1046-17-1045 **Andre G. Leroy*** (leroy@euler.univ-artois.fr), Faculté Jean Perrin, 23 Rue Jean Souvraz, 62307 Lens, France. *Quasi-duo skew polynomial rings and graded rings.*

This is a joint work with J. Matczuk and E. Puczylowski (Warsaw university).

Quasi-duo $\mathbb{Z}$-graded rings are described. These results are then applied to get characterizations of quasi-duo skew polynomial rings and skew Laurent polynomial rings.

Let R be a $\mathbb{Z}$-graded ring. Recall that $R = \bigoplus_{n\in\mathbb{Z}} R_n$, the direct sum of additive subgroups R_n, with $R_nR_m \subseteq R_{n+m}$ for all $n, m \in \mathbb{Z}$. We denote by $\mathcal{A}$ the set of all maximal right ideals M of R such that $R_n \not\subseteq M$, for some $0 \neq n \in \mathbb{Z}$. Set $A(R) = \bigcap_{M\in\mathcal{A}} M$.

Theorem: A $\mathbb{Z}$-graded ring R is quasi-duo if and only if R_0 is quasi-duo and $R/A(R)$ is a commutative ring.

We apply this result to obtain a characterization of right (left) quasi-duo skew polynomial rings of endomorphism type and skew Laurent polynomial rings. (Received September 14, 2008)