



1st Latin-American Workshop on Service-Oriented, Holonic and Multi-agents Manufacturing Systems for Industry of the Future

Pontificia Universidad Javeriana, Bogota, Colombia
January 27 – 28, 2021

Colombian Time		Day 1		Day 2	
		January 27, 2021		January 28, 2021	
7:30 AM	8:00 AM	Opening session			
8:00 AM	9:00 AM	Keynote Lecture Paulo Leitão Full Professor, Instituto Politécnico de Bragança		Keynote Lecture Simón Tamayo Data Science Specialist, McKinsey & Company	
9:00 AM	9:10 AM	Break			
9:10 am - 10:10 am		Session W.1.1: Technology 4.0"	Session W.1.2: People and industry in the age of Society 5.0	Session T.1.1: Logistics and Supply Chain I	Session T.1.2: Digitalization of design and planning activities
9:10 AM	9:30 AM	Machine Vision for Collaborative Robotics Using Synthetic Data-Driven Learning Juan Camilo Martínez-Franco and David Alvarez-Martinez	Location-Routing for a UAV-Based Recognition System in Humanitarian Logistics: Case Study of Rapid Mapping Paula Saavedra, Alejandro Pérez Franco and William J. Guerrero	Connectivity through Digital Supply Chain Management: A comprehensive literature review Iván Henao-Hernández, Andrés Muñoz Villamizar and Elyn Lizeth Solano Charris	Implementation of a holonic product-based platform for increased flexibility in production planning. Patricio Saez and Carlos Herrera
9:30 AM	9:50 AM	Optimizing Maintenance Policies of Computed Tomography Scanners with Stochastic Failures Andrés Felipe Cardona Ortegon and William J. Guerrero	A Local Search Algorithm for the Assignment and Work Balance of a Health Unit Néstor Díaz-Escobar, Pamela Rodríguez, Verónica Semblantes, Robert Taylor, Daniel Morillo Torres and Gustavo Gatica	Cyber-Physical Systems in Logistics/Supply Chain Erika Suárez-Riveros, Álvaro Mejía-Mantilla, Sonia Jaimes-Suárez and Jose-Fernando Jimenez	A novel analysis framework of 4.0 production planning approaches Estefania Tobon Valencia, Samir Lamouri, Robert Pellerin and Alexandre Moeuf
9:50 AM	10:10 AM	FarmBot Simulator: towards a Virtual Environment for Scaled Precision Agriculture Victor Alexander Murcia, Juan Felipe Palacios and Giacomo Barbieri	Ensuring ethics of cyber-physical and human systems: a guideline Damien Trentesaux	A survey on components of AR interfaces to aid packing operations Guillermo Camacho-Muñoz, Sandra Esperanza Nope Rodriguez and Humberto Loaiza-Correa	A survey about BIM interoperability and collaboration between design and construction Léa Sattler, Samir Lamouri, Robert Pellerin, Thomas Paviot, Dominique Deneux and Thomas Maigne
10:10 AM	10:20 AM	Break			
10:20 am - 11:20 am		Session W.2.1: Smart Production Control for Industry 4.0	Session W.2.2: Multi-agent systems, digital twins & Artificial Intelligence	Session T.2.1: Logistics and Supply Chain II	Session T.2.2: Optimization
10:20 AM	10:40 AM	Development of a predictive process monitoring methodology in a self-organized manufacturing system Luna Lovera Abella, Nestor Rodriguez, Laura Lopez, Geraldine Martinez, Jose Jimenez Gordillo and Hugo Aguirre Mayorga	Artificial Data Generation with Language Models for Imbalanced Classification in Maintenance Juan Pablo Usuga-Cadavid, Bernard Grabot, Samir Lamouri and Arnaud Fortin	Multiobjective LP model for supply chain management of perishable products in a diary company Sara Alayon	A Mixed-Integer Linear Model for Solving the Open Shop Scheduling Problem Daniel Morillo Torres and Gustavo Gatica
10:40 AM	11:00 AM	A GEMMA-based Decentralized Architecture for Smart Production Systems Jose Daniel Hernandez, David Andres Gutierrez and Giacomo Barbieri	Digital Twin in Water Supply Systems to Industry 4.0: The Holonic Production Unit Juan Cardillo Albarrán, Edgar Chacón, Luis Alberto Cruz Salazar and Yenny Alexandra Paredes Astudillo	Managing disruptions in supply chains Jairo R. Montoya-Torres	On the complexity of the Collaborative Joint Replenishment Problem Carlos Otero-Palencia, Jairo R Montoya-Torres and René Amaya-Mier
11:00 AM	11:20 AM	A Hybrid Control Architecture for an Automated Storage and Retrieval System Andres-Camilo Rincon, Daniel-Rolando Rodriguez, Yenny Alexandra Paredes-Astudillo and Jose-Fernando Jimenez	A multi-agent optimization approach to determine a farmers’ market locations in Bogotá city, Colombia Daniela Granados and Gonzalo Mejía	Airline Workforce Scheduling based on Multi-agent Systems Juan Camilo Chafloque Mesia, Julio Andres Mejia Vera, Nicolas Ceballos Aguilar, Gabriel Mauricio Zambrano Rey and Mohamed Rabie Nait-Abdallah	Hybrid model for Making Decision Methods in Wireless Sensor Networks Martha Torres and Virgilio González
11:20 AM	12:00 PM			Closing Session	