



Uniform moment bounds of multi-dimensional functions of discrete-time stochastic processes

Arnab Ganguly, Debasish Chatterjee, John Lygeros, Heinz Koepl

(Submitted on 24 Jul 2011)

We establish conditions for uniform r -th moment bound of certain \mathbb{R}^d -valued functions of a discrete-time stochastic process taking values in a general metric space. The conditions include an appropriate negative drift together with a uniform L_p bound on the jumps of the process for $p > r + 1$. Applications of the result are given in connection to iterated function systems and biochemical reaction networks.

Comments: 26 pages

Subjects: **Probability (math.PR)**

Cite as: **arXiv:1107.4749 [math.PR]**

(or **arXiv:1107.4749v1 [math.PR]** for this version)

Submission history

From: Arnab Ganguly [[view email](#)]

[v1] Sun, 24 Jul 2011 11:59:35 GMT (28kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.PR

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[math](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

