Jan van Neerven
(Technische Universiteit Delft)

On the Hodge-Dirac operator associated with a class of non-symmetric
Ornstein-Uhlenbeck operators

We study the Hodge-Dirac operators $D$ associated with a class of non-symmetric
Ornstein-Uhlenbeck operators $L$ in infinite dimensions. For $p \in (1, \infty)$ we prove
that $iD$ generates a $C_0$-group in $L^p$ with respect to the invariant measure if and
only if $p = 2$ and $L$ is self-adjoint. An explicit representation of this $C_0$-group in
$L^2$ is given and we prove that it has finite speed of propagation. As an application
we show how to derive from this $L^2$ off-diagonal estimates for various operators
associated with $L$, both in the self-adjoint and the non-self-adjoint case. This is
joint work with Pierre Portal.