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A fast algorithm for computing the characteristic polynomial of the p -curvature. (English)

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MSC:

68W30 Symbolic computation and algebraic computation

12H20 Abstract differential equations

65D18 Numerical aspects of computer graphics, image analysis, and computational geometry

68Q25 Analysis of algorithms and problem complexity

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Keywords:

p -curvature; algorithms; complexity; differential equations

Software:

[Jordan](#)

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References:

- [1] T. Arai. Mathematical Logic. Iwanami Shoten, 2011. (in Japanese).
- [2] A. Church. A note on the Entscheidungsproblem. Journal of Symbolic Logic, 1:40–41, 1936. · [Zbl 62.1058.04](#)
- [3] G. E. Collins. Quantifier elimination for real closed fields by cylindrical algebraic decomposition. In Automata Theory and Formal Languages 2nd GI Conference Kaiserslautern, volume 33 of Lecture Notes in Computer Science, pages 134–183. Springer-Verlag, 1975.
- [4] K. Gödel. Über formal unentscheidbare Sätze der Principia Mathematica und verwandter Systeme I. Monatshefte für Mathematik, 38(1):173–198, 1931. · [Zbl 57.0054.02](#)
- [5] T. C. Hales. The Jordan curve theorem, formally and informally. The American Mathematical Monthly, 114(10):882–894, 2007. · [Zbl 1137.03305](#)
- [6] H. Iwane, H. Yanami, H. Anai, and K. Yokoyama. An effective implementation of symbolic-numeric cylindrical algebraic decomposition for quantifier elimination. Theoretical Computer Science, 479:43–69, 2013. · [Zbl 1291.68433](#)
- [7] T. Matsuzaki, H. Iwane, H. Anai, and N. Arai. The complexity of math problems linguistic, or computational? In Proceedings of the Sixth International Joint Conference on Natural Language Processing, pages 73–81, 2013.
- [8] T. Matsuzaki, H. Iwane, H. Anai, and N. H. Arai. The most uncreative examinee: a first step toward wide coverage natural language math problem solving. In Proceedings of the 28th AAAI Conference on Artificial Intelligence, 2014. (to appear).
- [9] J. Robinson. Decidability and decision problems in arithmetic. The Journal of Symbolic Logic, 14(2):98–114, 1949. · [Zbl 0034.00801](#)
- [10] M. Steedman. The Syntactic Process. Bradford Books. MIT Press, 2001.
- [11] A. W. Strzeboński. Cylindrical algebraic decomposition using validated numerics. Journal of Symbolic Computation, 41(9):1021–1038, 2006. · [Zbl 1124.68123](#)
- [12] A. Tarski. A Decision Method for Elementary Algebra and Geometry. University of California Press, Berkeley, 1951. · [Zbl 0044.25102](#)
- [13] A. Turing. On computable numbers, with an application to the Entscheidungsproblem. Proceedings of the London Mathematical Society, 42:230–265, 1936. · [Zbl 0016.09701](#)
- [14] A. N. Whitehead and B. A. W. Russell. Principia Mathematica. Cambridge Univ. Press, Cambridge, 1910, 1912, and 1913.
- [15] L. Wittgenstein. Philosophical Investigations / Philosophische Untersuchungen. Oxford: Basil Blackwell, 1953. · [Zbl 1028.03003](#)

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