ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

14. Mathematical Aspects of Computer Science

1991 MS Classification: 14, 68
Volcheck, Emil

Computing with Algebraic Curves: a survey of recent results

In the past few years, steady progress has been made on developing algorithms for computing with algebraic curves. We will survey work and state recent results on the problems of (1) addition in the Jacobian of a plane algebraic curve, (2) testing torsion divisors for symbolic integration of algebraic functions, (3) computing the dual of a plane algebraic curve, and (4) computing the Weierstrass points and associated gap sequences of a plane algebraic curve.

Ref. Emil Volcheck, On computing the dual of a plane algebraic curve, in Proceedings of the 1997 International Symposium on Symbolic and Algebraic Computation (ISSAC '97), ACM, 1997.

Mark Heiligman and Emil Volcheck, On computing the Weierstrass points of a plane algebraic curve (manuscript under review).