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Special Issue Reprint

New Trends in Algebraic Geometry and Its Applications

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Unirrational algebraic varieties, particularly curves and surfaces, play an important role in many fields, such as Algebraic Geometry, Computational Geometry, Computer-Aided Design, Computer Graphics, and Geometric Modeling. Consequently, algorithms and results dealing with the different algebraic and geometric problems involving these geometric objects are very important.

This Special Issue on “New Trends in Algebraic Geometry and Its Applications” is directed at mathematicians and computer scientists with a particular interest in algebraic geometry and its applications. This Special Issue aims to facilitate communication between researchers addressing the fundamental algorithmic issues in the treatment of curves and surfaces (from symbolic and numeric perspectives).

The contributions presented in this Special Issue explore the interplay between geometry, algebra, and numerical computation when designing a variety of algorithms, or provide a complexity analysis of the running time of such algorithms.

This Special Issue focuses on recent problems concerning algebraic geometry and its applications as an algorithm for visualizing algebraic varieties, in scientific and computational algebra, computational and algebraic geometry, and computer algebra problems, solved by means of symbolic–numeric techniques.



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