

**Название публикации:**

Beyond the First Class of Analytic Complexity

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**Аннотация:**

WeĀ investigate the notion of analytic complexity of aĀ bivariate holomorphic function by means of computer algebra tools. AnĀ estimate from below on the number of terms in the differential polynomials defining classes of analytic complexity is established. WeĀ provide anĀ algorithm which allows one to explicitly compute the differential membership criteria for certain families of bivariate analytic functions in the second complexity class. The presented algorithm is implemented in the computer algebra system SingularĀ 4-1-1. © 2018, Springer Nature Switzerland AG.

**Ключевые слова:**

Analytic complexity, Differential polynomial, Differentially algebraic function