

# **2022 International Symposium on Accreditation of Engineering and Computing Education (ICACIT 2022)**

**Cusco, Peru  
3-4 November 2022**



**IEEE Catalog Number: CFP22J24-POD  
ISBN: 978-1-6654-9279-9**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP22J24-POD
ISBN (Print-On-Demand):	978-1-6654-9279-9
ISBN (Online):	978-1-6654-9278-2
ISSN:	2771-604X

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## Table of Contents

Page	Title	first name	last name	organization
1	Implementing Diversity, Equity, and Inclusion in Accreditation	Natalie	Kiesler	DIPF Leibniz Institute for Research and Information in Education
		John	Impagliazzo	Hofstra University
7	Jacaranda Flame Consulting: Changes in Engineering Students' Language during Structured Placements	David	Lowe	The University of Sydney
		Archie	Johnston	The University of Sydney
		Anthony	Kadi	The University of Sydney
12	Lessons learned from an engineering doctoral program created in the developing countries context	Eric	Forcael	Dept. of Civil and Environmental Engineering, Universidad del Bío-Bío
		Andrés	Ávila	Dept. of Mathematical Engineering, Universidad de La Frontera
		Claudio	Tenreiro	Dept. of Industrial Technologies, Universidad de Talca
18	Improving embedded programming skills through physical computing activities in engineering education: A course experience	Jonathan	Álvarez Ariza	Corporación Universitaria Minuto de Dios-UNIMINUTO
24	Bibliometric Analysis of Teaching and Learning in Engineering and Computing Education	Carlos Samuel	Ramos-Meza	Universidad Andina del Cusco
		Crayla	Alfaro Aucca	Universidad Andina del Cusco
		Jessika	Corahua Ordoñez	Universidad Andina del Cusco
		Edgard Fernando	Pacheco Luza	Universidad Andina del Cusco
30	Inequalities in connectivity and academic performance during non-face-to-face teaching due to the Covid-19 Pandemic	Cecilio Julio Alberto	Garrido Schaeffer	Universidad Nacional Mayor de San Marcos
		Thais Cleofé	Linares Fuentes	Universidad Nacional Mayor de San Marcos
		Liz Fabiola	Elías Rolando	Universidad Nacional Mayor de San Marcos
		José Luis	Paz Rojas	Universidad Nacional Mayor de San Marcos
		Marcos Antonio	Loroño González	Universidad Nacional Mayor de San Marcos
		Carlos Omar	Neyra Damián	Universidad Nacional Mayor de San Marcos
36	Experiences on Self-Evaluation and Accreditation of Master Programs in Computing at TEC	Jennier	Solano-Cordero	Costa Rica Institute of Technology
		Lilliana	Sancho-Chavarría	Costa Rica Institute of Technology
		Cesar	Garita	Costa Rica Institute of Technology

42	Participation of the faculty in the accreditation process of the Industrial Engineering career at Universidad Privada del Norte	Lupe Yovani	Gallardo Pastor	Universidad Privada del Norte
		Aldo Guillermo	Rivadenebra Cuya	Universidad Privada del Norte
		Aracelli	Poémape	Universidad Privada del Norte
		Luis Omar	Yap Hilario	Universidad Privada del Norte
		Fernando	Gallardo Pastor	Universidad Privada del Norte
46	Students perceptions and how to teach at postgraduate engineering programs	Javier Hugo	Morán Ruiz	Universidad San Ignacio de Loyola
		Jesús	Gabalán Coello	PENSER Corporation
		Jimmy	Túllume Salazar	ICACIT
51	Project based learning approach to improve self-sufficiency and motivation using agile methodologies	Norma	León Lescano	Universidad San Martín de Porres
		Eiriku	Yamao	Universidad San Martín de Porres
55	How to promote the systemic thinking in teachers to transmit it to students for the solution to complex engineering problems?	Jesús	Gabalán Coello	Corporación Penser
		Javier	Moran	Universidad San Ignacio de Loyola
		Jimmy	Tullume	ICACIT
61	Assessment of growth mindset of undergraduate engineering students in Peru	Nicolas A.	Nunez	Pontificia Universidad Catolica del Peru
		Giuliana	Cornejo-Meza	San Ignacio de Loyola - Escuela ISIL
65	The Fulfillment of Educational Objectives Increases Depending on the Number of Years of Graduation	Pedro	Rosales	Universidad Nacional Mayor de San Marcos
		Oscar	Tinoco	Universidad Nacional Mayor de San Marcos
		Carlos	Quispe	Universidad Nacional Mayor de San Marcos
		Gina	Tejada	Universidad Nacional Mayor de San Marcos
		Fiorella	Güere	Universidad Nacional Mayor de San Marcos
		Liliana	Agustini	Universidad Nacional Mayor de San Marcos
70	Interactive Open-Source Software Tool for the Teaching and Learning of Open and Closed Loop Systems	Helber	Meneses Navarro	University of Costa Rica
		Kevin	Cambronero Mora	University of Costa Rica
		Orlando	Arrieta Orozco	University of Costa Rica
76	Business Process Model for University Management based on ISO 21000:2018 standard	Maglioni	Arana Caparachin	Universidad Peruana Los Andes
		Maria Gabriela	Camborda Zamudio	Universidad Continental
		Maribel	Arana Caparachin	Universidad Catolica del Peru

80	The 2030 Agenda for Sustainable Development in engineering education: A criteria statement proposal for Graduate Attributes and Professional Competencies	Luis	Barrera	ICACIT
84	Continuous improvement in the faculty of an engineering program, ICACIT-V.3.2.	Cristhian Nicolas	Aldana Yarleque	Universidad Nacional de Frontera
		Yesenia	Saavedra Navarro	Universidad Nacional de Frontera
		Fermin Maximo	Saavedra Cano	Universidad Nacional de Frontera
		Lecarnaque Arevalo	Carlos Adrian	Universidad Nacional de Frontera
		Yenifer Elizabeth	Aguirre Panta	Universidad Nacional de Frontera