

# References

1. Aarts E, Lenstra JK (ed) (2003) Local Search in combinatorial optimization. Princeton University Press, USA
2. Ausiello G et al (1999) Complexity and approximation combinatorial optimisation problems. Springer, Berlin
3. Back T (1996) Evolutionary algorithms in theory and practice. Oxford University Press, USA
4. Bagdasar O, Popovici N (2015) Local maximum points of explicitly quasiconvex functions. *Optim Lett* 9(4):769–777. doi:[10.1007/s11590-014-0781-3](https://doi.org/10.1007/s11590-014-0781-3)
5. Bandemer H, Gottwald S (1996) Fuzzy sets, fuzzy logic, fuzzy methods. Wiley, USA
6. Bazaraa MS, Sherali HD, Shetti CM (2006) Non linear programming. Wiley, USA
7. Beasley JE (ed) (1996) Advances in linear and integer programming. Oxford University Press, USA
8. Berry S, Lowndes V (2003) Deriving a memetic algorithm to solve heat flow problems—University of Derby Technical Report.
9. Berry S, Parkes C (2016) Green transport planning paradoxes. *Mathematics Today* 52(5)
10. Blazewicz J et al (2001) Scheduling computer and manufacturing processes. Springer, Berlin
11. Braess D, Nagurney A, Wakolbinger (2005) On a paradox of transport planning (a translation of the 1968 article). *Transp Sci* 39(4):446–450
12. Buzacott JA, Shanthikumar JG (1993) Stochastic models of manufacturing systems. Prentice Hall, USA
13. Catoni S, Pallottino S (1991) Traffic equilibrium paradoxes. *Transp Sci* 25(3):240–244
14. Chambers L (1995a) Evolutionary algorithms in practical handbook of genetic algorithms. CRC Press, USA
15. Chambers L;(1995) Practical handbook of genetic algorithms vol 1. CRC Press, USA
16. Chambers L (1995) Practical handbook of genetic algorithms vol 2. CRC Press, USA
17. Chambers L (1999) Practical handbook of genetic algorithms vol 3. CRC Press, USA
18. Chen H (2008). Homeland security data mining using social network analysis. In: IEEE international conference on intelligence and security informatics. Springer, Berlin
19. Cheybani S, Kertesz J, Shreckenber M (1998) Correlation functions in the Nagel-Schreckenberg model. *J Phys A* 31:9787–9799
20. Cipriani TA, Leachman RC (1993) Optimization in industry. Wiley, USA
21. Cipriani TA, Leachman RC (1994) Optimization in industry, vol 2. Wiley, USA
22. Conti M, Giordano S, May M, Passarella A (2010) From opportunistic networks to opportunistic computing. *Commun Mag IEEE* 48:126–139
23. Corne D, Dorigo M, Glover F (1999) New ideas in optimization. McGraw Hill, USA
24. Coyle RG (1996) System dynamics modelling: ISBN 9780412617102. *Transp Res Ser B*, 18(2) (1984):101–110.

25. Danks D, Griffiths TL, Tenenbaum JB (2002) Dynamical causal learning. NIPSMIT Press, pp 67–74.
26. Deb K (2001), Multi objective optimization using evolutionary algorithms. Wiley, USA
27. Dhamija R, Tygar JD (2005) The battle against phishing: dynamic security skins. In: Proceedings of the 2005 symposium on usable privacy and security, ACM.
28. Dhamija R, Tygar JD (2006) Why phishing works. In: Proceedings of the SIGCHI conference on human factors in computing systems, pp 581–590
29. Ding C, Song S, Zhang Y (2008) Paradoxes of traffic flow and economics of congestion pricing. In: UNR joint economics working paper series, working paper no 08-007
30. Dolan A, Aldous J (1999) Networks and algorithms. Wiley, USA
31. Dorn J, Froeschl KA (1993) Scheduling of production processes. Ellis Horwood, UK
32. Englemore RS, Terry A (1979) Structure and function of the CRYSLIS system. In: Proceedings of IJCAI-79, pp 250–256
33. Englemore RS, Morgan AJ, Nii HP (1988) Hearsay-II. In: R Englemore, T Morgan (eds) Blackboard systems. Addison-Wesley, USA, pp 25–29
34. Esser J, Schreckenberg M (1997) Microscopic simulation of urban traffic based on cellular automata. *Int J Modern Phys* 18(5):1025–1036
35. Eugster PT, Garbinato B, Holzer A (2005) Location-based publish/subscribe. In Proceedings of the fourth IEEE international symposium on network computing and applications, IEEE Computer Society, 279–282
36. Farrar K (1979) Soundfield microphone. Parts 1 & 2—wireless World
37. Forrester J (1961) Industrial Dynamics, MIT Press
38. Gardner B, Martin K (1994) HRTF measurements of a KEMAR dummy-head microphone. <http://sound.media.mit.edu/KEMAR.html>
39. Gee ES, Smith CH (1993) Selecting allowances for jobshop performance. *Int J Prod Res* 31 (8):1839–1852
40. Gelenter D (1983) Generative communication in Linda. *ACM Trans Program Lang Syst* 7 (1):80–112
41. Gerzon MA (1992) General methatheory of auditory localisation—92nd AES convention, Vienna. Preprint 3306
42. Ghazi A, Laskey K, Wang X, Barbará D, Shackelford T, Wright E, Fitzgerald J (2006) Detecting threatening behavior using Bayesian networks. C4I Papers
43. Guan T, Zaluska E, De Roure D (2008) A semantic service matching middleware for mobile devices discovering grid services. In: Proceedings of the 3rd international conference on advances in grid and pervasive computing. Springer, Berlin, pp 422–433
44. Hadley G (1970) Systems, non linear and dynamic programming. Addison Wesley, USA
45. Hadley G (1971) Linear programming. Addison Wesley, USA
46. Hamed K (2009) Near-term travel speed prediction utilizing Hilbert–Huang transform. *Comput-Aided Civil Infrastruct Eng* 24:551–576
47. Holland JH (1994) Adaption in natural and artificial systems. MIT Press, USA
48. Holmes RB (1975) Geometric functional analysis and its applications. Springer, Berlin
49. Hui P, Crowcroft J, Yoneki E (2007) BUBBLE rap: social-based forwarding in delay tolerant networks. In: Proceedings of the 2nd ACM international workshop on mobility in the evolving internet architecture (MobiArch ), pp 241–250
50. Jakobsson M (2005) Modeling and preventing phishing attacks. In: Financial cryptography and data security. Springer, Berlin, pp 89–89
51. John R, Birkenhead R (eds) (2001) Developments in soft computing. Physica-Verlag
52. Johnson LA, Montgomery DC (1974) Operational research in production planning, scheduling and inventory control. Wiley, USA
53. Kalrath J, Wilson JM (1997) Business optimisation. MacMillan, UK
54. Kirchner A, Schadschneider A (2002) Simulation of evacuation processes using a bionics-inspired cellular automaton model for pedestrian dynamics. *Physica A: Stat Mech Appl* 312(1–2):260–276

55. Kreher DL, Stinson DR (1999) Combinatorial algorithms. CRC Press, USA
56. Keränen J, Ott T, Kärkkäinen T (2009) The ONE simulator for DTN protocol evaluation. In: Proceedings of 2nd international conference on simulation tools and techniques (SIMUTools'09), Rome, Italy, ICST New York, NY USA. ISBN 978-963-9799-45-5, pp 55:1–55:10
57. Kuokka D, Harada L (1995) Matchmaking for information agents, Readings in Agents, Morgan Kaufmann, pp 672–678.
58. Lau RY, Yunqing X, Yunming Y (2014) A probabilistic generative model for mining cybercriminal networks from online social media. *Comput Intell Mag* 9(1):31–43
59. Lévy P (1994) Collective intelligence: mankind's emerging world in cyberspace. Basic Books
60. Li HX, Yen VC (1995) Fuzzy sets and fuzzy decision making. CRC, USA
61. Lindgren A, Doria A, Scheln O (2003) Probabilistic routing in intermittently connected networks. In: Proceedings of the fourth ACM international symposium on mobile ad hoc networking and computing (MobiHoc 2003), pp 19–20
62. Luc DT (1989) Theory of vector optimisation. Springer, Berlin
63. Luc DT, Schaible S (1997) Efficiency and generalised concavity. *J Optim Theory* 147–153
64. Man KF, Tang KS, Kwong S (1999) Genetic algorithms. Springer, Berlin
65. McKenna JA (2004) The internet and social life. *Ann Rev Psychol* 55:573–590
66. Mendel J (2000) Uncertain rule-based fuzzy logic systems. Prentice Hall, USA
67. Morecroft JDW (2015) Strategic modelling and business dynamics: ISBN: 978-1-118-84468-7
68. Morton TE, Pentico DW (1993) Heuristic scheduling systems. Wiley, USA
69. Nagel K, Schreckenberg M (1992) A cellular automaton model for freeway traffic. *Phys France* 2221–2229
70. Neuman J (1951) The general theory of automata. In: Cerebral mechanisms in behavior: the Hixon symposium. Wiley, USA, pp 1–41
71. Osman IH, Kelly JP (1997) Meta heuristics theory and application, Kluwer
72. Panwalkar SS, Iskander W (1977) A survey of scheduling rules. *Oper Res* 25:45–61
73. Parker RG (1995) Deterministic scheduling theory. Chapman Hall, USA
74. Papadimitriou CH, Steglitz K (1998) Combinatorial optimisation, Dover
75. Pardalos PM, Resende MGC (ed) (2002) Handbook of applied optimization, Oxford
76. Pinedo M (1995) Scheduling, theory applications and systems. Prentice Hall, USA
77. Poelmans JE (2010) Formal concept analysis in knowledge discovery: a survey. In: International conference on conceptual structures (ICCS), pp 139–153. Springer, Berlin
78. Popovici N (2005) Pareto reducible multicriteria optimisation problems. *Optimization* 54 (2005):253–263
79. Schoder D, Gloor P, Metaxas P (2013) Social media and collective intelligence—ongoing and future research streams. *KI—Künstliche Intelligenz* 27(1):9–15
80. Schwartz MJ (2011) Epsilon fell to spear-phishing attack. Retrieved 17 June 2014 from <http://www.darkreading.com/attacks-and-breaches/epsilon-fell-to-spear-phishing-attack/d/d-id/1097119?>
81. Shashidhar J, Chen N (2011) A phishing model and its applications to evaluating phishing attacks. International cyber resilience conference
82. Smith A, Berry S, Hill R (2015) Efficient matching of services with users in opportunistic network environments. *Int J Adapt Innovative Syst*, 99–117.
83. Smith A, Berry S (2012) Evaluation of a framework for measuring efficiency in opportunistic ad-hoc networks. In: Third international conference on emerging intelligent data and web technologies (EIDWT), 2012, pp 61–65
84. Smith A, Hill R (2011) Towards a framework for the evaluation of efficient provisioning in opportunistic ad hoc networks. In: Proceedings of the 2011 international conference on P2P, parallel, grid, cloud and internet computing, IEEE Computer Society, pp 32–36

85. Smith A, Hill R (2011) Measuring efficiency in opportunistic ad hoc networks. *Int J Interconnected Netw* 12(3):32–36
86. Stahlschmidt S, Tausendteufel H (2013) Bayesian networks for sex-related homicides: structure learning and prediction. *J Appl Stat* 40(6):1155–1171
87. Stoer J, Witzgall C (1970) Convexity and optimisation in finite dimensions. Springer, Berlin
88. Sycara K, Widoff S, Klusch M, Lu JL (2002) LARKS: dynamic matchmaking among heterogeneous software agents in cyberspace, in cyberspace. *Auton Agents Multi-Agent Syst* 173–203
89. Unbehauen (ed) Control systems, robotics and automation: fuzzy and intelligent control systems, vol 17. Oxford: EOLSS, pp 303–316
90. Turing AM (1950) Computing Machinery and Intelligence. *Mind* 49:433–460
91. T1: Canal development and decline ([www.ukcanals.net](http://www.ukcanals.net))
92. T2: Passenger Rail Usage, Office of Rail and Road, ([www.orr.gov.uk](http://www.orr.gov.uk))
93. T3: On the Move ([www.racfoundation.org](http://www.racfoundation.org))
94. T4: The false paradise of Metroland, ([www.spectator.co.uk](http://www.spectator.co.uk))
95. T5: Railways Developments ([www.victorianweb.org](http://www.victorianweb.org))
96. T6: Travel in London ([www.tfl.gov.uk](http://www.tfl.gov.uk))
97. Vahdat A, Becker D (2000) Epidemic routing for partially connected ad-hoc networks. Technical report CS-200006, Duke University
98. Verma A, Srivastava A (2011) Integrated routing protocol for opportunistic networks. *Int J Adv Comput Sci Appl* 2(3)
99. Wiggins B, Paterson-Stephens I, Schillebeeckx P, The analysis of multi-channel sound reproduction algorithms using HRTF data—19th AES surround sound convention, Schoss
100. Williams HP (1993) Model solving in mathematical programming. Wiley, USA
101. Williams HP (2009) Logic and integer programming. Springer, Berlin
102. Williams HP (2013) Model building in mathematical programming. Wiley, USA
103. Woolsey RED (1982) The fifth column: production scheduling as it really is. *Interfaces* 12 (6):115–118
104. Yoneki E, Hui P, Chan S-Y, Crowcroft J (2007) A socio-aware overlay for publish/subscribe communication in delay tolerant networks. In: Proceedings of the 10th ACM symposium on modelling. Analysis and simulation of wireless and mobile systems (MSWiM), pp 225–234.
105. Zadeh LA (1973) Outline of a new approach to the analysis of complex systems & decision processes. *IEEE Trans Syst Manage Cybern SMC* 3(1)
106. Zalinescu C (2002) Convex analysis in general vector spaces world scientific, River Edge
107. Zalzal AMS, Fleming PJ (1997) Genetic algorithms in engineering systems; IEE Digital Library
108. Zhu S, Weibing Z, Jihui H, Xu C (2016) The effects of overtaking strategy in the Nagel-Schreckenberg model. *Eur Phys J B*

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