The 9th IFAC Conference on Manufacturing Modelling, Management and Control

Invited Session Proposal: Warehouse design and management

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Warehouse design and management is critical for global supply chain management and operations strategy. Today's warehouse goes beyond the planning in a simple warehouse, integrating risk control, information systems and big data, sustainability strategy, safety management, healthcare management, global supply chain strategy, robots and automation control to achieve operational competencies including cost, flexibility, quality, and time for superior business performance.

   Current active researches of warehouses, including AI and warehouses, robotic distribution centers, VR/AR-based warehousing operations, big data and facility planning, risks management of facility logistics, warehouses and Industry 4.0; revenue management and facility design, sustainability of facility design, and safety management of facility logistics, are improving the application of facility logistics in service facilities, manufacturing facilities, transportation facilities, retailing facilities, healthcare facilities, public and government facilities. Topics of interest include (but are not restricted to):

- AI and warehouses,
- Robotic distribution centers,
- VR/AR-based warehousing operations,
- Warehouses and Industry 4.0,
- Risks management of facility logistics,
- Safety management of facility logistics,
- Health and human factors in facility planning,
- Big data and facility planning,
- Revenue management and facility design,
- Green facility design,
- Optimization of facility layout,
- Planning and design of service facilities,
- Planning and design of manufacturing facilities,
- Planning and design of transportation facilities,
- Optimization of retailing facilities,
- Healthcare facility design,
- Design of public facilities.

Keywords: Warehouse design and management; Facility planning; Materials handling; AI and warehouses; Robotic distribution centers; VR/AR-based warehousing operations; Big data and facility planning;