

Special Issue

Computer Algebra in Scientific Computing

Message from the Guest Editor

Although scientific computing is very often associated with numeric computations, the use of computer algebra methods in scientific computing has obtained considerable attention in the last two decades. Computer algebra methods are especially suitable for parametric analysis of the key properties of systems arising in scientific computing. The topics addressed in this Special Issue cover all the basic areas of scientific computing as they benefit from the application of computer algebra methods, especially in the following topics:

- algebraic and semi-algebraic computations;
- symbolic-numeric methods for differential, differential-algebraic and difference equations;
- homotopy, perturbation and series methods;
- tropical and polyhedral methods;
- complexity of algebraic algorithms;
- automated reasoning in algebra and geometry;
- applications of computer algebra in the natural sciences and engineering.

Guest Editor

Prof. Dr. Andreas Weber

Institute for Computer Science, Bonn University, Endenicher Allee 19A,
D-53115 Bonn, Germany

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Mathematics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
mathematics@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Francisco Chiclana

School of Computer Science and Informatics, De Montfort University,
The Gateway, Leicester LE1 9BH, UK

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