

# Lars Moench

## List of Publications by Year in Descending Order

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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	Hierarchical Decision-Making for Qualification Management in Wafer Fabs: A Simulation Study. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2022</b> , 1-14	4.9	
124	An agent-based infrastructure for assessing the performance of planning approaches for semiconductor supply chains. <i>Expert Systems With Applications</i> , <b>2022</b> , 117001	7.8	0
123	A Multi-criteria Production Planning Approach for Aircraft Manufacturing Flow Lines. <i>IFAC-PapersOnLine</i> , <b>2022</b> , 55, 144-149	0.7	1
122	A survey of scheduling with parallel batch (p-batch) processing. <i>European Journal of Operational Research</i> , <b>2021</b> ,	5.6	11
121	Parallel machine scheduling with the total weighted delivery time performance measure in distributed manufacturing. <i>Computers and Operations Research</i> , <b>2021</b> , 127, 105126	4.6	3
120	A matheuristic for making order acceptance decisions in multi-product, multi-stage manufacturing systems. <i>Applied Soft Computing Journal</i> , <b>2021</b> , 111, 107640	7.5	
119	Bi-criteria parallel batch machine scheduling to minimize total weighted tardiness and electricity cost. <i>Journal of Business Economics</i> , <b>2020</b> , 90, 1345-1381	2.3	7
118	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> , <b>2020</b> , 33, 1-12	2.6	10
117	<b>2020</b> ,		1
116	Framework for Simulation-Based Decision Making in Semiconductor Value Chains. <i>Lecture Notes in Electrical Engineering</i> , <b>2020</b> , 14-23	0.2	
115	Qualification Management in Wafer Fabs: Optimization Approach and Simulation-Based Performance Assessment. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2020</b> , 17, 475-489	4.9	9
114	SMT2020A Semiconductor Manufacturing Testbed. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2020</b> , 33, 522-531	2.6	6
113	Matheuristics for Qualification Management Decisions in Wafer Fabs. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2020</b> , 33, 511-521	2.6	2
112	Guest Editorial Special SectionBpapers From the 2019 MASM/WSC Conference. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2020</b> , 33, 493-495	2.6	
111	Decomposition heuristics for parallel-machine multiple orders per job scheduling problems with a common due date. <i>Journal of the Operational Research Society</i> , <b>2019</b> , 1-17	2	4
110	Characteristic Curves and Cycle Time Control of Re-Entrant Lines. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2019</b> , 32, 140-153	2.6	4
109	Problemreduzierungsansätze für die Produktionsplanung unter Verwendung von Auslastungsfunktionen. <i>Automatisierungstechnik</i> , <b>2019</b> , 67, 455-467	0.8	

108	Integrated Planning of Production and Engineering Activities in Semiconductor Supply Chains: A Simulation Study <b>2019</b> ,		1
107	A New High-Volume/Low-Mix Simulation Testbed for Semiconductor Manufacturing <b>2019</b> ,		5
106	Decomposition methods for cost and tardiness reduction in aircraft manufacturing flow lines. <i>Computers and Operations Research</i> , <b>2019</b> , 103, 134-147	4.6	4
105	A survey of semiconductor supply chain models Part II: demand planning, inventory management, and capacity planning. <i>International Journal of Production Research</i> , <b>2018</b> , 56, 4546-4564	7.8	24
104	A clearing function based bid-price approach to integrated order acceptance and release decisions. <i>European Journal of Operational Research</i> , <b>2018</b> , 268, 243-254	5.6	6
103	A hybrid scheduling approach for a two-stage flexible flow shop with batch processing machines. <i>Journal of Scheduling</i> , <b>2018</b> , 21, 209-226	1.6	20
102	A matheuristic framework for batch machine scheduling problems with incompatible job families and regular sum objective. <i>Applied Soft Computing Journal</i> , <b>2018</b> , 68, 835-846	7.5	18
101	Heuristics for vehicle routing problems with backhauls, time windows, and 3D loading constraints. <i>European Journal of Operational Research</i> , <b>2018</b> , 266, 877-894	5.6	40
100	Hybrid approaches to optimize mixed-model assembly lines in low-volume manufacturing. <i>Journal of Heuristics</i> , <b>2018</b> , 24, 49-81	1.9	16
99	Rolling horizon, multi-product production planning with chance constraints and forecast evolution for wafer fabs. <i>International Journal of Production Research</i> , <b>2018</b> , 56, 6112-6134	7.8	20
98	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> , <b>2018</b> , 56, 4524-4545	7.8	40
97	A survey of semiconductor supply chain models part III: master planning, production planning, and demand fulfilment. <i>International Journal of Production Research</i> , <b>2018</b> , 56, 4565-4584	7.8	29
96	ELECTRICITY POWER COST-AWARE SCHEDULING OF JOBS ON PARALLEL BATCH PROCESSING MACHINES <b>2018</b> ,		3
95	A HIERARCHICAL APPROACH TO QUALIFICATION MANAGEMENT IN WAFER FABRS <b>2018</b> ,		5
94	Hybrid algorithms for the earliness/tardiness single-machine multiple orders per job scheduling problem with a common due date. <i>RAIRO - Operations Research</i> , <b>2018</b> , 52, 1329-1350	2.2	4
93	Problem Reduction Approaches for Production Planning Using Clearing Functions <b>2018</b> ,		1
92	Modelling and analysis of semiconductor supply chains. <i>International Journal of Production Research</i> , <b>2018</b> , 56, 4521-4523	7.8	3
91	Integrated process planning and scheduling for large-scale flexible job shops using metaheuristics. <i>International Journal of Production Research</i> , <b>2017</b> , 55, 392-409	7.8	24

90	Rolling horizon planning with engineering activities in semiconductor supply chains <b>2017</b> ,		2
89	A Testbed for Simulating Semiconductor Supply Chains. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2017</b> , 30, 293-305	2.6	15
88	Genetic algorithms for a single-machine multiple orders per job scheduling problem with a common due date <b>2017</b> ,		1
87	Simulation-based optimization to design equipment health-aware dispatching rules <b>2017</b> ,		3
86	Incorporating elements of a sustainable and distributed generation system into a production planning model for a wafer fab <b>2017</b> ,		1
85	Heuristic approaches for scheduling jobs in large-scale flexible job shops. <i>Computers and Operations Research</i> , <b>2016</b> , 68, 97-109	4.6	32
84	An automated negotiation approach to solve single machine scheduling problems with interfering job sets. <i>Computers and Industrial Engineering</i> , <b>2016</b> , 99, 318-329	6.4	10
83	Incorporating engineering process improvement activities into production planning formulations using a large-scale wafer fab model. <i>International Journal of Production Research</i> , <b>2016</b> , 54, 6416-6435	7.8	15
82	Metaheuristic Approaches for Scheduling Jobs on Parallel Batch Processing Machines. <i>Profiles in Operations Research</i> , <b>2016</b> , 187-207	1	2
81	An optimization model for qualification management in wafer fabs <b>2016</b> ,		3
80	Simulation-based optimization for integrated production planning and capacity expansion decisions <b>2016</b> ,		4
79	Modeling Cycle Times in Production Planning Models for Wafer Fabrication. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2016</b> , 29, 153-167	2.6	35
78	Service Selection with Runtime Aspects:A Hierarchical Approach. <i>IEEE Transactions on Services Computing</i> , <b>2015</b> , 8, 481-493	4.8	6
77	Hybrid algorithms for the vehicle routing problem with clustered backhauls and 3D loading constraints. <i>European Journal of Operational Research</i> , <b>2015</b> , 243, 82-96	5.6	42
76	Simulation-based performance assessment of production planning formulations for semiconductor wafer fabrication <b>2015</b> ,		12
75	Using simulation to improve planning decisions in mixed-model assembly lines <b>2015</b> ,		1
74	Grouping genetic algorithms for solving single machine multiple orders per job scheduling problems. <i>Annals of Operations Research</i> , <b>2015</b> , 235, 709-739	3.2	8
73	Model-Based Decision Support in Manufacturing and Service Networks. <i>Business and Information Systems Engineering</i> , <b>2014</b> , 6, 17-24	3.8	14

72	Modellbasierte Entscheidungsunterstützung in Produktions- und Dienstleistungsnetzwerken. <i>Business &amp; Information Systems Engineering</i> , <b>2014</b> , 56, 21-29		3
71	A decision support system for cooperative transportation planning: Design, implementation, and performance assessment. <i>Expert Systems With Applications</i> , <b>2014</b> , 41, 5125-5138	7.8	34
70	Scheduling jobs with ready times and precedence constraints on parallel batch machines using metaheuristics. <i>Computers and Industrial Engineering</i> , <b>2014</b> , 78, 175-185	6.4	35
69	Robuste multikriterielle Dienstkomposition in Informationssystemen. <i>Business &amp; Information Systems Engineering</i> , <b>2014</b> , 56, 159-171		
68	Robust Multi-criteria Service Composition in Information Systems. <i>Business and Information Systems Engineering</i> , <b>2014</b> , 6, 141-151	3.8	7
67	Simulation of low-volume mixed model assembly lines: Modeling aspects and case study <b>2014</b> ,		8
66	A simulation-based framework to schedule surgeries in an eye hospital. <i>IIE Transactions on Healthcare Systems Engineering</i> , <b>2014</b> , 4, 191-208		15
65	Decomposition heuristic for a two-machine flow shop with batch processing <b>2014</b> ,		3
64	A simultaneous and iterative approach for parallel machine scheduling with sequence-dependent family setups. <i>Journal of Scheduling</i> , <b>2014</b> , 17, 471-487	1.6	13
63	Simulation-based performance assessment of master planning approaches in semiconductor manufacturing. <i>Omega</i> , <b>2014</b> , 46, 21-35	7.2	34
62	An iterative approach for the serial batching problem with parallel machines and job families. <i>Annals of Operations Research</i> , <b>2013</b> , 206, 425-448	3.2	15
61	State of the Practice and Future Needs for Production Planning and Control Systems. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 247-266	0.3	
60	Deterministic Scheduling Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 105-175	0.3	
59	Semiconductor Manufacturing Process Description. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 11-28	0.3	2
58	Planning Wafer Starts Using Nonlinear Clearing Functions: A Large-Scale Experiment. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2013</b> , 26, 602-612	2.6	45
57	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> , <b>2013</b> , 40, 1224-1233	4.6	21
56	Dispatching Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 65-104	0.3	1
55	Production Planning Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 207-246.	0.3	2

54	A heuristic to support make-to-stock, assemble-to-order, and make-to-order decisions in semiconductor supply chains <b>2013</b> ,		5
53	Reliable Service Reconfiguration for Time-Critical Service Compositions <b>2013</b> ,		6
52	A comparison of production planning formulations with exogenous cycle time estimates using a large-scale wafer fab model <b>2013</b> ,		1
51	Modeling and Analysis Tools. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 29-64	0.3	0
50	Order Release Approaches. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> , 177-205	0.3	
49	Production Planning and Control for Semiconductor Wafer Fabrication Facilities. <i>Operations Research/ Computer Science Interfaces Series</i> , <b>2013</b> ,	0.3	86
48	A methodology to solve large-scale cooperative transportation planning problems. <i>European Journal of Operational Research</i> , <b>2012</b> , 223, 626-636	5.6	40
47	A variable neighborhood search approach for planning and scheduling of jobs on unrelated parallel machines. <i>Journal of Intelligent Manufacturing</i> , <b>2012</b> , 23, 1621-1635	6.7	21
46	Cost-Minimizing Service Selection in the Presence of End-to-End QoS Constraints and Complex Charging Models <b>2012</b> ,		9
45	Scheduling jobs with time constraints between consecutive process steps in semiconductor manufacturing <b>2012</b> ,		28
44	Heuristic approaches for master planning in semiconductor manufacturing. <i>Computers and Operations Research</i> , <b>2012</b> , 39, 479-491	4.6	33
43	An integrated scheduling and material-handling approach for complex job shops: a computational study. <i>International Journal of Production Research</i> , <b>2012</b> , 50, 5966-5985	7.8	28
42	Using iterative simulation to incorporate load-dependent lead times in master planning heuristics <b>2012</b> ,		2
41	Modelling and analysis of semiconductor manufacturing in a shrinking world: challenges and successes. <i>European Journal of Industrial Engineering</i> , <b>2011</b> , 5, 254	1.1	54
40	Multiple orders per job formation and release strategies in large-scale wafer fabs: a simulation study. <i>Journal of Simulation</i> , <b>2011</b> , 5, 25-43	1.9	5
39	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> , <b>2011</b> , 61, 336-345	6.4	64
38	A survey of problems, solution techniques, and future challenges in scheduling semiconductor manufacturing operations. <i>Journal of Scheduling</i> , <b>2011</b> , 14, 583-599	1.6	224
37	An agent-based planning approach within the framework of distributed hierarchical enterprise management. <i>Journal of Management Control</i> , <b>2011</b> , 22, 205-236	2.4	5

36	A comparison of heuristics to solve a single machine batching problem with unequal ready times of the jobs <b>2011</b> ,		3
35	Metaheuristics for scheduling jobs with incompatible families on parallel batching machines. <i>Journal of the Operational Research Society</i> , <b>2011</b> , 62, 2083-2096	2	32
34	A survey of challenges in modelling and decision-making for discrete event logistics systems. <i>Computers in Industry</i> , <b>2011</b> , 62, 557-567	11.6	23
33	A computational study of a shifting bottleneck heuristic for multi-product complex job shops. <i>Production Planning and Control</i> , <b>2011</b> , 22, 25-40	4.3	27
32	Towards a supply chain simulation reference model for the semiconductor industry <b>2011</b> ,		12
31	Architecture for simulation-based performance assessment of planning approaches in semiconductor manufacturing <b>2010</b> ,		11
30	Genetic algorithms to solve a single machine multiple orders per job scheduling problem <b>2010</b> ,		11
29	Infrastructure for model-based production scheduling. <i>International Journal of Industrial and Systems Engineering</i> , <b>2010</b> , 6, 441	0.4	1
28	Integrated heuristics for scheduling multiple order jobs in a complex job shop. <i>International Journal of Metaheuristics</i> , <b>2010</b> , 1, 156	0.8	13
27	Scheduling jobs on parallel machines with sequence-dependent setup times, precedence constraints, and ready times using variable neighborhood search <b>2009</b> ,		4
26	An Ant Colony optimization approach to solve cooperative transportation planning problems <b>2009</b> ,		4
25	A comparison of MIP-based decomposition techniques and VNS approaches for batch scheduling problems <b>2009</b> ,		21
24	Modeling and simulation of cataract surgery processes <b>2009</b> ,		2
23	An Ontology to Support Adaptive Agents for Complex Manufacturing Systems <b>2008</b> ,		4
22	Modeling and analysis of semiconductor manufacturing in a shrinking world: Challenges and successes <b>2008</b> ,		7
21	A simulation framework for assessing the performance of cooperative transportation planning algorithms <b>2008</b> ,		7
20	Solving volume and capacity planning problems in semiconductor manufacturing: A computational study <b>2008</b> ,		13
19	Heuristic approaches for determining minimum cost delivery quantities in supply chains. <i>European Journal of Industrial Engineering</i> , <b>2008</b> , 2, 377	1.1	9

18	Simulationsbasierte Leistungsbewertung von Planungsverfahren für komplexe Produktionssysteme <b>2008</b> , 213-228		1
17	Simulation-based assessment of machine criticality measures for a shifting bottleneck scheduling approach in complex manufacturing systems. <i>Computers in Industry</i> , <b>2007</b> , 58, 644-655	11.6	24
16	Decomposition heuristics for minimizing earliness/tardiness on parallel burn-in ovens with a common due date. <i>Computers and Operations Research</i> , <b>2007</b> , 34, 3380-3396	4.6	24
15	Genetic algorithm-based subproblem solution procedures for a modified shifting bottleneck heuristic for complex job shops. <i>European Journal of Operational Research</i> , <b>2007</b> , 177, 2100-2118	5.6	71
14	Simulation-based benchmarking of production control schemes for complex manufacturing systems. <i>Control Engineering Practice</i> , <b>2007</b> , 15, 1381-1393	3.9	44
13	Simulation framework for complex manufacturing systems with automated material handling <b>2007</b> ,		13
12	Minimizing earliness/tardiness on a single burn-in oven with a common due date and maximum allowable tardiness constraint. <i>OR Spectrum</i> , <b>2006</b> , 28, 177-198	1.9	26
11	Autonome und kooperative Steuerung komplexer Produktionsprozesse mit Multi-Agenten-Systemen. <i>Business &amp; Information Systems Engineering</i> , <b>2006</b> , 48, 107-119		4
10	The FABMAS multi-agent-system prototype for production control of water fabs: design, implementation and performance assessment. <i>Production Planning and Control</i> , <b>2006</b> , 17, 701-716	4.3	32
9	Machine learning techniques for scheduling jobs with incompatible families and unequal ready times on parallel batch machines. <i>Engineering Applications of Artificial Intelligence</i> , <b>2006</b> , 19, 235-245	7.2	57
8	ManufAg: a multi-agent-system framework for production control of complex manufacturing systems. <i>Information Systems and E-Business Management</i> , <b>2006</b> , 4, 159-185	2.6	24
7	Scheduling and Simulation <b>2006</b> , 109-133		6
6	A distributed shifting bottleneck heuristic for complex job shops. <i>Computers and Industrial Engineering</i> , <b>2005</b> , 49, 363-380	6.4	56
5	Heuristic scheduling of jobs on parallel batch machines with incompatible job families and unequal ready times. <i>Computers and Operations Research</i> , <b>2005</b> , 32, 2731-2750	4.6	144
4	Scheduling-Framework für Jobs auf parallelen Maschinen in komplexen Produktionssystemen. <i>Business &amp; Information Systems Engineering</i> , <b>2004</b> , 46, 470-480		13
3	Genetic algorithm based scheduling of parallel batch machines with incompatible job families to minimize total weighted tardiness. <i>International Journal of Production Research</i> , <b>2004</b> , 42, 1621-1638	7.8	122
2	On the numerical solution of the direct scattering problem for an open sound-hard arc. <i>Journal of Computational and Applied Mathematics</i> , <b>1996</b> , 71, 343-356	2.4	27
1	Heuristic and metaheuristic methods for the multi-skill project scheduling problem with partial preemption. <i>International Transactions in Operational Research</i> ,	2.9	1



