

CALL FOR PAPERS

Track 05 : Digitalization and SCM 4.0

Track description

Digitalization and Industry 4.0 have promoted disruptive changes that considerably affect supply chains and will continue triggering changes in the future. Supply Chain Management 4.0 (SCM 4.0) designates supply chain in the Digital Age and 4.0 came from the term "Industry 4.0". It encompasses the promise of a new Industrial Revolution one that marries emerging technologies to create a digital manufacturing enterprise that is not only interconnected, but communicates, analyzes, and uses data to further drive intelligent action back into the physical world. SCM 4.0 includes a new way to produce and deliver value for clients, but also new forms to coordinate and collaborate with all stakeholders in the value chain. This track aims to cover the insights from global research communities towards the practical and technological advances towards the aspects of "future digital supply chains".

Research questions

- ✓ How do Industry 4.0 as well as Supply and Demand Chain Management impact each other?
- ✓ Which challenges and opportunities arise in the SCM, caused by digitalization?
- ✓ Which additional risks and drawbacks must be considered in the future digital supply chain?
- ✓ How does digitalization create value for the different stakeholders in the digital supply chain?
- ✓ How does Disruptive Technologies Supports Post Covid19 Global Supply Chains and Logistics Management activities (social and economic impacts)?

Research topics

- ✓ Emerging technologies (e.g., internet of things, cobots, autonomous vehicles, blockchain, artificial intelligence, etc.) and its impact on supply chain management
- ✓ Advanced tracking and tracing technologies and applications in the supply chain context
- ✓ Effects of digitization & automation on efficiency, effectiveness, flexibility in supply chains
- ✓ Impacts of digitization on SC decision-making, leadership practices, management principles
- ✓ Innovative smart services for supply chain management
- ✓ Concepts of data security for supply chain applications
- ✓ Visibility, traceability, and transparency in manufacturing systems and supply chain
- ✓ Maturity models for digital transformation of supply chain management
- ✓ Innovative supply chain models based on big data analytics
- ✓ Analysis of diffusion and digital transformation in supply chains
- ✓ Effects of product and service virtualization on supply chain management
- The relationship between SC4.0 and sustainability
- ✓ New digital supply chain structures (e.g., highly distributed)
- ✓ Challenges and opportunities (management structures, workforce competences, etc.)
- ✓ Modeling, simulation, control, and optimization of smart production systems and networks

Important dates

Paper submissions deadline : **August 15, 2021**

Paper notification to authors : **September 15, 2021**

Registration Open : **September 01, 2021**

Final papers deadline : **December 15, 2021**

Chairs

Satya Shah is Director of Studies and Professor of Supply Chain and Engineering Management at University of Bolton. Along with Teaching/Learning and Academic practices, Prof Shah also dedicates passionately towards his Research & Enterprise interests, and currently leading the Bolton Centre of Global Supply Chain & Sustainability Management, and lead supervisor for PhD/EngD projects within the research interests.

Elaine Mosconi is an Associate Professor at the Université de Sherbrooke, Business School, Department of Information Systems and Quantitative Methods, Sherbrooke, Canada. She is the head of IntelliLab, a research group on emerging digital technologies in the context of the 4th Industrial Revolution and of the Centre of Excellence for Innovative Manufacturing Companies. She collaborates with many multidisciplinary research groups, such as Collaborative Research Network on Supply Chain (SC4), Réseau Innovation 4.0 Network, Collaborative Robotics on Manufacturing (CoRoM), Research Pole on Business Intelligence (PRISME) and the WAIM.Network (Work in age of intelligent machines). Her current research interests are related to digital transformation, collaborative innovation, business intelligence, Industry 4.0 and decision performance, especially in manufacturing sector context.

Luis Antonio de Santa-Eulalia is an Associate Professor in Operations Management at the Business School of the Université de Sherbrooke. He holds a PhD, a MSc and a BSc in Industrial Engineering, respectively from Université Laval, University of São Paulo and Federal University of São Carlos. Luis is a cofounder of the IntelliLab, a research group dedicated to the 4th Industrial Revolution and Digital Transformation and two collaborative research networks in the same fields: the Réseau Innovation 4.0 Network and the Collaborative Research Network on Supply Chain 4.0. He has coauthored more than 150 articles published in peer-reviewed journals and presented at conferences with selective editorial policies. His current research interests are related to emergent technologies and novel business models and practices for innovative and sustainable Operations Management.

Elias Ribeiro da Silva is an Assistant Professor at the Department of Technology and Innovation, University of Southern Denmark. With interest in strategies and operational capabilities for sustainable competitiveness, current research explores digital manufacturing, simulation, blockchain, and sustainable operations. Prior studies include PhD degree in Industrial and Systems Engineering, and experience embraces automotive, industrial automation, and technology industries. Currently, the coordinator of the Collaborative Research Network on Supply Chain 4.0.