Special Issue
Dynamic Programming

Message from the Guest Editor

Dynamic programming is an algorithm design technique suitable for solving certain optimization problems. A major characteristic of a dynamic programming solution is that sub-problems are solved in an order of increasing problem size, by which solving the next sub-problem makes use of recorded solutions of sub-problems encountered earlier. This avoids solving the same sub-problems repeatedly. Dynamic programming yields efficient algorithms for many optimization problems on graphs (e.g., all-pairs shortest paths), and patterns (e.g., edit distance, sequence alignment). Dynamic-programming-based algorithms have applications in a wide array of research areas, including computational biology, computational finance, computational economics, computational intelligence, machine learning, artificial intelligence, operations research, business analytics, and data analysis. This Special Issue on dynamic programming aims to bring together articles that present novel ideas and new solutions that use dynamic programming for computational problems. Reviews that provide new focus or new perspectives for dynamic programming algorithms and applications are also welcome.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2025)

About the Journal

Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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