



LATAM-SEC-2024 Technical Program

All times are as per Ecuador Standard Time

Monday – March 04, 2024		
15:00 - 17:00	Registration	Pontificia Universidad Católica del Ecuador
16:00 - 17:00	Icebreaker & Welcome Reception Drinks, Finger food	(PUCE) Facultad de Arquitectura, Diseño y Artes (FADA) MAIN HALL

Tuesday – March 05, 2024				
Registration & Coffee				
08:00 - 17:00	Registration (The registration desk will be open during conference hours)	PUCE – FADA		
08:00 - 09:00	Registration – Tea and Coffee	MAIN HALL		
	Opening Session			
09:00 - 9:30	Opening Performance Andes Dance Performance			
	Welcome and Introductions Enrique Villacís, Conference Chair	PUCE-FADA-AUDITORIUM V-Room A		
	Welcome to Pontificia Universidad Católica Christine Van Sluys, FADA Dean Hugo Navarrete, Research Department PUCE	V-Room A Zoom link (for online participants) https://us02web.zoom.us/i/3365082496?pwd=MWh4WihPbFZoS2RTdEIQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 1 IT Staff: Matías Flores and Kai Garcia		
	Welcoming Remarks Frank Yazdani, Secretary, ISEC Society			
09:30 - 10:00	Introduction of Keynote speaker KEYNOTE SPEAKER I Patricio Cevallos Salas, Tecnología Alternativa-ProTERRA Network			
	Tea & Coffee Break 10:00 - 10:30 (Conference Lounge ROOM	/ 302-303)		





	Technical Session I – Tuesday, March 5, 2024, 10:30 - 12:30				
	Location: School of Architecture, Design and Arts				
	TECHNICAL SESSION I-A	TECHNICAL SESSION I-B	TECHNICAL SESSION I-C		
	AUDITORIUM	ROOM 301	ROOM 309		
	STRUCTURAL AND SEISMIC ENGINEERING	CONSTRUCTION AND COST MANAGEMENT, AND PROCESS SIMULATION	SUSTAINABILITY AND CLIMATE CHANGE		
	Moderators: FRANK YAZDANI and JUAN S. BAQUERO IT Staff: Matías Flores and Kai Garcia	Moderators: WILSON CANDO and MOHSEN ABBASI IT Staff: David Quijia and Jared Lo	Moderators: ANDREA PARRA and PAOLO PIANTANIDA IT Staff: Anabel Fernandez and Vincent Chan		
	V-Room A Zoom link (for online participants)	V-Room A Zoom link (for online participants)	V-Room A Zoom link (for online participants)		
	https://us02web.zoom.us/l/3365082496?pwd=MWh4WjhPbFZo52RTdElQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 1	https://us02web.zoom.us///3365082496?pwd=MWh4WihPbFZo52RTdElQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 2	https://us02web.zoom.us/i/3365082496?pwd=MWh4WjhPbFZo52RTdElQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 3		
1	STR-01: OPTIMAL SINGLE-STORY STEEL BUILDINGS UNDER HIGH LOAD Stojan Kravanja, Tomaž Žula, Zdravko Kravanja	CON-12: AUTOMATION IN CONSTRUCTION: EDUCATION AND TRAINING FOR WORKFORCE DEVELOPMENT Mohammad Ilbeigi, Xi Chen	SUS-07: ANALYSIS OF THE PHYSICAL-MECHANICAL PROPERTIES OF CONCRETE USING RECYCLED PVC AND AGGREGATES Oscar Jaramillo, Wilson Cando, Andrés Quel, John Flores		
2	STR-07: SHEAR EXPERIMENTS ON STRAIGHT REINFORCED CONCRETE SLABS Eva Lantsoght, Gabriela Zarate Garnica, Jiandong Lu, Yuguang Yang, Max Hendriks	CON-08: CHARACTERIZATION OF EARTH, LIME, AND GYPSUM MORTARS IN THE CONSTRUCTIONS OF THE 16TH, 17TH, AND 18TH CENTURIES Marco Lenin Lara, Ines Angélica Del Pino Martinez, David Sanz, Sol Lopez Andres	SUS-02: ADVANTAGES AND BARRIERS FOR USE OF EXCAVATED SEDIMENTS Bojan Žlender, Primož Jelušič		
3	STR-14: RECENT ADVANCES IN THE FIELD OF BRIDGE LOAD TESTING Eva Lantsoght	CPM-03: PROMOTION INVESTMENT EVOLUTION OF CONSTRUCTION REAL ESTATE PROJECTS Miguel Andrés Guerra, Steban Hidalgo, Freddy Miño, Cristian Yanouch, Steve Calahorrano, Giovanna Rodriguez	SUS-13: STRENGTH DEVELOPMENT IN CLAY-STABILIZED BRICKS WITH CEMENT AND RICE BY-PRODUCTS Adriana Camacho, María Mena, Jorge Albuja-Sánchez, Dana Cruz, Mariela Anaguano- Marcillo		
4	STR-08: LOAD-BEARING TIMBER DSF ELEMENTS INFLUENCE ON RACKING STABILITY OF MULTI-STOREY PREFABRICATED TIMBER BUILDINGS Miroslav Premrov, Erika Kozem Šilih, Andrej Štrukelj	CPM-02: PROFIT EVOLUTION FOR RESIDENTIAL CONSTRUCTION PROJECTS ACCORDING TO PROJECT CHARACTERISTICS Miguel Andrés Guerra, Ariel Mosquera, Nicolás Hidalgo, María Cevallos, Valeria Mendez, Michael Lara	SUS-14: SUGARCANE BAGASSE ASH AS A PARTIAL REPLACEMENT OF CEMENT FOR PRODUCING COMPRESSED STABILIZED EARTH BLOCKS Santiago Bravo, Felipe Espinoza, Jorge Albuja-Sánchez, Mariela Anaguano-Marcillo Jonathan Morales		
5	STR-09: PROBABILISTIC ANALYSIS OF FLEXURAL OVERSTRENGTH FACTOR FOR SEISMICALLY DESIGNED REINFORCED CONCRETE BEAMS AND COLUMNS Andrea Natali Zarate, David Tsz Lung, Alexis Ivan Andrade, Tito Oswaldo Castillo	CPM-07: LOGISTICS MODEL VS GOMPERTZ MODEL IN APPROXIMATION OF "S" CURVES IN WATER SUPPLY SYSTEMS PROJECTS Juan Merizalde, Paula Bermeo, Juan Osorio, Fernando Castro, Mauricio Cely	AAE-07: SUSTAINABLE REHABILITATION OF THE FORMER QUITO AIRPORT: INCORPORATION OF GLUED LAMINATED TIMBER AS AN ALTERNATIVE OF LOW CARBON EMISSIONS Christine. De Franca Van Sluvs. Esteban Nicolás Jaramillo Serrano.		
6	STR-18: COMPARISON BETWEEN SMF AND SPSW STEEL BUILDING FOR MIXED- USE RESIDENCE USING THE AHP METHOD. Diego Hernan Hidalgo, Roberto Alejandro Guevara, Marlon Hernan Navarro	CPM-08: CONSTRUCTION ANTICORRUPTION MEASURES: A LITERATURE REVIEW Ahmed Jalil Al-Bayati, Salman Alanazy	PND-01: CLIMATE PLANNING AND LOCAL GOVERNMENT: ACTORS AND CLIMATE CHANGE MEASURES Luis Deliberio Llacas Vicuña		
7	EPE-02: STRUCTURAL ANALYSIS OF THE ECOEARTH SANDWICH SYSTEM Enrique Vinicio Villacis, Patricio Cevallos, Cynthia Ayarza	MAT-03: CORRELATION BETWEEN COMPOSITION OF MASONRY BLOCKS USING RECYCLED RUBBER AGGREGATES AND PROFITABILITY OF PRODUCTION LINE Jorge I. Fajardo, Xavier Guerrero, César A. Paltán	AAE-11:SUSTAINABLE ARCHITECTURE APPLIED TO THE DESIGN OF THE HOUSING CORE María Elizabeth Maldonado Marchán, Karina Alexandra Chérrez Rodas		
8	AAC-03: STUDY OF THE EFFECT OF GEOMETRIC UNSHARPNESS IN WELDED PLATES USING THE INDUSTRIAL RADIOGRAPHY METHOD Mauricio Cely, Verónica Sotomayor, Giovanny Constante, Santiago Haro	EPE-12: SOLAR POWERED OFF-GRID WATER DISTRIBUTION PROJECTS: A CASE STUDY COMPARISON OF TWO COMMUNITIES Lonny Simonian, Paul Redden	CEN-01: CONFIRMING HEATING TRENDS OF NEAR-SURFACE OCEAN TEMPERATURES, 1988 TO 2022 George Evans, Amarjit Singh ONLINE PRESENTATION		
	Lunch Break: 12:30 - 14:00 (Conference Lounge ROOM 302-303)				





	Technical Session II – Tuesday, March 5, 2024, 14:00 - 16:00			
	Location: School of Archite	ecture, Design and Arts		
	TECHNICAL SESSION II-A	TECHNICAL SESSION II-B		
	ROOM 301	ROOM 309		
	ARCHITECTURE, EDUCATION, AND PROFESIONAL ETHICS	MATERIALS		
	Moderators: STOJAN KRAVANJA and AMARJIT SINGH IT Staff: David Quijia and Kai Garcia	Moderators: LUIS MENENDEZ and MIROSLAV PREMROV IT Staff: Anabel Fernandez and Jared Lo		
	V-Room A Zoom link (for online participants)	V-Room A Zoom link (for online participants)		
	https://us02web.zoom.us/j/3365082496?pwd=MWh4WjhPbFZoS2RTdElQMWVOcUVSQT09	https://us02web.zoom.us/i/3365082496?pwd=MWh4WjhPbFZoS2RTdEIQMWVOcUVSQT09		
	PMI: 530 500 2490, Passcode: 595011, DREAROUT RIT 1	PMI: 330 506 2496, Passcode: 395011, BREAROUT RIT 2		
1	EPE-03: HISTORICAL REFERENCE REVISION OF THE ECO-EARTH SANDWICH SYSTEM FOR ITS CULTURAL COHERENCE Enrique Villacis Tapia, Cynthia Ayarza, Julio Gutierrez	MAT-01, FUNCTIONALLY GRADED CONCRETE: POROSITY GRADATION TO ENHANCE DURABILITY UNDER CARBONATION Daniel Véras Ribeiro, Cleber Marcos Ribeiro Dias, Adriana dos Santos Silva		
2	EPE-06: ENVIRONMENTAL SCIENCE LAB PLANNING AND CONSTRUCTION AS AN INTERNATIONAL DESIGN-BUILD STUDIO: TEACHING AND LEARNING EXPERIENCE Jorge Andrade, Gabriela Naranjo, Lorena Valdivia, Sandra Iturriaga, Rubén Jódar, Jan Blieske, Franziska Wollscheid	MAT-02: NATURAL FIBERS FOR SUSTAINABLE CONCRETE MIXES Eva Lantsoght, Josue Batallas, Nicolas Hidalgo, Mateo Montenegro, Lourdes Orejuela, Francisco Jativa		
3	EPE-11: ARTIFICIAL INTELLIGENCE: A LOOK BACK TO THE FUTURE IN UNIVERSITY EDUCATION Mohsen Abbasi, Michael Maks Davis, Fafael Melgarejo Heredia, Diego Antonio Ordoñez Camacho	AAC-02: ASSESSING MECHANICAL PROPERTIES FOR STRUCTURAL UTILIZATION OF GUADUA ANGUSTIFOLIA KUNT Wilson Cando, Ines Garcia, Jorge Bucheli, Camila Cando		
4	EPE-13. TEACHING LINEAR SCHEDULING THROUGH GAMIFIED ACTIVE EXPLORATION Mohammad Ilbeigi	MAT-06: REDUCING PLASTIC WASTE: A MECHANICAL ANALYSIS OF PLASTIC SUBSTITUTION IN URBAN ROAD CONSTRUCTION Ana Paulina Ortiz Viñán, Carlos Javier Vásquez Monteros, Carlos Alberto Escudero Villavicencio ONLINE PRESENTATION		
5	AAE-13: ARCHITECTURE PRACTICAL LEARNING: ANALYSIS OF ARCHITECTURAL DESIGN STUDIO THROUGH A NEUROSCIENCE EDUCATION PERSPECTIVE María Lorena Rodríguez, Enrique Villacis Tapia, Javier Benavides	MAT-07: LITERATURE REVIEW OF COCONUT SHELL AND FIBERS IN PAVEMENT DESIGN Miguel Andrés Guerra, Francisco Iturralde		
6	AAE-09: ROLE OF CRAFTSMAN APPLIED TO ARCHITECTURAL EDUCATION ANALYZED THROUGH THE CONCEPTS OF MIMESIS AND PHRONESIS: THE CASE OF DAU IV Javier Benavides, María Lorena Rodríguez	MAT-08: STUDY OF LITERATURE REVIEW ON THE USE OF PLASTIC IN CONCRETE MIXES Miguel Andrés Guerra, Estefanía Carrión, Estefanía Cervantes		
7	CSA-04: INTEGRATING PREVENTION THROUGH DESIGN (PTD) INTO ENGINEERING CURRICULA Ahmed Jalil Al-Bayati, Elin Jensen, Ricardo Eiris, Osama Abudayyeh	MAT-09: COMPRESSIVE AND BENDING STRENGTH OF CHAMBO ARTISANAL BRICKS WITH ADDITION OF RECYCLED GLASS POWDER Diego Hernan Hidalgo, Henry Francisco Dávalos, Deisy Paulina Llamuca		
8	AAW-01, TEACHING AND APPLYING WATER CONSUMPTION SIMULTANEITY IN RESIDENTIAL: AN ACTIVE LEARNING PROJECT-BASED ENGINEERING APPROACH Holger Benavides-Muñoz, Luis Fernando Granda-Aguilar, Juan Carlos García-Espinosa ONLINE PRESENTATION	MAT-05: THE USE OF FLY ASH AS A SUBSTITUTE FOR PORTLAND CEMENT IN HYDRAULIC CONCRETE Krizia Isabella Bustillo Portillo, Jurgen Estuardo Martínez Carrillos, Michael Job Pineda Canales ONLINE PRESENTATION		
	Tea & Coffee Break 16:00 - 16:30 (Conference Lounge ROOM 302-304)			





	Wednesday – March 06, 2024			
	Registration & Coffee			
	08:00 - 16:00	Registration (The registration desk will be open of	during conference hours)	PUCE – FADA
	08:00 - 09:00	Registration – Tea and Cof	fee	MAIN HALL
		Opening S	Session	
		Conference Briefings/Opening Session		PUCE-FADA-AUDITORIUM
	09:00 - 10:00	KEYNOTE SPEAKER II Carlos Celi, Profesor Pontificia Universidad Católica del Ecuador		V-Room A V-Room A Zoom link (for online participants) <u>s://us02web.zoom.us///3365082496?pwd=MWh4WihPbFZo52RTdEIQMWVOcUVSQT09</u> PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 1
		BREAK – 10	:00-10:30	
	Technical Session III – Wednesday, March 6, 2024, 10:30 - 12:30 Location: School of Architecture, Design and Arts			
	TECH	NICAL SESSION III-A	TE	ECHNICAL SESSION III-B
	ROOM 301: HERITAGE	AND ARCHITECTURAL ENGINEERING	ROO	OM 309: INFRASTRUCTURE
	Moderators: JAVIER BEN IT Staff: Dav	AVIDEZ and CARLA LOPEZ DEL PUERTO id Quijia, Kai Garcia, and Jared Lo	Moderators: AHM IT Staff:	IED JALIL AL-BAYATI and JORGE ALBUJA Anabel Fernandez and Vincent Chan
	V-Room A Zoom link (for online participants) https://us02web.zoom.us/i/3365082496?pwd=MWh4WihPbFZoS2RTdEIQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 1		V-Room A Zoom link (for online participants)	
			https://us02web.zoom.us/i/3365082496?pwd=MWh4WjhPbFZoS2RTdEIQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 2	
1	AAE-04: MAKING THE INVISIBLE VISIBLE REVEALING Xavier Barriga-Abril, Jose Antonio Vivanco, Cristina Rosa	S DATA IN THE CITY as, Xavier Medina, Ana Aulestia, Andres Basantes	EPE-09: SDG LENS TO ASSESS INTERDISCIPI Miguel Andrés Guerra, Holbeein Velasquez, Este	LINARY SUSTAINABLE DESIGNS FOR INFRASTRUCTURE SYSTEMS fania Cervantes
2	2 AAE-05: URBAN STAKEHOLDERS AS KEY TO MANAGEMENT MODELS FOR URBAN REGENERATION CONTRIBUTION FROM SCIENTIFIC LITERATURE (2009-2022) Gabriela Mejia		CSA-03: A CHECKLIST DEFINITION FOR ASSESSING MECHANICAL RISKS USING NTP 330 IN A REPAVEMENT CONSTRUCTION PROCESS Jorge Bucheli, Ricardo Valentino Albuja, Ramiro Zavala	
3	AAE-08: TESTING PHRAGMITES AUSTRALIS FOR DC Cesar Gabriel Ferro, Maria Mercedes Andrade	UBLE CURVATURE DEPLOYABLE STRUCTURES	RAD-02: IDENTIFICATION, ASSESSMENT, AND INFRASTRUCTURE PROJECTS Jorge Bucheli García, Nicolás Hurtado, Oscar Jai	D PROPOSAL OF MECHANICAL RISK CONTROLS IN URBAN ROAD REPAVING ramillo, Wilson Cando, Ricardo Valentino Albuja Endara
4	4 AAE-12: EXPERIMENTAL EXPLORATIONS WITH DIGITAL FABRICATION FOR PREFABRICATED CONSTRUCTION SYSTEMS Luis Alberto Menendez		INF-02: ANALYSIS OF THE CAUSES OF TRAFFIC ACCIDENTS ON SIMON BOLIVAR AVENUE Fabián Díaz, Josué Ortega ONLINE PRESENTATION	
5	5 AAE-14: ARQUITECTURAL VERNACULAR HERITAGE AS A CULTURAL ENHACER IN RUTAL VILLAGES María Rodríguez, Enrique Villacis Tapia, Cynthia Ayarza		INF-03: COMPARATIVE ANALYSIS OF EVALUATION CRITERIA FOR UNPAVED RURAL ROADS: A CASE STUDY Carlos Javier Vásquez Monteros , Gino Flor Chávez, Lizbeth Michelle Machuca Ordoñez ONLINE PRESENTATION	
6	6 LDR-01: LEGAL ANALYSIS OF CONCEPTS TO COMBINE BUILT HERITAGE PRESERVATION WITH ORGANIZATIONAL AND TECHNOLOGICAL FIRE PROTECTION Ulrike Quapp and Klaus Holschemacher		INF-04: PROPOSED METHOD FOR IMPLEMENTATION OF RAILROADS FOR FREIGHT TRANSPORTATION César Zúniga, Ada Rodríguez, María Elena Perdomo	
7	EPE-04: REVALUATION OF THE CITY AND ITS RESOL Gabriela Mejia	JRCES: AN ACADEMIC METHODOLOGY FOR ADAPTATION TO CHANGES	EPE-07: ASSESSMENT OF SPATIAL DATA OB Victor Gonzalez-Jaramillo, Antonio Gonzalez-Bus	TAINED BY MEANS OF THE USE OF UNMANNED AERIAL VEHICLE (UAV) stan <mark>ONLINE PRESENTATION</mark>
8			EPE-08: EVALUATION OF VEGETATION COVE MULTISPECTRAL DATA FROM UAVS Victor Gonzalez-Jaramillo, Julio Rodriguez-Cabre	R DYNAMICS IN A SUB-TROPICAL CLIMATE USING HIGH-RESOLUTION
	Lunch Break: 12:30 - 14:00 (Conference Lounge ROOM 302-303)			





	Technical Session IV – Wednesday, March 6, 2024, 14:00 - 16:00			
	TECHNICAL SESSION IV-A ROOM 301 IV-A: WATER ENGINEERING AND RISK	TECHNICAL SESSION IV-B ROOM 309 IV-B: HOUSING AND SOILS ENGINEERING		
	Moderators: ULRIKE QUAPP and JORGE BUCHELI IT Staff: David Quijia and Kai Garcia	Moderators: LORENA RODRIGUEZ and KLAUS HOLSCHEMACHER IT Staff: Anabel Fernandez and Vincent Chan		
	V-Room A Zoom link (for online participants) https://us02web.zoom.us/j/3365082496?pwd=MWh4WjhPbFZoS2RTdEIQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 1	V-Room A Zoom link (for online participants) https://us02web.zoom.us/j/3365082496?pwd=MWh4WjhPbFZoS2RTdElQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 2		
1	AAW-02: EVALUATION OF THE HYDROLOGICAL RESPONSE TO CLIMATE AND LAND USE CHANGE IN A WATERSHED Fernando Oñate-Valdivieso, Mauricio Cordero ONLINE PRESENTATION	HOS-02: A SUSTAINABLE PRODUCTION AND MANAGEMENT OF AN INDUSTRIALIZED HOUSE Paolo Piantanida, Claudia Alejandra Pilar, Valentina Villa, Antonio Vottari		
2	RAD-03: WATER EROSION RISK AND FOOD SECURITY: A CASE STUDY Fernando Oñate-Valdivieso, Jhonatan González ONLINE PRESENTATION	HOS-06: HABITABILITY CONDITIONS IN SELF-CONSTRUCTED RURAL HOUSES WITHIN INDIGENOUS COMMUNITIES Andrea Parra, Ekaterina Armijos, Diego Mancheno, Raúl Yépez		
3	AAW-04: OPTIMAL DESIGN OF A PUMPED IRRIGATION SYSTEM OPERATING IN SHIFTS Mireya Lapo-Pauta, Javier Espinosa ONLINE PRESENTATION	HOS-04: EMERGENCY SHELTER AND CONNECTIVITY FOR RURAL COMMUNITIES AFTER NATURAL DISASTERS A CASE STUDY Josue Dieppa, Carla López, Genesis Acevedo, Eiden García, Humberto Cavallin, Daniel Rodríguez		
4	AAW-05.DESIGNATION OF THE HEAD LOSS COEFICIENT IN FITTINGS CFD Mireya Lapo-Pauta, <u>Eduardo Carrión</u> , Cristhian Pardo <mark>ONLINE PRESENTATION</mark>	GFE-01: INELASTIC DISPLACEMENTS MACHINE-LEARNING-BASED ESTIMATIONS FOR THE RC-BUILDINGS SEISMIC DESIGN CONSIDERING SSI EFFECTS. Juan-Sebastián Baquero, Gustavo Chafla		
5	AAW-08: COMPARING THE WATER QUALITY OF STREAMS FEEDING A WATERSHED Mia Fong, Amarjit Singh, Julia McHerron, Lanson Chung <mark>ONLINE PRESENTATION</mark>	GFE-05: GEOTECHNICAL CHARACTERIZATION OF SOILS IN "LOS CHILLOS", THROUGH CORRELATIONS OF IN-SITU TESTS, LABORATORY ANALYSIS, AND SPECIFIC PARAMETERS OF THE TERRAIN Wilson Oswaldo Cando Tipán, Jorge Bucheli		
6	RAD-06: RISK PERCEPTION IN THE CONSTRUCTION INDUSTRY: A BIBLIOMETRIC REVIEW Aynur Hurriyet Turkyilmaz, Gul Polat; Asli Pelin Gurgun <mark>ONLINE PRESENTATION</mark>	GFE-04: GEOTECHICAL CHARACTERIZATION OF SOILS IN THE TUMBACO VALLEY, QUITO, ECUADOR, THROUGH IN-SITU TEST CORRELATIONS AND GEOTECHNICAL PARAMETERS Ana Beatriz Cando, Oscar Jaramillo, Wilson Cando, Camila Laura Cando		
7		GFE-02: DETERMINATION OF THE MATRIX SUCTION OF FINE PARTIALLY SATURATED SOILS AND ITS CORRELATION WITH THE COLLAPSE POTENTIAL Jorge Albuja-Sánchez, Jessica Duque, Lizmary Martin, Jonathan Morales, Mariela Anaguano-Marcillo		
8				
	BREAK – 16:00-16:15			





CLOSING SESSION				
16:30 - 17:30	Closing Remarks Enrique Villacís, Conference Chair	PUCE-FADA-AUDITORIUM		
	Awards for best presentations Charles Escobar, Engineering Dean Christine Van Sluys, FADA Dean Closing Remarks Klaus Holschemacher – Announcing the EURO MED SEC 5 Conference Amarjit Singh ISEC Society Chairman of the Board and President Enrique Villacís – Announcing the next LATAM SEC Closing Performance Andes Dance Performance	V-Room A Zoom link (for online participants) https://us02web.zoom.us/i/3365082496?pwd=MWh4WihPbFZoS2RTdEIQMWVOcUVSQT09 PMI: 336 508 2496, Passcode: 395011, BREAKOUT Rm 2 IT Staff: Matías Flores, Kai Garcia, Vincent, Chan, Jared Lo		
	Tuesday – March 5, 2024			
18:00 - 21:00	Dinner Banquet at PIM'S Restaurant	Meeting point FADA-PUCE MAIN HALL		
Thursday – March 7, 2024				
09:00 - 11:30	Technical Tour – Visit to Quito's Historical Downtown Metro Station	Meeting point FADA-PUCE MAIN HALL		
14:30 -16.00	Cultural Tour 1 – Quito Walking Cultural Tour	Meeting point FADA-PUCE MAIN HALL		
Friday– March 8, 2024				
09:00 - 16:00	Cultural Tour 2 – Tour Mitad del Mundo	Meeting point FADA-PUCE MAIN HALL		





Keynote Speaker I



Patricio Cevallos Salas Senior Consultant Tecnología Alternativa Studio ProTERRA Network

<u>Title:</u> Natural Materials in Construction an approach to environmental and social crises Tuesday, March 5, 2024 9:30am - 10:00am

Earthen construction technologies, due to their low impact on the carbon footprint, allow them to be environmentally friendly, and due to their high labor use they allow construction costs to have a greater impact on the income of construction workers and not on the acquisition of industrialized materials that favor large national and transnational companies. The Greenhouse Gases (GHG) emitted into the atmosphere and which are directly associated with global warming, is defined as carbon footprint, with the construction industry being the most polluting, especially due to the production and use of cement. The responsibility of construction companies is to ensure the use of low-impact materials. The increasingly growing trend of generating architecture based on the use of earth, as a basic construction element, allows mitigating GHGs and consequently lowering carbon dioxide (CO_2) emissions. This presentation compares the carbon footprint of cement and earth-based construction systems by way of their extraction and disposal process to the economical consequences of industrialization due to the displacement of manual labor.





Keynote Speaker II



Carlos Celi

Professor School of Engineering / Civil Engineering Pontificia Universidad Católica del Ecuador

<u>Title:</u> Estimation of damage in structures of special use Wednesday, March 6, 2024 9:30am - 10:00am

This study focuses on the estimation of damage in structures of special use, and offers a concise review of techniques used in the seismic evaluation of buildings with fixed base and base isolation. Nonlinear analysis tools and a probabilistic approach, employing parametric analysis adjusted to a lognormal distribution, are employed. The capacity spectrum methodology (CSM) is used to derive capacity curves. With the aim of promoting the use of isolation systems in Ecuador, where they are not mandatory according to building codes, an essential 6-story structure is modeled with both fixed base and various configurations of base isolation using Lead Rubber Bearings (LRB) and variations in their geometric and mechanical properties. The impact of these variations in the mathematical models on the performance of the superstructure is analyzed. The nonlinear behavior of the structure is captured through capacity curves, which are then extrapolated to fragility curves using direct static methods (MED). The capacity curves are limited based on the local fragility of the lateral load-resisting system, recognizing that numerical stability analysis may provide more conservative estimates of global ductility. The analysis and generation of results are carried out using Matlab and OpenSees routines. The results are presented in damage probability matrices for seismic scenarios defined by target displacements. This research aims to enhance the understanding and evaluation of the performance of structures of special use and promote the utilization of isolation systems in Ecuador.











