


复旦大学数学科学学院
数学综合报告会

报告题目：Weak type (1, 1) for a normal Ornstein-Uhlenbeck semigroup

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时间：2017-10-18 星期三 10:00-11:00

地点：光华东主楼 1801

摘要：The Ornstein-Uhlenbeck operator in Rn is linear and elliptic with constant second-order coefficients. But the first-order coefficients are linear in the coordinates and such that they cause a drift inwards. This operator generates a semigroup, and we study the corresponding maximal operator. The relevant measure here is a gaussian measure, which replaces

Lebesgue measure.

Assuming only that the semigroup is normal, i.e., commutes with its adjoint, we prove that the maximal operator is of weak type (1, 1) for the gaussian measure. This extends earlier results by several authors. The first step in the proof is a transformation of variables which gives the semigroup a reasonable, explicit expression.

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