ICCL 2024
Conference
MONTERREY, MÉXICO

Tecnológico de Monterrey
Escuela de Ingeniería y Ciencias
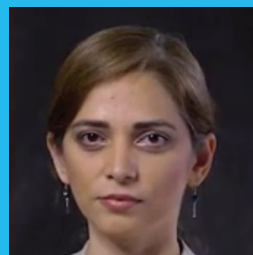Departmento de Ingeniería Industrial, Región Monterrey

CONFERENCE AGENDA

THE SPEAKERS

Christopher Mejía

Homero Escandon

Marzieh Khakifirooz

Cipriano Santos

DAY 01 Sunday, 08 September 2024

17:00 - 18:00   Registration
18:00 - 20:00   Networking & Cocktail

CEDES Building
Mirador

OUR SPONSORS

DAY 02 — Monday, 09 September 2024

📍 CEDES Building 12th Floor

Time	Session
07:30 - 08:30	Coffee & -Registration
08:30 - 09:00	Conference Opening and Welcome Session
09:00 - 10:00	Opening Keynote Session — Topic: *"AI tackling SC uncertainty at micro and macro levels: From Nanostore Evolution to Port Disruptions"*. Speaker: Christopher Mejía, Ph.D.
10:00 - 10:30	Coffee Break

PARALLEL SESSIONS • Tracks 1, 2 & 3 • 📍 CEDES Building 11th Floor

Time	Track 1 / CD1104 AI-Robotics & Logistics — Session chair: Yasmin Rios	Track 2 / CD1105 AI-Driven Supply Chains — Session chair: Saúl Domínguez	Track 3 / CD1107 Freight & Transport Planning — Session chair: M. HajiaghaeiKeshteli	Track 3 / CD1108 Freight & Transport Planning — Session chair: Salvador Vicencio
10:30 - 10:50	Introducing Combi-Stations in Robotic Mobile Fulfilment Systems: A Queueing-Theory-Based Efficiency Analysis [Lin Xie and Sonja Otten]	A Deep Learning Accelerated Heuristic for Truck Loading Optimization [Fynn Martin Gilbert, Jakob Schulte, André Hottung, Daniel Wetzel & Kevin Tierney]	An Enterprise-Wide Optimization System for Sustainable Regional Planning [Jesús Velásquez-Bermúdez, Carlos D. Paternina-Arboleda & Jairo R. Montoya-Torres]	Routing optimization considering advanced constraints and 3d load building [Vinko Llanes]
10:50 - 11:10	The Static Buffer Reshuffling and Retrieval Problem for Autonomous Mobile Robots [Max Disselnmeyer, Thomas Bömer, Jakob Pfrommer & Anne Meyer]	Enhancing the Operationalization of SCRES-Based Simulation Models with AI Algorithms: A Preliminary Exploratory Analysis, [Alexander Garrido, Fabián Pongutá & Wilson Adarme]	Using Deep Reinforcement Learning to Dispatch Loads to Carriers under Uncertain Demand and Dynamic Fleet Size [Marco Antônio Aburachid Tavares & Adriano Alonso Veloso]	Exploring the optimization of itineraries with a time-dependent component through the study of the Tourist Trip Design Problem in Puebla [Sofía Álvarez Sandoval]
11:10 - 11:30	Sorting Multibay Block Stacking Storage Systems with Multiple Robots, [Thomas Bömer, Nico Koltermann, Jakob Pfrommer & Anne Meyer]	The Impact of Artificial Intelligence on Mexico's Logistics Sector: Challenges and Opportunities [Félix Rubén Lostal Martínez]	Approaches to Improve the Distribution Aspects of Gasoline in México [Santiago-Omar Caballero-Morales, Gladys Bonilla-Enriquez & José-Luís Martínez-Flores]	Enabling digital transformation through autonomous supply chain [Blas Treviño]
11:30 - 11:50	Intelligent System and Framework for Integrating Machine Learning with Software Development for Predictive Banking Logistics [Eduardo Ayora]	Optimization and Discrete-Event Simulation Model for Pricing and Inventory Management of Perishable Products [Jesús Isaac Vázquez-Serrano, Leopoldo Eduardo Cárdenas-Barrón, Neale R. Smith, Armando Céspedes-Mota, Rodrigo E. Peimbert-García, & Julio C. Vicencio-Ortiz]	Inventory routing problem with priorities and greenhouse gas emissions reduction [Paulina A. Avila-Torres & Nancy M. Arratia-Martinez]	A Simulation Model for the Container Unloading Process from Ship to Yard in Maritime Terminals [Perla-Ayala-Torres, Cristian José Solano Payares & Santiago Omar Caballero] *Track 4*

🕐 12:00 - 13:30 — LUNCH — 📍 CEDES Building 12th Floor

PARALLEL SESSIONS • Tracks 1, 2 & 3 • 📍 CEDES Building 11th Floor

Time	Track 1 / CD1104 AI-Robotics & Logistics — Session chair: Alexander Garrido	Track 2 / CD1105 AI-Driven Supply Chains — Session chair: Salvador Vicencio	Track 3 / CD1107 Freight & Transport Planning — Session chair: Neale Smith
13:30 - 13:50	Enhancing logistics in the Picking Process within a Warehouse with Artificial Intelligence Techniques [Saúl Domínguez-Casasola, Yasmín Á. Ríos-Solís, José Luís González-Velarde]	Enhancing Supply Chain Management with Artificial Intelligence: Innovations and Applications [Rafael Batres]	Enhancing Last-Mile Delivery: Social Media Insights and Deep Learning Applications [Valeria Laynes-Fiascunari, Luis Rabelo & Edgar Gutierrez-Franco]
13:50 - 14:10	How Digital Twins enable Supply Chain Resiliency within Disruptions: a Case Study [Blas Treviño]	Supply Chain Prescriptions: Leverage the power of AI to unlock hidden savings [El-Moizz Malpica]	A Tri-Objective Optimization Model for the Electrification of Public Transportation Fleets [Karla Cervantes-Sanmiguel]
14:10 - 14:30	Using Cloudera and Open Source Technologies for Processing Sensor Data [Mario Barrientos]	Observability and digital resiliency for proactive strategy [Eddy Castro]	Enhancing Last-Mile Delivery Efficiency: Environmental and Traffic Benefits of Dedicated Loading-Unloading Zones in Mexico [Camilo A. Mora-Quiñones, Leopoldo Eduardo Cárdenas-Barrón, Jan C. Fransoo, Josué C. Velázquez-Martínez]
14:30 - 14:50	Artificial Intelligence Applications in Drone Navigation for Logistic Processes - A Mini-Review [Gladys Bonilla]	Improving Smart stock in retail with advance analytics [Jorge Miguel Bohl]	How to solve routing problems with graph analytics [Sergio Molina]
14:50 - 15:10	Branch Cut and Price with dual optimal inequalities for the coloring problem [Alexandre Dupont]	A Process-Based Simulation and Data Analytics Model for Improving Decision Making in Automotive Supply Chains [Andrés Acero]	Visibility and agile decision making in transportation execution [Vinko Llanes]

Tour & Dinner (RSVP only)

Time	
15:10 - 19:00	HEB Distribution Center *(Including transfers)*
20:00 - 21:30	Restaurant El Noreste Grill / Paseo Tec 2nd floor

DAY 03 — Tuesday, 10 September 2024

CEDES Building 12th Floor

Time	
08:00 - 09:00	Coffee & -Registration
09:00 - 10:00	Keynote Plenary Session — Homero Escandón, Ph.D. VP at Biotix, ASCM (San Diego) Topic: *"Nearshoring Trends for Global Supply Chains"*
10:00 - 10:30	Coffee Break

PARALLEL SESSIONS • Tracks 4, 5 & 6 • CEDES Building 11th Floor

Time	Track 4 / CD1104 — Maritime Logistics — Session chair: Andrés Acero	Track 5 / CD1105 — Retail, Logistics & Nearshoring — Session chair: Saúl Dominguez	Track 6 / CD1107 — Sustainability — Session chair: María G. Villarreal
10:30 - 10:50	Evaluating Port Emissions Prediction Model Resilience against Cyberthreats [Venkata Sai Sandeep Vennam, Carlos D. Paternina-Arboleda & Morteza Safaei Pour]	The Impact of Emerging Trends and Increased Supply Chain Costs on Retail Goods Returns: An Analytical Model for Optimizing Pricing and Refund Strategies [Ali Shirzadeh Chaleshtaria, Ehsan Elahi, Michel Fathi, Marzieh Khakifirooz & Maling Ebrahimpour]	Predictive Modeling Performance Comparison of Port-Based Hydrocarbon Emissions using Multiple Linear Regression, Decision trees and Random Forest [Mythili Basangoudar, Carlos D. Paternina-Arboleda, Dayana Agudelo-Castaneda]
10:50 - 11:10	Robust Optimisation for an Integrated Model of Berth and Quay Crane Assignment at Maritime Container Terminals Respecting Uncertain Numbers of Quay Cranes [Abtin Nourmohammadzadeh & Stefan Voß]	Promoting Regional Economic Welfare for Microstores via Nearshoring Strategies [José-Fernando Camacho-Vallejo, Eva Selene Hernández-Gress, and Carlos Corpus]	A metaheuristic method to design one-way electric car sharing system [Taki Eddine Harbi & Ben Lauwens]
11:10 - 11:30		Efficiency and Environmental Impact: A Bi-level Optimization of Customer Preferences Delivery in Nearshoring Supply Chains [Marzieh Khakifirooz]	Industry 4.0 Strategy to Reduce the Effect of CO_2 Emissions in Inventory Management Costs [Santiago Omar Caballero-Morales, José-Luís Martínez-Flores, Irma-Delia Rojas-Cuevas, Diana Sánchez-Partida & Patricia Cano-Olivos]
11:30 - 11:50	An Efficient Integer Programming Model for Solving the Master Planning Problem of Container Vessel Stowage [Jaike van Twiller, Agnieszka Sivertsen, Rune M. Jensen & Kent H. Andersen]	Artificial Intelligence in Procurement: Buzzword or Real Revolution? [Omar Quintero-Espinosa, Alexander Garrido, Oscar Palacio]	Generation of tourist routes considering preferences and public transport using artificial intelligence planning techniques [Fernando Elizalde-Ramírez & Cristina Maya-Padrón]

LUNCH

12:00 - 13:30 — CEDES Building 12th Floor

PARALLEL SESSIONS • Tracks 4, 5 & 6 • CEDES Building 11th Floor

Time	Track 5 -CD 1 - CD1104 — Retail, Logistics & Nearshoring — Session chair: Andrés Acero	Track 5 CD 2 - CD1105 — Retail, Logistics & Nearshoring — Session chair: Jobish Vallikavungal	Track 6 CD1107 — Sustainability — Session chair: María G. Villarreal
13:30 - 13:50	Recent Nearshoring Opportunities and Sustainability Concerns in North America [Mostafa Hajiaghaei-Keshteli]	Two-Dimensional Assortment and Shelf-Space Allocation Problem [Baoying Lin & Satyaveer S. Chauhan]	An EOQ model for growing items in a three-echelon supply chain considering mortality, planned shortages, imperfect quality, and carbon tax policy [Cynthia De la Cruz Márquez, Leopoldo Eduardo Cárdenas-Barrón, Neale R. Smith, Rafael Ernesto Bourguet-Díaz, Imelda de Jesús Loera-Hernández, Armando Céspedes-Mota, Buddhadev Mandal, Gerardo Treviño-Garza]
13:50 - 14:10	Resilience Considerations in Supply Chains [Araceli Zavala]	Net Revenue Management at Scale: Challenges and Solutions at PepsiCo [Eduardo Salazar]	Optimizing ROI for livestock farm under power demand and carbon taxes [Al-Amin Khan, Leopoldo Eduardo Cárdenas-Barrón]
14:10 - 14:30	Development of a Game Theory Cournot Model with Incomplete Information to Measure the Level of Cooperation among Oil Companies in a Pipeline Supply Chain [Rafael Carmona-Benítez]	Enhancing Coverage and Accessibility in Healthcare: A Mobile Unit Approach to the Maximal Covering Location Problem with Accessibility Indicators [Salvador J. Vicencio-Medina]	Trucking Tomorrow: A Comprehensive Analysis of Industry Variables [Pamela Torres]
14:30 - 14:50	Quantifying the impact on GHG emissions and mobility of mass events using cell phone location [José Ignacio Huertas & Luisa Fernanda Chaparro]		Integrated timetabling and vehicle scheduling and electric fleet procurement for a sustainable transit system [Diana Quintanar]

Keynote Plenary Session

Time	
15:00 - 16.00	Topic: *"AI Horizons: Navigating the Next Frontier in Logistics and Supply Chain Innovation"*. Panelist: Marzieh Khakifirooz, Ph.D. Topic: *"Operations Artificial Inteligence, How AI is Everywhere"*. Panelist: Cipriano Santos, Ph.D.
16:00 - 16:30	Panel: General Discussion
16:30 - 16:45	Conference Conclusions and Closing