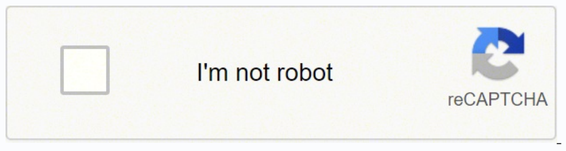

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Sato levy processes and infinitely divisible distributions pdf

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Basic examples 2. Characterization and existence 3. Stable processes and their extensions 4. The Levy-Ito decomposition of sample functions 5. Distributional properties of Levy processes 6. Subordination and density transformation 7.
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Log-infinitely divisible multifractal processes

E. Bacry[1] and J.F. Muzy[2]
[1] Centre de Mathematiques Appliquées, Ecole Polytechnique,
91128 Palaiseau Cedex, France,
Email: emmanuel.bacry@cpht.polytechnique.fr
[2] CNRS, UMR 6134, Université de Corse, Grossetti,
20250 Corte, France,
Email: muzy@univ-corse.fr
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Abstract

We define a large class of multifractal random measures and processes with arbitrary log-infinitely divisible exact or asymptotic scaling law. These processes generalize within a unified framework both the recently defined log-normal Multifractal Random Walk processes (MRW) [26, 3] and the log-Poisson "product of cylindrical pulses" [5]. Their construction involves the notion of "continuous stochastic multiplications" [29] from coarse to fine scales. They are obtained as limit processes when the finest scale goes to zero. We prove the existence of these limits and we study their main statistical properties including non degeneracy, convergence of the moments and multifractal scaling.

1 Introduction

Fractal objects and the related concept of scale-invariance, are now generally used in many fields of natural, information or social sciences. They have been involved in large amount of empirical, as well as theoretical studies concerning a wide variety of problems. The scale-invariance property of a stochastic process is usually quantified by the scaling exponents ζ_q associated with the power-law behavior of the order q moments of the "fluctuations" at different scales. More precisely, for a 1D random process[1] $X(t)$, let us consider the order q absolute moment of the "fluctuation" $\delta_\ell X(t)$ at scale ℓ:

$$m(q,\ell) = \mathbb{E}(|\delta_\ell X(t)|^q) \sim \ell^{\zeta_q}, \qquad (1)$$

where the "fluctuation" process $\delta_\ell X(t)$ is assumed to be stationary and $\mathbb{E}(.)$ stands for the mathematical expectation. Usually, the fluctuation $\delta_\ell X(t)$ is chosen to be the increment of $X(t)$ at time t and scale ℓ:

$$\delta_\ell X(t) = X(t+\ell) - X(t)$$

[1]We will exclusively consider, in this paper, real valued random functions of a 1D continuous "time" variable t. Though the extension to higher dimensions is rather natural, this problem will be addressed in a forthcoming study.

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Wiener-Hopf factorizations 10.
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On a relation between classical and free infinitely divisible transforms

Zbigniew J. Jurek (University of Wrocław)

June 28, 2017

Abstract. We study two ways (levels) of finding free-probability analogues of classical infinite divisible measures. More precisely, we identify their Voiculescu transforms. For free-selfdecomposable measures we found the formula (a differential equation) for their background driving transforms. We illustrate our methods on the hyperbolic characteristic functions. As a by-product our approach potentially may produce new formulas for definite integrals.

Mathematics Subject Classifications(2010): Primary 60E07, 60H05, 60Z11; Secondary 44A05, 60B10.

Key words and phrases: infinite divisibility; free-infinite divisibilty; convolution semigroups; characteristic function; Voiculescu transform; Lévy-Khintchine formulas; Lévy (spectral) measure; Riemann zeta functions; Euler function; digamma function.

Abbreviated title: Classical and free-infinite divisibility

Addresses:

Institute of Mathematics
University of Wrocław
Pl. Grunwaldzki 2/4
50-384 Wrocław
Poland
www.math.uni.wroc.pl/∼zjjurek ; e-mail: zjjurek@math.uni.wroc.pl

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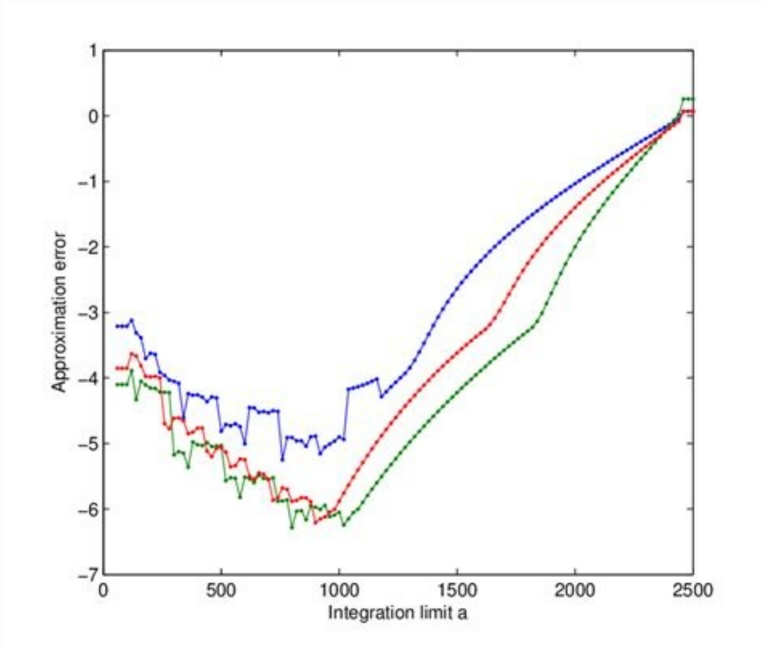

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Theoretical Probability, 26, 885-898. K. Sato (2013) Inversions of infinitely divisible distributions and conjugates of stochastic integral mappings, J. Theoretical Probability, 26, 901-931. 2012 M. Maejima, V. Pérez-Abreu, K. Sato (2012) A class of multivariate infinitely divisible distributions related to arcsine density, Bernoulli, Vol. 18, No. 2, 476-495. 2011 K. Sato (2011) Description of limits of ranges of iterations of stochastic integral mappings of infinitely divisible distributions, ALEA Latin American Journal of Probability and Mathematical Statistics, 8, 1-17. K. Sato (2011) Stochastic integrals with respect to Lévy processes and infinitely divisible distributions, Sûgaku, 63, No. 2, 17-37 (in Japanese). A.
Lindner, K. Sato (2011) Properties of stationary distributions of a sequence of generalized Ornstein-Uhlenbeck processes, Math. Nachr., 284, 2225-2248.
(PDF) 2010 K. Sato (2010) Fractional integrals and extensions of selfdecomposability, Lecture Notes in Math. (Springer), 2001, Lévy Matters I, 1-91. (PDF of manuscript) 2009 A. Lindner, K. Sato (2009) Continuity properties and infinite divisibility of stationary distributions of some generalized Ornstein-Uhlenbeck processes, Ann. Probab., 37, 250-274. (PDF) M.
Maejima, K. Sato (2009) The limits of nested subclasses of several classes of infinitely divisible distributions are identical with the closure of the class of stable distributions, Probab. Theory Related Fields, 145, 119-142. K. Sato (2009) Selfdecomposability and semi-selfdecomposability in subordination of cone-parameter convolution semigroups, Tokyo J. Math., 32, 81-90. (PDF of preprint) 2007 K. Sato (2007) Transformations of infinitely divisible distributions via improper stochastic integrals, ALEA Latin American Journal of Probability and Mathematical Statistics, 3, 67-110. 2006 O.
E. Barndorff-Nielsen, M. Maejima, K. Sato (2006) Some classes of multivariate infinitely divisible distributions admitting stochastic integral representations, Bernoulli, 12, 1-33. (PDF of preprint) K. Sato (2006) Two families of improper stochastic integrals with respect to Lévy processes, ALEA Latin American Journal of Probability and Mathematical Statistics, 1, 47-87. Corrigenda.
(PDF) K. Sato (2006) Additive processes and stochastic integrals, Illinois J. Math., 50 (Doob Volume), 825-851. K. Sato (2006) Monotonicity and non-monotonicity of domains of stochastic integral operators, Probab. Math. Statist. 26, 23-39. (PDF of preprint) O. E. Barndorff-Nielsen, M. Maejima, K. Sato (2006) Infinite divisibility for stochastic processes and time change, J. Theoretical Probability., 19, 411-446. (PDF of preprint) H. Kondo, M. Maejima, K. Sato (2006) Some properties of exponential integrals of Lévy processes and examples, Electronic Comm. Probab., 11, 291-303. ejpecp/ECP/index.php (PDF of preprint) 2005 J. Pedersen, K. Sato (2005) The class of distributions of periodic Ornstein-Uhlenbeck processes driven by Lévy processes, J. Theoretical Probability, 18, 209-235. K. Sato, T. Watanabe (2005) Last exit times for transient semistable processes, Ann. Inst.
Henri Poincaré, Probab. Statist., 41, 929-951. 2004 J. Pedersen, K. Sato (2004) Semigroups and processes with parameter in a cone, in: Abstract and Applied Analysis (ed. N. M. Chuong et al., World Scientific) 499-513. K.
Sato (2004) Stochastic integrals in additive processes and application to semi-Lévy processes, Osaka J. Math., 41, 211-236. J. Pedersen, K. Sato (2004) Relations between cone-parameter Lévy processes and convolution semigroups, J. Math. Soc. Japan, 56, 541-559. K. Sato, T. Watanabe (2004) Moments of last exit times for Lévy processes, Ann. Inst. Henri Poincaré, Probab. Statist., 40, 207-225.
2003 J. Pedersen, K. Sato (2003) Cone-parameter convolution semigroups and their subordination, Tokyo J. Math., 26, 503-525. M. Maejima, K. Sato (2003) Semi-Lévy processes, semi-selfsimilar additive processes, and semi-stationary Ornstein-Uhlenbeck type processes, J. Math. Kyoto Univ., 43, 609-639. 2001 O. E. Barndorff-Nielsen, J. Pedersen, K. Sato (2001) Multivariate subordination, self-decomposability and stability, Adv. Appl. Probab., 33, 160-187. K. Sato (2001) Subordination and self-decomposability, Stat. Probab. Letters, 54, 317-324. K. Sato (2001) Basic results on Lévy processes, in: Lévy Processes. Theory and Appliccations (ed. O. E. Barndorff-Nielsen et. al., Birkhäuser) 3-37. 2000 M. Maejima, K. Sato, T. Watanabe (2000) Distributions of selfsimilar and semi-selfsimilar processes with independent increments, Stat.
Probab. Letters, 47, 395-401. M. Maejima, K. Sato, T. Watanabe (2000) Completely operator semi-selfdecomposable distributions, Tokyo J. Math., 23, 235-253.
K. Sato, K. Yamamuro (2000) Recurrence-transience for self-similar additive processes associated with stable distributions, Acta Applicandae Mathematicae, 63, 375-384.
List of mathematical papers 1961 - 1999 Books K. Sato (1990) Kahou Katei (additive (or Lévy) processes), Kinokuniya, Tokyo (in Japanese). K. Sato (1999) Lévy Processes and Infinitely Divisible Distributions, Cambridge Studies in Advanced Mathematics 68, Cambridge University Press. xii+486 pages. Corrections and Changes (PDF). A. Rocha-Arteaga, K. Sato (2003) Topics in Infinitely Divisible Distributions and Lévy Processes, Aportaciones Mathemáticas, Investigación 17, Sociedad Matemática Mexicana. Corrigenda (PDF). O. E. Barndorff-Nielsen, K. Sato, edited (2004) K. Itô, Stochastic Processes, Lectures Given at Aarhus University, Springer. Corrigenda (PDF). K. Sato (2013) Lévy Processes and Infinitely Divisible Distributions. Revised edition, Paperback, Cambridge Studies in Advanced Mathematics 68, Cambridge University Press. xiv+ 521 pages. ISBN 978-1-107-65649-9 A. Rocha-Arteaga, K. Sato (2019) Topics in Infinitely Divisible Distributions and Lévy Processes, Revised Edition. SpringerBriefs in Probability and Mathematical Statistics. viii+135 pages. ISBN 978-3-030-22699-2. List of books (in preparation) Lecture Notes K.
Sato (1985) Lectures on Multivariate Infinitely Divisible Distributions and Operator-Stable Processes, Technical Report Series, Lab. Res. Statist. Probab. Carleton Univ. and Univ. Ottawa, No. 54, Ottawa.
K. Sato (1995) Lévy Processes on the Euclidean Spaces, Lecture Notes, Institute of Mathematics, University of Zurich. K. Sato (2000) Density Transformation in Lévy Processes, MaPhySto, Aarhus, Denmark, Lecture Notes 7.
List of lecture notes and mimeographed notes (in preparation) Selected Miscellaneous Writings K. Sato (1994) Banach lattices, potential operators, population-genetic models, L distributions, and Lévy processes (in Japanese). 14 pages. (PDF) K. Sato (2001) Lebesgue decomposition between two path space measures induced by Lévy processes, Institute of Statistical Mathematics, Cooperative Res. Rep. 137, 1-10.
(PDF) K. Sato (2002) On a theorem on Lévy processes, Institute of Statistical Mathematics, Cooperative Res. Rep.
146, 33-37. (PDF) K. Sato (2005) Remarks on Pólya's theorem on characteristic functions, Institute of Statistical Mathematics, Cooperative Res. Rep. 175, 133-145. (PDF) Memo November 29, 2007, from KS. (PDF) Memo December 5, 2007, from KS. (PDF) Memo December 15, 2007, from KS. (PDF) Memo January 28, 2008, from KS.
(PDF) K. Sato (2009) Comments on the book "Lévy Processes and Infinitely Divisible Distributions", I (PDF) K. Sato (2009) Distributional properties of stochastic integrals of Lévy processes -- infinite divisible or not, absolutely continuous or not, Extended abstract of special talk, March 26, 2009, Mathematical Society of Japan, 18 pages (in Japanese). (PDF) Supplement to 9, 3 pages (in Japanese). (PDF) K. Sato (translated in 2020 from the writing in 1994) Banach lattices, potential operators, population-genetic models, L distributions, and Lévy processes. (PDF) K. Sato (2020) Reminiscences, Revised version of the article that appeared in Cooperative Research Report 434 (March 2020) Institute of Statistical Mathematics, Tachikawa, Tokyo, Japan, pp.
87-101. (PDF) K. Sato (2021) Remembering Kunita-san, Journal of Stochastic Analysis: Vol. 2 : No. 3 , Article 6. Available at: List (in preparation) Coauthors Ole E. Barndorff-Nielsen (2001 - 06), Gyeong Suck Choi (1995 - 96), Masatoshi Fukushima (1963 - 65, 1991), Karl Gustafson (1969), Nobuyuki Ikeda (1960 - 64), Hitoshi Kondo (2006), Hiroshi Kunita (1965), Alexander Lindner (2007 -), Makoto Maejima (1999 - 2013), Minoru Motoo (1965 - 67), Masao Nagasawa (1962 - 64), Jan Pedersen (2001 - 05), Víctor Pérez-Abreu (2008 - 2013), Alfonso Rocha-Arteaga (2001 - 03, 2017 -), Fred W. Steutel (1998), Hiroshi Tanaka (1960 - 62), Setsuo Taniguchi (1991), Yohei Ueda (2011 - 2013), Tadashi Ueno (1960 - 65), Toshiro Watanabe (1994 - 2005), Koji Yamamuro (1996 - 98), Makoto Yamazato (1978 - 1994) Short Biography Born June 1934, in Tokyo 1953 - 1958: Undergraduate student, University of Tokyo 1958 - 1960: Graduate student in mathematics, University of Tokyo. Master of Science. Advisor was Kôsaku Yosida 1960 - 1965: Assistant and lecturer, Department of Mathematics, Tokyo Metropolitan University 1965: Doctor of Science, University of Tokyo 1965 - 1976: Associate professor, Tokyo University of Education. Probability group together with G. Maruyama, M. Motoo, and M. Fukushima 1976 - 1983: Associate professor and professor, Department of Mathematics, College of Liberal Arts, Kanazawa University 1983 - 1996: Professor, College of General Education and School of Informatics and Sciences, Nagoya University 1996: Professor Emeritus, Nagoya University 2008: Analysis Prize from Mathematical Society of Japan for the study of Lévy processes and infinitely divisible distributions Visiting University of Minnesota (Aug. 1967 - Aug. 1968 and Sept. 1975-June 1976), University of Illinois (Sept. 1968 - June 1969), Carleton University (July 1981 - Apr. 1982), University of Zurich (Apr. - June 1995) Editorship: 1982 - 1989 Member of Editorial Board, Zeitschrift für Wahrscheinlichkeitstheorie und verwandte Gebiete and Probability Theory and Related Fields Short Courses: MaPhySto Aarhus (Jan. 2000), CIMAT Guanajuato (Jan. 2001) Past Research Interest Markov processes. Boundary problems Markov processes. (Recurrent) potential operators Banach lattices. Abstract maximum principle Potential operators Markov chain models in population genetics Convergence of population-genetical models to diffusions Last Modified: November 14, 2021