18th IFAC Symposium on Information Control Problems in Manufacturing (INCOM 2024)

● 28-30 August 2024, Vienna, Austria ●

Invited Session:

Big data analytics adoption in enhancing the resilience of manufacturing and distribution systems: Incentive, implementation, and impact

Organized by:

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With the rapid growth of supply network complexity, manufacturing, and distribution systems are now faced with more unprecedented challenges, for example, trends in omni-channel sales, the deepening mismatch between supply and demand, shorter product lifecycle, and riskier supply chain disruption. These challenges pose new requirements for system resilience. Resilience, which is defined as the capability to quickly adapt and adjust to various unpredictable and uncontrollable emergencies, could better maintain business continuity, reduce losses and costs, and protect brand reputation. With the consideration of more complicated supply networks, it seems that enhancing the resilience of manufacturing and distribution systems brooks no delay. In addition, in the context of the digital economy, the application of big data technologies has penetrated various industries, including manufacturing and distributing industries. Cloud computing, the Internet of Things, big data, artificial intelligence, blockchain, and other digital intelligence technologies have gradually been applied in production, circulation, services, and so on. However, the application of big data analytics in manufacturing and distribution systems is still low-efficient and unsystematic.

This session aims to motivate enterprises to adopt big data analytics and share their operational data, construct a data-driven framework to help enterprises make decisions and enhance resilience, and evaluate the effects of big data analytics on system resilience.

Topics may include (but are not limited to):

- Determinants of intention to use big data analytics
- Data capital investment strategy in supply chains
- Enhancing resilience by information sharing or collaboration
- The role of big data analytics in decisions
- A data-driven supply chain forecasting method (e.g., demand forecasting and supply learning)
- Data-driven operational strategies (e.g., supplier selection, network design, production, inventory, and distribution) to enhance resilience
- A data-driven reliability and resilience measurement
- The effects of big data analytics in enhancing resilience

IVITATION CODE 7q8g6

Draft papers reporting original research (limited to 6 pages in IFAC format) are welcome.

When you submit your paper to the IFAC system, you will be required the invitation code 7q8g6 in order to associate your paper to the invited session.

IMPORTANT DATES:

Draft papers submission deadline	31/01/2024
Notification of acceptance	15/03/2024
Final papers submission deadline	15/04/2024
Early registration deadline	30/04/2024

Conference website: http://www.incom2024.org

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