Universidad de
los Andes
Colombia

ICACIT
SYMPOSIUM

10th Symposium
ICACIT 2024

October, 03-04

The 10th International Symposium on Accreditation of Engineering and Computing Education - ICACIT is the most important educational quality and accreditation event in Latin America. A space to share knowledge and experiences in accreditation, education, and continuous quality improvement among professionals from academia, industry and government. The event will be held in Hybrid mode.

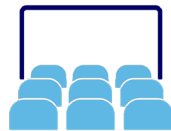Technical Sponsor: IEEE   IEEE Education Society

Program

Call For Papers:

In the 10th edition, the Symposium's Call for Papers aims to continue promoting research on quality and accreditation in the education of engineers and professionals in the field of computing. The accepted papers presented orally at the event will be indexed in the IEEE Xplore Digital Library.

Workshops:

Led by professionals with great experience and internationally recognized. Workshops will be developed to offer you the tools and guidance to implement and maintain continuous improvement processes in higher education programs.

Self-Study Exhibition:

Only at the Symposium will you have access to a room with self-study reports of programs accredited by ICACIT. The self-study reports chosen do not necessarily demonstrate full compliance with the ICACIT criteria. However, they fulfill the purpose of exemplifying how to prepare the self-study report.

Co-organizer (Venue)

Founded in 1948 by Mario Laserna Pinzón, Universidad de los Andes is Colombia's first private, secular, and non-partisan university. With a commitment to excellence, it has consistently aimed to bridge the knowledge gap between Colombia and the global scientific community, driving innovation and national progress through education.

Universidad de los Andes
Colombia

🎗 *Ranked 1st in Colombia.*
🎗 *Ranked 6th in Latin America and the Caribbean.*
🎗 *Ranked 179th worldwide.*

ICACIT // *Acreditadora de Valor Internacional* //

Keynote Speakers

Ph.D. Edmundo Tovar

PastPresident

IEEE Education Society

Ph.D. Isabel Hilliger

Deputy Director of Measurement, Evaluation and Quality of the School of Engineering

Pontificia Universidad Católica de Chile

Ph.D. Sandro Paz

General coordinator of accreditation and continuous improvement of the Faculty of Sciences and Engineering

Pontificia Universidad Católica del Perú

Ph.D. Carlos Rodriguez

Academic Vice Dean of the Faculty of Engineering

Universidad de los Andes de Colombia

Ph.D. Rubby Casallas

Dean of the Faculty of Engineering

Universidad de los Andes de Colombia

Thursday, October 3rd

	Salon: RGD_106-7	Salon: RGD_112-13	Salon: RGD_110-11
8:30 - 12:30	Registration of Participants and Delivery of Materials		
9:00 - 9:30	Opening of the ICACIT 2024 Symposium *(Auditorio Lleras)*		

Keynote Lecture No. 1

Augmented Intelligence for Engineering Education

Ph.D. Rubby Casallas Gutierrez

Dean of the Faculty of Engineering, Universidad de los Andes de Colombia

(9:30 - 10:00)

10:00 - 10:15

Paper ID 23
Analysis of Student Facial Reactions During Classroom Instruction.
Andi Hutami Endang

10:15 - 10:30

Paper ID 25
Enhancing Student Retention: Action Research on First-Year Pedagogical.Strategies
Cristina Dreifuss-Serrano

10:30 - 10:45

Paper ID 32
Key competencies for industry 5.0 in undergraduate engineering students.
Einstein Sánchez Bardales

10:45 - 11:00

Paper ID 36
Visual and External Auditory in Information Retention.
Javier Hugo Morán Ruiz

11:00 - 11:15

Coffe Break

11:15 - 11:30

Paper ID 38
Prediction of Labor Insertion in Graduates based on the Pre-Professional Internship Process through a supervised Machine Learning model.
Maria Gabriela Camborda Zamudio

11:30 - 11:45

Paper ID 39
Machine Learning model for predicting the achievement of the Graduate Profile through academic performance in university students.
Maglioni Arana Caparachin

11:45 - 12:00

Paper ID 47
Relationship between internal communication and resistance to change in the teaching staff of an educational company.
Gisselle Katherine Valencia Cervantes

Workshop Nº1

Implementing a Quality Assurance System based on International Accreditations

Ph.D. Sandro Paz Collado

-

General coordinator of accreditation and continuous improvement of the Faculty of Sciences and Engineering of the Pontificia Universidad Católica del Perú

Exhibition of Self-study

Keynote Lecture No. 2

Sustainability experiences of continuous improvement processes
Pontificia Universidad Católica de Chile

Ph.D. Isabel Hilliger

Pontificia Universidad Católica de Chile
(Salon: RGD_106-7)

(12:00 - 13:00)

13:00 - 15:00	Free time for lunch

ICACIT SYMPOSIUM

Thursday, October 3rd

	Salon: RGD_106-7	Salon: RGD_112-13	Salon: RGD_110-11
15:00 - 15:15	**Paper ID 31** — Learning chemistry through controversy? Reading discrepant perspectives to promote comprehension, multiple text integration, and epistemic emotions in freshmen engineering students — *María Felipa Cañas Cano*		
15:15 - 15:30	**Paper ID 50** — Internship Performance of Chemical Engineering Students in Cusco, Peru — *Uriel Raul Fernandez Bernaola*		
15:30 - 15:45	**Paper ID 54** — Educational model to develop work skills in students at a higher education institute in Lima, Peru — *Katherine Paola Ramirez Arias*		
15:45 - 16:00	**Paper ID 57** — Ethical challenges in the teaching of specialized subjects in the training of industrial engineers — *Juan Lara Herrera*	**Workshop N°2** *Design of improvement plans in engineering programs* *PhD. Isabel Hilliger* – *Deputy Director of Measurement, Evaluation and Quality of the School of Engineering at Pontificia Universidad Catolica de Chile*	*Exhibition of Self-study*
16:00 - 16:15	**Paper ID 58** — Social dimension of the evaluative culture of learning and student satisfaction — *Jeniffer Doris Garcia Chauca*		
16:15 - 16:30	**Paper ID 63** — Impact of Aneaes Accreditations on the Continuous Improvement of the Production Systems Engineering Program at the Polytechnic Faculty of the National University of Asunción — *Zulma Lucia Demattei Ortiz*		
16:30 - 16:45	**Paper ID 64** — Automated Prototype for Demonstrating the Properties of Gases in Natural Science Laboratories — *Adolfo Duarte Rueda*		
16:45 - 17:00	**Paper ID 15** — Characteristics of University Happiness Conditions and Academic Performance: A Case Study of a University in Arequipa, Peru — *Marjorie Agueda Calcina Cateriano*		

Panel: Challenges in the Training of Engineers 5.0
Towards the training of engineers for industry 5.0
(Auditorio Lleras)

17:00 - 18:00	*1. Ph.D. Carlos Francisco Rodríguez, Universidad de los Andes de Colombia*
	2. Ph.D. Alvaro Orjuela Cañón, IEEE Colombia Section Chair
	3. Ph.D. Edmundo Tovar, IEEE Education Society
	4. Ph.D. Isabel Hilliger, Pontificia Universidad Catolica de Chile
	5. Ph.D. César Beltrán Castañon, IEEE Peru Section Chair
	6. PhD. Sandro Paz Collado, General coordinator of accreditation and continuous improvement of the Faculty of Sciences and Engineering of Pontificia Universidad Católica del Perú

Friday, October 4th

	Salon: RGD_106-7	Salon: RGD_112-13	Salon: RGD_110-11

8:30 - 12:30	Registration of Participants and Delivery of Materials		

9:00 - 9:15	**Paper ID 3** — Assessing soft skills development in informatics students through project-based learning and Agile frameworks — *Vanessa Maribel Choque Soto*		
9:15 - 9:30	**Paper ID 4** — The PBL Methodology in a hybrid class in an integrative Systems Engineering course — *Isabel C. Barragan Arias*		
9:30 - 9:45	**Paper ID 5** — CS2023 Curricula Guidelines and Computer Science Accreditation — *Michael Oudshoorn*	**Visit** *Visit to the laboratories of the Faculty of Engineering Universidad de los Andes, de Colombia*	**Exhibition of Self-study**
9:45 - 10:00	**Paper ID 8** — Impact of ANEAES Accreditation on the Computer Engineering Program at Universidad Americana — *José Luis Vázquez Noguera*		
10:00 - 10:15	**Paper ID 18** — The Deployment of Virtualized Operating Systems to Reveal Network Vulnerabilities for Classroom Setting — *Miguel Bustamante*		
10:15 - 10:30	**Paper ID 19** — Cloud Computing: Exploring the Digital Frontier for the Academic Environment — *Miguel Bustamante*		
10:30 - 10:45	**Paper ID 24** — Automated Prototype for Demonstrating the Properties of Gases in Natural Science Laboratories — *Neicer Campos Vásquez*		
10:45 - 11:00	**Paper ID 28** — Implementation of a Curricular Management Support Tool for the Quality Systems of the Engineering Programs at Uniandes. — *Camila Botero Saffon Cateriano*		
11:00 - 11:15	**Coffe Break**		
11:15 - 11:30	**Paper ID 29** — Educational Software for Learning Load Profile in Residential Supplies — *Joel Contreras Núñez*		
11:30 - 11:45	**Paper ID 43** — Gamified and Artificial Intelligence-Assisted Knowledge Base in a Social Platform for Self-Learning in Higher Education — *Jordán Darwin Blancas Sánchez*		
11:45 - 12:00	**Paper ID 51** — AI Ethics in the Fields of Education and Research: A Systematic Literature Review — *William Mauricio Rojas Contreras*		

12:00 - 13:00	**Keynote Lecture No. 3** *Sample of Teaching Support Developments* (Gloria Cortés, Carola Hernandez, Carlos F, Rodríguez) *Development Group – Didacta and Faculty of Engineering at Universidad de los Andes, Colombia* (Salon: RGD_106 - 7)
13:00 - 15:00	**Free time for lunch**

Friday, October 4th

	Salon: RGD_106-7	Salon: RGD_112-13	Salon: RGD_110-11

15:00 - 15:15

Paper ID 53
Intelligent computational architecture for improving the quality of higher education
Jorge Omar Portilla Jaimes

15:15 - 15:30

Paper ID 56
Selection of the best AI educational tool applied to university-level teaching and learning process using the AHP Methodology
Antony De La Cruz Vasquez

15:30 - 15:45

Paper ID 59
How to improve Graduates Attributes with Virtual Reality: A case of study in Industrial Engineering
Henry Gomez Urquizo

15:45 - 16:00

Paper ID 66
Augmented reality to support the teaching-learning process in computer graphics
Liz Sofia Raymunda Pedro Huaman

16:00 - 16:15

Paper ID 60
Comparative analysis of student desertion in Electronic Engineering at UPTC and UdeC between 2015 and 2018
Ilber Adonayt Ruge Ruge

16:15 - 16:30

Paper ID 12
BITA: The First Female Robotics Intercollegiate Championship to foster STEM attitudes and skills
Sandra Milena Merchán Rubiano

16:30 - 16:45

Paper ID 42
Relation between learning styles and academic performance: a study in peruvian health students in the context of digital transformation
Miguel Mogollón Almidón

16:45 - 17:00

Paper ID 49
Artificial Intelligence Model for the Improvement of the Quality of Education at the National University of Central Peru, Huancayo 2024
Kevin Paul Taype Soriano

Salon: RGD_112-13 (Workshop)

Workshop N°3
Quality measurements and performance evaluation of teamwork
Ph.D. Carlos F. Rodríguez
-
Academic Vice Dean of the Faculty of Engineering in the University de los Andes, Colombia.

Salon: RGD_110-11

Exhibition of Self-study

17:00 - 17:30

Keynote Lecture No. 4
Trends in the comprehensive training of Engineers 5.0
Ph.D. Edmundo Tovar, IEEE Education Society
(Auditorio Lleras)

17:30 - 18:00

Closing of the ICACIT 2024 Symposium
(Auditorio Lleras)

Self-Study Exhibition

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Educational institutions have granted ICACIT permission to display the Self-Study Reports of some of their programs. In some of these documents, certain confidential information has been removed.

The room is located at:
Universidad de los Andes, Colombia (Cra. 1 #18a-12, La Candelaria, Bogotá, Colombia)

The room can be visited at the following times:

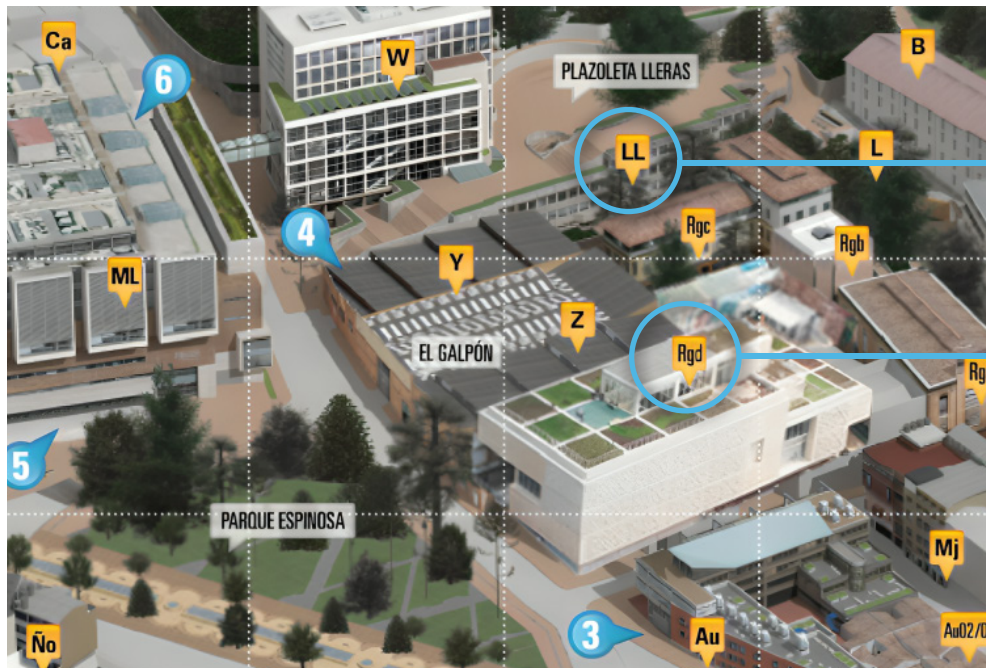**Thursday, October 3:** 10:00 a.m. – 12:00 p.m. and 3:00 p.m. – 5:00 p.m.
Friday, October 4: 09:00 a.m. – 12:00 p.m. and 3:00 p.m. – 5:00 p.m.

Important

1 Upon entering, you must hand over your PARTICIPANT CREDENTIAL to the person in charge of the room and leave your personal items in the area designated for this purpose.

2 You must ask the person in charge of the room for one of the available reports and go to the reading tables carrying only a notepad and a pen that will be given to you during admission.

3 All your electronic devices must have "silent" mode activated while you are in the room. To answer a call you must leave the room and return the report to the person in charge of the room.

4 Feel free to review the reports and take notes on your pad at the reading tables. Self-Study Reports should not be removed from the room for any reason.

5 Taking photographs or video recordings is NOT ALLOWED.

6 Any participant who violates these rules will be sanctioned with expulsion from all Symposium activities and will lose their right to a certificate of attendance.

ICACIT // Acreditadora de Valor Internacional //

ID	Institution	Campus	Program	
1	Universidad Nacional Santiago Antúnez de Mayolo	Huaraz	Ingeniería Agrícola	
2			Ingeniería Civil	
3			Ingeniería de Minas	
4			Ingeniería Sanitaria	
5	UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS Universidad del Perú, DECANA DE AMÉRICA	Lima	Ing. de Seguridad y Salud en el Trabajo	*Evaluation Cycle 2023*
6			Ingeniería Textil	
7	UNIVERSIDAD RICARDO PALMA	Lima	Ingeniería Electrónica	
8			Ingeniería Informática	
9	UNIVERSIDAD esan	Lima	Ingeniería Industrial y Comercial	
10			Ing. de Tecnologías de Información y Sistemas	

University Campus Sketch

Opening and closing:
Lleras Auditorium

Sessions, Workshop and Self-study room Rooms:
RGD_106-7, RGD_110-11 and RGD_112-13

Address: Cra. 1 #18a-12, La Candelaria, Bogotá, Cundinamarca, Colombia

Google Map (*clic here*)