

Seminarankündigung

Deformationsquantisierung

Am 17. 11. 2020 spricht um 15 Uhr c.t.

<https://bbb.durates.net/b/ste-2va-uez>

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Drinfel'd twists and Rankin-Cohen brackets

Rankin-Cohen brackets are bidifferential operators on modular forms. Certain formal superpositions of these operators have been shown to define associative products on the algebra of modular forms [Eholzer, Cohen-Manin-Zagier, Connes-Moscovici]. I'll present a result which asserts that the associative superpositions of Rankin-Cohen brackets coincide with the formal star products on the plane that are invariant under the linear action of $SL(2, \mathbb{R})$. Within this context, Eholzer's product equals Moyal's product. I'll give an explicit formula for each of these star products in terms of an integral kernel. This result has the same flavour as El Gradechi's Lie theoretical approach to Rankin-Cohen brackets. All this is a simple application to the special case of the Lie algebra of the affine Lie group " $ax + b$ " of a method - which I call the "retract method"- that explicitly constructs the intertwiners between formal Drinfel'd twists sharing a common symmetry.

gez. Stefan Waldmann