



MIT SCALE Latin America Conference

21-26 March 2021

**DISCOVER LEADING EDGE
LOGISTICS AND SUPPLY CHAIN
MANAGEMENT RESEARCH**

110 applied research presentations

Top academics from across Latin America & the Caribbean.

Explore these vital topics:

- Applied Operations Research
- Data Driven Supply Chains
- Emerging Technology
- Educational Innovation
- Freight Transportation and Logistics Policy
- Supply Chain Management for Food and Ag
- Logistics 4.0
- Micro and Small Firms
- Port Operations
- Retail Operations for Nanostores
- Sustainable Supply Chains
- Urban Logistics

Register: bit.ly/scalelatam21



CENTRO LATINOAMERICANO DE INNOVACIÓN EN LOGÍSTICA

MIT SCALE LatAm Conference 2021

- H Humanitarian Supply Chains
 K Keynote Plenary Session
 L Logistics 4.0
 Q Quick Break
 R Research Chat
N Retail Operations for Nanostores
 B Sustainable Supply Chains
 W Welcome / Farewell

MARCH 21 • SUNDAY

| | | | |
|---------------|---|---|---|
| 07:30 – 08:20 | W | Registration and Check In <i>Speakers: Chris Mejía</i> <i>Sponsors: MIT CTL Event Staff</i> | Zoom |
| 08:20 – 08:40 | K | Opening Remarks <i>Speakers: Chris Mejía</i> | https://mit.zoom.us/my/agrau |
| 08:40 – 09:50 | K | Keynote I: The New (Ab)Normal: Reshaping Business and Supply Chain Strategy Beyond Covid-19 <i>Speakers: Yossi Sheffi</i> | Zoom |
| 09:50 – 10:00 | Q | Break | Guest Choice |
| 10:00 – 10:20 | N | Supply and demand contrast between different types of nanostores in Lima <i>Speakers: Rodrigo Villegas, Geraldine Garcia, Carmen Rodríguez, Miguel Santa Cruz</i> | Zoom |
| 10:00 – 10:20 | B | The Greening of a Large Urban Distribution Network <i>Speakers: Jerry Bendiner, Orlando Torres, Luiggy Rueda, Mario Valadez</i> | Zoom |
| 10:20 – 10:40 | N | Effect of population density and marginalization on stores location <i>Speakers: Christopher Mejía, Dominique Gomez</i> | Zoom |
| 10:20 – 10:40 | B | The repositioning of Empty Containers Can Improve Brazilian Soybean Grains Exports Through Manaus Ports <i>Speakers: Bruno Oliveira, Augusto Rocha</i> | Zoom |
| 10:40 – 11:00 | N | Dynamic supply chain network design for a Brazilian retailer <i>Speakers: Christopher Mejía, Nestor Moreno, Magali Aquino, Paulo Fernandes</i> | Zoom |
| 10:40 – 11:00 | B | Fast Shipping and Inbound Logistics Sustainability <i>Speakers: Ana Luiza Ferrer, Perla Jazmin, Haro Ruiz, Roger Mariño</i> | Zoom |
| 11:00 – 11:20 | N | Improving access to healthy food in vulnerable populations through nanostores and small businesses <i>Speakers: Daniela Granados, Gonzalo Mejía, Jairo R. Montoya-Torres</i> | Zoom |
| 11:00 – 11:20 | B | Inclusion of remanufacturing in an office furniture manufacturing company in Santiago de Chile <i>Speakers: Juan Pedro Sepúlveda Rojas, Rodrigo Ternero, Pedro Palominos</i> | Zoom |
| 11:20 – 11:30 | Q | Break | Guest Choice |
| 11:30 – 11:50 | H | Maturity Model for Disaster Response Operations <i>Speakers: Hingred Ferraz Pereira, Patricia Alcantara Cardoso, Adriana Leiras</i> | Zoom |
| 11:30 – 11:50 | L | Applications of Artificial Intelligence in Supply Chain Management <i>Speakers: Wendy Carvajal, Marcelo De Sousa Murta, Lucia Leal</i> | Zoom |
| 11:50 – 12:10 | H | Risk generation in a megacity <i>Speakers: Mario Chong, Isabel Bastidas, Yndira Guevara, Yereth Romero, Julio Castillo</i> | Zoom |
| 11:50 – 12:10 | L | Augmented Reality System for Load Yard Control in Industry <i>Speakers: Augusto Rocha, Eduardo Silva, Sandro Breval</i> | Zoom |
| 12:10 – 12:30 | H | Landslide aftermath simulation in Paima: a dynamic system approach <i>Speakers: Nicolás Giedelmann Lasprilla, Elyn L. Solano Charris, Carlos L. Quintero Araujo</i> | Zoom |
| 12:10 – 12:30 | L | Diagnosis of Supply Chain 4.0 maturity in Uruguay <i>Speakers: Juan Topolansky, Agustín Rodríguez, Martín Tanco, Daniel Jurburg, Santiago Kraiselburd</i> | Zoom |
| 12:30 – 12:50 | H | Humanitarian Operations in Latin America: a taxonomy and a research agenda <i>Speakers: Brenda Cardoso, Ludmylla Moreira, Adriana Leiras, William Guerrero, Jorge Vargas-Florez</i> | Zoom |

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| 12:30 – 12:50 | L Are Workers from the Agricultural Industry Ready for the Arrival of Industry 4.0? <i>Speakers: Martín Tanco, Daniel Jurburg, Álvaro Cabrera</i> | Zoom |
| 12:50 – 13:00 | Q Break | Guest Choice |
| 13:00 – 14:00 | R Research Chat: Educational Innovation and Nanostores | Zoom |
| 14:00 – 14:15 | W Day Wrap-up and Check-out | Zoom |

MIT SCALE LatAm Conference 2021

- D Data Driven and Emerging Tech
 C Micro and Small Firms
 P Panel
 Q Quick Break
 R Research Chat
S SCM for Food and Ag
O Student Paper Competition
U Urban Logistics
W Welcome / Farewell

MARCH 22 • MONDAY

| | | | |
|---------------|---|---|--------------|
| 08:00 – 08:20 | W | Check-in | Zoom |
| 08:19 – 09:40 | P | Panel I: Women in Supply Chain Initiative <i>Speakers: Katie Date</i> | Zoom |
| 08:20 – 08:40 | U | Framework development for fulfillment models in e-commerce companies <i>Speakers: Dominique Gomez, Eva Ponce, Juan M. Bellido, Renata Cabrini</i> | Zoom |
| 08:40 – 09:00 | U | Urban travel demand estimation and forecasting: a mixed logit application to the Villa Carlos Paz city <i>Speakers: Gerardo Heckmann, Juan José Pompilio Sartori, Walter Javier Romano</i> | Zoom |
| 09:00 – 09:20 | U | Districting of urban areas considering the road network for last mile deliveries <i>Speakers: Claudio Cunha, Fábio Boaventura, Lei Zhao, Talyta Abichabki</i> | Zoom |
| 09:20 – 09:40 | U | The Geo-Prescriptive Inventory Routing Problem <i>Speakers: Carlos Daniel Paternina-Arboleda, Daniela Cassandro-De La Hoz, Jorge Iván Vélez</i> | Zoom |
| 09:40 – 09:50 | Q | Break | Guest Choice |
| 09:50 – 10:10 | C | Micro business research in Piura Peru <i>Speakers: José Luis Calderón Lama</i> | Zoom |
| 09:50 – 10:10 | S | Considering temperatures in wine shipping decisions: model, risk indices, and applications | Zoom |
| 10:10 – 10:30 | C | Business practices in nanostores. A study in Piura, Perú <i>Speakers: Brenda Silupú, Sergio Reyes, José Amorós, Fabiola Alcas</i> | Zoom |
| 10:10 – 10:30 | S | Supply chain model to reduce meat degradation during exports | Zoom |
| 10:30 – 10:50 | C | The coexistence of nanostores within the retail landscape. A spatial statistical study for Mexico City <i>Speakers: Camilo Andrés Mora-Quiñones, Leopoldo Eduardo Cárdenas-Barrón, Josué C. Velázquez-Martínez, Karla Gámez Pérez</i> | Zoom |
| 10:30 – 10:50 | S | Improving food security with farmers' markets in Bogotá, Colombia: A logistics perspective | Zoom |
| 10:50 – 11:10 | C | Hey Small Firms, Do You Need Cash? Forget About Sales! <i>Speakers: Analíz Cabrera Hernandez, Trevor Nathan Thompson</i> | Zoom |
| 10:50 – 11:10 | S | Rethinking Fresh Food Supply Chains for Low-Income Consumers in Brazil | Zoom |
| 11:10 – 11:20 | Q | Break | Guest Choice |
| 11:20 – 11:40 | D | Data-Driven & Emerging Technologies in Latin American Supply Chain Management Research | Zoom |
| 11:20 – 11:40 | O | Implementation and adoption of a technological fruit and vegetable distribution platform for 'bodegas' or micro-stores in Lima | Zoom |
| 11:40 – 12:00 | D | Benefits of the RFID technology in a healthcare three - echelon supply chain | Zoom |
| 11:40 – 12:00 | O | Location of Urban Distribution Centers to Enhance the Competitiveness of Nanostores. | Zoom |
| 12:00 – 12:20 | D | Beyond the Seaport: Assessing the Impact of Policies & Investments on the Transport Chain | Zoom |
| 12:00 – 12:20 | O | Including risk parameters in vehicle routing modelling | Zoom |
| 12:20 – 12:40 | D | Data-driven and Model-driven Methods for Supply Chain Risk Management | Zoom |
| 12:20 – 12:40 | O | A simheuristic procedure for the design of last-Mile deliveries in Bogota | Zoom |
| 12:40 – 13:00 | Q | Break | Zoom |

13:00 – 14:00

R **Research Chat: CLI & Micro and Small Firms**

Zoom

14:00 – 14:15

W **Day Wrap-up and Check-out**

Zoom

MIT SCALE LatAm Conference 2021

- F Freight Transportation and Logistics Policy
 K Keynote Plenary Session
 T Port Operations
 Q Quick Break
N Retail Operations for Nanostores
 O Student Paper Competition
 W Welcome / Farewell

MARCH 23 • TUESDAY

| | | | |
|---------------|---|---|--------------|
| 08:00 – 08:20 | W | Check-in | Zoom |
| 08:20 – 09:30 | K | Keynote II: Digitizing Nanostore Logistics – enhancing competitiveness and reducing the logistics footprint of serving mom and pop <i>Speakers: Prof. Jan C. Fransoo</i> | Zoom |
| 09:30 – 09:40 | Q | Break | |
| 09:40 – 10:00 | T | Efficiency comparison between container terminals in Southern Brazil <i>Speakers: Beatriz Murakami Chow, Jully Giacomini, Vanina Macowski Durski Silva</i> | Zoom |
| 09:40 – 10:00 | N | Collaborative economy logistics solution in urban environments from emerging markets <i>Speakers: Daniel Prato, David Salinas, Debora Costa, Diana López, Rodrigo Bilicki</i> | Zoom |
| 10:00 – 10:20 | T | Comparative case study between the logistic competitiveness of three industrial agglomeration models: Shenzhen in China, Manaus in Brazil and Ciudad Del Este in Paraguay <i>Speakers: Richards Veras, Fabiana Oliveira</i> | Zoom |
| 10:00 – 10:20 | N | Retail Execution Quality Analysis in Traditional Channel of Nanostores <i>Speakers: Claudia Antonini, Diego Valenzuela, José Larco</i> | Zoom |
| 10:20 – 10:40 | T | Efficiency analysis of solid bulk terminals using DEA Method <i>Speakers: Beatriz Chow, Jully Anne Giacomini, Vanina Macowski Durski Silva</i> | Zoom |
| 10:20 – 10:40 | N | Optimization strategies for last mile delivery of CPG products to nanostores in the city center of Cochabamba <i>Speakers: Daniel Santiago Lima Urquiola</i> | Zoom |
| 10:40 – 11:00 | T | Smart and Sustainable Logistic Ecosystem of Panama: A Conceptual Model <i>Speakers: Erick Jones, Juan Marcos Castillo, Zoila Yadira Guerra de Castillo</i> | Zoom |
| 10:40 – 11:00 | N | The future of nano-stores. Current situation and buying patterns analysis in the city of Quito. <i>Speakers: Carlos Suárez, Jonathan Acaro, Ximena Córdova</i> | Zoom |
| 11:00 – 11:10 | Q | Break | Guest Choice |
| 11:10 – 11:30 | F | Collaborative strategies for freight transportation using an ITS <i>Speakers: Ana Maria Castañeda Velazquez, Andres Polania, Daniel Prato, Juan David Suárez Moreno, Maria Esperanza Riaño</i> | Zoom |
| 11:10 – 11:30 | O | Distribution strategies to deliver yogurt and juice to underserved communities <i>Speakers: Daynor Bautista</i> | Zoom |
| 11:30 – 11:50 | F | Truck Transportation in the Americas: A cross-comparison analysis <i>Speakers: Andrés Villena, David Correll, Guilherme Mendonça, Viviana Ruiz</i> | Zoom |
| 11:30 – 11:50 | O | Study of the factors related to the operational management of a return center considering the reverse logistics of the SMEs <i>Speakers: Carolina Barea Espinoza, Fernando Amado López Gutiérrez, Renán Alberto Laguna Vargas</i> | Zoom |
| 11:50 – 12:10 | F | Observatory of Urban Transport of Cargo OTUC-QUITO <i>Speakers: Bernardo Puente-Mejia, Carlos Suárez-Núñez, Clara Orellana-Rojas</i> | Zoom |
| 11:50 – 12:10 | O | Rotating Rack System Learner (RRSL): a methodology to increase space usage by varying SKU locations <i>Speakers: Alfredo Gimenez Zapiola, María Sánchez-Arriola</i> | Zoom |

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| 12:10 – 12:30 | F Perceptions of Urban Freight Transport in Brazilian Historical Cities <i>Speakers: Artur Diniz Rocha Macedo, Carla De Oliveira Leite Nascimento, Franciso Gildemir Ferreira Silva, Gustavo Peixoto Silva, João Guilherme De Costa Braga França, Leise Kelli Oliveira, Leonardo Herszon Meira, Ligia Rabay, Mylena Cristine Rodrigues Jesus</i> | Zoom |
| 12:20 – 12:50 | O Explaining Product Returns in a Nanostore Context: Implications for Marketing, Sales and Logistics Functions | Zoom |
| 12:40 – 13:00 | Q Break | Zoom |
| 13:00 – 14:00 | H Research Chat II: Humanitarian SCM for Food and Agri-business | Zoom |
| 14:00 – 14:15 | W Day Wrap-up and Check-out | Zoom |

MIT SCALE LatAm Conference 2021

D Data Driven and Emerging Tech **P** Panel **Q** Quick Break **S** SCM for Food and Ag **U** Urban Logistics

W Welcome / Farewell

MARCH 24 • WEDNESDAY

| | | | |
|---------------|---|---|--------------|
| 08:00 – 08:20 | W | Check-in | Zoom |
| 08:19 – 09:40 | P | Panel II: Freight transportation and infrastructure | Zoom |
| 08:20 – 08:40 | U | Multi-tiered Last-mile Delivery Models <i>Speakers: Miguel Barros, Alexandre Faria, Matheo Moreno, Juan Piña-Pardo, Matthias Winkenbach</i> | Zoom |
| 08:40 – 09:00 | U | Bottom of the Pyramid Urban Logistics: Case Study of Goods Distribution in Slums <i>Speakers: Giulliane Fioravanti, Ana Hirakawa, Selma Isa, Orlando Lima Jr., Henrique Oliveira</i> | Zoom |
| 09:00 – 09:20 | U | How to Do Deliveries in a Latin-American Megacity? Digital Twin for Last-Mile Operations in Bogota, Colombia <i>Speakers: Christopher Mejia, Edgar Gutierrez-Franco, Luis Rabelo, Mario Marin</i> | Zoom |
| 09:20 – 09:40 | U | Investigating the operational effects of uncertainty on delivery times for off-hours deliveries in the megacity of São Paulo, Brazil <i>Speakers: Claudio Cunha, Daniel Mota, Hugo Yoshizaki</i> | Zoom |
| 09:40 – 09:50 | Q | Break | |
| 09:50 – 10:10 | D | Demand Forecasting using Machine Learning in a Pharma Retail Chain <i>Speakers: Waldo Flores, Dr. Nima Kazemi, Nestor Moreno, Mariana Sousa</i> | Zoom |
| 09:50 – 10:10 | S | Market Size and Direct Accessibility as Mediators for Explaining Potato Prices <i>Speakers: Christopher Mejia, Claudia Antonini, José Larco, Maria Noriega</i> | Zoom |
| 10:10 – 10:30 | D | ContracTool: Scalable Contract Lifecycle Management Solution - Dell Case Study <i>Speakers: Peter Banda, Jens Bürger, Peter Horny, Martin Razus</i> | Zoom |
| 10:10 – 10:30 | S | First mile food losses destination and quantification in Colombia <i>Speakers: Agustina Calatayud, Andrés Cárdenas, Catalina Silva-Plata, Diego Gutiérrez, Julieth Ricardo, Vivian Rangel</i> | Zoom |
| 10:30 – 10:50 | D | Traffic Count Prediction Based on Weather Information for Urban Logistics in Megacities <i>Speakers: Edgar Gutierrez, Valeria Laynes, Luis Rabelo</i> | Zoom |
| 10:30 – 10:50 | S | Mathematical model for minimizing wastes in crop maintenance tasks <i>Speakers: Guisselle A. Garcia-Llinas, Jairo R. Montoya-Torres, Luis E. Ramirez-Polo, Nestor E. Caicedo Solano</i> | Zoom |
| 10:50 – 11:10 | D | The relevance of data integration and IT to enable Postponement strategies in the context of Supply Chain Design: an empirical study <i>Speakers: Ricardo Cassel, Carlos Panitz</i> | Zoom |
| 10:50 – 11:10 | S | Can food be circular? An investigation of food supply chains through the lenses of circular economy and data-driven technologies <i>Speakers: Jens Bürger, Vinicius Picanco Rodrigues</i> | Zoom |
| 12:40 – 13:00 | Q | Break | Guest Choice |

MIT SCALE LatAm Conference 2021

E Educational Innovation **K** Keynote Plenary Session **Q** Quick Break **W** Welcome / Farewell

MARCH 25 • THURSDAY

| | | |
|---------------|---|--------------|
| 08:00 – 08:20 | W Check-in | Zoom |
| 08:20 – 09:30 | K Keynote plenary session III: Current status and challenges of transportation systems in Colombia <i>Speakers: Ángela María Orozco Gómez</i> | Guest Choice |
| 09:30 – 09:40 | Q Break | Guest Choice |
| 09:40 – 10:00 | E Capacity building through e-learning in logistics in micro and small firms (MSEs) <i>Speakers: Juana Valderrama, Catalina Silva-Plata, Cristian Barragán, Estefania Lasso, Sindy Melo</i> | Guest Choice |

MIT SCALE LatAm Conference 2021

A Applied Operations Research **Q** Quick Break **W** Welcome / Farewell

MARCH 26 • FRIDAY

| | | |
|---------------|---|--------------|
| 08:00 – 08:20 | W Check-in | Zoom |
| 09:40 – 09:50 | Q Break | Guest Choice |
| 11:20 – 11:40 | A A GRASP-RVND metaheuristic for the data mule routing problem with Limited Autonomy | Guest Choice |
