This is an online Appendix to the paper 'Online appointment scheduling: a taxonomy and review', by A. Braaksma, N.M. van de Vrugt and R.J. Boucherie, submitted to the European Journal of Operations Research.

Appendix: Operations research methods

Agent-based models. ABMs mimic the interactions of autonomous agents to assess their effects on the global system. ABMs, typically used in simulation programs, comprise of: agents, decision-making heuristics, learning rules, interaction topology, and a non-agent central environment [6].

Algorithms. Any procedures or formulas for solving an optimization problem. We distinguish exact algorithms and heuristics; exact algorithms return an optimal solution, while heuristics are designed to approximate optimal solutions fast [15].

Constraint programming. Constraint programming is a paradigm in which the user states relations (constraints) among decision variables. Heuristic constraint solvers are used to find an assignment to all decision variables that satisfies all constraints [14].

Decision analysis. Methods for scoping a decision-making problem: clearly representing it, decomposing it into elements, establishing criteria, evaluating the options, and recommending a decision to a decision maker [3].

Dynamic programming. A set of approaches for solving sequential decision problems: deterministic, stochastic, and approximate dynamic programming; and Markov decision theory [11, 12, 15].

Forecasting. The use of a model to predict future values of random variables based on historical data. Two commonly used techniques are regression analysis and time series analysis [4].

Game theory. A mathematical method of decision-making in which a cooperative or non-cooperative competitive situation is analyzed to determine the optimal strategy (including bidding and auctions) [7, 9].

Mathematical programming. A collection of tools for solving linear, nonlinear, or stochastic optimization models consisting of an objective function, a set of parameters and decision variables, and a set of constraints that restrict the decision variables [15].

Networks and graphs. Networks and graphs are sets of objects (nodes, vertices) that are connected by links (edges). This field includes for example the vehicle routing and maximum spanning tree problem [1, 8].

Neural networks. An Artificial Neural Network (ANN) is a paradigm that can be used to extract patterns and detect trends in large datasets. An ANN is built for a specific application, and learns from new data input [2, 5].

Queueing theory. Mathematical models for (networks of) waiting lines, or queues. Typical input for these models is the arrival process of customers, and the service requirement distribution, discipline, and capacity [13, 15].

Scheduling. The process of assigning jobs to one or multiple machine(s) in such a way that a given performance measure is optimized. Typical objectives are minimizing the latest completion time (makespan) or the number of machines required [10].

Simulation. Mimicking a real-world system as it evolves over time. The 'simulation model' is evaluated by a computer to generate representative samples of the performance measure of interest [15].

Stochastic models. Mathematical models that mimic the random evolution of a system. We distinguish three types of stochastic models: Markov process, renewal processes, and (general) stochastic processes [13].

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