
STEPHEN WATT, University of Waterloo
Toward Gröbner Bases of Symbolic Polynomials

We consider "symbolic polynomials" that generalize the usual polynomials by allowing multivariate integer valued polynomials as exponents. Earlier we have shown how to compute GCDs, factorizations and functional decomposition of these objects. The present work asks whether it is meaningful to compute Gröbner bases of sets of symbolic polynomials, and, if so, how do these "symbolic" Gröbner bases relate to the usual Gröbner bases when the exponents are specialized.