

## Leadership and Engagement: IEEE Computer Society 2025 Key Strategies

Hironori Washizaki, IEEE Computer Society President

IEEE Computer Society (CS) President Hironori Washizaki kicks off the New Year with an overview of the Society's goals and strategic areas. In 2025, the CS will focus on three strategic areas: engaging our members, engaging industry, and leading new areas such as AI and Society.

### Strategic goals

The CS is the world's largest computing technical society. Its vision is to be the global leading provider of technical information, community services, and personalized services to the world's computing professionals. To align activities with the vision across the organization, the CS particularly states the following cross-cutting strategic goals since 2021: Engage more students and early career professionals, engage more industry individuals and organizations, and lead the way in new technical areas<sup>1</sup>.

With the kind support and energy of all of our membership and collaborators with the dedicated leadership of the 2025 team (see: "The 2025 Leadership Team"), my goal for this year is to continue the CS growth by focusing on the following

strategic areas aligned with the aforementioned midterm goals.

### 2025 LEADERSHIP TEAM

The CS cannot achieve its mission without the strong support of our volunteers. I'd like to extend my warmest appreciation to the members of the 2025 Board of Governors. Furthermore, I am delighted to introduce the members of our 2025 Executive Committee leadership, who have volunteered to serve in the following roles:

- Dr. Grace Lewis: President-Elect
- Dr. Nils Aschenbruck: Vice President
- Mr. Andrew Seely: Member and Geographic Activities vice president
- Dr. Cyril Onwubiko: Professional and Education Activities Board vice president
- Dr. Charles (Chuck) Hansen: Publications Board vice president
- Dr. Edward Au: Standard Activities Board vice president
- Ms. Terry Benzel: Technical and Conference Activities Board vice president
- Mr. Darren Galpin: Treasurer (Finance Committee chair).
- Dr. Yoshiko Yasuda: Secretary

Membership engagement: SYP, Juniors and more

For the future of our community and the

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<sup>1</sup> <https://www.computer.org/about/vision>

technological field, it is vital to provide greater values and continuous support to grow long-standing relationships and retain younger generations in professional organizations. Figure 1 shows how the CS engages and fosters the growth of our community members at every stage of their professional journey, from precollege students to early career professionals and seniors.

Student & Young Professional (SYP) activities are crucial to address the goal since they provide unique engagement opportunities and empower our volunteers through various activities, including mentoring programs with professionals and seniors, skill development through hackathons and competitions, and community building and entrepreneurial networking. As a perfect example, I witnessed firsthand the passion and engagement of SYPs at the All India Computer Society Student & Young Professional Congress (AICSSYC) last year (Figure 2). Their efforts and insights are inspiring to advance our entire community. My goal is to provide the necessary support and resources to amplify SYP activities in many ways, such as continuing the CS Global Chapter Leaders' Summit to foster cross-Chapter collaboration and the exchange of ideas.

An organized contact point and support for precollege students in the CS-specific area were needed in the CS's engagement system. By referring to the prosperous past science, technology, engineering, and mathematics education programs, such as the CS's Diversity and Inclusion Funded Learn-Compute Camp as well as the IEEE

TryEngineering programs, the CS's Ad Hoc Committee, which was co-led by Irene Pazos Viana and myself, has inaugurated a new program, named CS Juniors, to engage K-12 students, teachers, and the local community by creating educational experiences that enhance their understanding of computer science and related fields<sup>2</sup>. Last year, multiple CS Juniors-sponsored events occurred around the world, including Latin America (Figure 3), Asia, and Africa. This year, the CS plans to continue the CS Juniors program more systematically by having open calls for proposals.

There are many other efforts underway to achieve our goal, such as scholarships and awards supported by the CS. Furthermore, diversity and inclusion (D&I) is crucial to ensure broader and inclusive participation, free of discrimination, and foster innovations based on diverse thinking. The CS is committed to D&I in all aspects of the organization. Efforts include continuing the Diversity and Inclusion Fund to support programs and events that positively impact D&I<sup>3</sup>.

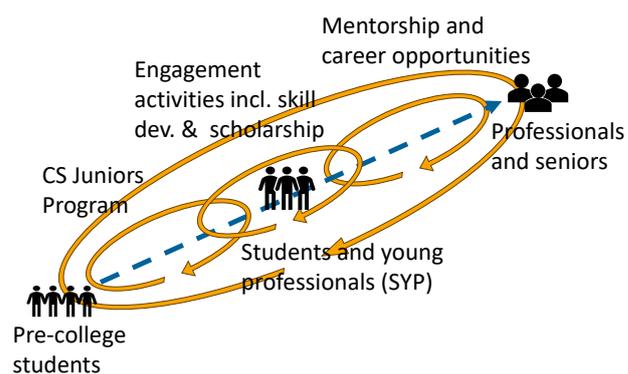


Figure 1. Membership engagement at different career stages

<sup>2</sup> <https://www.computer.org/membership/juniors>

<sup>3</sup> [https://www.computer.org/about/diversity-](https://www.computer.org/about/diversity-inclusion/project-proposals)

[inclusion/project-proposals](https://www.computer.org/about/diversity-inclusion/project-proposals)



Figure 2. All India Computer Society Student & Young Professional Congress (AICSSYC) volunteers last year



Figure 3. The CS Juniors program in Montevideo last year

Industry engagement: BOKs, certifications and more

To be essential to all elements of the computing profession, delivering greater value propositions to industrial individuals and growing partnerships with industry organizations is crucial. Consequently, the CS continues and expands critical activities, including technical committees and conferences, periodical publications, standards and ethics,

mentorship opportunities among professionals, bodies of knowledge (BOKs), and related training and career development opportunities.

The CS has sponsored many technical conferences, from emerging ones, such as IEEE Quantum Week (1,600+ attendees last year), to mature and still growing “mega” ones, such as the SC Conference (around 18,000 attendees last year, Figure 4) and the CVPR (12,000+ attendees previous year). Conferences are where people across industry and research, academia, and government meet to access the latest developments, successful applications, and case studies, and seek collaboration opportunities since complex issues are often challenging for individual entities to solve. The CS also supports related industry-focused events and activities, such as IEEE RAS events and the SustainTech Leadership Forum. These endeavors usually involve joint-Society collaboration due to the cross-disciplinary nature of complex technological issues and global challenges such as sustainability. Periodicals (e.g., magazines and journals) and IEEE standards are also important sources for accessing the state of the art and ensuring interoperability and quality in products and services.

Concerning professional development opportunities, Figure 5 shows BOKs and other concepts connected based on the conceptual structure described in the ISO/IEC 24773 standard series, which I have been leading for many years. In cooperation with other professional societies, the CS has developed and supported the evolution of

various BOKs<sup>4</sup> and related frameworks as solid foundations of professions, including the Guide to the Software Engineering Body of Knowledge (SWEBOK Guide), the Software Engineering Competency Model (SWECOM), the Systems Engineering Body of Knowledge (SEBoK), and the Enterprise Information Technology Body of Knowledge (EITBOK). With the support of experienced editors and review volunteers, I have led the SWEBOK Guide Evolution project, resulting in the release of version 4 (V4) last year, which reflects modern software engineering (SE) techniques and practices and updates existing ones. Notable updates include the integration of agile and DevOps, the incorporation of new knowledge areas such as architecture, operations, and security, and the inclusion of emerging topic areas such as AI SE.

This year, in addition to the continuous evolution of these BOKs by incorporating newly developed technologies and practices from our publications and other sources, the CS strategically provides knowledge and skills development opportunities, particularly for industrial professionals and students. The efforts will include a new certification program based on the latest SWEBOK Guide as well as educational and training curriculum and digital contents. Furthermore, we plan to hold a new event called the IEEE Software Engineering Professionals Summit (SWEBOK Summit) to share the latest achievements, challenges, and future directions on the BOK, skills, and competencies required for current and future SE professionals.



Figure 4. The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC24 Conference) exhibition

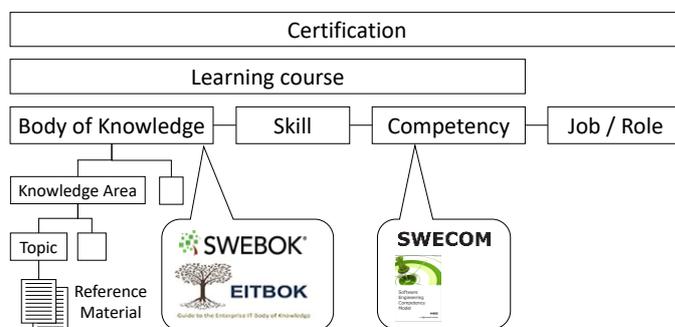


Figure 5. BOK and professional development

Lead the way in new areas: AI, tech predictions and more

To keep the community up to date with emerging technologies and to foster innovation, the CS must be a proactive bridge between cutting-edge research and the realities of industry and society. To achieve this goal, the CS continues and expands critical activities, including technical committees, conferences and events, periodical publications and standards, the facilitation of new initiatives, and proactive strategic collaborations with other professional societies. The CS is committed to

<sup>4</sup> <https://www.computer.org/education/bodies-of->

[knowledge/](https://www.computer.org/education/bodies-of-knowledge/)

nimbly providing the necessary support and resources to amplify these activities.

One crucial developing area is AI. Our community and AI have mutual relationships: the CS advances AI technologies, and at the same time, AI accelerates the CS's activities. My goal is for the CS to be recognized as the IEEE's primary authority in AI technologies. However, the CS's activities and products must be properly empowered by AI while maintaining ethics and integrity.

To this end, we will clarify and provide a holistic view of the CS's AI-focused programs and products. These efforts include CS-sponsored conferences such as CVPR and IEEE CAI, CS-supported AI standards, and publications such as the number one-ranked AI journal IEEE Transactions on Pattern Analysis and Machine Intelligence, the 40-year history magazine IEEE Intelligent Systems, and the relatively new journal IEEE Transactions on Artificial Intelligence. Furthermore, we amplify and extend these programs and products by increasing synergistic relationships among them and strengthening collaborations with other IEEE organizational units and alliances (such as the IEEE AI Coalition) as well as external professional societies. To enhance this direction, the CS plans to hold a new IEEE Generative AI Innovation Summit, an industry-focused event to discuss the challenges and latest advancements associated with innovative generative AI technologies. Our continuous efforts on ethics and integrity will also support the direction. To envision a broader spectrum of new areas, the

CS has annually issued Technology Predictions Reports by Dejan Milojevic's team (Figure 6). The findings in the reports are helpful, particularly when it comes to critical infrastructures.<sup>5</sup> For example, Figure 7 shows the evolution and a possible future direction of SE aligned with underlying fundamental technologies predicted in the reports, such as AI and quantum computing. The CS plans to continue this effort this year. Furthermore, the CS continues the Emerging Technology Fund program,<sup>6</sup> which supports ideas that connect emerging technologies with the computing community.

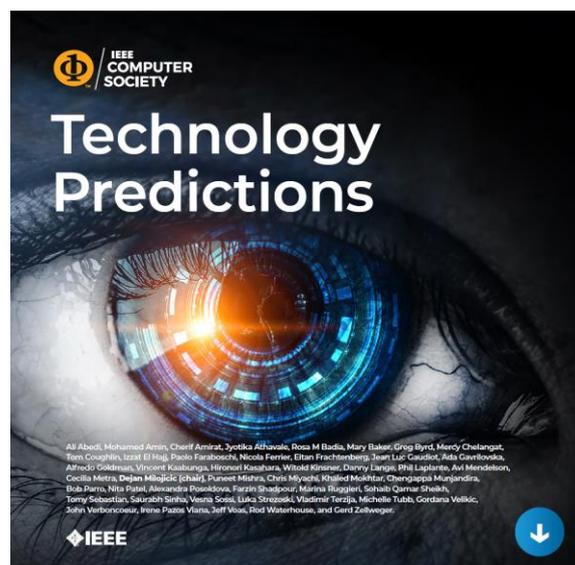
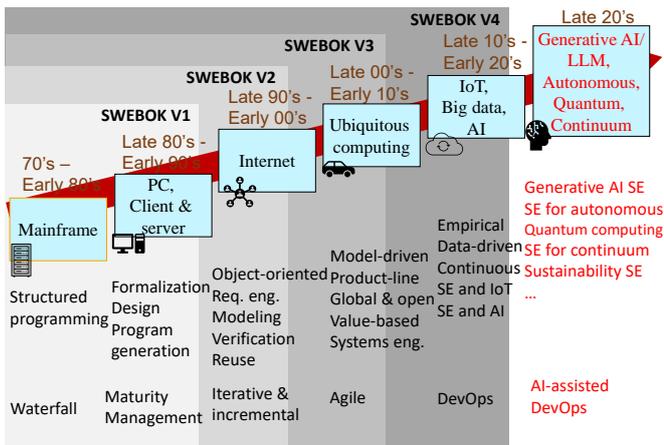


Figure 6. IEEE CS Technology Predictions

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<sup>5</sup> <https://www.computer.org/resources/2024-top-technology-predictions/>

<https://www.computer.org/communities/emerging-technology-fund>



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Figure 7. Software engineering evolution with tech predictions

### Going Further Together

I am humbled to lead as the CS president, with a particular focus on the aforementioned strategic areas. I often refer to a famous African proverb: “If you want to go fast, go alone. If you want to go far, go together.” This is what the CS values as the leading technical community, highlighting the importance of collaboration and collective efforts in achieving sustainable progress and larger computing advancements for good.

Together, we will go beyond today's AI and advanced technologies, overcome the limitations of current diversity and inclusion, and realize global sustainability. The CS is always your professional home. Your feedback and actions shape the CS to change the world and contribute to humanity.

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