Cynthia Barnhart

List of Publications by Citations

82 papers	5,116 citations	35 h-index	71 g-index
90 ext. papers	5,810 ext. citations	3 avg, IF	5.55 L-index

#	Paper	IF	Citations
82	Branch-and-Price: Column Generation for Solving Huge Integer Programs. *Operations Research*, **1998**, 46, 316-329	2.3	1256
81	The fleet assignment problem: Solving a large-scale integer program. *Mathematical Programming*, **1995**, 70, 211-232	2.1	221
80	Flight String Models for Aircraft Fleeting and Routing. *Transportation Science*, **1998**, 32, 208-220	4.4	209
79	Using Branch-and-Price-and-Cut to Solve Origin-Destination Integer Multicommodity Flow Problems. *Operations Research*, **2000**, 48, 318-326	2.3	202
78	Applications of Operations Research in the Air Transport Industry. *Transportation Science*, **2003**, 37, 368-391	4.4	172
77	Planning for Robust Airline Operations: Optimizing Aircraft Routings and Flight Departure Times to Minimize Passenger Disruptions. *Transportation Science*, **2006**, 40, 15-28	4.4	164
76	Airline Schedule Planning: Integrated Models and Algorithms for Schedule Design and Fleet Assignment. *Transportation Science*, **2004**, 38, 19-32	4.4	154
75	Solving binary cutting stock problems by column generation and branch-and-bound. *Computational Optimization and Applications*, **1994**, 3, 111-130	1.4	139
74	Flight operations recovery: New approaches considering passenger recovery. *Journal of Scheduling*, **2006**, 9, 279-298	1.6	128
73	Comparing Optimal Relocation Operations With Simulated Relocation Policies in One-Way Carsharing Systems. *IEEE Transactions on Intelligent Transportation Systems*, **2014**, 15, 1667-1675	6.1	125
72	Airline Crew Scheduling: A New Formulation and Decomposition Algorithm. *Operations Research*, **1997**, 45, 188-200	2.3	113
71	Airline Fleet Assignment with Time Windows. *Transportation Science*, **2000**, 34, 1-20	4.4	112
70	Itinerary-Based Airline Fleet Assignment. *Transportation Science*, **2002**, 36, 199-217	4.4	106
69	The real-time deadheading problem in transit operations control. *Transportation Research Part B: Methodological*, **1998**, 32, 77-100	7.2	105
68	Improving Crew Scheduling by Incorporating Key Maintenance Routing Decisions. *Operations Research*, **2003**, 51, 387-396	2.3	100
67	Railroad Blocking: A Network Design Application. *Operations Research*, **2000**, 48, 603-614	2.3	99
66	Composite Variable Formulations for Express Shipment Service Network Design. *Transportation Science*, **2002**, 36, 1-20	4.4	98

65	Multimodal Express Package Delivery: A Service Network Design Application. *Transportation Science*, **1999**, 33, 391-407	4.4	92
64	Air Network Design for Express Shipment Service. *Operations Research*, **1996**, 44, 852-863	2.3	84
63	Constructing Railroad Blocking Plans to Minimize Handling Costs. *Transportation Science*, **1998**, 32, 330-345	4.4	84
62	Chapter 1 Air Transportation: Irregular Operations and Control. *Handbooks in Operations Research and Management Science*, **2007**, 14, 1-67		81
61	Airline Crew Scheduling **2003**, 517-560		64
60	Airline Schedule Planning: Accomplishments and Opportunities. *Manufacturing and Service Operations Management*, **2004**, 6, 3-22	4.6	62
59	Demand and capacity management in air transportation. *EURO Journal on Transportation and Logistics*, **2012**, 1, 135-155	2.4	52
58	Equitable and Efficient Coordination in Traffic Flow Management. *Transportation Science*, **2012**, 46, 262-280	4.4	50
57	Modeling Airline Frequency Competition for Airport Congestion Mitigation. *Transportation Science*, **2012**, 46, 512-535	4.4	49
56	Airline Fleet Assignment with Enhanced Revenue Modeling. *Operations Research*, **2009**, 57, 231-244	2.3	48
55	Network Design for Express Shipment Delivery. *Computational Optimization and Applications*, **2002**, 21, 239-262	1.4	47
54	Assessing the viability of enabling a round-trip carsharing system to accept one-way trips: Application to Logan Airport in Boston. *Transportation Research Part C: Emerging Technologies*, **2015**, 56, 359-372	8.4	44
53	Modeling Passenger Travel and Delays in the National Air Transportation System. *Operations Research*, **2014**, 62, 580-601	2.3	43
52	Deadhead Selection for the Long-Haul Crew Pairing Problem. *Operations Research*, **1995**, 43, 491-499	2.3	43
51	Incremental bus service design: combining limited-stop and local bus services. *Public Transport*, **2013**, 5, 53-78	2.1	42
50	An Analysis of Passenger Delays Using Flight Operations and Passenger Booking Data. *Air Traffic Control Quarterly*, **2005**, 13, 1-27		38
49	Integrated Disruption Management and Flight Planning to Trade Off Delays and Fuel Burn. *Transportation Science*, **2017**, 51, 88-111	4.4	37
48	A column generation and partitioning approach for multi-commodity flow problems. *Telecommunication Systems*, **1994**, 3, 239-258	2.3	37

47	Yard Crane Scheduling for container storage, retrieval, and relocation. *European Journal of Operational Research*, **2018**, 271, 288-316	5.6	35
46	Testing the Validity of the MIP Approach for Locating Carsharing Stations in One-way Systems. *Procedia, Social and Behavioral Sciences*, **2012**, 54, 138-148		35
45	Dynamic Airline Scheduling. *Transportation Science*, **2009**, 43, 336-354	4.4	35
44	Integrated Flight Scheduling and Fleet Assignment Under Airport Congestion. *Transportation Science*, **2013**, 47, 477-492	4.4	33
43	A Network-Based Primal-Dual Heuristic for the Solution of Multicommodity Network Flow Problems. *Transportation Science*, **1993**, 27, 102-117	4.4	33
42	A new binary formulation of the restricted Container Relocation Problem based on a binary encoding of configurations. *European Journal of Operational Research*, **2018**, 267, 467-477	5.6	32
41	An Approximate Model and Solution Approach for the Long-Haul Crew Pairing Problem. *Transportation Science*, **1998**, 32, 221-231	4.4	31
40	UPS Optimizes Its Air Network. *Interfaces*, **2004**, 34, 15-25	0.7	30
39	Dual-ascent methods for large-scale multicommodity flow problems. *Naval Research Logistics*, **1993**, 40, 305-324	1.5	29
38	Integrated Airline Scheduling: Considering Competition Effects and the Entry of the High Speed Rail. *Transportation Science*, **2017**, 51, 132-154	4.4	21
37	Robust airline schedule design in a dynamic scheduling environment. *Computers and Operations Research*, **2013**, 40, 831-840	4.6	21
36	Formulating a Mixed Integer Programming Problem to Improve Solvability. *Operations Research*, **1993**, 41, 1013-1019	2.3	19
35	Integrated Airline Schedule Planning. *Profiles in Operations Research*, **1998**, 384-403	1	18
34	The Stochastic Container Relocation Problem. *Transportation Science*, **2018**, 52, 1035-1058	4.4	17
33	Robust flight schedules through slack re-allocation. *EURO Journal on Transportation and Logistics*, **2013**, 2, 277-306	2.4	17
32	An assessment of the impact of demand management strategies for efficient allocation of airport capacity. *International Journal of Revenue Management*, **2012**, 6, 5	0.2	17
31	Robust optimization: Lessons learned from aircraft routing. *Computers and Operations Research*, **2018**, 98, 165-184	4.6	17
30	Strong activity rules for iterative combinatorial auctions. *Computers and Operations Research*, **2010**, 37, 1271-1284	4.6	16

29	Crew Scheduling. *Profiles in Operations Research*, **1999**, 493-521	1	15
28	Overview of Airline Economics, Markets and Demand47-72		14
27	Airline-Driven Performance-Based Air Traffic Management: Game Theoretic Models and Multicriteria Evaluation. *Transportation Science*, **2016**, 50, 180-203	4.4	13
26	Transportation Service Network Design: Models and Algorithms. *Lecture Notes in Economics and Mathematical Systems*, **1999**, 259-283	0.4	13
25	Setting public service obligations in low-demand air transportation networks: Application to the Azores. *Transportation Research, Part A: Policy and Practice*, **2013**, 54, 35-48	3.7	11
24	The Airline Planning Process153-181		11
23	Flight schedule design for a charter airline. *Computers and Operations Research*, **2007**, 34, 1516-1531	4.6	9
22	Integer multicommodity flow problems. *Lecture Notes in Computer Science*, **1996**, 58-71	0.9	9
21	Irregular Operations: Schedule Recovery and Robustness253-274		7
20	Routing models and solution procedures for regional less-than-truckload operations. *Annals of Operations Research*, **1995**, 61, 67-90	3.2	7
19	Multimodal express shipment service design: Models and algorithms. *Computers and Industrial Engineering*, **1997**, 33, 685-688	6.4	6
18	Airline-driven ground delay programs: A benefits assessment. *Transportation Research Part C: Emerging Technologies*, **2018**, 89, 268-288	8.4	5
17	Airline Frequency Competition in Airport Congestion Pricing. *Transportation Research Record*, **2012**, 2266, 69-77	1.7	5
16	Evaluating Air Traffic Flow Management in a Collaborative Decision-Making Environment. *Transportation Research Record*, **2011**, 2206, 10-18	1.7	5
15	Airline Schedule Optimization183-211		5
14	An integer programming approach to support the US Air Force's air mobility network. *Computers and Operations Research*, **2008**, 35, 1771-1788	4.6	5
13	Logistics Service Network Design for Time-Critical Delivery. *Lecture Notes in Computer Science*, **2005**, 86-105	0.9	4
12	Applying Majority Judgment over a Polyhedral Candidate Space. *SSRN Electronic Journal*,	1	3

11	Tarmac delay policies: A passenger-centric analysis. *Transportation Research, Part A: Policy and Practice*, **2016**, 83, 42-62	3.7	2
10	XNET: Extended Traffic Assignment Model. *Journal of Transportation Engineering*, **1987**, 113, 450-462		2
9	Robust Optimization: Lessons Learned from Aircraft Routing. *SSRN Electronic Journal*, **2017**,	1	1
8	A decomposition approach for commodity pickup and delivery with time-windows under uncertainty. *Journal of Scheduling*, **2014**, 17, 489-506	1.6	1
7	Information Technology in Airline Operations, Distribution and Passenger Processing441-466		1
6	Practice Abstract. *Interfaces*, **2001**, 31, 66-68	0.7	1
5	Choice-Based Airline Schedule Design and Fleet Assignment: A Decomposition Approach. *SSRN Electronic Journal*,	1	1
4	Airline-Driven Ground Delay Programs: A Benefits Assessment. *SSRN Electronic Journal*,	1	1
3	Majority judgment over a convex candidate space. *Operations Research Letters*, **2019**, 47, 317-325	1	0
2	A Novel Approach to the Tail Assignment Problem in Airline Planning. *Transportation Research Procedia*, **2021**, 58, 53-60	2.4	0
1	The Tail Assignment Problem: A Case Study at Vueling Airlines. *Transportation Research Procedia*, **2021**, 52, 445-452	2.4	