2024/25 ANNUAL REPORT TO IFIP

BRAZILIAN COMPUTER SOCIETY (SBC)

An Overview of SBC

Founded in 1978, the Brazilian Computer Society (Sociedade Brasileira de Computação – SBC) is a non-profit scientific society that brings together students, educators, researchers, professionals, and computing enthusiasts throughout Brazil. Its mission is to promote digital inclusion, encourage research and education in computing, and contribute to the education of computing professionals committed to social responsibility.

SBC plays an important role in the development of computing as a scientific discipline and profession in Brazil. Its activities encompass research, education, scientific publications, professional development, public policy, scientific competitions, innovation, and cooperation with national and international organizations.

The Society has a broad organizational structure that reflects the diversity of the computing field. Its Special Commissions and Interest Groups promote scientific, technical, educational, and policy-related activities in their respective areas and organize many of Brazil's major scientific computing conferences. During the reporting period, SBC had 29 Special Commissions and five Interest Groups. A new Special Commission on Digital Government and a new Interest Group on Quantum Computing and Communication were created in 2024.

SBC also maintains a strong geographical presence throughout Brazil through its 25 Regional Chapters. These chapters support regional scientific and educational activities, disseminate SBC initiatives, and strengthen connections between the Society and universities, research institutions, students, and professionals nationwide.

At the end of the reporting period, SBC had 6,191 members, including 1,770 full members, 2,743 undergraduate students, 1,320 graduate students, basic-education teachers, founders, and institutional members.

SBC's Vision / Mission Statement

SBC's activities are guided by a broad mission combining scientific, educational, professional, and societal objectives. The Society works to encourage teaching, research, and development in computing and information technology in Brazil; foster critical thinking and professional responsibility within the computing community; contribute to public discussions and policies concerning computing and technological development; disseminate scientific knowledge through conferences, meetings,

publications, and other activities; and contribute to the scientific and technological development of the country.

Key Activities in the Reported Period

This report summarizes SBC's main activities from August 2024 to July 2025. During this period, the Society pursued initiatives in computing research and education, computing in schools, open science, inclusion and diversity, scientific publications, innovation, scientific events and competitions, institutional cooperation, and modernization of its organizational and digital infrastructure.

Grand Challenges in Computing and Computing Education

One of SBC's major strategic initiatives during the period was the organization of the *Grand Challenges in Computing* and *Grand Challenges in Computing Education 2025–2035*.

The 4th Seminar on Grand Challenges in Computing in Brazil and the 1st Seminar on Grand Challenges in Computing Education were held jointly in São Paulo in November 2024. The initiative brought together members of the Brazilian computing community to identify and examine priority research and education challenges for the coming decade.

The Grand Challenges initiative is intended to provide a long-term research and education agenda for the Brazilian computing community. In addition to helping researchers identify important scientific and technological problems, the results are expected to inform public policy and help define priorities for research funding programs.

The main outcomes of the seminars were presented in March 2025 at CAPES, the Brazilian federal agency responsible for graduate education, during an event in Brasília attended by the President of CAPES, representatives of the Ministry of Education, and other institutions. SBC made seminar papers available through SBC OpenLib (SOL) and prepared two books consolidating the results for publication.

The initiative reflects SBC's view that advances in computing extend well beyond the discipline itself and are an important component of Brazil's scientific, economic, educational, and social development.

Computing Education

Computing education continued to be a major priority for SBC during the reporting period.

A particularly important achievement was the approval of the *Professional Master's Program in Computing Education (ProfComp)*. SBC submitted the proposal to CAPES to

establish a national graduate program dedicated to preparing qualified teachers to teach computing at different levels of basic education.

ProfComp brings together a network of 16 higher education institutions distributed across all regions of Brazil and involves more than 200 faculty members. CAPES approved the proposal, and the Brazilian Ministry of Education subsequently issued the ordinance officially authorizing the program, with the first cohort scheduled to begin in 2026.

The program represents an important step in SBC's longstanding efforts to establish computing as an essential component of basic education. It addresses the growing demand for teachers who can develop computational thinking and other computing competencies among school students.

SBC also organized the 2nd Brazilian Symposium on Computing in Basic Education (SBC-EB). The event used a hybrid format and was held simultaneously in five Brazilian cities, with a program designed specifically for basic-education administrators and educators.

Additional activities included events on Computing in Basic Education, a short course on the topic at the Annual Meeting of the Brazilian Society for the Advancement of Science (SBPC), and the preparation of the booklet "What is Computing: A Practical Guide for School Administrators and Educators." Together, these activities seek both to prepare educators and to improve public understanding of the role of computing in the education of citizens in an increasingly digital society.

Science, Technology, and Open Science

SBC continued its efforts to strengthen the dissemination of computing research and promote open scientific practices.

A significant development was the creation of an Open Science Working Group. The initiative aims to align the Brazilian computing community with international developments in scientific practice by encouraging research that is more transparent, accessible, collaborative, and reproducible. SBC views Open Science not only as an issue of scientific practice but also as a mechanism for broadening the societal impact of computing research.

SBC continued to invest in the SBC OpenLib (SOL), its open-access digital library, as a central component of its scientific communication infrastructure. In meetings with the presidents of CAPES and CNPq, SBC representatives emphasized the importance of SOL in providing equitable open access to computing research and discussed the need for sustainable support for national open-science infrastructure.

There were also important developments involving SBC's scientific journals. In October 2024, the Journal on Interactive Systems (JIS) was successfully indexed in Scopus, joining the Journal of the Brazilian Computer Society (JBCS) and the Journal of Internet

Services and Applications (JISA) among SBC's international journals indexed by the database.

The International Journal of Computer Architecture Education (IJCAE) was also transferred to SOL during the period, further consolidating SBC's scientific publications within its open-access infrastructure.

Inclusion, Diversity, and Equity

SBC continued to strengthen institutional activities related to inclusion, diversity, and equity through its Commission for Inclusion, Diversity and Equity (CIDE), established in 2024.

One of CIDE's major initiatives was a demographic survey of SBC members. The survey aimed to provide a better understanding of the composition of the Brazilian computing community and identify opportunities to improve inclusion and equity.

The study examined characteristics including gender, race, sexual orientation, disability, and geographical location, as well as the experiences, perceptions, and aspirations of members of the computing community. The results were consolidated in a booklet prepared for release at CSBC 2025.

The demographic study provides SBC with an evidence base to develop institutional policies that better reflect the diversity of its community and to identify barriers to participation by underrepresented groups.

SBC also continued a broader initiative to document and preserve the history of its programs and activities. Two new booklets were prepared during the period, one documenting CIDE's activities and another addressing Computing in Basic Education.

Innovation and Engagement with Industry

SBC strengthened its efforts to foster innovation, entrepreneurship, and interaction between the academic computing community and industry.

The SBC Innovation Seal continued as one of the Society's principal initiatives for encouraging academic entrepreneurship and technology transfer. The 2025 edition received 29 project submissions from all regions of Brazil and involved new evaluators from the Brazilian innovation ecosystem. SBC also organized a webinar providing practical guidance to prospective participants on preparing projects and competing for the award.

The Society held meetings with companies and other organizations to identify new opportunities for cooperation and encourage them to become institutional members of SBC. It also supported planning for COMPUTEC 2025 and surveyed innovation and industry-interaction initiatives led by SBC's Special Commissions.

These activities seek to strengthen connections among computing research, entrepreneurship, industry, and the broader Brazilian innovation ecosystem.

Modernization of SBC's Digital and Administrative Infrastructure

The increasing scale and complexity of SBC's activities have created growing demands on its information systems and digital infrastructure. To address these challenges, SBC created an Extraordinary Directorate of Information Technology.

The new Directorate is responsible for coordinating IT governance, infrastructure planning and management, the evolution of SBC's information systems, and improvements in digital security. Its creation provides a more coordinated framework for the technological infrastructure supporting SBC's scientific, educational, membership, and administrative activities.

SBC also continued efforts to professionalize its administrative activities. The Society improved its registration, membership, and electronic voting systems, transitioned to secure electronic document processing, and continued adapting SBC systems to Brazil's General Data Protection Law (LGPD).

Institutional and International Cooperation

SBC continued to expand its relationships with scientific societies and other national and international organizations.

During the reporting period, SBC participated in both the IFIP Member Society Assembly (MSA) and the IFIP General Assembly (GA), strengthening the Society's engagement with IFIP. SBC also prepared and widely disseminated an article explaining the benefits of SBC's membership in IFIP, to increase awareness among Brazilian researchers and encourage greater participation in IFIP activities.

SBC also strengthened its relationship with the Latin American Center for Informatics Studies (CLEI) by nominating Brazilian representatives and participating in meetings of the CLEI Executive Committee.

At the national level, SBC advanced discussions with the Brazilian Health Informatics Society (SBIS), the Brazilian Association of Telemedicine and Telehealth (ABTMS), and the Brazilian Society of Biomedical Engineering (SBEB) concerning the creation of a federation dedicated to health informatics. SBC also participated in meetings of scientific societies organized by the Brazilian Society for the Advancement of Science (SBPC).

A new cooperation agreement was signed with the Brazilian Association of Science Parks and Business Incubators (ANPROTEC), and discussions progressed toward a cooperation agreement with the Brazilian National Research and Education Network (RNP).

These activities are part of SBC's broader effort to strengthen connections between the Brazilian computing community and other scientific disciplines, innovation organizations, and international computing societies.

Scientific Events

Scientific events are one of SBC's principal mechanisms for advancing computing research, supporting scientific communities, and educating students and professionals.

Between August 2024 and July 2025, SBC was involved in 57 events with approximately 8,000 registered participants. These included 22 scientific symposia and congresses promoted by SBC, two co-promoted events, 15 Regional Schools, 14 supported events, and four events organized through partnerships.

SBC's scientific activities were supported by 29 Special Commissions and five Interest Groups. During the period, the Society established the new Special Commission on Digital Government (CE-GD) and the Interest Group on Quantum Computing and Communication (GI-CQ), reflecting the emergence and growing importance of these fields within the Brazilian computing community.

The events organized by SBC cover a broad range of areas, including computer networks and distributed systems, cybersecurity, software engineering, databases, artificial intelligence, human-computer interaction, computer graphics, multimedia, information systems, computing education, high-performance computing, robotics, formal methods, health informatics, and many other areas.

SBC's Regional Schools complement the major national conferences by providing educational and scientific activities in different parts of the country and by creating opportunities for students and professionals outside Brazil's largest research centers to engage with the computing community.

CSBC 2024

The Society's flagship event, the 44th Congress of the Brazilian Computer Society (CSBC 2024), was held in Brasília. Its theme was Digital Desert: The Disconnected and Unseen World.

The Congress attracted more than 1,500 participants and comprised 10 core events, 15 satellite events, two special events, and four sectoral meetings.

CSBC provides an important national forum for connecting scientific research in computing with educational, technological, governmental, professional, and societal issues. The 2024 theme placed particular emphasis on digital inclusion and on populations and communities that remain disconnected or insufficiently represented in the digital transformation of society.

During the reporting period, SBC also began preparations for CSBC 2025 in Maceió and CSBC 2026 in Gramado and launched the call for proposals to host CSBC 2027.

Scientific Competitions and Talent Development

Scientific competitions are another important component of SBC's activities, particularly in identifying and developing young talent and encouraging students to pursue computing.

The SBC Programming Marathon achieved record participation during the reporting period. Its first stage involved 880 teams from 226 educational institutions, competing at almost 50 sites across Brazil. Sixty-five teams qualified for the Brazilian finals in João Pessoa, selected on the basis of performance as well as geographical and gender representation.

Brazil also hosted the Latin American Finals of the competition in Salvador in March 2025.

The Women's Programming Marathon attracted more than 1,000 competitors from 10 Latin American countries, showing the growing reach of initiatives that encourage women's participation in competitive programming. SBC also supported several regional programming competitions, including the first edition of the SBC São Paulo Programming Marathon.

Brazilian students also achieved strong results in international informatics competitions. Participants selected through the Brazilian Informatics Olympiad (OBI) received one gold, one silver, and one bronze medal at the European Girls' Olympiad in Informatics (EGOI). At the International Olympiad in Informatics (IOI), held in Egypt, Brazilian students received three bronze medals.

Together, these activities combine competition with education, training, international participation, and initiatives to broaden the geographical and gender diversity of students engaged in computing.

Brazilian Participation in IFIP

SBC represents Brazil in the International Federation for Information Processing (IFIP) and maintains longstanding participation in IFIP activities through the General Assembly, Technical Committees, Working Groups, and other initiatives.

During the reporting period, SBC participated in the IFIP Member Society Assembly (MSA) and the IFIP General Assembly (GA). SBC also published an article explaining the benefits and opportunities associated with IFIP membership, seeking to increase awareness of IFIP among SBC members and encourage greater participation by the Brazilian computing community.

General Assembly

Country Representative: Ronaldo Alves Ferreira

Technical Committees

Brazilian researchers participate in several IFIP Technical Committees (TCs) and Working Groups (WGs), providing an important connection between SBC's scientific communities and IFIP's international activities.

- TC 1 – Foundations of Computer Science
  - Leila Ribeiro
- TC 2 – Software: Theory and Practice
  - Julio Leite
- TC 3 – Education
  - Ig Ibert Bittencourt
- TC 5 – Information Technology Applications
  - Vacant
- TC 6 – Communication Systems
  - José Neuman de Souza
- TC 7 – System Modeling and Optimization
  - Edmundo de Souza e Silva
- TC 8 – Information Systems
  - Vacant
- TC 9 – ICT and Society
  - Vacant
- TC 10 – Computer Systems Technology
  - Ricardo Augusto da Luz Reis
- TC 11 – Security and Privacy Protection in Information Processing Systems
  - Vacant
- TC 12 – Artificial Intelligence
  - André C. P. de L. de Carvalho
- TC 13 – Human-Computer Interaction
  - André Pimenta Freire
- TC 14 – Entertainment Computing
  - Esteban W. G. Clua

Reported by
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Brazilian Representative to IFIP

Source: SBC's Annual Report 2024 - 2025, available at
https://books-sol.sbc.org.br/index.php/sbc/catalog/book/176