

> Thursday, April 27th, 2023

14:00 - 15:30

LEM-OPER SEMINAR

**RESEARCH
SEMINAR**



EMPOWERING CHANGE MAKERS FOR A BETTER SOCIETY

‘BLOCKCHAIN - WHY AND HOW IS IT RELEVANT IN SUPPLY CHAIN?’

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ABSTRACT

Digitalization is a powerful megatrend impacting how we collaborate and exchange supply chain information, and how we integrate, manage and control supply chain operations. We discuss briefly technologies such as smart factories and warehouses, smart logistics, cloud-based systems, digital platforms, and the computational engines powered by Analytics, Data Science and Artificial Intelligence that are enabling the digitalisation of supply chains (MacCarthy & Ivanov, 2022). We then examine one of the most iconic emerging technologies – the blockchain. Blockchain’s ability to provide an immutable digital record and a secure medium for instant information sharing among distributed supply chain partners has the potential to address some of the major challenges related to visibility, traceability and transparency in supply chain management. We discuss how and why organizations are seeking to apply the technology, where they are seeking to apply it and the product, market and industry contingency factors influencing applications (Ahmed and MacCarthy, 2022a). There are formidable challenges in deploying and scaling blockchain solutions in the physical world of supply chains, not least the complexity of globally distributed supply networks (MacCarthy et al., 2022). We note the challenges and the research opportunities they bring (Ahmed and MacCarthy, 2022b).