



Seminar/Talk

Weyl calculus with respect to the Gaussian measure and L_p - L_q boundedness of the Ornstein-Uhlenbeck semigroup in complex time

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Host: Jan Maas

We introduce a Weyl functional calculus for the Ornstein-Uhlenbeck operator $L = -\Delta + x \cdot \nabla$, and give a simple criterion for L_p - L_q boundedness of operators in this functional calculus. It allows us to recover, unify, and extend, old and new results concerning the boundedness of $\exp(-zL)$ as an operator from $L_p(\mathbb{R}^d, \gamma_\alpha)$ to $L_q(\mathbb{R}^d, \gamma_\beta)$ for suitable values of z with $\operatorname{Re} z > 0$ and $\alpha, \beta > 0$. Here, γ_τ denotes the centred Gaussian measure on \mathbb{R}^d with density $(2\pi\tau)^{-d/2} \exp(-|x|^2/2\tau)$.

Thursday, June 1, 2017 04:00pm - 06:00pm

Seminar room Big Ground floor / Office Bldg West (I21.EG.101)



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