



Exit Problems for Lévy and Markov Processes with One-Sided Jumps and Related Topics

Guest Editor:

Prof. Dr. Florin Avram

Laboratoire de Mathématiques
Appliquées, Université de Pau,
64000 Pau, France

Deadline for manuscript
submissions:

closed (30 September 2019)

Message from the Guest Editor

It has long been well-known that exit problems for one-dimensional Lévy processes are easier when there are jumps in one direction only. In the last few years, this intuition became more precise: a great variety of identities for exit problems of spectrally-negative Lévy processes may be ergonomically expressed in terms of two “ q -harmonic functions” (or scale functions, or positive martingales) W and Z . The proofs typically require not much more than the strong Markov property and hold in principle for the wider class of spectrally-negative strong Markov processes.

Motivated by these considerations, this Special Issue aims to review and push further the state-of-the-art on the following topics:

- W , Z formulas for exit problems of the Lévy and diffusion classes (including drawdown problems)
- W , Z formulas for quasi-stationary distributions
- Asymptotic results
- Extensions to random walks, Markov additive processes, Omega models, processes with Parisian reflection or absorption, processes with state-dependent drift, etc.
- Optimal stopping, dividends, real options, etc
- Numeric computation of the scale functions





risks



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Steven Haberman

Faculty of Actuarial Science and Insurance, Bayes Business School, City University of London, 106 Bunhill Row, London EC1Y 8TZ, UK

Message from the Editor-in-Chief

Risks is published in Open Access format – research articles, reviews and other content are released on the internet immediately after acceptance. Specifically, *Risks* welcomes contributions that

- contribute with insight, outlook, understanding and overview, no matter how simple they are;
- show creativity in pedagogical tricks and techniques;
- help the transfer of theoretical research to public and private application;
- show responsibility for societal impact.

The scientific community and the general public have unlimited free access to the content as soon as it is published.

Author Benefits

Open Access: free for readers, with **article processing charges (APC)** paid by authors or their institutions.

High visibility: indexed within **Scopus, ESCI (Web of Science), EconLit, EconBiz, RePEc,** and **other databases.**

Journal Rank: JCR - Q2 (*Business, Finance*) / CiteScore - Q1 (Economics, Econometrics and Finance (miscellaneous))

Contact Us

Risks Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/risks
risks@mdpi.com
[X@Risks_MDPI](https://twitter.com/Risks_MDPI)