Reha Uzsoy

List of Publications by Citations

172 papers	6,259 citations	41 h-index	75 g-index
198 ext. papers	7,101 ext. citations	4.2 avg, IF	5.96 L-index

#	Paper	IF	Citations
172	Executing production schedules in the face of uncertainties: A review and some future directions. *European Journal of Operational Research*, **2005**, 161, 86-110	5.6	436
171	A REVIEW OF PRODUCTION PLANNING AND SCHEDULING MODELS IN THE SEMICONDUCTOR INDUSTRY PART I: SYSTEM CHARACTERISTICS, PERFORMANCE EVALUATION AND PRODUCTION PLANNING. *IIE Transactions*, **1992**, 24, 47-60		394
170	Efficient Algorithms for Scheduling Semiconductor Burn-In Operations. *Operations Research*, **1992**, 40, 764-775	2.3	377
169	A REVIEW OF PRODUCTION PLANNING AND SCHEDULING MODELS IN THE SEMICONDUCTOR INDUSTRY PART II: SHOP-FLOOR CONTROL. *IIE Transactions*, **1994**, 26, 44-55		250
168	Experimental Evaluation of Heuristic Optimization Algorithms: A Tutorial. *Journal of Heuristics*, **2001**, 7, 261-304	1.9	199
167	Scheduling batch processing machines with incompatible job families. *International Journal of Production Research*, **1995**, 33, 2685-2708	7.8	163
166	Analysis of periodic and event-driven rescheduling policies in dynamic shops. *International Journal of Computer Integrated Manufacturing*, **1992**, 5, 153-163	4.3	162
165	Benchmarks for shop scheduling problems. *European Journal of Operational Research*, **1998**, 109, 137-141	5.6	145
164	Predictable scheduling of a job shop subject to breakdowns. *IEEE Transactions on Automation Science and Engineering*, **1998**, 14, 365-378		139
163	Rapid Modeling and Discovery of Priority Dispatching Rules: An Autonomous Learning Approach. *Journal of Scheduling*, **2006**, 9, 7-34	1.6	137
162	Outbound supply chain network design with mode selection, lead times and capacitated vehicle distribution centers. *European Journal of Operational Research*, **2005**, 165, 182-206	5.6	127
161	Minimizing total tardiness on a batch processing machine with incompatible job families. *IIE Transactions*, **1998**, 30, 165-178		117
160	A genetic algorithm to minimize maximum lateness on a batch processing machine. *Computers and Operations Research*, **2002**, 29, 1621-1640	4.6	112
159	A genetic algorithm for minimizing maximum lateness on parallel identical batch processing machines with dynamic job arrivals and incompatible job families. *Computers and Operations Research*, **2007**, 34, 3016-3028	4.6	111
158	Minimizing total completion time on a batch processing machine with job families. *Operations Research Letters*, **1993**, 13, 61-65	1	111
157	Rolling horizon procedures for dynamic parallel machine scheduling with sequence-dependent setup times. *International Journal of Production Research*, **1995**, 33, 3173-3192	7.8	110
156	Tractable nonlinear production planning models for semiconductor wafer fabrication facilities. *IEEE Transactions on Semiconductor Manufacturing*, **2006**, 19, 95-111	2.6	108

155	Decomposition Methods for Complex Factory Scheduling Problems **1997**,		107
154	Production planning with resources subject to congestion. *Naval Research Logistics*, **2009**, 56, 142-157	1.5	100
153	Predictable scheduling of a single machine with breakdowns and sensitive jobs. *International Journal of Production Research*, **1999**, 37, 4217-4233	7.8	93
152	Cycle-time improvements for photolithography process in semiconductor manufacturing. *IEEE Transactions on Semiconductor Manufacturing*, **2001**, 14, 48-56	2.6	83
151	. *IEEE Transactions on Semiconductor Manufacturing*, **1991**, 4, 270-280	2.6	80
150	A genetic algorithm for a single product network design model with lead time and safety stock considerations. *European Journal of Operational Research*, **2009**, 197, 599-608	5.6	74
149	Rescheduling on a single machine with part-type dependent setup times and deadlines. *Annals of Operations Research*, **1997**, 70, 93-113	3.2	70
148	A Computational Study of Shifting Bottleneck Procedures for Shop Scheduling Problems. *Journal of Heuristics*, **1997**, 3, 111-137	1.9	67
147	Decomposition methods for reentrant flow shops with sequence-dependent setup times. *Journal of Scheduling*, **2000**, 3, 155-177	1.6	63
146	Scheduling semiconductor test operations: Minimizing maximum lateness and number of tardy jobs on a single machine. *Naval Research Logistics*, **1992**, 39, 369-388	1.5	60
145	A single-product network design model with lead time and safety stock considerations. *IIE Transactions*, **2007**, 39, 411-424		58
144	Learning effective dispatching rules for batch processor scheduling. *International Journal of Production Research*, **2008**, 46, 1431-1454	7.8	56
143	MINIMIZING TOTAL WEIGHTED COMPLETION TIME ON A SINGLE BATCH PROCESSING MACHINE. *Production and Operations Management*, **2009**, 6, 57-73	3.6	55
142	Hybrid decomposition heuristics for solving large-scale scheduling problems in semiconductor wafer fabrication. *Journal of Scheduling*, **2007**, 10, 41-65	1.6	55
141	Modelling and analysis of semiconductor manufacturing in a shrinking world: challenges and successes. *European Journal of Industrial Engineering*, **2011**, 5, 254	1.1	54
140	Exploiting shop floor status information to schedule complex job shops. *Journal of Manufacturing Systems*, **1994**, 13, 73-84	9.1	52
139	An Exploratory Analysis of Two Iterative Linear Programming-Simulation Approaches for Production Planning. *IEEE Transactions on Semiconductor Manufacturing*, **2010**, 23, 442-455	2.6	50
138	An Experimental Comparison of Production Planning Using Clearing Functions and Iterative Linear Programming-Simulation Algorithms. *IEEE Transactions on Semiconductor Manufacturing*, **2012**, 25, 104-117	2.6	49

137	Modeling for the equitable and effective distribution of donated food under capacity constraints. *IIE Transactions*, **2016**, 48, 252-266		47
136	Optimal disassembly configurations for single and multiple products. *Journal of Manufacturing Systems*, **1999**, 18, 311-322	9.1	47
135	Planning Wafer Starts Using Nonlinear Clearing Functions: A Large-Scale Experiment. *IEEE Transactions on Semiconductor Manufacturing*, **2013**, 26, 602-612	2.6	45
134	Performance of decomposition procedures for job shop scheduling problems with bottleneck machines. *International Journal of Production Research*, **2000**, 38, 1271-1286	7.8	45
133	Scheduling a single batch processing machine with secondary resource constraints. *Journal of Manufacturing Systems*, **1998**, 17, 37-51	9.1	43
132	A Tabu search approach to scheduling an automated wet etch station. *Journal of Manufacturing Systems*, **1997**, 16, 102-116	9.1	42
131	A survey of semiconductor supply chain models part I: semiconductor supply chains, strategic network design, and supply chain simulation. *International Journal of Production Research*, **2018**, 56, 4524-4545	7.8	40
130	Evaluation and comparison of production schedules. *Computers in Industry*, **2000**, 42, 203-220	11.6	38
129	Maintenance scheduling and staffing policies in a wafer fabrication facility. *IEEE Transactions on Semiconductor Manufacturing*, **1998**, 11, 316-323	2.6	37
128	A shifting bottleneck algorithm for scheduling semiconductor testing operations. *Journal of Electronics Manufacturing*, **1992**, 02, 119-134		37
127	A capacity allocation problem with integer side constraints. *European Journal of Operational Research*, **1998**, 109, 170-182	5.6	36
126	Scheduling and order release in a single-stage production system. *Journal of Manufacturing Systems* , **1995**, 14, 290-306	9.1	36
125	Finite-capacity production planning algorithms for a semiconductor wafer fabrication facility. *International Journal of Production Research*, **2001**, 39, 825-842	7.8	35
124	Modeling Cycle Times in Production Planning Models for Wafer Fabrication. *IEEE Transactions on Semiconductor Manufacturing*, **2016**, 29, 153-167	2.6	35
123	Optimization Models of Production Planning Problems. *Profiles in Operations Research*, **2011**, 437-507	1	33
122	Implementing global factory schedules in the face of stochastic disruptions. *International Journal of Production Research*, **2005**, 43, 793-818	7.8	33
121	Control of a batch-processing machine: A computational approach. *International Journal of Production Research*, **1998**, 36, 3167-3181	7.8	33
120	A problem reduction approach for scheduling semiconductor wafer fabrication facilities. *IEEE Transactions on Semiconductor Manufacturing*, **2006**, 19, 216-225	2.6	32

119	A metamodel-based Monte Carlo simulation approach for responsive production planning of manufacturing systems. *Journal of Manufacturing Systems*, **2016**, 38, 114-133	9.1	31
118	Decomposition methods for scheduling semiconductor testing facilities. *Flexible Services and Manufacturing Journal*, **1996**, 8, 357		31
117	A survey of semiconductor supply chain models part III: master planning, production planning, and demand fulfilment. *International Journal of Production Research*, **2018**, 56, 4565-4584	7.8	29
116	The effect of shop floor continuous improvement programs on the lot size□cycle time relationship in a multi-product single-machine environment. *International Journal of Advanced Manufacturing Technology*, **2011**, 52, 669-681	3.2	28
115	Rolling horizon procedures for the single machine deterministic total completion time scheduling problem with release dates. *Annals of Operations Research*, **1997**, 70, 115-125	3.2	28
114	Machine Criticality Measures and Subproblem Solution Procedures in Shifting Bottleneck Methods: A Computational Study. *Journal of the Operational Research Society*, **1996**, 47, 666-667	2	28
113	Performance evaluation of dispatching rules for semiconductor testing operations. *Journal of Electronics Manufacturing*, **1993**, 03, 95-105		28
112	A new dynamic programming algorithm for the parallel machines total weighted completion time problem. *Operations Research Letters*, **1992**, 11, 73-75	1	28
111	Quantifying the benefits of cycle time reduction in semiconductor wafer fabrication. *IEEE Transactions on Electronics Packaging Manufacturing*, **2000**, 23, 39-47		27
110	Estimating Clearing Functions for Production Resources Using Simulation Optimization. *IEEE Transactions on Automation Science and Engineering*, **2015**, 12, 539-552	4.9	24
109	A survey of semiconductor supply chain models Part II: demand planning, inventory management, and capacity planning. *International Journal of Production Research*, **2018**, 56, 4546-4564	7.8	24
108	. *IEEE Transactions on Semiconductor Manufacturing*, **2015**, 28, 374-384	2.6	24
107	Measures of subproblem criticality in decomposition algorithms for shop scheduling. *International Journal of Production Research*, **2003**, 41, 865-882	7.8	24
106	An integrated production planning model with load-dependent lead-times and safety stocks. *Computers and Chemical Engineering*, **2009**, 33, 2159-2163	4	23
105	Incorporating manufacturing lead times in joint production-marketing models: A review and some future directions. *Annals of Operations Research*, **2008**, 161, 171-188	3.2	23
104	Using a mathematical programming model to examine the marginal price of capacitated resources. *International Journal of Production Economics*, **2011**, 131, 383-391	9.3	22
103	Single-machine scheduling with dynamic arrivals: Decomposition results and an improved algorithm. *Naval Research Logistics*, **1996**, 43, 709-719	1.5	22
102	Implementation of a decision support system for scheduling semiconductor test operations. *Journal of Electronics Manufacturing*, **1993**, 03, 121-131		22

101	Modeling for the equitable and effective distribution of food donations under stochastic receiving capacities. *IISE Transactions*, **2017**, 49, 567-578	3.3	20
100	Rolling horizon, multi-product production planning with chance constraints and forecast evolution for wafer fabs. *International Journal of Production Research*, **2018**, 56, 6112-6134	7.8	20
99	The impact of simultaneous continuous improvement in setup time and repair time on manufacturing cycle times under uncertain conditions. *International Journal of Production Research*, **2013**, 51, 447-464	7.8	20
98	Chance-constrained formulations in rolling horizon production planning: an experimental study. *International Journal of Production Research*, **2016**, 54, 3927-3942	7.8	20
97	Robust optimization approaches for the equitable and effective distribution of donated food. *European Journal of Operational Research*, **2018**, 269, 516-531	5.6	19
96	The impact of lot-sizing in multiple product environments with congestion. *Journal of Manufacturing Systems*, **2014**, 33, 436-444	9.1	18
95	Prioritising production and engineering lots in wafer fabrication facilities: a simulation study. *International Journal of Production Research*, **2011**, 49, 3105-3125	7.8	18
94	A comparison of multiple linear regression approaches for fitting clearing functions to empirical data. *International Journal of Production Research*, **2014**, 52, 3164-3184	7.8	17
93	Integrating a decomposition procedure with problem reduction for factory scheduling with disruptions: a simulation study. *International Journal of Production Research*, **2008**, 46, 5883-5905	7.8	17
92	An exploratory study of disaggregated clearing functions for production systems with multiple products. *International Journal of Production Research*, **2014**, 52, 5301-5322	7.8	16
91	Integrated Planning of Production and Engineering Process Improvement. *IEEE Transactions on Semiconductor Manufacturing*, **2008**, 21, 390-398	2.6	16
90	Achieving Equity, Effectiveness, and Efficiency in Food Bank Operations: Strategies for Feeding America with Implications for Global Hunger Relief. *Profiles in Operations Research*, **2016**, 229-256	1	15
89	Production planning for semiconductor manufacturing via simulation optimization **2011**,		15
88	Zero-order production planning models with stochastic demand and workload-dependent lead times. *International Journal of Production Research*, **2015**, 53, 1661-1679	7.8	14
87	Identifying potential bottlenecks in production systems using dual prices from a mathematical programming model. *International Journal of Production Research*, **2016**, 54, 2000-2018	7.8	14
86	Modeling and Analysis of Integrated Planning of Production and Engineering Process Improvement. *IEEE Transactions on Semiconductor Manufacturing*, **2013**, 26, 414-422	2.6	14
85	Assessing the impact of alternative continuous improvement programmes in a flow shop using system dynamics. *International Journal of Production Research*, **2014**, 52, 3014-3031	7.8	14
84	Multi-dimensional clearing functions for aggregate capacity modelling in multi-stage production systems. *International Journal of Production Research*, **2017**, 55, 4164-4179	7.8	13

83	Estimating clearing functions from simulation data **2010**,		13
82	Simulation-based performance assessment of production planning formulations for semiconductor wafer fabrication **2015**,		12
81	Modeling the evolution of dependency between demands, with application to inventory planning. *IIE Transactions*, **2014**, 46, 55-66		12
80	Production planning with load-dependent lead times and safety stocks for a single product. *International Journal of Planning and Scheduling*, **2011**, 1, 58	0.8	12
79	Performance of decomposition methods for complex workshops under multiple criteria. *Computers and Industrial Engineering*, **1997**, 33, 261-264	6.4	12
78	Supply chain optimisation and protocol environment (SCOPE) for rapid prototyping and analysis of complex supply chains. *Production Planning and Control*, **2007**, 18, 388-406	4.3	12
77	Short-term capacity allocation problem with tool and setup constraints. *Naval Research Logistics*, **2005**, 52, 754-764	1.5	12
76	Lagrangian heuristics for scheduling new product development projects in the pharmaceutical industry. *Journal of Heuristics*, **2007**, 13, 403-433	1.9	11
75	Using System Dynamics Simulations to Compare Capacity Models for Production Planning **2006**,		11
74	Integrating Interval Estimates of Global Optima and Local Search Methods for Combinatorial Optimization Problems. *Journal of Heuristics*, **2000**, 6, 481-500	1.9	11
73	An iterative heuristic for the single machine dynamic total completion time scheduling problem. *Computers and Operations Research*, **1996**, 23, 641-651	4.6	11
72	Chance-Constraint-Based Heuristics for Production Planning in the Face of Stochastic Demand and Workload-Dependent Lead Times **2012**, 173-208		11
71	Simulation-Based Performance Assessment of Production Planning Models With Safety Stock and Forecast Evolution in Semiconductor Wafer Fabrication. *IEEE Transactions on Semiconductor Manufacturing*, **2020**, 33, 1-12	2.6	10
70	Outbound supply chain network design with mode selection and lead time considerations. *Naval Research Logistics*, **2007**, 54, 282-300	1.5	10
69	Heuristics for minimizing maximum lateness on a single machine with family-dependent set-up times. *Computers and Operations Research*, **2008**, 35, 2018-2033	4.6	10
68	Measuring the Quality of Manufacturing Schedules **1995**, 129-154		10
67	An experimental study of an iterative simulation-optimization algorithm for production planning **2008**,		9
66	Computer-Aided Process Planning and Material Requirements Planning: First Steps towards Computer-Integrated Manufacturing. *Interfaces*, **1992**, 22, 76-86	0.7	9

65	A data-driven iterative refinement approach for estimating clearing functions from simulation models of production systems. *International Journal of Production Research*, **2019**, 57, 6013-6030	7.8	8
64	Statistical optimum estimation techniques for combinatorial optimization problems: a review and critique. *Journal of Heuristics*, **2014**, 20, 329-358	1.9	8
63	Investigating interventions for increasing colorectal cancer screening: Insights from a simulation model. *Socio-Economic Planning Sciences*, **2013**, 47, 142-155	3.7	8
62	Continuous Dynamic Models, Clearing Functions, and Discrete-Event Simulation in Aggregate Production Planning **2012**, 103-126		8
61	Impact of Scheduling Policies on the Performance of an Additive Manufacturing Production System. *Procedia Manufacturing*, **2019**, 39, 447-456	1.5	8
60	Production Planning with Capacitated Resources and Congestion **2020**,		7
59	Efeito da redução do tamanho de lote e de programas de Melhoria Contínua no Estoque em Processo (WIP) e na Utilização: estudo utilizando uma abordagem híbrida System Dynamics - Factory Physics. *Production*, **2009**, 19, 214-229	1.3	7
58	Heuristics for capacity planning problems with congestion. *Computers and Operations Research*, **2009**, 36, 1924-1934	4.6	7
57	Exact and heuristic procedures for capacity expansion problems with congestion. *IIE Transactions*, **2008**, 40, 1185-1197		7
56	Modeling and analysis of semiconductor manufacturing in a shrinking world: Challenges and successes **2008**,		7
55	Observations on the interactions among deadlock avoidance policies and dispatching rules in automated manufacturing systems. *International Journal of Production Research*, **2003**, 41, 81-95	7.8	7
54	An experimental expert system for process planning of sheet-metal parts. *Computers and Industrial Engineering*, **1991**, 20, 59-69	6.4	7
53	Valid inequalities for concave piecewise linear regression. *Operations Research Letters*, **2019**, 47, 52-58	1	6
52	A comparison of mixed integer programming formulations of the capacitated lot-sizing problem. *International Journal of Production Research*, **2018**, 56, 7064-7084	7.8	6
51	Estudo do efeito de programas de melhoria contínua em variáveis do chão de fábrica na relação entre tamanho de lote de produção e lead time: lead time relationship. *Gestão & Produção*, **2010**, 17, 137-148	0.9	5
50	Modeling the impact of new product introduction on the output of semiconductor wafer fabrication facilities **2016**,		5
49	The Effects of Production Planning on the Dynamic Behavior of a Simple Supply Chain: An Experimental Study. *Profiles in Operations Research*, **2011**, 43-80	1	5
48	Estimating the Costs of Planned Changes Implied by Freezing Production Plans. *Profiles in Operations Research*, **2016**, 17-44	1	4

47	Lead time modeling in production planning **2015**,		4
46	Media Streams Scheduling for Synchronization in Distributed Multimedia Systems. *Journal of Parallel and Distributed Computing*, **1999**, 56, 272-295	4.4	4
45	**2016**,		4
44	Rounding heuristics for multiple product dynamic lot-sizing in the presence of queueing behavior. *Computers and Operations Research*, **2018**, 100, 54-65	4.6	3
43	An iterative refinement approach to fitting clearing functions to data from simulation models of production systems **2017**,		3
42	Machine Criticality Measures and Subproblem Solution Procedures in Shifting Bottleneck Methods: A Computational Study. *Journal of the Operational Research Society*, **1996**, 47, 666	2	3
41	A robust strategy approach to a strategic mobility problem. *European Journal of Operational Research*, **1994**, 79, 266-276	5.6	3
40	A genetic algorithm for order acceptance and scheduling in additive manufacturing. *International Journal of Production Research*,1-18	7.8	3
39	SIMULATION OPTIMIZATION FOR PLANNING PRODUCT TRANSITIONS IN SEMICONDUCTOR MANUFACTURING FACILITIES **2018**,		3
38	Advanced Planning and Scheduling for Manufacturing,2033-2053		3
37	Modeling the effect of public health resources and alerting on the dynamics of pertussis spread. *Health Systems*, **2016**, 5, 81-97	2.3	2
36	A random keys genetic algorithm for a bicriterion project selection and scheduling problem. *International Journal of Planning and Scheduling*, **2015**, 2, 110	0.8	2
35	Minimizing total tardiness on a batch processing machine with incompatible job families. *IIE Transactions*, **1998**, 30, 165-178		2
34	Scheduling Semiconductor Test Operations: Optimization and Approximation **1992**, 179-199		2
33	Iterative combinatorial auctions for managing product transitions in semiconductor manufacturing. *IISE Transactions*, **2020**, 52, 413-431	3.3	2
32	A Simple Model of Capacity Contention During New Product Introductions. *IEEE Transactions on Semiconductor Manufacturing*, **2020**, 33, 240-251	2.6	1
31	Load dependent lead time modelling: A robust optimization approach **2017**,		1
30	A comparison of production planning formulations with exogenous cycle time estimates using a large-scale wafer fab model **2013**,		1

29	Modelling the response of a public health department to infectious disease **2010**,		1
28	Determining safety stocks in the presence of workload-dependent lead times **2007**,		1
27	Planning Models with Stationary Fixed Lead Times **2020**, 77-112		1
26	Optimzing Engineering and Production Lots During Product Transitions in Semiconductor Manufacturing **2019**,		1
25	Problem Reduction Approaches for Production Planning Using Clearing Functions **2018**,		1
24	Conic programming models for production planning with clearing functions: Formulations and duality. *European Journal of Operational Research*, **2021**, 292, 953-966	5.6	1
23	Integrated Production Planning and Pricing Decisions in Congestion-Prone Capacitated Production Systems. *Profiles in Operations Research*, **2014**, 29-68	1	1
22	Review of Decomposition Methods for Factory Scheduling Problems **1997**, 31-45		0
21	Managing product transitions with learning and congestion effects. *International Journal of Production Economics*, **2021**, 239, 108190	9.3	0
20	Computing the number of acute-care beds within NC Certificate of Need. *Health Systems*, **2016**, 5, 98-108	1.3	
19	Production Planning and Control Frameworks **2020**, 29-45		
18	Univariate Clearing Functions **2020**, 143-189		
17	Time-Varying Lead Times and Iterative Multi-Model Approaches **2020**, 113-141		
16	Editorial Appreciation to Our Reviewers. *IEEE Transactions on Semiconductor Manufacturing*, **2018**, 31, 405-405	2.6	
15	Problemreduzierungsans□ze f□ die Produktionsplanung unter Verwendung von Auslastungsfunktionen. *Automatisierungstechnik*, **2019**, 67, 455-467	0.8	
14	Editorial Appreciation to the TSM Community. *IEEE Transactions on Semiconductor Manufacturing*, **2019**, 32, 362-362	2.6	
13	Multivariate Clearing Functions **2020**, 191-220		
12	Workload and Cycle Time in the Production Unit **2020**, 19-28		

List of Publications

11	Applications of Clearing Functions **2020**, 239-262	
10	Lot-Sizing Models Using Multi-dimensional Clearing Functions **2020**, 221-237	
9	Naive Rolling Horizon Procedures for Job Shop Scheduling **1997**, 147-160	
8	Computational Results for Shops with Single and Parallel Machine Workcenters **1997**, 175-189	
7	Workcenter-based Decomposition Procedures for the Classical Job Shop Environment **1997**, 61-90	
6	Tailored Decomposition Procedures for Semiconductor Testing Facilities **1997**, 161-173	
5	A Generic Decomposition Procedure for Semiconductor Testing Facilities **1997**, 91-106	
4	Time-Based Decomposition Procedures for Single-Machine Subproblems **1997**, 107-128	
3	Editorial 2018 Best Paper Award. *IEEE Transactions on Semiconductor Manufacturing*, **2019**, 32, 139-139	2.6
2	Constraint violation reduction search for 0□1 mixed integer linear programming problems. *Engineering Optimization*, **2021**, 53, 609-626	2
1	Editorial from the Incoming Editor-in-Chief. *IEEE Transactions on Semiconductor Manufacturing*, **2018**, 31, 195-195	2.6