

23(5)

On Supercontractivity for Markov Semigroups

毛永华

北京师范大学数学科学学院

收稿日期 2004-9-22 修回日期 网络版发布日期 2007-3-28 接受日期 2005-3-29

摘要

关键词 [Markov semigroup](#) [logarithmic Sobolev inequality](#) [supercontractivity](#) [compact embedding](#)

分类号

On Supercontractivity for Markov Semigroups

Yong Hua MAO

Department of Mathematics, Beijing Normal University, Beijing 100875, P. R. China

Abstract In this paper, we study the supercontractivity for Markov semigroups and obtain some sufficient and necessary conditions; especially explicit formulae are obtained for birth-death process and diffusion on the line. Sufficient conditions and necessary conditions in terms of isoperimetric inequalities are also presented. Moreover, we prove that the supercontractivity is equivalent to the compact embedding of Sobolev space into an Orlicz space.

Key words [Markov semigroup](#) [logarithmic Sobolev inequality](#) [supercontractivity](#) [compact embedding](#)

DOI:

通讯作者 毛永华 maoyh@bnu.edu.cn

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ 本刊中 包含 "[Markov semigroup](#)" 的 [相关文章](#)
- ▶ 本文作者相关文章
- [毛永华](#)