

Article	Path Planning	Task Scheduling	Priority Management	Motion Planning	Deadloack Prevention	Obstacle Avoidance	Architecture Type	Fleet Type
Traffic Management of Multi-AGV Systems by Improved Dynamic Resource Reservation					Dynamic resource reservation (IDRR) based method	Dynamic resource reservation (IDRR) based method	Centralized	Homogeneous
Smart mobile robot fleet management based on hierarchical multi-agent deep Q network towards intelligent manufacturing		Hierarchical RL	Multi-agent RL algorithm, QMIX				Hierarchical	Homogeneous
Queue Formation and Obstacle Avoidance Navigation Strategy for Multi-Robot Systems Based on Deep Reinforcement Learning			DRL-based Deep Deterministic Policy Gradient (DDPG) algorithm	Queue formation		DRL-based Deep Deterministic Policy Gradient (DDPG) algorithm	Distributed	Homogeneous
Predicting Conflict Zones on Terrestrial Routes of Automated Guided Vehicles with Fuzzy Querying on Apache Kafka			Fuzzy Logic			Fuzzy KSQL with distance measure	Centralized	Homogeneous
Path Planning and scheduling for a fleet of autonomous vehicles	Bump-surface concept & GA	Bump-surface concept & GA		Modified Genetic Algorithm		Bump-surface	Centralized	Homogeneous
Operating a Large Fleet of Mobile Robots using the Plan-Merging Paradigm			Plan-Merging Paradigm				Distributed	Homogeneous
Online Conflict-Free Scheduling of Fleets of Autonomous Mobile Robots	Dijkstra	Tailor-made Scheduler			Path Planning Heuristic Move AMR out of the way	Path Planning Heuristic Move AMR out of the way	Centralized	Homogeneous
Multi-Robot Task Allocation and Scheduling Considering Cooperative Tasks and Precedence Constraints		Greedy Constructive & Local Improvement Heuristics	Precedence constraints	Feasibility and executability criterion			Centralized	Heterogeneous
Multi-Robot Cooperation in the MARTHA Project			Temporal constraints	Local	Plan-Merging Paradigm	Range sensor, potential field	Distributed	Homogeneous
Multiple robots avoid humans to get the jobs done: An approach to human-aware task allocation	Kinodynamic RRT*	Auction-based with human awareness					Distributed	Homogeneous
Mitigating Emergency Stop Collisions in AGV Fleets in Case of Control Failure	A*				Wait, minimization algorithm & delay methods	Wait, minimization algorithm & delay methods	Centralized	Homogeneous
Layered-Cost-Map-Based Traffic Management for Multiple AMRs via a DDS	DWA				Costmap layer and filter	Costmap layer and filter	Centralized	Homogeneous
Integrated Motion Planning and Coordination for Industrial Vehicles	Lattice-based				Trajectory envelopes	Trajectory envelopes	Centralized	Homogeneous
Highly-scalable traffic management of autonomous industrial transportation systems	Lattice-based & Dijkstra		Spatial resource allocation		Private-zone & negotiation	Private zones	Distributed	Homogeneous
Hierarchical Traffic Management of Multi-AGV Systems With Deadlock Prevention Applied to Industrial Environments	Traffic-sensitive path planner based on Dijkstra		Negotiation strategy		Time expanded graphs		Centralized	Homogeneous
Hierarchical and Flexible Traffic Management of Multi-AGV Systems Applied to Industrial Environments	Traffic-sensitive path planner based on Dijkstra		Negotiation strategy		Sector graphs		Hierarchical	Homogeneous
Fleet Management System for Autonomous Mobile Robots in Secure Shop-floor Environments	Pre-made sub-plans	Decomposition of tasks, based on multi-criteria			Restricted zones		Centralized	Homogeneous

Fleet Management System for an Industry Environment	A* using one-way paths and some bidirectional		Resource allocation, semaphore			Wait until the obstacle is removed	Hybrid	Homogeneous
Ensemble Coordination Approach in Multi-AGV Systems Applied to Industrial Warehouses ++	Graph-search		Local negotiations	Model Predictive Control	Negotiation mechanism with a resource allocation strategy		Hybrid	Homogeneous
Efficient multi-robot path planning in real environments: a centralized coordination system	Time Enhanced A* (TEA*)		TEA* (wait and give way conditions)		Graph analysis		Centralized	Homogeneous
Efficient Multi-Robot Cooperative Transportation Scheduling System		Master-slave architecture			Dual-robot path planning conflict detection & priority wait mechanism	Euclidean distance between the next positions	Centralized	Homogeneous
Decentralized Market-Based Task Allocation Algorithm for a Fleet of Industrial Mobile Robots		Sequential & CBAA, Murdoch and CBPAE-based	Auction-based				Distributed	Homogeneous
Distributed Fleet Management in Noisy Environments via Model-Predictive Control	Global planning	Q-learning-based		Model-Predictive Control (MPC) using Q-learning			Distributed	Homogeneous
Development of a Fleet Management System for Multiple Robots' Task Allocation Using Deep Reinforcement Learning	Deep Reinforcement Learning (DRL) & Dynamic path planning with a static waiting mechanism	Deep Reinforcement Learning (DRL)	Static Waiting Mechanism			DRL	Centralized	Homogeneous
Decentralized and prioritized algorithm for AGV fleet management	Dijkstra		Rank-based		Prioritization algorithm		Hybrid	Homogeneous
Deadlock avoidance algorithm for AGVs on a tessellated layout			Reservation-based		Limit title reservation based on system's state		Centralized	Heterogeneous
Conflict-Based Task and Motion Planning for Multi-Robot, Multi-Goal Problems		PDDL-based		Dijkstra-based		Waypoints to pinpoint collisions	Centralized	Homogeneous
Collision-free allocation of temporally constrained tasks in multi-robot systems	Safe Interval Path Planning (SIPP)	Auction-based				SIPP	Centralized	Homogeneous
Centralized versus Distributed Nonlinear Model Predictive Control for Online Robot Fleet Trajectory Planning	Nonlinear MPC (NMPC)				MPC	MPC	Centralized/Distributed	Homogeneous
Autonomous transport vehicles: Where we are and what is missing	Centralized lattice-based	Centralized, deadline satisfaction		Centralized lattice-based		Probabilistic estimation	Centralized	Homogeneous
A Rules and Communication Based Multiple Robots Transportation System	Topological Path Planning		Rule-based		Rule-based	Rule-based & Sensor-based detection	Distributed	Homogeneous
A Routing and Task-Allocation Algorithm for Robotic Groups in Warehouse Environments	Dijkstra	Kuhn-Munkers algorithm					Centralized	Homogeneous
A probabilistic Eulerian traffic model for the coordination of multiple AGVs in automatic warehouses ++	TEN & A*		Time-Expanded Network (TEN) & MPC				Hierarchical	Homogeneous
Anytime Lifelong Multi-Agent Pathfinding in Topological Maps	Lifelong MAPF based on rolling-horizon collision resolution (RHCR) & SIPP				Corridor Conflict-based search (Corridor-BS)	Corridor Conflict-based search (Corridor-BS)	Centralized	Homogeneous

An Integrated Timetable Optimization and Automatic Guided Vehicle Dispatching Method in Smart Manufacturing		Timetable optimization and AGV dispatching (TOAD) with genetic algorithm			TOAD		Centralized	Heterogeneous
An End-to-End Deep Reinforcement Learning Based Modular Task Allocation Framework for Autonomous Mobile Systems	Nav2 - Dijkstra	DRL		Nav2 - DWA			Centralized	Homogeneous
A multi-agent system using fuzzy logic to increase AGV fleet performance in warehouses	A*	Fuzzy Logic	Fuzzy Inference System		Unidirectional paths		Distributed	Homogeneous
A Hierarchical Approach for Joint Task Allocation and Path Planning	Hierarchical Task Allocation and Path Planning Solver (HTAPPS) and low-level A*	Hierarchical	Conflict-Based Search (CBS)				Hierarchical	Homogeneous
AGV Traffic Management in Automated Industrial Plants: An Enhanced Lifelong Multi-Agent Path Finding Approach	Lifelong Multi-Agent Path Finding (L-MAPF) and Rolling-Horizon Conflict Resolution (RHCR)		Bounded Horizon Conflict-Based Search (CBS)		RHCR and CBS		Centralized	Homogeneous
A Dynamic Routing Strategy for the Traffic Control of AGVs in Automatic Warehouses	A*		Traffic Estimation & Dynamic Replanning & Deviations		Traffic Estimation & Dynamic Replanning & Deviations		Centralized	Homogeneous