

Weyl-Moyal multiplication formula

Let V be $2n$ -dimensional symplectic vector space. Then for arbitrary two (smooth) functions on V

$$(f * g)(x) = \exp \left[\frac{1}{\nu} w^{ij} \frac{\partial}{\partial x} \frac{\partial}{\partial y} \right] f(x) g(y) \Big|_{x=y}.$$

This is famous Weyl formula for multiplication of Weyl symbols. This was the first formula that Sasha explained me yesterday when he began to give me the course on Fedosov quantisation