

Bounded holomorphic functional calculus for nonsymmetric Ornstein-Uhlenbeck operators

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Abstract. We study bounded holomorphic functional calculus for nonsymmetric infinite dimensional Ornstein-Uhlenbeck operators \mathcal{L} . We prove that if $-\mathcal{L}$ generates an analytic semigroup on $L^2(\gamma_\infty)$, then \mathcal{L} has bounded holomorphic functional calculus on $L^r(\gamma_\infty)$, $1 < r < \infty$, in any sector of angle $\vartheta > \vartheta_r^*$, where γ_∞ is the associated invariant measure and ϑ_r^* the sectoriality angle of \mathcal{L} on $L^r(\gamma_\infty)$. The angle ϑ_r^* is optimal. In particular our result applies to any non-degenerate finite dimensional Ornstein-Uhlenbeck operator, with dimension-free estimates.

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