ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

13. Combinatorics

1991 MS Classification: 5, 13, 14

Campillo, A. & Revilla, M. A., Universidad de Valladolid, Spain

Computing equations of monomial projective curves

Projective monomial curves are images X of mappings $\mathbb{P}^1 \to \mathbb{P}^n$ defined by monomial equations. The defininig ideal homogeneous polynomials vanishing on X can be classically computed by elimination theory using Gröbner basis. Since Gröbner basis algorithm has a big complexity, one searchs for alternative quicker algorithms. New methods to describe equations (and syzygies) for monomial varieties are given recently by Sturmfelds, Peeva, Bayer, Campillo and Gimenez. We present quick algorithms for monomial projective curves based on above methods.