more information on submissions, access the publication's "[Write for Us](#)" page.





SHAPING THE **FUTURE**



As IEEE CS looks to the future, diversity and inclusion, emerging technologies, and young professional advancement take center stage. In 2023, the society expanded its efforts in these areas to more strategically align new programs with the evolving needs of the community.

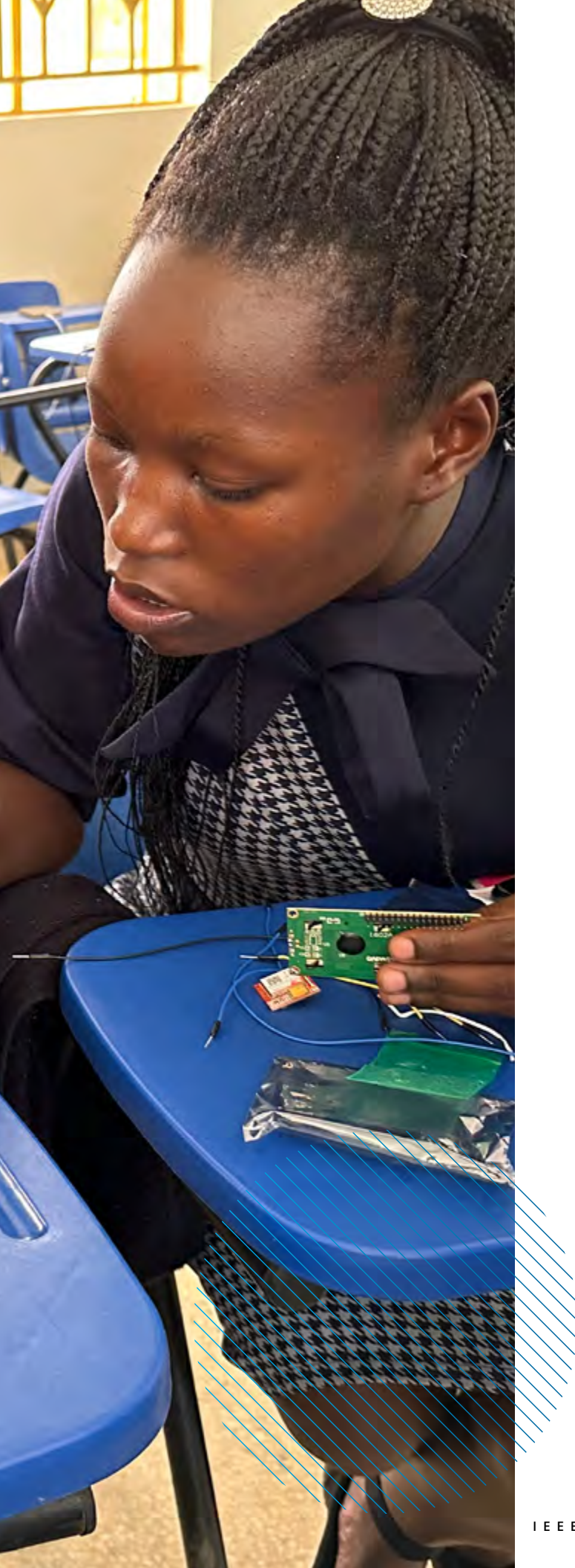


\$689,000+
**AWARDS, GRANTS,
SCHOLARSHIPS,
AND DONATIONS**

A photograph of two young women, likely students, working together on a project. They are seated at a blue table, looking down at a small electronic circuit board with various components and wires. One woman is pointing at the board with her finger. In the background, there are blue chairs and a window with a yellow frame. The image is partially covered by a dark blue overlay containing text.

DIVERSITY & INCLUSION INITIATIVES

As a part of the IEEE Foundation, IEEE CS' D&I Fund was designed to support projects and programs that positively impact diversity, equity, and inclusion throughout the computer engineering and computer science communities. For 2023, D&I grant submissions grew more than 40% year over year, with 124 potential programs proposed. These programs included the following, among others:



IEEE LEARN-COMPUTE CAMP

India has about 700 tribal groups throughout the country, called “Scheduled Tribes.” For students coming from these rural areas, the journey from tribal lands to bustling urban cities can seem challenging, especially when it comes to technology.

To help with this transition, the IEEE Computer Society (CS), along with KIL-Kotagiri, sponsored the [IEEE Learn-Compute Camp 1.0](#), hosted at Kengari Panchayat Nilgiris, Govt Higher Secondary School 23-24 June 2023. Enabled by a grant from the Diversity and Inclusion (D&I) Fund of the IEEE Foundation, this camp was established for the Kotas, an ethnic group indigenous to the Nilgiris mountain range in Tamil Nadu, India.

“The first camp was basically to give awareness of cyber-safety and how these pre-university kids can use social media, Internet, and email more safely than before,” said Ramneek Kalra, cloud support engineer at Amazon Web Services, and program lead for the event. “With determination and knowledge obtained from camps like this one, pre-university students can thrive in their new urban environments and build a bright future.”

YOU BELONG IN IEEE CS

Made possible by a Diversity and Inclusion (D&I) Grant from the IEEE Computer Society, the [You Belong in CS](#) (UBCS) program represents the belief that everyone, regardless of their background, gender, or location deserves an equal opportunity to thrive in the world of computer science and technology. This program consisted of a series of events: a STEM workshop series geared toward high school students in rural Sri Lanka; the Code with Women in Engineering (WIE) 2022 program, a collaboration with the IEEE

Sri Lanka Section WIE Affinity Group; and an IEEE Education Week Sri Lanka event including a STEM exhibition and a seminar on higher education pathways.

“UBCS is more than a project; it’s a manifestation of my core values and aspirations,” said project leader Chamika Sudusinghe, a Ph.D. student at the University of Illinois Urbana-Champaign in Champaign, Ill., U.S.A. “Collaboration has been key; when we collaborate with other organizations that share similar visions and objectives, we have the potential to surpass our targets and create an even more profound positive impact on society.”



APPLYING ATOMIC HABITS TO DIVERSITY, EQUITY, AND INCLUSION IN TEACHING

James Clear's *Atomic Habits* surmises that small shifts in daily behavior allow individuals to get 1% better every day. With the support of an IEEE Computer Society Diversity & Inclusion (D&I) Fund grant from the IEEE Foundation, this [concept](#) has been translated to the classroom environment.

Seeking to create a mentoring circle of faculty and doctoral students who are working toward more inclusive teaching spaces for their students, project lead Akesha Horton, director of curriculum and instruction, Luddy School of Informatics, Computing,

and Engineering at Indiana University in Bloomington, Ind., U.S.A. and her colleague, Nathan Ensmenger, informatics graduate director and associate professor at the university, established a program to help uncover slight changes that can lead to a more inclusive teaching environment. The goals of this work centered on achieving better informed and equipped faculty and future faculty, improving course syllabi and lesson plans, and developing sample lesson plans/case studies that illustrate the techniques and processes required to develop more inclusive course materials.

“By focusing on the value of persistent and incremental change, all of our participants were empowered to make at least one change to their course practices and/or syllabus,” said Horton.





EMERGING TECHNOLOGY INITIATIVES

As computer science and engineering integrates into an increasing range of vertical markets, demands for collaboration continue to rise. These technologies are now becoming foundational parts of a wide range of novel solutions. As such, it's not surprising that in 2023, Emerging Technology grant submissions rose more than 300%. New initiatives included:



DIGITAL PLATFORMS AND SOCIETAL HARMS

Bringing together global technology leaders, government officials, policy makers, researchers, and computer science professionals to tackle the challenges around hate speech; extremism and exploitation; and misinformation and disinformation, the 2023 Tech Forum on Digital Platforms and Societal Harms aimed to increase knowledge around key issues, expand awareness of ethical obligations, and identify the technical solutions that can help.

Drawing in-person and virtual attendees, this forum encouraged dialogue and debate around ways to better support truth in technology.

“The harm inflicted through hate speech, extremism, misinformation and disinformation on digital platforms is staggering,” said Dr. Andre Oboler, CEO, Online Hate Prevention Institute, Australia, and 2023 Tech Forum Co-Chair. “Consider the emotional, mental, or physical toll that these harmful expressions can inflict on us individually, and as a society. Collectively solving these issues requires work from government, industry and technologists, and convening these stakeholders to rally around solutions is critical to the future of our society.”

CYBERSECURITY BENCHMARKS

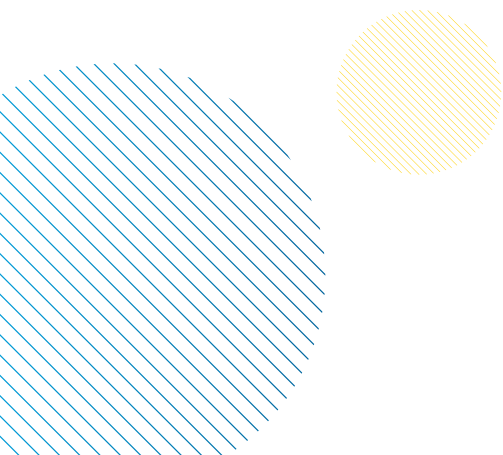
Funded with an Emerging Technology Grant, the [IEEE Trojan Removal Competition](#) encouraged participants to explore solutions that can enhance the security of neural networks. By developing general, effective, and efficient white box trojan removal techniques, participants contributed to building trust in deep learning and artificial intelligence, especially for pre-trained models in the wild, which is crucial to protecting artificial intelligence from potential attacks.

With 1,706 valid submissions from 44 teams worldwide, six groups successfully developed techniques that achieved better results than the state-of-the-art baseline metrics published in top machine-learning venues. The benchmarks summarizing the models and attacks used during the competition are being released to enable additional research and evaluation.

“We’re hoping that this benchmark provides diverse and easy access to model settings for people coming



up with new AI security techniques,” shared Yi Zeng, the competition chair and research assistant at Bradley Department of Electrical and Computer Engineering, Virginia Tech, Blacksburg, Va., U.S.A. “This competition has yielded new data sets consisting of trained poisoned pre-trained models that are of different architectures and trained on diverse kinds of data distributions with really high attack success rates, and now developers can explore new defense methods and get rid of remaining vulnerabilities.”







PROFESSIONAL DEVELOPMENT

The computer science and engineering profession continues to expand. As solutions such as generative AI take shape and new algorithms permeate technology solutions in every vertical market, the demand for computer scientists and engineers will rise. Investing in tomorrow's leaders will support the field in meeting growing demands and building the next generation of solutions. With that in mind, in 2023, IEEE CS focused on:

CAREER DEVELOPMENT

From career advice to job listings, the IEEE CS Career Center offers a one-stop-shop for computer science and engineering professionals to make connections on their professional journey. Enhanced in 2023, the online Career Center simplifies the job search process for both employers and applicants. More information can be found at <https://careers.computer.org>.



STUDENT CHAPTER GROWTH

Events like the aforementioned [UBCS](#) provide avenues to not only support diversity and inclusion but to cultivate next-generation leaders as well. In fact, in 2023, UBCS drove a near doubling of student chapters in Sri Lanka, increasing them from seven to 12. New chapters were established at the University of Vavuniya, Sabaragamuwa University of Sri Lanka, University of Ruhuna, National School of Business Management, and Gen. Sir John Kotelawala Defence University.

With programs that speak to inclusivity, opportunity, and leader cultivation, 2023 IEEE CS initiatives fueled positive developments in support of the future of the fields of computer science and engineering.

YOUNG PROFESSIONAL ENGAGEMENT

From additional targeted events at IEEE CS conferences to the establishment of a Young Professional Shadow Board (Advisory Council), 2023 had a focus on engaging early-career professionals. As the future of computer science and engineering, their input will support the evolution of programs provided by IEEE CS. This year's focus helped to deliver new vehicles for young professionals' voices to be heard.



CHAPTER GRANTS SPARK INNOVATION

The CS Chapters in IEEE Region 10 organized a Summer School from 12–15 Sept. 2023 at Anil Neerukonda Institute of Technology & Sciences (ANITS), Visakhapatnam, India.

Bringing together students from across the globe, the summer school delivered instruction on a variety of skills on the topics of Sensors, Networks & IOT

Applications, with hands-on workshops solving real-time problems.

The Summer School exposed students to leading-edge technologies in IoT, Computing, Networks and also industry requirements to prepare the Third and Final Year students for employment after graduation.

IEEE CS Membership & Geographic Activities funded more than 40 local events in 2023. [Learn how to get funding for your local chapter activities.](#)

IEEE CS Identifies Emerging Leaders in Computer Science and Engineering in “20 in their 20s” List

In November 2023, IEEE CS released the inaugural “20 in their 20s” list to celebrate the successes of individuals who are in the beginning stages of their computer science and engineering journeys. Comprised of early-career professionals making an impact on the technical community and their work, the 2023 list includes:

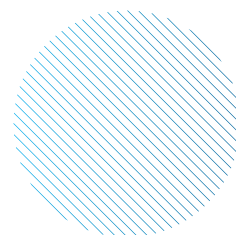
- **Asif Ahmed** | Software Development Engineer, MoneyView, Whizdm Innovations Pvt Ltd., India
- **Olufemi Balogun** | R&D Engineer, Operations & Strategy, VAAV Innovative Solutions, Nigeria
- **Cybele Ghanem** | Implementation and Support Engineer, Invigo, Lebanon
- **Ali Ghasempour** | Co-Founder and CEO, CyberWise.Space, Estonia
- **Saptarshi Ghosh** | Systems Design Engineer, Intel Corporation, USA
- **Sneha Hegde** | R&D Engineer, École Centrale de Lyon / KAPTEOS, France
- **Niranjan Kumar** | Business Development, Antano & Harini, India
- **Ahmed Lachkham** | Full-Stack Developer Consultant, Deloitte, Tunisia
- **Muthu Mariapan** | Senior Engineer, PathPartner Technology, India
- **Sewwandie Nanyakkara** | Senior Software Engineer, Sysco LABS, Sri Lanka
- **Ariel Nowik** | Software Developer, Balanz Capital, Argentina
- **Gaurav Pathak** | IEEE CS mentor and active volunteer, India
- **Lihini Rajapaksha** | Administrative Business Analyst, Xyicon
- **Abdiel Ramirez** | Systems Engineer, Comcast: Digital Media Services, USA
- **Dhruvinsinh Rathod** | Custom Software Engineering Analyst, Accenture, India
- **Christos Roumeliotis** | Co-Founder & General Manager, Innovation Bee, Greece
- **Shivam Shivam** | Engineering Lead, ZS, USA
- **Mayesha Tafannum** | Client Services Officer – Information Technology, HSBC, Bangladesh
- **Shatakshi Tomar** | Associate Data Engineer, Lowe’s, India
- **Zach Turner** | Embedded Software Engineer, L3Harris Technologies, USA

For more information on this year’s honorees, visit [computer.org](https://www.computer.org).

BETTER SERVING **OUR WORLD**



2023 provided a backdrop for the evolution of IEEE CS, the computer science and engineering community, and the profession. The work of IEEE CS helped advance the field, clear a path for new discoveries, and lead next steps in support of the profession.





With the rise in demand for computer science and engineering comes a drive for knowledge, skills, and progress, and IEEE CS will continue to convene global leaders to help support advancements for the bettering of our world.

That work will mean a continued focus on cultivating diversity and inclusion, supporting emerging technologies, closely following industry developments, and nurturing the next generation of leaders. IEEE will design programs designed to speak to these strategic imperatives, while creating efficiencies that enable

more substantive and sustainable connections throughout the global community.

In short, 2023 served as a foundational year for a renewed focus on the future. Its successes will serve as a basis for 2024 initiatives and will amplify and bolster the efforts from the computer science and engineering community in the year to come.

To stay up to date on the latest IEEE CS news and developments, visit computer.org.



**40
NEW
STANDARDS**



**236
ACTIVE
STANDARDS**



WASHINGTON, DC OFFICE

2001 L Street N.W., Suite 700
Washington, DC 20036-4928

WEST COAST OFFICE

10662 Los Vaqueros Circle
Los Alamitos, CA 90720-1314

WORLDWIDE

help@computer.org
www.computer.org

