



Call for Workshop Papers

Workshop:

System Interoperability in Robotic Applications for Internal Logistics

Workshop Chairs

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You are gladly invited to participate in the Workshop “*System Interoperability in Robotic Applications for Internal Logistics*” in the **International Conference on Interoperability for Enterprise Systems and Applications (I-ESA 2022)**. I-ESA is the major international event on Enterprise Interoperability, promoted by the Virtual Laboratory for Enterprise Interoperability ([INTEROP-VLab](#)) and sponsored by the International Federation for Information Processing ([IFIP](#)). Accepted and presented papers will be published by CEUR Workshops Proceedings.

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Objectives

Automated Guided Vehicles (AGVs) are a well-established solution to automate internal logistic operations in big industrial and logistic installations of large size. These solutions have been specifically designed to work in large installations, characterized by a well-defined organization and structure, and large, dedicated spaces for humans and robots. Intrinsicly, these characteristics facilitate deployment, navigation, and interaction with humans. However, smaller installations, found in SMEs or in sectors that are traditionally difficult to automate, there are smaller spaces that are in turn shared with humans. AGVs are just not designed for these environments, representing a digital divide for companies that cannot seize the advantages obtained through digitalization. There are of course alternative solutions for smaller spaces, but they are either too expensive or lacking key features of AGVs and therefore just not competitive enough.

There is however an alternative solution based on free navigation mobile robots which, empowered by key technical enablers like artificial intelligence, cloud-edge computing and blockchain, can provide a viable alternative to automate internal logistic processes in sectors and processes which are difficult (or just impossible) to automate with existing solutions. In this sense, system interoperability is key to enable key features of mobile robotic solutions for internal logistics:

- Plug-and-Play: Simplify the deployment, connectivity, and integration of the solution.
- Scalability and modularity: Facilitate the adaptation and scalability of the solution to adapt to specific requirements.
- Personalization: Facilitate the integration with existing systems and applications, or the integration of specific vertical solutions.

Logiblock is a regional project funded by the Agència Valenciana de la Innovació which is focused in the development of a solution that integrates the aforementioned enablers to deliver a turn-key solution to facilitate the development of mobile robotic applications in internal logistics and the objective of the workshop is to reach out to the research community to further explore system interoperability in this challenging but nonetheless relevant scenario.



Topics

Internal logistics interoperability, Ontologies and data models for internal logistic systems, Internal logistics monitoring and control, Internal logistics prognostics and optimization, AI based solutions for internal logistics, AI-based solutions lifecycle management (design, development, deployment, orchestration, maintenance), Mobile robotics navigation, Robotic Fleet management systems, Integration with WMS, ERP, and MES/MOM systems, Trustworthy internal logistic applications, Blockchain for logistics applications

Paper Submission

Papers must be in English, contain original research work and must follow the [CEUR guidelines for authors](#). The expected length is **6 pages** for a full paper and **4 pages** for a short paper.

Authors should submit their contributions through [confmaster](#) system.

Key Dates

January 31st, 2022	First draft paper submission
February 15 th , 2022	Notification of acceptance
March 23 rd , 24 th , 2022	I-ESA 2022 Workshops
April 18 th , 2022	Camera-ready
June 20 th , 2022	Publication of Proceedings

Please, consider that **at least one author per paper must register** to the Workshops by **February 18th, 2022**. If none of the authors is registered, the paper will not be included in the workshop programme and in the proceedings.

Further Information about this Workshop

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Further Information about Conference

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