

# **2023 IEEE International Humanitarian Technology Conference (IHTC 2023)**

**Santa Marta, Colombia  
1 – 3 November 2023**



**IEEE Catalog Number: CFP2306Y-POD  
ISBN: 979-8-3503-1432-8**

**Copyright © 2023 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:	CFP2306Y-POD
ISBN (Print-On-Demand):	979-8-3503-1432-8
ISBN (Online):	979-8-3503-1431-1
ISSN:	2837-4789

**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

<p>"Assessment of Skin Impedance in Radiofrequency Therapy: A Study Utilizing Unique Electrode Form for Cutaneous Leishmaniasis Treatment" .....</p> <p style="padding-left: 20px;"><i>Ian C. Rodrigues Häusler, Davide Paparo, Daniel Fehr, Raphael Hagen, Marta S. Velez Mestre, Mathias Bonmarin</i></p>	<p>1</p>
<p>Trajectory Detection in Furrows to Automate the Navigation of Agrobot with AI .....</p> <p style="padding-left: 20px;"><i>Christian Camilo Torres Castillo, Javier Alberto Chaparro</i></p>	<p>6</p>
<p>Boricua Energy Justice as a Humanitarian Claim.....</p> <p style="padding-left: 20px;"><i>Javier Moscoso-Cabrera, Pablo Méndez-Curbelo, Willian Pacheco-Cano, Carlos Peña-Becerra, Alexis Burgos-Rivera, Miguel De Jesús-Soto, Marcel Castro-Sitiriche</i></p>	<p>12</p>
<p>Holistic Training of Engineering Students Through the Service-Learning Methodology in Socially Disadvantaged Schools.....</p> <p style="padding-left: 20px;"><i>Rosalía Daza Merino, Erika María Ronquillo Mandujano, Lilia Licea Hernández, Virginia Lagunes Barradas</i></p>	<p>18</p>
<p>Deep-Learning-Based Refugee-Dwelling Extraction from High-Resolution Satellite Imagery for Humanitarian Operations.....</p> <p style="padding-left: 20px;"><i>Yunya Gao, Yukun Liu</i></p>	<p>24</p>
<p>Uniform Irrigation and Moisture Monitoring System for a Blueberry Crop in Substrate .....</p> <p style="padding-left: 20px;"><i>Manuel Gantiva-Osorio, Alexander Pérez-Ruiz, Javier Alberto Chaparro</i></p>	<p>31</p>
<p>Automated Identification of Microaggressions .....</p> <p style="padding-left: 20px;"><i>Matthieu Bardal, Kaleb Chisholm, Sean Jamieson, Mark Alwast, Kasi Viswanath Nilla, Khanh Le, Yasaman Amannejad</i></p>	<p>37</p>
<p>ULA, a Bibliometric Method to Identify Sustainable Development Goals using Large Language Models.....</p> <p style="padding-left: 20px;"><i>Loris Bergeron, Jérôme François, Radu State, Jean Hilger</i></p>	<p>43</p>
<p>Radar Based Monitoring System to Protect the Colombian Amazon Rainforest .....</p> <p style="padding-left: 20px;"><i>Jorge Torres, Diana Cortés, Danny Portela, Andrés Triana, Camilo Cano, Margarita Varón</i></p>	<p>49</p>
<p>NVIS Antenna Experiment in Puerto Rico: An Approach for Disaster Relief Communications .....</p> <p style="padding-left: 20px;"><i>Loderay I. M. Bracero Marrero, Percy F. Shadwell</i></p>	<p>56</p>
<p>Architecture Design of a Highly Scalable Information System for the Management of an Inclusive Job Board that Includes Disability and Job Skills .....</p> <p style="padding-left: 20px;"><i>Angel Perez-Muñoz, Vladimir Robles-Bykbaev</i></p>	<p>62</p>
<p>Mobile Application for Disease Diagnosis using Tongue Imaging: A Health and Information Tool.....</p> <p style="padding-left: 20px;"><i>Paola Peralta-Flores, María Bustamante-Guamán, Angel Perez-Muñoz, Paola Ingavelez-Guerra, Fabián Cuesta-Astudillo</i></p>	<p>69</p>
<p>Web Tool for Generating Image Maps with YOLO, OCR, Python and Angular Based on the W3C Web Accessibility Initiative (WAI).....</p> <p style="padding-left: 20px;"><i>Angel Perez-Muñoz, Edwin Marquez-Lozado</i></p>	<p>74</p>
<p>Development of a Blockchain-Based Web3 Application for CO<sub>2</sub> Absorption Right Management .....</p> <p style="padding-left: 20px;"><i>Germán Abu Arab, Juan Ignacio Cogliatti, Pablo Urquizó, Juan Abu Arab, Luis Mateo Borrazás, Cristina Mayr</i></p>	<p>79</p>

BPM for Mutual Aid Management in Industrial Emergency Response .....	83
<i>Katherine Pachón-Carrascal, Jhon Botello Maldonado, Guisselle García-Llinás, César Viloría-Núñez, Daniel Romero-Rodríguez, Aymer Y. Maturana, Katherine Sofia Palacio Salgar</i>	
Braille Cube Teaching- Learning Gadget for Inclusive Education: B-Cube .....	90
<i>J. Alfredo Namigtle, M. Oscar Bautista, J. Jesus Namigtle, Rogerio A. Enriquez Caldera</i>	
Enhancing Western Organizational Cybersecurity Resilience Through Tailored Education for Non-Technical Employees.....	95
<i>Sina Keshvadi</i>	
Technology-Enhanced Inclusive Mathematics Learning: Promoting Equity and Lifelong Learning Opportunities for Vision-Impaired Students.....	101
<i>Muhammad H. Al Omoush, Sumaia E. Salih, Tracey Mehigan</i>	
Interactive Multimodal Learning: Towards using Pedagogical Agents for Inclusive Education.....	107
<i>Muhammad H. Al Omoush, Sumaia E. Salih, Sameer Kishore, Tracey Mehigan</i>	
Wireless DOCSIS: Experience in Colombian Pacific Coast .....	114
<i>Andres Navarro Cadavid, Yeison Barahona Sepulveda</i>	
The Gender Digital Divide and Education in Afghanistan: A Review .....	120
<i>Zahra Nazari, Pert Musilek</i>	
An Examination of Online Hate and Harassment Targeting Immigrants .....	127
<i>Sina Keshvadi</i>	
Improvising Age Verification Technologies in Canada: Technical, Regulatory and Social Dynamics.....	134
<i>Azfar Adib, Wei-Ping Zhu, M. Omair Ahmad</i>	
A Software for Managing Technical Services Offered by Small ISPs in Colombia .....	140
<i>Juan Diego Holguín Torres, Luis Carlos Sandoval Alarcón, Jose David Cely Callejas</i>	
The Women’s Antenna: An Experience of Community Technology Construction Led by Cabécar Women of Costa Rica.....	147
<i>Kemly Camacho, Elizabeth Herrera, Danny Xie-Li, Esteban Arias-Méndez</i>	
Development of USV and UAV Robotic System for Characterization of Abandoned Ponds by Alluvial Mining in the Peruvian Amazon.....	154
<i>Manuel Escobar, Juan Pimentel, Julio Araujo, Ramzy Kahhat, Francisco Cuellar</i>	
Wireless Broadband Coverage Study for the Department of Meta for the 2.4 GHz Band with WiFi Technology, Based on the Locations Established by the Ministry of ICT Colombia. ....	160
<i>J. D. Acero Rojas, J. D. Cely Callejas, M. Patiño Bernal</i>	
Exploring the Role of Financial Cybersecurity Risk Management in Enhancing the Performance of Banking Payment Systems in Nigeria: A Qualitative Case Study .....	167
<i>N/A</i>	
Interactive Conference Proposal the Power of Play for Disaster Risk Reduction: Ayni: Hoy Por Ti, Mañana Por Mi .....	175
<i>Jo Rose, Claudia Milena Adler</i>	

Software Development of an Expert System for Mental Health Care and Diagnosis in the  
Population Victims of the Armed Conflict in Colombia Complying with Indicator 3.4 of SDG 3  
Health and Well-Being ..... 178  
*Anthony Millan De Lange, Carmen Molinares Brito, Karim Hussein Dasuki, Stefany Baena  
Valencia*

**Author Index**