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Esser, P. (B-LIEG)

Sur la réduction de fonctions analytiques qui ne sont pas en involution. (French) [Reduction of analytic functions which are not in involution]

Bull. Soc. Math. Belg. Sér. B **40** (1988), *no. 1,* 73–79.

The following theorem is proved: Near $\rho \in T^*\mathbf{R}^n$ let f and g be real analytic functions such that $f(\rho) = g(\rho) = 0$, $\{f, g\}(\rho) > 0$, where $\{\cdots\}$ denotes the Poisson bracket; for all $a, b > 0$ such that $a + b = 1$, there is a unique function $\varphi > 0$, analytic at ρ, such that $\{f\varphi^a, g\varphi^b\} = 1$ near ρ. That theorem extends a result of Kawai and Kashiwara and is similar to a theorem of Hörmander applied to C^∞ functions. It makes possible the microlocal study of the singularities of the solutions of analytic differential operators whose principal symbol is $ep_1^k p_2^l$, where $e(\rho) \neq 0$, $p_1(\rho) = p_2(\rho) = 0$, $\{p_1, p_2\}(\rho) \neq 0$.

Reviewed by *Jean Leray*