

Lars Moench

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

125
papers

2,310
citations

27
h-index

44
g-index

140
ext. papers

2,818
ext. citations

3.9
avg, IF

5.59
L-index

#	Paper	IF	Citations
125	A survey of problems, solution techniques, and future challenges in scheduling semiconductor manufacturing operations. <i>Journal of Scheduling</i> , 2011 , 14, 583-599	1.6	224
124	Heuristic scheduling of jobs on parallel batch machines with incompatible job families and unequal ready times. <i>Computers and Operations Research</i> , 2005 , 32, 2731-2750	4.6	144
123	Genetic algorithm based scheduling of parallel batch machines with incompatible job families to minimize total weighted tardiness. <i>International Journal of Production Research</i> , 2004 , 42, 1621-1638	7.8	122
122	Production Planning and Control for Semiconductor Wafer Fabrication Facilities. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 ,	0.3	86
121	Genetic algorithm-based subproblem solution procedures for a modified shifting bottleneck heuristic for complex job shops. <i>European Journal of Operational Research</i> , 2007 , 177, 2100-2118	5.6	71
120	Variable neighborhood search approaches for scheduling jobs on parallel machines with sequence-dependent setup times, precedence constraints, and ready times. <i>Computers and Industrial Engineering</i> , 2011 , 61, 336-345	6.4	64
119	Machine learning techniques for scheduling jobs with incompatible families and unequal ready times on parallel batch machines. <i>Engineering Applications of Artificial Intelligence</i> , 2006 , 19, 235-245	7.2	57
118	A distributed shifting bottleneck heuristic for complex job shops. <i>Computers and Industrial Engineering</i> , 2005 , 49, 363-380	6.4	56
117	Modelling and analysis of semiconductor manufacturing in a shrinking world: challenges and successes. <i>European Journal of Industrial Engineering</i> , 2011 , 5, 254	1.1	54
116	Planning Wafer Starts Using Nonlinear Clearing Functions: A Large-Scale Experiment. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2013 , 26, 602-612	2.6	45
115	Simulation-based benchmarking of production control schemes for complex manufacturing systems. <i>Control Engineering Practice</i> , 2007 , 15, 1381-1393	3.9	44
114	Hybrid algorithms for the vehicle routing problem with clustered backhauls and 3D loading constraints. <i>European Journal of Operational Research</i> , 2015 , 243, 82-96	5.6	42
113	Heuristics for vehicle routing problems with backhauls, time windows, and 3D loading constraints. <i>European Journal of Operational Research</i> , 2018 , 266, 877-894	5.6	40
112	A methodology to solve large-scale cooperative transportation planning problems. <i>European Journal of Operational Research</i> , 2012 , 223, 626-636	5.6	40
111	A survey of semiconductor supply chain models part I: semiconductor supply chains, strategic network design, and supply chain simulation. <i>International Journal of Production Research</i> , 2018 , 56, 4524-4545	7.8	40
110	Scheduling jobs with ready times and precedence constraints on parallel batch machines using metaheuristics. <i>Computers and Industrial Engineering</i> , 2014 , 78, 175-185	6.4	35
109	Modeling Cycle Times in Production Planning Models for Wafer Fabrication. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2016 , 29, 153-167	2.6	35

108	A decision support system for cooperative transportation planning: Design, implementation, and performance assessment. <i>Expert Systems With Applications</i> , 2014 , 41, 5125-5138	7.8	34
107	Simulation-based performance assessment of master planning approaches in semiconductor manufacturing. <i>Omega</i> , 2014 , 46, 21-35	7.2	34
106	Heuristic approaches for master planning in semiconductor manufacturing. <i>Computers and Operations Research</i> , 2012 , 39, 479-491	4.6	33
105	Heuristic approaches for scheduling jobs in large-scale flexible job shops. <i>Computers and Operations Research</i> , 2016 , 68, 97-109	4.6	32
104	Metaheuristics for scheduling jobs with incompatible families on parallel batching machines. <i>Journal of the Operational Research Society</i> , 2011 , 62, 2083-2096	2	32
103	The FABMAS multi-agent-system prototype for production control of water fabs: design, implementation and performance assessment. <i>Production Planning and Control</i> , 2006 , 17, 701-716	4.3	32
102	A survey of semiconductor supply chain models part III: master planning, production planning, and demand fulfilment. <i>International Journal of Production Research</i> , 2018 , 56, 4565-4584	7.8	29
101	Scheduling jobs with time constraints between consecutive process steps in semiconductor manufacturing 2012 ,		28
100	An integrated scheduling and material-handling approach for complex job shops: a computational study. <i>International Journal of Production Research</i> , 2012 , 50, 5966-5985	7.8	28
99	A computational study of a shifting bottleneck heuristic for multi-product complex job shops. <i>Production Planning and Control</i> , 2011 , 22, 25-40	4.3	27
98	On the numerical solution of the direct scattering problem for an open sound-hard arc. <i>Journal of Computational and Applied Mathematics</i> , 1996 , 71, 343-356	2.4	27
97	Minimizing earliness/tardiness on a single burn-in oven with a common due date and maximum allowable tardiness constraint. <i>OR Spectrum</i> , 2006 , 28, 177-198	1.9	26
96	Integrated process planning and scheduling for large-scale flexible job shops using metaheuristics. <i>International Journal of Production Research</i> , 2017 , 55, 392-409	7.8	24
95	A survey of semiconductor supply chain models Part II: demand planning, inventory management, and capacity planning. <i>International Journal of Production Research</i> , 2018 , 56, 4546-4564	7.8	24
94	Simulation-based assessment of machine criticality measures for a shifting bottleneck scheduling approach in complex manufacturing systems. <i>Computers in Industry</i> , 2007 , 58, 644-655	11.6	24
93	Decomposition heuristics for minimizing earliness/tardiness on parallel burn-in ovens with a common due date. <i>Computers and Operations Research</i> , 2007 , 34, 3380-3396	4.6	24
92	ManufAg: a multi-agent-system framework for production control of complex manufacturing systems. <i>Information Systems and E-Business Management</i> , 2006 , 4, 159-185	2.6	24
91	A survey of challenges in modelling and decision-making for discrete event logistics systems. <i>Computers in Industry</i> , 2011 , 62, 557-567	11.6	23

90	A variable neighborhood search approach for planning and scheduling of jobs on unrelated parallel machines. <i>Journal of Intelligent Manufacturing</i> , 2012 , 23, 1621-1635	6.7	21
89	Scheduling jobs on a single batch processing machine with incompatible job families and weighted number of tardy jobs objective. <i>Computers and Operations Research</i> , 2013 , 40, 1224-1233	4.6	21
88	A comparison of MIP-based decomposition techniques and VNS approaches for batch scheduling problems 2009 ,		21
87	A hybrid scheduling approach for a two-stage flexible flow shop with batch processing machines. <i>Journal of Scheduling</i> , 2018 , 21, 209-226	1.6	20
86	Rolling horizon, multi-product production planning with chance constraints and forecast evolution for wafer fabs. <i>International Journal of Production Research</i> , 2018 , 56, 6112-6134	7.8	20
85	A matheuristic framework for batch machine scheduling problems with incompatible job families and regular sum objective. <i>Applied Soft Computing Journal</i> , 2018 , 68, 835-846	7.5	18
84	Hybrid approaches to optimize mixed-model assembly lines in low-volume manufacturing. <i>Journal of Heuristics</i> , 2018 , 24, 49-81	1.9	16
83	Incorporating engineering process improvement activities into production planning formulations using a large-scale wafer fab model. <i>International Journal of Production Research</i> , 2016 , 54, 6416-6435	7.8	15
82	An iterative approach for the serial batching problem with parallel machines and job families. <i>Annals of Operations Research</i> , 2013 , 206, 425-448	3.2	15
81	A Testbed for Simulating Semiconductor Supply Chains. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2017 , 30, 293-305	2.6	15
80	A simulation-based framework to schedule surgeries in an eye hospital. <i>IIE Transactions on Healthcare Systems Engineering</i> , 2014 , 4, 191-208		15
79	Model-Based Decision Support in Manufacturing and Service Networks. <i>Business and Information Systems Engineering</i> , 2014 , 6, 17-24	3.8	14
78	A simultaneous and iterative approach for parallel machine scheduling with sequence-dependent family setups. <i>Journal of Scheduling</i> , 2014 , 17, 471-487	1.6	13
77	Integrated heuristics for scheduling multiple order jobs in a complex job shop. <i>International Journal of Metaheuristics</i> , 2010 , 1, 156	0.8	13
76	Solving volume and capacity planning problems in semiconductor manufacturing: A computational study 2008 ,		13
75	Simulation framework for complex manufacturing systems with automated material handling 2007 ,		13
74	Scheduling-Framework für Jobs auf parallelen Maschinen in komplexen Produktionssystemen. <i>Business & Information Systems Engineering</i> , 2004 , 46, 470-480		13
73	Simulation-based performance assessment of production planning formulations for semiconductor wafer fabrication 2015 ,		12

72	Towards a supply chain simulation reference model for the semiconductor industry 2011 ,		12
71	Architecture for simulation-based performance assessment of planning approaches in semiconductor manufacturing 2010 ,		11
70	Genetic algorithms to solve a single machine multiple orders per job scheduling problem 2010 ,		11
69	A survey of scheduling with parallel batch (p-batch) processing. <i>European Journal of Operational Research</i> , 2021 ,	5.6	11
68	Simulation-Based Performance Assessment of Production Planning Models With Safety Stock and Forecast Evolution in Semiconductor Wafer Fabrication. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2020 , 33, 1-12	2.6	10
67	An automated negotiation approach to solve single machine scheduling problems with interfering job sets. <i>Computers and Industrial Engineering</i> , 2016 , 99, 318-329	6.4	10
66	Cost-Minimizing Service Selection in the Presence of End-to-End QoS Constraints and Complex Charging Models 2012 ,		9
65	Heuristic approaches for determining minimum cost delivery quantities in supply chains. <i>European Journal of Industrial Engineering</i> , 2008 , 2, 377	1.1	9
64	Qualification Management in Wafer Fabs: Optimization Approach and Simulation-Based Performance Assessment. <i>IEEE Transactions on Automation Science and Engineering</i> , 2020 , 17, 475-489	4.9	9
63	Grouping genetic algorithms for solving single machine multiple orders per job scheduling problems. <i>Annals of Operations Research</i> , 2015 , 235, 709-739	3.2	8
62	Simulation of low-volume mixed model assembly lines: Modeling aspects and case study 2014 ,		8
61	Bi-criteria parallel batch machine scheduling to minimize total weighted tardiness and electricity cost. <i>Journal of Business Economics</i> , 2020 , 90, 1345-1381	2.3	7
60	Robust Multi-criteria Service Composition in Information Systems. <i>Business and Information Systems Engineering</i> , 2014 , 6, 141-151	3.8	7
59	Modeling and analysis of semiconductor manufacturing in a shrinking world: Challenges and successes 2008 ,		7
58	A simulation framework for assessing the performance of cooperative transportation planning algorithms 2008 ,		7
57	Service Selection with Runtime Aspects:A Hierarchical Approach. <i>IEEE Transactions on Services Computing</i> , 2015 , 8, 481-493	4.8	6
56	A clearing function based bid-price approach to integrated order acceptance and release decisions. <i>European Journal of Operational Research</i> , 2018 , 268, 243-254	5.6	6
55	Reliable Service Reconfiguration for Time-Critical Service Compositions 2013 ,		6

54	SMT2020 ^A Semiconductor Manufacturing Testbed. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2020 , 33, 522-531	2.6	6
53	Scheduling and Simulation 2006 , 109-133		6
52	A heuristic to support make-to-stock, assemble-to-order, and make-to-order decisions in semiconductor supply chains 2013 ,		5
51	Multiple orders per job formation and release strategies in large-scale wafer fabs: a simulation study. <i>Journal of Simulation</i> , 2011 , 5, 25-43	1.9	5
50	An agent-based planning approach within the framework of distributed hierarchical enterprise management. <i>Journal of Management Control</i> , 2011 , 22, 205-236	2.4	5
49	A New High-Volume/Low-Mix Simulation Testbed for Semiconductor Manufacturing 2019 ,		5
48	A HIERARCHICAL APPROACH TO QUALIFICATION MANAGEMENT IN WAFER FABRS 2018 ,		5
47	Decomposition heuristics for parallel-machine multiple orders per job scheduling problems with a common due date. <i>Journal of the Operational Research Society</i> , 2019 , 1-17	2	4
46	Characteristic Curves and Cycle Time Control of Re-Entrant Lines. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2019 , 32, 140-153	2.6	4
45	Scheduling jobs on parallel machines with sequence-dependent setup times, precedence constraints, and ready times using variable neighborhood search 2009 ,		4
44	An Ant Colony optimization approach to solve cooperative transportation planning problems 2009 ,		4
43	An Ontology to Support Adaptive Agents for Complex Manufacturing Systems 2008 ,		4
42	Autonome und kooperative Steuerung komplexer Produktionsprozesse mit Multi-Agenten-Systemen. <i>Business & Information Systems Engineering</i> , 2006 , 48, 107-119		4
41	Simulation-based optimization for integrated production planning and capacity expansion decisions 2016 ,		4
40	Decomposition methods for cost and tardiness reduction in aircraft manufacturing flow lines. <i>Computers and Operations Research</i> , 2019 , 103, 134-147	4.6	4
39	Hybrid algorithms for the earliness/tardiness single-machine multiple orders per job scheduling problem with a common due date. <i>RAIRO - Operations Research</i> , 2018 , 52, 1329-1350	2.2	4
38	Modellbasierte Entscheidungsunterstützung in Produktions- und Dienstleistungsnetzwerken. <i>Business & Information Systems Engineering</i> , 2014 , 56, 21-29		3
37	Simulation-based optimization to design equipment health-aware dispatching rules 2017 ,		3

36	Decomposition heuristic for a two-machine flow shop with batch processing 2014 ,		3
35	A comparison of heuristics to solve a single machine batching problem with unequal ready times of the jobs 2011 ,		3
34	An optimization model for qualification management in wafer fabs 2016 ,		3
33	Parallel machine scheduling with the total weighted delivery time performance measure in distributed manufacturing. <i>Computers and Operations Research</i> , 2021 , 127, 105126	4.6	3
32	ELECTRICITY POWER COST-AWARE SCHEDULING OF JOBS ON PARALLEL BATCH PROCESSING MACHINES 2018 ,		3
31	Modelling and analysis of semiconductor supply chains. <i>International Journal of Production Research</i> , 2018 , 56, 4521-4523	7.8	3
30	Rolling horizon planning with engineering activities in semiconductor supply chains 2017 ,		2
29	Metaheuristic Approaches for Scheduling Jobs on Parallel Batch Processing Machines. <i>Profiles in Operations Research</i> , 2016 , 187-207	1	2
28	Semiconductor Manufacturing Process Description. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 11-28	0.3	2
27	Production Planning Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 207-246	0.3	2
26	Using iterative simulation to incorporate load-dependent lead times in master planning heuristics 2012 ,		2
25	Modeling and simulation of cataract surgery processes 2009 ,		2
24	Matheuristics for Qualification Management Decisions in Wafer Fabs. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2020 , 33, 511-521	2.6	2
23	Genetic algorithms for a single-machine multiple orders per job scheduling problem with a common due date 2017 ,		1
22	Incorporating elements of a sustainable and distributed generation system into a production planning model for a wafer fab 2017 ,		1
21	Using simulation to improve planning decisions in mixed-model assembly lines 2015 ,		1
20	Dispatching Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 65-104	0.3	1
19	A comparison of production planning formulations with exogenous cycle time estimates using a large-scale wafer fab model 2013 ,		1

18	Infrastructure for model-based production scheduling. <i>International Journal of Industrial and Systems Engineering</i> , 2010 , 6, 441	0.4	1
17	2020 ,		1
16	Simulationsbasierte Leistungsbewertung von Planungsverfahren für komplexe Produktionssysteme 2008 , 213-228		1
15	Integrated Planning of Production and Engineering Activities in Semiconductor Supply Chains: A Simulation Study 2019 ,		1
14	Problem Reduction Approaches for Production Planning Using Clearing Functions 2018 ,		1
13	Heuristic and metaheuristic methods for the multi-skill project scheduling problem with partial preemption. <i>International Transactions in Operational Research</i> ,	2.9	1
12	A Multi-criteria Production Planning Approach for Aircraft Manufacturing Flow Lines. <i>IFAC-PapersOnLine</i> , 2022 , 55, 144-149	0.7	1
11	Modeling and Analysis Tools. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 29-64	0.3	0
10	An agent-based infrastructure for assessing the performance of planning approaches for semiconductor supply chains. <i>Expert Systems With Applications</i> , 2022 , 117001	7.8	0
9	Robuste multikriterielle Dienstkomposition in Informationssystemen. <i>Business & Information Systems Engineering</i> , 2014 , 56, 159-171		
8	State of the Practice and Future Needs for Production Planning and Control Systems. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 247-266	0.3	
7	Deterministic Scheduling Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 105-175	0.3	
6	Problemreduzierungsansätze für die Produktionsplanung unter Verwendung von Auslastungsfunktionen. <i>Automatisierungstechnik</i> , 2019 , 67, 455-467	0.8	
5	Framework for Simulation-Based Decision Making in Semiconductor Value Chains. <i>Lecture Notes in Electrical Engineering</i> , 2020 , 14-23	0.2	
4	Order Release Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , 2013 , 177-205	0.3	
3	Guest Editorial Special Section Papers From the 2019 MASM/WSC Conference. <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2020 , 33, 493-495	2.6	
2	A metaheuristic for making order acceptance decisions in multi-product, multi-stage manufacturing systems. <i>Applied Soft Computing Journal</i> , 2021 , 111, 107640	7.5	
1	Hierarchical Decision-Making for Qualification Management in Wafer Fabs: A Simulation Study. <i>IEEE Transactions on Automation Science and Engineering</i> , 2022 , 1-14	4.9	

