Rajan Batta

List of Publications by Year
in descending order

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Version: 2024-02-01

142	5,797	76196	88477
papers	citations	40 h-index	70 g-index

146	146	146	3404
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Review of recent developments in OR/MS research in disaster operations management. European Journal of Operational Research, 2013, 230, 201-211.	3.5	503
2	On the use of genetic algorithms to solve location problems. Computers and Operations Research, 2002, 29, 761-779.	2.4	248
3	The Maximal Expected Covering Location Problem: Revisited. Transportation Science, 1989, 23, 277-287.	2.6	225
4	Optimal Obnoxious Paths on a Network: Transportation of Hazardous Materials. Operations Research, 1988, 36, 84-92.	1.2	209
5	A logistics model for emergency supply of critical items in the aftermath of a disaster. Socio-Economic Planning Sciences, 2011, 45, 132-145.	2.5	197
6	Dispatching and routing of emergency vehicles in disaster mitigation using data fusion. Socio-Economic Planning Sciences, 2009, 43, 1-24.	2.5	168
7	On finding dissimilar paths. European Journal of Operational Research, 2000, 121, 232-246.	3.5	149
8	A simulated annealing approach to police district design. Computers and Operations Research, 2002, 29, 667-684.	2.4	149
9	Developing Conflict-Free Routes for Automated Guided Vehicles. Operations Research, 1993, 41, 1077-1090.	1.2	128
10	Location of temporary depots to facilitate relief operations after an earthquake. Socio-Economic Planning Sciences, 2012, 46, 112-123.	2.5	105
11	Algorithms for a Facility Location Problem with Stochastic Customer Demand and Immobile Servers. Annals of Operations Research, 2002, 111, 17-34.	2.6	101
12	A branch-and-price approach for operational aircraft maintenance routing. European Journal of Operational Research, 2006, 175, 1850-1869.	3.5	101
13	Modeling Equity of Risk in the Transportation of Hazardous Materials. Operations Research, 1990, 38, 961-973.	1.2	100
14	Budget constrained location problem with opening and closing of facilities. Computers and Operations Research, 2003, 30, 2047-2069.	2.4	94
15	Prepositioning of supplies in preparation for a hurricane under potential destruction of prepositioned supplies. Socio-Economic Planning Sciences, 2013, 47, 20-37.	2.5	94
16	Prepositioning of assets and supplies in disaster operations management: Review and research gap identification. European Journal of Operational Research, 2020, 284, 1-19.	3.5	94
17	Covering-Location Models for Emergency Situations That Require Multiple Response Units. Management Science, 1990, 36, 16-23.	2.4	91
18	Locating Facilities on the Manhattan Metric with Arbitrarily Shaped Barriers and Convex Forbidden Regions. Transportation Science, 1989, 23, 26-36.	2.6	80

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19	The Variance-Constrained Shortest Path Problem. Transportation Science, 1994, 28, 309-316.	2.6	80
20	Passenger grouping under constant threat probability in an airport security system. European Journal of Operational Research, 2006, 168, 633-644.	3.5	78
21	Allocation and reallocation of ambulances to casualty clusters in a disaster relief operation. IIE Transactions, 2007, 39, 27-39.	2.1	73
22	Joint ground and air emergency medical services coverage models: A greedy heuristic solution approach. European Journal of Operational Research, 2010, 207, 736-749.	3.5	73
23	Simultaneous sensor selection and routing of unmanned aerial vehicles for complex mission plans. Computers and Operations Research, 2012, 39, 2787-2799.	2.4	72
24	Passenger grouping with risk levels in an airport security system. European Journal of Operational Research, 2009, 194, 574-584.	3.5	68
25	Spatial decision support system for hazardous material truck routing. Transportation Research Part C: Emerging Technologies, 2000, 8, 337-359.	3.9	66
26	Locating an Ambulance on the Amherst Campus of the State University of New York at Buffalo. Interfaces, 1990, 20, 43-49.	1.6	63
27	Routing of a hazmat truck in the presence of weather systems. Computers and Operations Research, 2007, 34, 1351-1373.	2.4	59
28	Value-at-Risk model for hazardous material transportation. Annals of Operations Research, 2014, 222, 361-387.	2.6	56
29	Dynamic conflict-free routing of automated guided vehicles. International Journal of Production Research, 1999, 37, 2003-2030.	4.9	55
30	Generalized route planning model for hazardous material transportation with VaR and equity considerations. Computers and Operations Research, 2014, 43, 237-247.	2.4	54
31	Hurricane evacuation planning using public transportation. Socio-Economic Planning Sciences, 2017, 59, 43-55.	2.5	53
32	A network-based model for transporting extremely hazardous materials. Operations Research Letters, 1993, 13, 85-93.	0.5	51
33	Scheduling Repairs at Texas Instruments. Interfaces, 1993, 23, 68-74.	1.6	51
34	Equitable Sequencing of a Given Set of Hazardous Materials Shipments. Transportation Science, 1991, 25, 124-137.	2.6	49
35	Public facility location using dispersion, population, and equity criteria. European Journal of Operational Research, 2014, 234, 819-829.	3.5	49
36	Location coverage models with demand originating from nodes and paths: Application to cellular network design. European Journal of Operational Research, 2008, 190, 610-632.	3.5	47

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37	Finite-Size Facility Placement in the Presence of Barriers to Rectilinear Travel. Operations Research, 2002, 50, 1018-1031.	1.2	46
38	Modeling of Workflow Congestion and Optimization of Flow Routing in a Manufacturing/Warehouse Facility. Management Science, 2009, 55, 267-280.	2.4	44
39	A comprehensive modeling framework for hazmat network design, hazmat response team location, and equity of risk. Computers and Operations Research, 2017, 79, 119-130.	2.4	44
40	Medical waste collection considering transportation and storage risk. Computers and Operations Research, 2020, 120, 104966.	2.4	43
41	Base station location and channel allocation in a cellular network with emergency coverage requirements. European Journal of Operational Research, 2005, 164, 301-323.	3.5	42
42	Simulation-based Selectee Lane queueing design for passenger checkpoint screening. European Journal of Operational Research, 2012, 219, 146-155.	3.5	41
43	The equity constrained shortest path problem. Computers and Operations Research, 1990, 17, 297-307.	2.4	39
44	A queueing-location model with expected service time dependent queueing disciplines. European Journal of Operational Research, 1989, 39, 192-205.	3.5	38
45	Cell formation using tabu search. Computers and Industrial Engineering, 1995, 28, 485-494.	3.4	37
46	A Multiple Route Conditional Risk Model For Transporting Hazardous Materials. Infor, 1995, 33, 20-33.	0.5	37
47	School Bus Routing with Stochastic Demand and Duration Constraints. Transportation Science, 2017, 51, 1349-1364.	2.6	37
48	Modeling uncertainties in plant layout problems. European Journal of Operational Research, 1992, 63, 347-359.	3.5	36
49	Balancing staffing and switching costs in a service center with flexible servers. European Journal of Operational Research, 2007, 177, 924-938.	3.5	35
50	Modeling the response of illicit drug markets to local enforcement. Socio-Economic Planning Sciences, 1993, 27, 73-89.	2.5	34
51	Placing a finite size facility with a center objective on a rectangular plane with barriers. European Journal of Operational Research, 2007, 179, 1160-1176.	3.5	34
52	Dual Toll Pricing for Hazardous Materials Transport with Linear Delay. Networks and Spatial Economics, 2012, 12, 147-165.	0.7	34
53	Facility location models for immobile servers with stochastic demand. Naval Research Logistics, 2004, 51, 137-152.	1.4	33
54	Optimal placement of warehouse cross-aisles in a picker-to-part warehouse with class-based storage. IIE Transactions, 2012, 44, 107-120.	2.1	33

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55	Objectives Derived form Viewing Hazmat Shipments as a Sequence of Independent Bernoulli Trials. Transportation Science, 1997, 31, 252-261.	2.6	32
56	Contour line construction for a new rectangular facility in an existing layout with rectangular departments. European Journal of Operational Research, 2007, 180, 149-162.	3.5	32
57	A single-server priority queueing-location model. Networks, 1988, 18, 87-103.	1.6	30
58	Forecast-driven model for prepositioning supplies in preparation for a foreseen hurricane. Journal of the Operational Research Society, 2016, 67, 98-113.	2.1	30
59	Controlling a Fleet of Unmanned Aerial Vehicles to Collect Uncertain Information in a Threat Environment. Operations Research, 2017, 65, 674-692.	1.2	30
60	On the Analysis of Two New Models for Transporting Hazardous Materials. Operations Research, 1996, 44, 710-723.	1.2	29
61	Evaluating the reliability of automated collision notification systems. Accident Analysis and Prevention, 2003, 35, 349-360.	3.0	29
62	Regulating hazardous materials transportation by dual toll pricing. Transportation Research Part B: Methodological, 2016, 83, 20-35.	2.8	29
63	An integrated model for site selection and space determination of warehouses. Computers and Operations Research, 2015, 62, 169-176.	2.4	28
64	Optimal Sampling Design for Variables with Varying Spatial Importance. Geographical Analysis, 2004, 36, 177-194.	1.9	27
65	Sequencing the processing of incoming mail to match an outbound truck delivery schedule. Computers and Operations Research, 2005, 32, 1777-1791.	2.4	27
66	Adaptive Cell Tower Location Using Geostatistics. åŸºäºŽåœ°çŸè®¡å¦ç‚„é€‚åº””æ€§åŸºç«™™å•„å¡””é€‰å€ç©¶. Geographical Analysis		27
67	Analysis of centroid aggregation for the Euclidean distance p-median problem. European Journal of Operational Research, 1999, 113, 147-168.	3.5	25
68	Single Server Queueing-Location Models with Rejection. Transportation Science, 1988, 22, 209-216.	2.6	24
69	Effective job shop scheduling through active chain manipulation. Computers and Operations Research, 1995, 22, 159-172.	2.4	24
70	Integration of COTS software products ARENA & CPLEX for an inventory/logistics problem. Computers and Operations Research, 2004, 31, 533-547.	2.4	24
71	When haste makes sense: Cracking down on street markets for illicit drugs. Socio-Economic Planning Sciences, 1997, 31, 293-306.	2.5	22
72	Locating a 1-Center on a Manhattan Plane with â€œArbitrarilyâ€•Shaped Barriers. Annals of Operations Research, 2003, 123, 157-172.	2.6	22

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73	Search for an immobile entity on a network. European Journal of Operational Research, 2008, 191, 347-359.	3.5	22
74	Mixed planar/network facility location problems. Computers and Operations Research, 1988, 15, 61-67.	2.4	21
75	Effective and equitable supply of gasoline to impacted areas in the aftermath of a natural disaster. Socio-Economic Planning Sciences, 2017, 57, 25-34.	2.5	21
76	A location model for a facility operating as anM/G/k queue. Networks, 1989, 19, 717-728.	1.6	20
77	The Traveling Repairperson Home Base Location Problem. Transportation Science, 1994, 28, 150-161.	2.6	20
78	The stochastic queue center problem. Computers and Operations Research, 1999, 26, 1423-1436.	2.4	20
79	Scheduling crackdowns on illicit drug markets. European Journal of Operational Research, 1996, 88, 231-250.	3.5	19
80	Optimal placement of omnidirectional sensors in a transportation network for effective emergency response and crash characterization. Transportation Research Part C: Emerging Technologies, 2014, 45, 64-82.	3.9	19
81	Time-Dependent Hazardous-Materials Network Design Problem. Transportation Science, 2018, 52, 454-473.	2.6	18
82	Noteâ€”Comment on â€œThe Dynamics of Plant Layoutâ€• Management Science, 1987, 33, 1065-1065.	2.4	17
83	Optimization of aeromedical base locations in New Mexico using a model that considers crash nodes and paths. Accident Analysis and Prevention, 2008, 40, 1105-1114.	3.0	17
84	Special need students school bus routing: Consideration for mixed load and heterogeneous fleet. Socio-Economic Planning Sciences, 2019, 65, 10-19.	2.5	17
85	Planar area location/layout problem in the presence of generalized congested regions with the rectilinear distance metric. IIE Transactions, 2005, 37, 35-50.	2.1	16
86	Clustering Sensors in Wireless Ad Hoc Networks Operating in a Threat Environment. Operations Research, 2005, 53, 432-442.	1.2	15
87	Distribution network design: Selection and sizing of congested connections. Naval Research Logistics, 2005, 52, 701-712.	1.4	15
88	Value-at-Risk and Conditional Value-at-Risk Minimization for Hazardous Materials Routing. Profiles in Operations Research, 2013, , 127-154.	0.3	15
89	Improving hurricane disaster preparedness: models for optimal reallocation of hospital capacity. International Journal of Operational Research, 2011, 10, 194.	0.1	14
90	Designing manufacturing facility layouts to mitigate congestion. IIE Transactions, 2011, 43, 689-702.	2.1	14

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91	A bounding-based solution approach for the continuous arc covering problem. Journal of Geographical Systems, 2014, 16, 161-182.	1.9	14
92	Planning Dissimilar Paths for Military Units. , 2005, 10, 25-42.		14
93	Optimal Placement of Suicide Bomber Detectors. , 2007, 12, 65-78.		14
94	An aggregation approach to solving the networkp-median problem with link demands. Networks, 2000, 36, 233-241.	1.6	13
95	Variable capacity sizing and selection of connections in a facility layout. IIE Transactions, 2003, 35, 49-59.	2.1	13
96	Cellular network configuration with co-channel and adjacent-channel interference constraints. Computers and Operations Research, 2008, 35, 3738-3757.	2.4	13
97	Facility placement with sub-aisle design in an existing layout. European Journal of Operational Research, 2009, 197, 154-165.	3.5	13
98	Technical Noteâ€"The Stochastic Queue Median Over a Finite Discrete Set. Operations Research, 1989, 37, 648-652.	1.2	12
99	A Queueâ€Length Cutoff Model for a Preemptive Twoâ€Priority $M/M/1$ System. SIAM Journal on Applied Mathematics, 2006, 67, 99-115.	0.8	12
100	Predicting gasoline shortage during disasters using social media. OR Spectrum, 2020, 42, 693-726.	2.1	12
101	Commentary on facility location in the presence of congested regions with the rectilinear distance metric. Socio-Economic Planning Sciences, 2004, 38, 291-306.	2.5	11
102	Optimal placement of sensors and interception resource assessment for the protection of regional infrastructure from covert attack. Journal of Transportation Security, 2011, 4, 145-169.	0.9	11
103	Dispatching and loitering policies for unmanned aerial vehicles under dynamically arriving multiple priority targets. Journal of Simulation, 2014, 8, 9-24.	1.0	11
104	A spatial model of received signal strength indicator values for automated collision notification technology. Transportation Research Part C: Emerging Technologies, 2005, 13, 432-447.	3.9	10
105	The K-Connection Location Problem in a Plane. Annals of Operations Research, 2005, 136, 193-209.	2.6	10
106	A systems view of personnel assignment problems. Human Factors and Ergonomics in Manufacturing, 2006, 16, 285-307.	1.4	10
107	A real-time network approach for including obstacles and flight dynamics in UAV route planning. Journal of Defense Modeling and Simulation, 2016, 13, 291-306.	1.2	10
108	A multi-objective optimization approach to the location of road weather information system in New York State. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2018, 22, 503-516.	2.6	10

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109	The Multiple Vehicle TSP with Time Windows and Equity Constraints over a Multiple Day Horizon. Transportation Science, 1996, 30, 120-133.	2.6	9
110	Optimization of Evacuation Warnings Prior to a Hurricane Disaster. Sustainability, 2017, 9, 2152.	1.6	9
111	Stability of a crime level equilibrium. Socio-Economic Planning Sciences, 2005, 39, 229-244.	2.5	8
112	On the analysis of last-mile relief delivery on a tree network: Application to the 2015 Nepal earthquake. Journal of the Operational Research Society, 2021, 72, 727-743.	2.1	8
113	Relocation-promotion problem with Euclidean distance. European Journal of Operational Research, 1990, 46, 61-72.	3.5	7
114	An Automated Network Generation Procedure for Routing of Unmanned Aerial Vehicles (UAVs) in a GIS Environment. Networks and Spatial Economics, 2007, 7, 153-176.	0.7	7
115	Finding rectilinear least cost paths in the presence of convex polygonal congested regions. Computers and Operations Research, 2009, 36, 737-754.	2.4	7
116	On the accuracy of demand point solutions to the planar, manhattan metric, p-median problem, with and without barriers to travel. Computers and Operations Research, 1988, 15, 253-262.	2.4	6
117	Human Factors Contributes to Queuing Theory: Parkinson's Law and Security Screening. Proceedings of the Human Factors and Ergonomics Society, 2007, 51, 602-606.	0.2	6
118	Server Adaptation in an Airport Security System Queue. OR Insight, 2007, 20, 22-31.	0.1	6
119	Investigating the benefits of re-optimisation while searching for two immobile entities on a network. International Journal of Mathematics in Operational Research, 2009, 1, 37.	0.1	5
120	A simulation approach to study emergency response. Journal of Simulation, 2014, 8, 115-128.	1.0	5
121	Solving the petroleum replenishment and routing problem with variable demands and time windows. Annals of Operations Research, 2020, 294, 9-46.	2.6	5
122	Scheduling spatially distributed jobs with degradation: Application to pothole repair. Socio-Economic Planning Sciences, 2020, 72, 100904.	2.5	5
123	Determining efficient facility locations on a tree network operating as a FIFOM/G/1 queue. Networks, 1993, 23, 597-603.	1.6	4
124	Implementing larson and sadiq's location model in a geographic information system. Computers and Operations Research, 1994, 21, 447-454.	2.4	4
125	A Spatial Decision Support System Combining GIS and OR Tools to Optimize District Boundaries and Bus Routes for a Suburban School District. OR Insight, 2008, 21, 3-16.	0.1	4
126	Establishing public policy to protect critical infrastructure: Finding a balance between exposure and cost in Los Angeles County. Transport Policy, 2012, 24, 109-117.	3.4	4

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127	A study of situationally aware routing for emergency responders. Journal of the Operational Research Society, 2015, 66, 570-578.	2.1	4
128	Location-coverage models for preventing attacks on interurban transportation networks. Annals of Operations Research, 2017, 258, 679-717.	2.6	4
129	Convoy movement problem: a civilian perspective. Journal of the Operational Research Society, 2017, 68, 14-33.	2.1	4
130	On the synthesis of advertising and relocation decisions for a facility. Computers and Industrial Engineering, 1989, 16, 179-187.	3.4	3
131	Emergency Response Technology and Integrated Active Transportation System. Transportation Research Record, 2010, 2189, 26-36.	1.0	3
132	Stock-out severity index: tool for evaluating inequity in drug stock-outs. Central European Journal of Operations Research, 2020, 28, 1243-1263.	1.1	3
133	The balancing traveling salesman problem: application to warehouse order picking. Top, 2021, 29, 442-469.	1.1	3
134	On the analysis of an idealized model to manage gasoline supplies in a short-notice hurricane evacuation. OR Spectrum, 2022, 44, 911-945.	2.1	3
135	Simultaneous siting and sizing of distribution centers onÂaÂplane. Annals of Operations Research, 2009, 167, 157-170.	2.6	2
136	Optimal routing of infiltration operations. Journal of Transportation Security, 2016, 9, 87-104.	0.9	2
137	Supply-Chain Optimisation. OR Insight, 2001, 14, 20-30.	0.1	1
138	Clustering intelligent transportation sensors using public transportation. Top, 2016, 24, 594-611.	1.1	1
139	On the distance between random events on a network. Networks, 2020, 75, 203-231.	1.6	1
140	Comment on â€œNetwork Median Problems with Continuously Distributed Demandâ€• Transportation Science, 1987, 21, 217-217.	2.6	0
141	Propagated delay estimation and its use in the development of an effective aircraft ground delay strategy. International Journal of Operational Research, 2007, 2, 1.	0.1	0
142	Contributions to humanitarian logistics. IISE Transactions, 2019, 51, 807-808.	1.6	0