The 50ᵗʰ Latin American Computing Conference (L CLEI 2024)
Bahía Blanca, August 12 to 16, 2024
Organized by: Universidad Nacional del Sur, SADIO
https://conferencia2024.clei.org

Call for Papers

The Latin American Computing Conference (CLEI) will celebrate its 50th anniversary starting in 2024 and ending in 2025. Such an important event calls on the entire community of Latin America in particular and the world in general to participate with original academic papers that contribute to the different aspects of computer science and engineering. The CLEI will take place in the city of Bahía Blanca (Argentina) in August 12th to 16th, 2024.

CLEI conferences have been conducted since 1974 by the Latin American Center for Informatics Studies (CLEI, www.clei.org), and are the main Latin American space for the exchange of ideas, experiences, results and applications between researchers, teachers, professionals and students of science and computer engineering. It is included in the CORE ranking (www.core.edu.au) and indexed by Scopus. CLEI 2024 will include plenary conferences by world-renowned researchers and professionals, workshops and panels on different aspects that include all areas in which computing participates directly and indirectly. In addition, the ELI Latin American School of Informatics, the Latin American Contests for master's and doctoral thesis (CLTM and CLTD) will be developed, as well as the Congress of Latin American Women in Computing (LAWCC), the Latin American Networking Conference (LANC) and the First Latin American Workshop on Quantum Software Engineering (TLISC 2024).

CLEI 2024 invites to submit papers that address open problems, illustrating the conceptualization, design, construction, evaluation or application of techniques, methods, tools or computer systems, in any area of computer science and engineering. To facilitate the evaluation, it is requested that each submission be associated with a track among the following:

ORGANIZATION

General Chair

Dr. Marcelo Falappa (UNS, Argentina)
Dr. Carlos Luna (UDELAR, Uruguay)

Program Committee General Chair

Dr. Carlos Chesñevar (UNS, Argentina)
Dr. Jose Miguel Rojas (University of Sheffield, UK)

Organizing Committee
Dra. Claudia Pons (SADIO, UNLP/UAI)
Dr. Rodrigo Santos (UNS)
Dr. Carlos Chesñevar (UNS)

Dr. Marcelo Falappa (UNS)
Dr. Diego Martinez (UNS)
Lic. Alejandra Villa (SADIO)
Dr. Fernando Gregorio (UNS)

TRACKS

Software Systems track: including (but not limited to) the following topics: Software Engineering; Software Testing and Analysis; System Quality, Maintenance and Evolution; Mining software repositories and Analytics; Software Engineering for Artificial Intelligence; Computing Theory; Human Aspects of Software Engineering.
Chairs: Dr. Alejandra Garrido (FI-UNLP, Argentina), Dr. Breno Miranda (UFPE, Brasil).

Intelligent Systems track: computer systems that emulate or augment human cognitive capabilities, including (but not limited to) Data Science, Big Data, Operations Research, and the following aspects of Artificial Intelligence AI and Natural Language Processing, Knowledge Representation and AI, Formal Reasoning in AI, Ethical AI, Bias in AI Algorithms, Explainable AI, Human-in-the-loop AI, AI in Healthcare, AI in Biology and Chemistry, AI in Autonomous Vehicles, AI in Finance, AI in Education, AI and Climate Change, AI in Cyber Security, AI Regulation and Governance, AI in Entertainment, AI and Operation Research, AI and Industry 4.0, AI and Simulation.
Chairs: Dr. Ana Maguitman (UNS, Argentina), Dr. Silvio Gonnet (FRST-UTN, Argentina), Dr. Carlos Brizuela (CICESE-Mexico)

Systems in Practice: computer systems deployed in the productive or social environment, including (but not limited to) Human-Computer Interaction, High Performance Computing, Bioinformatics and Chemoinformatics, Education, Applications in industry/government/society, and Gender Approach in these topics.
Chairs: Dr. Jessica Carballido (UNS, Argentina), Dr. Pablo Turjanski (DC/FCEN-UBA, Argentina).

Computer Technologies: specialized technologies not covered in the other tracks, such as IoT, Blockchain, Cloud/Edge Computing, High Performance Computing, Fault Tolerance, Communication Networks, Cybersecurity, Virtual/Augmented Reality, Digital Ecosystems, Integrability, Innovation in Digital Ecosystems, Industry 4.0, etc.; in addition to Education and Gender Focus on these topics.
Chairs: Dr. Patricia Bazán (FI-UNLP, Argentina), Dr. Javier Orozco (UNS, Argentina), Dr. Jesús Antonio Carretero (UCIII- España).

Computer Education. Interdisciplinary factors in the teaching of computing and information technology: Ethical, social and/or economic aspects, Philosophical problems, Historical analysis. Education in computing and informatics at the beginning of a career in computing (tertiary or university): Heterogeneity of the students who begin their studies, Experiences in introductory courses, Relationships of the university with pre-university education, First programming language, Training of computer science teachers computing. Didactics for teaching computing: different theoretical approaches and/or practical applications, methodologies, modalities: Mental models, Constructivism, Active learning, Modalities in teaching computing (face-to-face, blended, distance), Evaluation modalities, Accessibility in teaching computing. Problems and addressing strategies. Tools.

Experiences. Other strategies and/or tools for computer teaching-learning. University-business association models: Curriculum design based on factors required by the industry, Promotion and training to undertake business initiatives, Work and student dropout.
Chairs: Dr. Ismar Frango (U. Mackenzie/Brazil) - Dr. María Gómez (U. Medellín/Colombia).

TYPES OF SUBMISSIONS

CLEI 2024 will accept three types of submission:

Full papers: These papers must be self-contained and present a clear contribution with an adequate bibliographic review, results, discussion of the same and conclusions. Papers that are accepted and presented at the conference will be published by IEEE Xplore. Their maximum length is 10 pages.
Work-in-progress papers: This category corresponds to works in progress. As such, they are expected to present a line of research on which they can make an original contribution. It is expected that the topic will be motivated, and the expected outcome will be raised, providing if there are preliminary results and future actions. The maximum extension is 4 pages. Papers that are accepted and presented at the conference will be published by IEEE Xplore.
"Journal First" papers: works on topics relevant to CLEI 2024 which have been published in an indexed journal in 2022 or 2023.

SUBMISSIONS

Language: The works must be written in Spanish, Portuguese or English.
Submissions: Works must be sent via CTM Microsoft indicating the selected track. Link to submission site: https://cmt3.research.microsoft.com/CLEI2024.
Format: (1) All papers must be in PDF format; (2) *Full* and *work-in-progress* papers must use the IEEE conference template (www.ieee.org/conferences_events/conferences/publishing/templates.html) and have the title, abstract and index terms in English, regardless of the language used in the rest of the paper; (3) *Journal First* submissions must include a single page indicating (i) DOI, (ii) journal where the paper was published, and (iii) impact factor and quartile.
Integrity: Authors of full and work-in-progress papers must accept the CLEI Author Code of Conduct (www.clei.org/codigo-de-conducta-para-los-autores/). In particular, these papers must not have already been published or be under review in any other national or international conference or publication (but could be published as a preprint in an open repository). The inclusion of text generated by large-scale language models (LLMs) is expressly prohibited, unless it is part of the experimental material of the reported work.

REVISION

Each submission will be reviewed anonymously "single-blind review" by at least three members of the Program Committee, in accordance with the CLEI Code of Conduct for Reviewers (www.clei.org/codigo-de-conducta-de-los-revisores/).

PAPERS PRESENTATION: accepted papers will be presented in thematic sessions, consisting of 20 minutes of oral presentation of each complete article followed by questions from attendees and 10 minutes for work-in-progress papers.

PUBLICATION AND INDEXING

The CLEI 2024 Proceedings will be published by IEEE, and will appear in the IEEE Xplore Digital Library (https://ieeexplore.ieee.org/), which is typically indexed by Scopus.

Full and work-in-progress papers: to ensure publication in the Conference Proceedings, each accepted article must: (1) have at least one of its authors registered **as an author** in the conference; (2) be presented **in person** at the conference; (3) respect the conference format and maximum number of pages; (4) incorporate the reviewers' recommendations for improvement.
"Journal First" papers: will be included in the conference program but not in the proceedings, respecting the copyright policies of the journal where it was published.

AWARDS FOR BEST PAPERS AND SUBSEQUENT PUBLICATION

Best Paper: The Program Committee will select one paper from each track as the Best Paper.
Extended versions: The Program Committee will recommend several articles for publication in one of the journals associated with the event, in which case the authors must present an improved and extended version (in English) that will have a new evaluation process, specific to the journal.

Journals associated with the event: The journals associated with the event are: CLEI Electronic Journal (open access, free, indexed by Scopus, LATINDEX, DOAJ, DBLP, etc.) (www.clei.org/cleiej). Additional journals may be announced later.

ASSOCIATED EVENTS

- Latin American Master Thesis Contest. Chair: Dr. Laura Cobo (UNS, Argentina) - Dr. Rhadamés Cardona (UCV, Venezuela).

Since 1998, the CLTM has been part of CLEI. The theses presented must be defended between April 1, 2023 and March 31, 2024 (non-extendable hard deadline), be approved at the time of submission and have been carried out at CLEI member institutions. Along with a summary of no more than 20 pages, the approval certificate and a list of publications related to the thesis that have been made or are under evaluation must be sent. The best three theses will be awarded according to the evaluation made by the program committee and the CLTM chairs. The thesis work is individual and therefore does not admit co-authorship. Abstracts submitted with more than one author will not be considered.

- Latin American Doctoral Thesis Contest. Chair: Dr. Diego Martinez (UNS, Argentina) - Dr. Alicia García (USAL, España)

The CLTD has been associated to CLEI since 2015. The theses presented must be defended between April 1, 2023 and March 31, 2024 (non-extendable hard deadline), be approved at the time of submission and have been carried out at CLEI member institutions. The best three theses will be awarded according to the evaluation made by the program committee and the CLTD chairs. The thesis work is individual and therefore does not admit co-authorship. Abstracts submitted with more than one author will not be considered.

-XVI Latin American Women in Computing Congress. Chairs: Dr. Rocío Cecchini (UNS, Argentina) - Dr. Laura Cecchi (UNCo, Argentina), M.Sc. Silvana Roncagliolio (PUCV-Chile) - Dr. Veronica Gil-Costa (UNSL, Argentina).

The XVI LAWCC (XV Latin American Women in Computing Congress) will be held as part of the 50° CLEI. Its main objective is to highlight the research, interest and achievements of women in various areas of computing, with the intention of encouraging the active participation of more women in the technological area. In the presentation of papers, it is expected to identify the challenges of women in the STEM areas (Science, Technology, Engineering and Mathematics) and Information and Telecommunications Technologies (ICT), in teaching, in the workplace and in the research. It seeks to find ways to address recurring problems related to gender and interaction with society in this context.

Topics of Interest: Analysis of the activity and participation of women in STEM (Science, Technology, Engineering and Mathematics) and ICT (Information and Communication Technologies) in general. Contributions of women from STEM/ICT areas in addressing the pandemic. Female participation in scientific and technological events (hackathons, scientific clubs, workshops, etc.). Inclusive software development (games, apps and others) with a strong participation of women. Initiatives to promote gender equity in STEM/ICT. Experiences of groups/communities of women in STEM/ICT areas. Gender and Human Computer Interaction. Female leadership models and ICT. Gender particularities in the development and implementation of ICT. Gender particularities in the teaching of STEM/ICT, at the 5 levels: initial, preschool, basic/primary, secondary and higher education. Participation of women in decision-making at the national and international level in relation to the use of ICT. Public policies around Women and ICT.

- First Latin American Workshop of Quantum Software Engineering (TLISC 2024). Dr. Jose Manuel García Alonso, (UEx, España) Dr. Alejandro Fernandez (UNLP, Argentina).

As quantum computing evolves and becomes applicable, there is an increasing need for systematic, disciplined, and quantifiable approaches to the development, operation, and maintenance of quantum software (and the classical software with which it is integrated). Much of what we have learned in decades of research, innovation and development in Software Engineering is applicable in this new hybrid quantum-classical reality. However, this new context raises questions, challenges and opportunities; identifying them, characterizing them and responding to them is the focus of Quantum Software Engineering.

This workshop is proposed as a discussion forum, with special interest in mobilizing the Latin American community, on how to produce quantum software considering the lessons learned from the field of classical software engineering, as well as novel approaches. This involves applying or adapting existing software engineering processes, methods, techniques and principles for quantum software development, and even creating new methods and techniques that help create quantum software with appropriate quality attributes.

Topics of interest: Quantum programming techniques and practices; Quantum software design; Quantum computing algorithms; Quantum software engineering methodologies; Quantum software services; Analysis and design of quantum programs; Testing and verification of quantum programs; Quantum software quality assurance; Evolution and maintenance of quantum software; Quantum software modeling; Automation of quantum software production; Model-driven engineering and

generative techniques for quantum software; Metrics for quantum software; Frameworks and tools for developing quantum programs; Service-oriented quantum software; Experiments with quantum software; Quantum software execution; Industrial applications; Empirical evaluations.

- Latin American School of Informatics. Chair: Dr. Claudio Delrieux (UNS, Argentina) - Dr. Andrea Delgado (UDELAR-Uruguay).

The Latin American School of Informatics is an evolution of the tutorials delivered in all CLEIs. Since 2022, these tutorials were formalized in a school and in 2024 the third edition will be developed in parallel with CLEI 2024. The aim is to provide a set of courses of interest to undergraduate and postgraduate students and professionals. The use of hybrid classrooms will expand the impact of the school to students around the world. The presentation of the courses will be done in a similar way to that of the works and will be evaluated by an academic committee that will select a set of courses. Topics planned for ELI involve all areas of computer science and engineering.

- Latin American Networking Conference (LANC 2024).

To be announced.

Parallel Event

53° Jornadas Argentinas de Informática (JAIIO 2024)

JAIIO has been held since 1961, organized by the Argentine Computer Science Society (SADIO). The JAIIOs bring together researchers, students and professionals from academia, industry and government, both Argentine and foreign, with the aim of extending knowledge of the computer science discipline, stimulating links and promoting teaching, research and applications in this discipline.

The JAIIOs are organized as a set of symposia, lasting one or two days, each dedicated to a specific topic. All papers submitted are reviewed by experts and the selected ones are published in the JAIIO Memories https://ojs.sadio.org.ar/index.php/JAIIO under ISSN 2451-7496. Extended versions of the most notable papers of each symposium are published in the Electronic Journal of SADIO (EJS) ISSN 1514-6774, a member of the Basic Nucleus of Scientific Journals (NBR) of CONICET.

Symposiums JAIIO.

ASAI /AGRANDA - Simposio Argentino de Inteligencia Artificial, Ciencia de Datos y GRANdes DAtos
ASSE - Simposio Argentino de Ingeniería de Software
CAI - Congreso Argentino de AgroInformática
CAIS - Congreso Argentino de Informática y Salud
EST - Concurso de Trabajos Estudiantiles
IETF Day - Taller del Grupo de Trabajo de Ingeniería de Internet/Argentina
JUI - Jornadas de Vinculación Universidad - Industria
SACS - Simposio Argentino de Ciberseguridad
SAEI - Simposio Argentino de Educación en Informática

SAHTI/SHIALC - Simposio Argentino de Historia, Tecnologías e Informática. Simposio Historia de la Informática en América Latina y el Caribe.
SAIV - Simposio Argentino de Imágenes y Visión
SIDS - Simposio Argentino de Informática, Derecho y Sociedad
SIE - Simposio de Informática en el Estado
SIIIO - Simposio Argentino de Informática Industrial e Investigación Operativa

IMPORTANT DATES

- Papers submissions: 5th April.
- ELI courses proposals. 26th April.
- CLTM and CLTD contest: 10th May.
- Authors notifications and courses selection: 14th June.
- **Final version: 19th July.**