

# Shortest Routing of Bidirectional Automated Guided Vehicle Blocking

IEEE/ASME Transactions on Mechatronics

12, 63-72

DOI: [10.1109/tmech.2006.886255](https://doi.org/10.1109/tmech.2006.886255)

Citation Report

#	ARTICLE	IF	CITATIONS
1	An Iterative Synthesis Approach to Petri Net-Based Deadlock Prevention Policy for Flexible Manufacturing Systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2007, 37, 362-371.	3.4	223
2	Optimal Path Planning for Mobile Robot Navigation. IEEE/ASME Transactions on Mechatronics, 2008, 13, 451-460.	3.7	96
3	On Siphon Computation for Deadlock Control in a Class of Petri Nets. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2008, 38, 667-679.	3.4	103
4	Coordination of multiple AGVs in an industrial application. , 2008, , .		30
5	Routing and scheduling in Multi-AGV systems based on dynamic banker algorithm. , 2008, , .		11
6	An Effective Algorithm to Find Elementary Siphons in a Class of Petri Nets. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2009, 39, 912-923.	3.4	73
7	Dynamic Optimization of Simultaneous Dispatching and Conflict-free Routing for Automated Guided Vehicles - Petri Net Decomposition Approach -. Journal of Advanced Mechanical Design, Systems and Manufacturing, 2010, 4, 701-715.	0.3	25
8	Implementation Issues of AGVs in Flexible Manufacturing System : A Review. Global Journal of Flexible Systems Management, 2010, 11, 55-61.	3.4	15
9	Modeling Distributed Transportation Systems Composed of Flexible Automated Guided Vehicles in Flexible Manufacturing Systems. IEEE Transactions on Industrial Informatics, 2010, 6, 166-180.	7.2	106
10	Time Windows Based Dynamic Routing in Multi-AGV Systems. IEEE Transactions on Automation Science and Engineering, 2010, 7, 151-155.	3.4	133
11	Petri Net Decomposition Approach to Optimization of Route Planning Problems for AGV Systems. IEEE Transactions on Automation Science and Engineering, 2010, 7, 523-537.	3.4	93
12	Modified Banker's algorithm for scheduling in multi-AGV systems. , 2011, , .		18
13	Intelligent token Petri nets for modelling and control of reconfigurable automated manufacturing systems with dynamical changes. Transactions of the Institute of Measurement and Control, 2011, 33, 9-29.	1.1	42
14	Decentralized Coordination System for Multiple AGVs in a Structured Environment. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 6005-6010.	0.4	14
15	Resource-Transition Circuits and Siphons for Deadlock Control of Automated Manufacturing Systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2011, 41, 74-84.	3.4	121
16	Guest editorial: Petri nets and agile manufacturing. Transactions of the Institute of Measurement and Control, 2011, 33, 3-8.	1.1	2
17	Matrix model based control of flexible manufacturing systems using banker's algorithm. , 2012, , .		0
18	ACtivity-Oriented Petri Net for scheduling of resources. , 2012, , .		26

#	ARTICLE	IF	CITATIONS
19	Modeling Resource Management Problems with Activity-Oriented Petri Nets. , 2012, , .		12
20	Deadlock Control of Automated Manufacturing Systems Based on Petri Nets—A Literature Review. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 437-462.	3.3	249
21	Petri Net Decomposition Approach for Dispatching and Conflict-Free Routing of Bidirectional Automated Guided Vehicle Systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2012, 42, 1230-1243.	3.4	87
22	An exact and a simulated annealing algorithm for simultaneously determining flow path and the location of P/D stations in bidirectional path. Journal of Manufacturing Systems, 2013, 32, 648-654.	7.6	12
23	A Petri-Net-Based Scheduling Strategy for Dual-Arm Cluster Tools With Wafer Revisiting. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 1182-1194.	5.9	31
24	Automated Formal Verification of Routing in Material Handling Systems. IEEE Transactions on Automation Science and Engineering, 2013, 10, 900-915.	3.4	1
25	Distributed multi-level motion planning for autonomous vehicles in large scale industrial environments. , 2013, , .		7
26	Controllable Petri Net-Based Implementation Approach for Motor Control Systems. IEEE Transactions on Industrial Electronics, 2013, 60, 4599-4612.	5.2	3
27	Interactive Petri Nets. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 291-302.	5.9	47
28	An ant colony-based algorithm for finding the shortest bidirectional path for automated guided vehicles in a block layout. International Journal of Advanced Manufacturing Technology, 2013, 64, 399-409.	1.5	25
29	One-Step Look-Ahead Maximally Permissive Deadlock Control of AMS by Using Petri Nets. Transactions on Embedded Computing Systems, 2013, 12, 1-23.	2.1	43
30	A New Modified Reachability Tree Approach and Its Applications to Unbounded Petri Nets. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 932-940.	5.9	42
31	Petri Net-Based Optimal One-Wafer Cyclic Scheduling of Hybrid Multi-Cluster Tools in Wafer Fabrication. IEEE Transactions on Semiconductor Manufacturing, 2014, 27, 192-203.	1.4	41
32	An approach to determination of simple circular waits in reconfigurable multi-vehicle systems. , 2014, , .		0
33	Last-Position Elimination-Based Learning Automata. IEEE Transactions on Cybernetics, 2014, 44, 2484-2492.	6.2	63
34	Simultaneous Scheduling of Machines and AGVs in Flexible Manufacturing System with Minimization of Tardiness Criterion. , 2014, 5, 1492-1501.		42
35	A new scheme of multiple automated guided vehicle system for collision and deadlock free. , 2014, , .		11
36	Accomplish multi-robot tasks via Petri net models. , 2015, , .		6

#	ARTICLE	IF	CITATIONS
37	Maximally permissive deadlock avoidance for resource allocation systems with R/W-locks. Discrete Event Dynamic Systems: Theory and Applications, 2015, 25, 31-63.	0.6	13
38	Hybrid multiobjective genetic algorithms for integrated dynamic scheduling and routing of jobs and automated-guided vehicle (AGV) in flexible manufacturing systems (FMS) environment. International Journal of Advanced Manufacturing Technology, 2015, 81, 2123-2141.	1.5	101
39	Necessary and sufficient liveness condition of GS <sup>3</sup> PR Petri nets. International Journal of Systems Science, 2015, 46, 1147-1160.	3.7	27
40	Adaptive Cockroach Colony Optimization for Rod-Like Robot Navigation. Journal of Bionic Engineering, 2015, 12, 324-337.	2.7	11
41	An adaptive particle swarm optimization method based on clustering. Soft Computing, 2015, 19, 431-448.	2.1	105
42	Control Program Design for Automated Guided Vehicle Systems via Petri Nets. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2015, 45, 44-55.	5.9	53
43	Fully Expanded Tree for Property Analysis of One-Place-Unbounded Petri Nets. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2016, , 1-12.	5.9	14
44	Decentralized management of intersections of automated guided vehicles. IFAC-PapersOnLine, 2016, 49, 497-502.	0.5	14
45	Computer-aided design and simulation of strip layout for progressive die planning using Petri nets. Advances in Mechanical Engineering, 2016, 8, 168781401664438.	0.8	4
46	An Efficient Scheduling Method for Crude Oil Operations in Refinery With Crude Oil Type Mixing Requirements. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2016, 46, 413-426.	5.9	50
47	Think-globally-act-locally approach with weighted arcs to the synthesis of a liveness-enforcing supervisor for generalized Petri nets modeling FMSs. Information Sciences, 2016, 363, 235-260.	4.0	24
48	A novel method for deadlock prevention of AMS by using resource-oriented Petri nets. Information Sciences, 2016, 363, 178-189.	4.0	41
49	A survey of siphons in Petri nets. Information Sciences, 2016, 363, 198-220.	4.0	54
50	An Iterative Approach for Collision Free Routing and Scheduling in Multirobot Stations. IEEE Transactions on Automation Science and Engineering, 2016, 13, 950-962.	3.4	39
51	Automated guided vehicle mission reliability modelling using a combined fault tree and Petri net approach. International Journal of Advanced Manufacturing Technology, 2017, 92, 1825-1837.	1.5	53
52	Petri net representation and reachability analysis of 0-1 integer linear programming problems. Information Sciences, 2017, 400-401, 157-172.	4.0	9
53	Deadlock analysis and control based on Petri nets: A siphon approach review. Advances in Mechanical Engineering, 2017, 9, 168781401769354.	0.8	21
54	Multi-AGVs Collision-Avoidance and Deadlock-Control for Item-To-Human Automated Warehouse. , 2017, , .		14

#	ARTICLE	IF	CITATIONS
55	Conflict-free route planning of automated guided vehicles based on conflict classification. , 2017, , .		12
56	Assignment and Coordination of Autonomous Robots in Container Loading Terminals. IFAC-PapersOnLine, 2017, 50, 9712-9717.	0.5	3
57	Collision-Free Route Planning for Multiple AGVs in an Automated Warehouse Based on Collision Classification. IEEE Access, 2018, 6, 26022-26035.	2.6	90
58	A Survey on Petri Net Models for Freight Logistics and Transportation Systems. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 1795-1813.	4.7	49
59	Speedup Techniques for Multiobjective Integer Programs in Designing Optimal and Structurally Simple Supervisors of AMS. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2018, 48, 77-88.	5.9	27
60	Optimizing Container Loading With Autonomous Robots. IEEE Transactions on Automation Science and Engineering, 2018, 15, 717-731.	3.4	10
61	A Time-Efficient Approach to Solve Conflicts and Deadlocks for Scheduling AGVs in Warehousing Applications. , 2018, , .		8
62	On the evaluation of AGVS-based warehouse operation performance. Simulation Modelling Practice and Theory, 2018, 87, 379-394.	2.2	28
63	Optimized Multiagent Routing for a Class of Guidepath-Based Transport Systems. IEEE Transactions on Automation Science and Engineering, 2019, 16, 363-381.	3.4	22
64	Smart robotic mobile fulfillment system with dynamic conflict-free strategies considering cyber-physical integration. Advanced Engineering Informatics, 2019, 42, 100998.	4.0	61
65	Liveness of Disjunctive and Strict Single-Type Automated Manufacturing System: An ROPN Approach. IEEE Access, 2019, 7, 17760-17771.	2.6	7
66	Deadlock Prevention of Self-Driving Vehicles in a Network of Intersections. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 4219-4233.	4.7	25
67	Approach to Integrated Scheduling Problems Considering Optimal Number of Automated Guided Vehicles and Conflict-Free Routing in Flexible Manufacturing Systems. IEEE Access, 2019, 7, 74909-74924.	2.6	52
68	A prioritized planning algorithm of trajectory coordination based on time windows for multiple AGVs with delay disturbance. Assembly Automation, 2019, 39, 753-768.	1.0	25
70	Task Selection by Autonomous Mobile Robots in A Warehouse Using Deep Reinforcement Learning. , 2019, , .		13
71	Towards Collision-Free Automated Guided Vehicles Navigation and Traffic Control. , 2019, , .		4
72	On a maximally permissive deadlock prevention policy for automated manufacturing systems by using resource-oriented Petri nets. ISA Transactions, 2019, 89, 67-76.	3.1	34
73	Modeling and Optimal Cyclic Scheduling of Time-Constrained Single-Robot-Arm Cluster Tools via Petri Nets and Linear Programming. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 871-883.	5.9	18

#	ARTICLE	IF	CITATIONS
74	Colored Resource-Oriented Petri Net Based Ladder Diagrams for PLC Implementation in Reconfigurable Manufacturing Systems. IEEE Access, 2020, 8, 217573-217591.	2.6	11
75	Dynamic Resource Reservation Based Collision and Deadlock Prevention for Multi-AGVs. IEEE Access, 2020, 8, 82120-82130.	2.6	24
76	Cloud-Based Cyber-Physical Robotic Mobile Fulfillment Systems: A Case Study of Collision Avoidance. IEEE Access, 2020, 8, 89318-89336.	2.6	38
77	Bi-Objective Colored Traveling Salesman Problems. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 6326-6336.	4.7	7
78	Colored Resource-Oriented Petri Nets for Deadlock Control and Reliability Design of Automated Manufacturing Systems. IEEE Access, 2021, 9, 125616-125627.	2.6	3
79	A Collision-Free Path Planning Algorithm for Non-Complex ASRS Using Heuristic Functions. , 2021, , .		1
80	A Coloured Petri Net- and D* Lite-Based Traffic Controller for Automated Guided Vehicles. Electronics (Switzerland), 2021, 10, 2235.	1.8	8
81	Planning and control of autonomous mobile robots for intralogistics: Literature review and research agenda. European Journal of Operational Research, 2021, 294, 405-426.	3.5	235
82	Deadlock Control and Fault Detection and Treatment in Reconfigurable Manufacturing Systems Using Colored Resource-Oriented Petri Nets Based on Neural Network. IEEE Access, 2021, 9, 84932-84947.	2.6	9
83	Petri Net Decomposition Method for Simultaneous Optimization of Task Assignment and Routing for AGVs. Transactions of the Institute of Systems Control and Information Engineers, 2009, 22, 191-198.	0.1	1
84	Mobility of Cooperating Objects. Springer Briefs in Electrical and Computer Engineering, 2014, , 39-71.	0.3	0
86	Scheduling of Semiconductor Manufacturing Systems Using Petri Nets. , 2018, , 553-570.		0
87	Priority-Based Genetic Algorithm for Conflict-Free Automated Guided Vehicle Routing. Procedia Engineering, 2012, 50, 732-739.	1.2	9
88	Improved Coding Landmark-Based Visual Sensor Position Measurement and Planning Strategy for Multiwarehouse Automated Guided Vehicle. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-16.	2.4	8
89	A Novel Searching Method of Fringe Blocks for AGV Deadlock Avoidance. , 2021, , .		1
90	Analysis of Multi-AGVs Management System and Key Issues: A Review. CMES - Computer Modeling in Engineering and Sciences, 2022, 131, 1197-1227.	0.8	3
91	Scheduling of autonomous mobile robots with conflict-free routes utilising contextual-bandit-based local search. International Journal of Production Research, 2022, 60, 4090-4116.	4.9	4
92	Application of Automated Guided Vehicles in Smart Automated Warehouse Systems: A Survey. CMES - Computer Modeling in Engineering and Sciences, 2022, , .	0.8	4

#	ARTICLE	IF	CITATIONS
93	Modular control of discrete-event systems using similarity. Automatica, 2022, 142, 110431.	3.0	0
94	Dynamic Optimization of Conflict-Free Routing of Automated Guided Vehicles for Just-in-Time Delivery. IEEE Transactions on Automation Science and Engineering, 2023, 20, 2099-2114.	3.4	3
95	A General Petri-Net Controller for Avoiding Collisions and Deadlocks in a Partially-Controllable Mixed Traffic System. SSRN Electronic Journal, 0, , .	0.4	0
96	Dynamic Scheduling and Path Planning of Automated Guided Vehicles in Automatic Container Terminal. IEEE/CAA Journal of Automatica Sinica, 2022, 9, 2005-2019.	8.5	22
97	Deadlock Avoidance Dynamic Routing Algorithm for a Massive Bidirectional Automated Guided Vehicle System. , 2022, , .		1
98	A Novel Method for Converting Colored Petri Nets to Ladder Diagram in the Automation of Automated Manufacturing Systems. IEEE Access, 2023, 11, 29275-29295.	2.6	0
99	Integrating Both Routing and Scheduling Into Motion Planner for Multivehicle System. Canadian Journal of Electrical and Computer Engineering, 2023, 46, 56-68.	1.5	3
103	Conflict Model and Time Window Based Multi AGV Path Finding and Coordination. , 2023, , .		0