JOURNAL OF COMPLEXITY

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DESCRIPTION

The multidisciplinary Journal of Complexity publishes original research papers that contain substantial mathematical results on complexity as broadly conceived. Outstanding review papers will also be published. In the area of computational complexity, the focus is on complexity over the reals, with the emphasis on lower bounds and optimal algorithms. The Journal of Complexity also publishes articles that provide major new algorithms or make important progress on upper bounds. Other models of computation, such as the Turing machine model, are also of interest. Computational complexity results in a wide variety of areas are solicited.

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- Computational number theory
- Computational stochastics
- Control theory
- Cryptography
- Design of experiments
- Differential equations
- Discrete problems
- Distributed and parallel computation
- High and infinite-dimensional problems
- Information-based complexity
- Inverse and ill-posed problems
- Machine learning
- Markov chain Monte Carlo
- Monte Carlo and quasi-Monte Carlo
- Multivariate integration and approximation
- Noisy data
- Nonlinear and algebraic equations
- Numerical analysis
- Operator equations
- Optimization
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INTRODUCTION
The multidisciplinary Journal of Complexity publishes original research papers that contain substantial mathematical results on complexity as broadly conceived. Outstanding review papers will also be published. In the area of computational complexity, the focus is on complexity over the reals, with the emphasis on lower bounds and optimal algorithms. The Journal of Complexity also publishes articles that provide major new algorithms or make important progress on upper bounds. Other models of computation, such as the Turing machine model, are also of interest. A new area is quantum computing. Computational complexity results in a wide variety of areas are solicited. The following is a partial list of topics: applied mathematics, numerical analysis, scientific computation, approximation theory, systems of algebraic equations, differential equations, optimization, control theory, decision theory, design of experiments, distributed computation, information theory, prediction and estimation, and statistics. The Journal of Complexity also addresses such topics as chaos and complexity in biological, physical, financial, and economic systems.

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