1043-14-48   **Stéphane Vénéreau*** (`stephane.venereau@unibas.ch`), Mathematisches Institut, Rheinsprung 21, CH-4051 Basel, Switzerland. *Relations between the Leading Terms of a Polynomial Automorphism.*

We are interested in the ideal of polynomials $p \in \mathbb{C}[x_1, \cdots, x_n]$ such that $p(\bar{f}_1, \cdots, \bar{f}_n) = 0$ where $(f_1, \cdots, f_n)$ defines an automorphism of $\mathbb{C}^n$ and the $\bar{f}_i$'s are the leading terms. Two general results about this ideal allow us to give a complete description of all possible relations in dimension three, at least when the ideal is principal. (Received August 11, 2008)