
YUQUN CHEN, School of Mathematical Sciences, South China Normal University, Guangzhou 510631, China
Gröbner-Shirshov bases for semirings

We establish Gröbner-Shirshov bases theory for semirings and commutative semirings. As applications, we obtain Gröbner-Shirshov bases and A. Blass's (1995) and M. Fiore–T. Leinster's (2004) normal forms of the semirings $\mathbb{N}[x]/(x = 1 + x + x^2)$ and $\mathbb{N}[x]/(x = 1 + x^2)$, correspondingly. This is a joint work with L.A. Bokut and Qihui Mo.