

COLLOQUIUM

DEPARTMENT OF MATHEMATICS AND STATISTICS
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Factorizing and Decomposing Ore Polynomials

Abstract: We present algorithms for computing factorizations and least common left multiple decompositions of skew (Ore) polynomials over $F_q(t)$, for a prime power $q = p^u$. Our algorithms are effective in $F_q(t)[x; \sigma, \delta]$, for any automorphism σ and σ -derivation δ of $F_q(t)$. On input f in $F_q(t)[x; \sigma, \delta]$, the algorithms run in time polynomial in $\deg_x(f)$, $\deg_t(f)$, p , and u .

364 Science and Engineering Building
Wednesday, April 6, 2005
2:00–3:00 p.m.

(Refreshments at 1:30 p.m. in Room 368, Science and Engineering Building)

Yang Zhang received his Ph.D. in applied mathematics from the University of Western Ontario in 2004. He is a candidate for an assistant professorship at Oakland University.