References

[1] Y.S.Kim, S.Rachev, M.S.Bianchi, F.J.Fabozzi. Computing var and avar in infinitely divisible distributions. *Probability and Mathematical Statistics*, 30(2), 2010.

- [2] A. Herbertsson. Default contagion in large homogeneous portfolios. No 272, Working Papers in Economics from GÃČÂűteborg University, Department of Economics, 2008.
- [3] A Tree-based Method to price American Options in the Heston Model. Vellekoop, m.h. and nieuwenhuis, j.w. *Journal of Computational Finance*, to appear, 2009.
- [4] A.Ahdida A.Alfonsi. A mean-reverting sde on correlation matrices. *Preprint*.
- [5] A.Alfonsi. A second-order discretization scheme for the cir process: application to the heston model. *Preprint CERMICS hal-00143723*.
- [6] H. NIEDERREITER A.B.OWEN and J.SHIUE Editors. *Randomly permuted* (t,m,s)-Nets and (t,s)-sequences. in "Montecarlo and Quasi Montecarlo methods in Scientific Computing". Springer, New York, 1995.
- [7] A.Brace M.Musiela E.Schogl. A simulation algorithm based on measure relationship in the lognormal market models. *Working Paper*, 1998.
- [8] M.Mnif A.B.Zeghal. Optimal multiple stopping and valuation of swing options in levy models. *Int. J. Theor. and Appl. Finance*, 9(8):1267–1297, 2006.
- [9] L.CLEWLOW A.CARVEHILL. On the simulation of contingent claims. *Journal of Derivatives*, pages 66–73, Winter 1994.
- [10] H.GEMAN A.EYDELAND. Domino effects: inverting the laplace transform. *RISKAvril*, 1995.
- [11] A.Kawai. Analytical and monte carlo swaptions pricing under the forward swap measure. *Journal of Computational Finance*, 6-1:101–111, 2002.
- [12] A.Kohatsu Higa P.Tankov. Jump-adapted discretization schemes for levy-driven sdes. *To appear in Stochastic Processes and their Applications*, 2011.

[13] A.Kolodko J.Schoenmakers. Iterative construction of optimal bermudan stopping time. *Finance & Stochastics*, 10:27–49, 2006.

- [14] Arthur Albert. Regression and the Moore-Penrose Pseudoinverse. Academic Press, 1972.
- [15] H. Albrecher. The valuation of Asian options for market models of exponential Lévy type. In *Proceedings of the 2nd Actuarial and Financial Mathematics Day*, pages 11–20. 2004.
- [16] H. Albrecher and W. Schoutens. Static hedging of Asian options under stochastic volatility models using fast Fourier transform. In A. Kyprianou, W. Schoutens, and P. Wilmott, editors, *Exotic option pricing* and advanced Lévy models, pages 129–147. Wiley, 2005.
- [17] Hansjörg Albrecher, Jan Dhaene, Michael Goovaerts, and Wim Schoutens. Static hedging of Asian options under Lévy models: the comonotonicity approach. *J. Derivatives*, 12:63–72, 2005.
- [18] Hansjörg Albrecher and Martin Predota. Bounds and approximations for discrete Asian options in a variance-gamma model. *Grazer Math. Ber.*, 345:35–57, 2002.
- [19] Hansjörg Albrecher and Martin Predota. On Asian option pricing for NIG Lévy processes. J. Comput. Appl. Math., 172:153–168, 2004.
- [20] A.Li P.Ritchken L.Sankarasubramanian. Lattice methods for pricing american interest rate claims. *The Journal of Finance*, 50:719–737, 1995.
- [21] L. Alili and A. E. Kyprianou. Some remarks on first passage of Lévy process, the American put and pasting principles. Ann. Appl. Probab., 15:2062–2080, 2005.
- [22] A. Almendral. Numerical valuation of American options under the CGMY process. In Andreas Kyprianou, Wim Schoutens, and Paul Wilmott, editors, *Exotic option pricing and advanced Lévy models*, pages 259–276. Wiley, 2005.
- [23] G.Fusai A.Meucci. Discretely monitored asian options under lÅČÄľvy processes. J. Banking Finan., 2008.
- [24] L. Andersen and R. Brotherton-Ratcliffe. Extended LIBOR market models with stochastic volatility. *J. Comput. Finance*, 9:1–40, 2005.

[25] Jesper Andreasen. The pricing of discretely sampled Asian and lookback options: a change of numeraire approach. *J. Comput. Finance*, 2(1):5–30, 1998.

- [26] S. Ankirchner. Monotone utility convergence. J. Appl. Probab., 43:622–633, 2006.
- [27] S. Ankirchner, S. Dereich, and P. Imkeller. Enlargement of filtrations and continuous Girsanov-type embeddings. In C. Donati-Martin, M Émery, A. Rouault, and C. Stricker, editors, Séminaire de Probabilités XL, pages 389–410. Springer, 2007.
- [28] S. Antonelli, F. Scarlatti. Pricing options under stochastic volatility: a power series approach. *Finance Stoch.*, 13:269–303, 2009.
- [29] I.A. ANTONOV and V.M. SALEEV. An economic method of computing lp_{τ} -sequences. USSR Comput. Maths. Math. Phys, 19:252–256, 1980.
- [30] A.PELSSER-T.VORST. The binomial model and the greeks. *The Journal Of Derivatives*, Spring:45–49, 1994.
- [31] D. Applebaum. Lévy Processes and Stochastic Calculus. Cambridge University Press, 2004.
- [32] D. Applebaum. Lévy Processes and Stochastic Calculus. Cambridge University Press, 2nd edition, 2009.
- [33] S.Crepey A.Rahal. Pricing convertible bonds with call protection. Journal of Computational Finance, to appear, 2011.
- [34] A.Sepp. Pricing european-style options under jump diffusion processes with stochastic volatility: Applications of fourier transform. *Proceedings of the 7th Tartu Conference on Multivariate Statistics*, 2004.
- [35] A.Sepp. Pricing options on realized variance in the heston model with jumps in returns and volatility. *Journal of Computational Finance*, 11-4, 2008.
- [36] S. Asmussen and P. W. Glynn. Stochastic Simulation: Algorithms and Analysis. Springer, 2007.
- [37] S. Asmussen, D. Madan, and M. Pistorius. Pricing equity default swaps under an approximation to the CGMY Lévy model. *J. Comput. Finance*, 11:79–93, 2007.

[38] Sø ren Asmussen, Florin Avram, and Martijn R. Pistorius. Russian and American put options under exponential phase-type Lévy models. *Stochastic Process. Appl.*, 109:79–111, 2004.

- [39] G.FUSAI A.TAGLIANI. Accurate valuation of asian options using moments. *International Journal Of Theoretical and Applied Finance*, 2.
- [40] Mukarram Attari. Option Pricing Using Fourier Transforms: A Numerically Efficient Simplification. SSRN eLibrary, 2004.
- [41] B.Lapeyre A.Turki. SIAM J. Financial Math. to appear, 1, 2012.
- [42] A.Van Haastrect A.Pelsser. Efficient, almost exact simulation of the heston stochastic volatility model. *Preprint*, 2008.
- [43] Florin Avram, Andreas Kyprianou, and Martijn R. Pistorius. Exit problems for spectrally negative Lévy processes and applications to (Canadized) Russian options. *Ann. Appl. Probab.*, 14:215–238, 2004.
- [44] J.HULL A.WHITE. The pricing of options on assets with stochastics volatility. *J. Of Finance*, 42:281–300, 1987.
- [45] J.HULL A.WHITE. The use of the control variate technique in option pricing. *J.Of Finance and Quantitative Analysis*, 23:237–251, 1988.
- [46] J.HULL A.WHITE. Efficient procedures for valuing european and american path-dependent options. *The Journal of Derivatives*, 1:21–31, 1993.
- [47] A.ERN S.VILLENEUVE A.ZANETTE. Adaptive finite element methods for local volatility european option pricing. *International Journal of Theoretical and Applied Finance*, 7(6), 2004.
- [48] O.Kudrayavtsev A.Zanette. Efficient pricing of swing options in lévy-driven models. *preprint*.
- [49] S.VILLENEUVE A.ZANETTE. Parabolic A.D.I. methods for pricing american option on two stocks. *Mathematics of Operations Research*, pages 121–151, Feb 2002.
- [50] Etore P. Jourdain B. Adaptive optimal allocation in stratified sampling methods. *Preprint Cermics hal-00192540*, pages 1–25.

[51] D. Backus, S. Foresi, and L. Wu. Accounting for biases in Black-Scholes. SSRN/585623, 2004.

- [52] M. Barchmann. Portfolio theory with jump processes. Diploma thesis, TU Dresden, 2009.
- [53] O. E. Barndorff-Nielsen. Exponentially decreasing distributions for the logarithm of particle size. *Proc. R. Soc. Lond. A*, 353:401–419, 1977.
- [54] O. E. Barndorff-Nielsen. Normal inverse Gaussian distributions and stochastic volatility modelling. *Scand. J. Statist.*, 24:1–13, 1997.
- [55] O. E. Barndorff-Nielsen. Processes of normal inverse Gaussian type. *Finance Stoch.*, 2:41–68, 1998.
- [56] O. E. Barndorff-Nielsen and C. Halgreen. Infinite divisibility of the hyperbolic and generalized inverse gaussian distributions. *Z. Wahrscheinlichkeitstheorie verw. Geb.*, 38:309–312, 1977.
- [57] O. E. Barndorff-Nielsen, T. Mikosch, and S. Resnick, editors. *Lévy Processes: Theory and Applications*. Birkhäuser, 2001.
- [58] O. E. Barndorff-Nielsen and K. Prause. Apparent scaling. *Finance Stoch.*, 5:103–113, 2001.
- [59] O. E. Barndorff-Nielsen and N. Shephard. Non-Gaussian Ornstein– Uhlenbeck-based models and some of their uses in financial economics. J. Roy. Statist. Soc. Ser. B, 63:167–241, 2001.
- [60] O. E. Barndorff-Nielsen and N. Shephard. Non-Gaussian Ornstein-Uhlenbeck based models and some of their uses in financial econometrics. J. R. Statistic. Soc. B, 63:167–241, 2001.
- [61] Ole Barndorff-Nielsen and Neil Shephard. Non-gaussian ornstein—uhlenbeck-based models and some of their uses in financial economics. *Journal of the Royal Statistical Society*, 63(2):167–241, 2001.
- [62] Ole E. Barndorff-Nielsen and Neil Shephard. Non-Gaussian Ornstein-Uhlenbeck-based models and some of their uses in financial economics. J. R. Stat. Soc. Ser. B Stat. Methodol., 63(2):167–241, 2001.
- [63] G. Barone-Adesi and R. E. Whaley. Efficient analytic approximation of American option values. *J. Finance*, 42:301–320, 1987.

[64] B.Arouna. Variance reduction and robbind-monro algorithm. Technical report, Cermics, 2002.

- [65] B.Arouna. Robbind-monro algorithm and variance reduction. *Journal of Computational Finance*, 7-2:335–362, 2003-04.
- [66] D. S. Bates. The skewness premium: option pricing under asymmetric processes. In P. Ritchken, P. P. Boyle, and G. Pennacchi, editors, Advances in Futures and Options Research, volume 9, pages 51–82. Elsevier, 1997.
- [67] David S. Bates. Jump and stochastic volatility: Exchange rate processes implict in deutche mark in options. *Review of Financial Studies*, 9:69–107, 1996.
- [68] B.Dupire. <pri>cing on a smile. Risk magazine, 7:18–20, 1994.
- [69] F. Bellini and M. Frittelli. On the existence of minimax martingale measures. *Math. Finance*, 12:1–21, 2002.
- [70] D. Belomestny, S. Mathew, and J. Schoenmakers. Multiple stochastic volatility extension of the LIBOR market model and its implementation. *Monte Carlo Methods Appl.*, 15:285–310, 2009.
- [71] D. Belomestny and M. Reiß. Optimal calibration for exponential Lévy models. WIAS Preprint No. 1017, 2005.
- [72] D. Belomestny and M. Reiß. Spectral calibration of exponential Lévy models. *Finance Stoch.*, 10:449–474, 2006.
- [73] D. Belomestny and J. Schoenmakers. A jump-diffusion LIBOR model and its robust calibration. *Quant. Finance*, 11:529–546, 2011.
- [74] Eric Benhamou. Fast Fourier transform for discrete Asian options. *J. Comput. Finance*, 6(1):49–68, 2002.
- [75] W. Benner, L. Zyapkov, and S. Jortzik. A multi-factor cross-currency LIBOR market model. *J. Derivatives*, 16:53–71, 2009.
- [76] H. Berestycki, J. Busca, and I. Florent. Computing the implied volatility in stochastic volatility models. Comm. Pure Appl. Math., 57:1352–1373, 2004.
- [77] J. Bertoin. Some elements on Lévy processes. In *Stochastic processes:* Theory and methods, volume 19 of Handbook of Statistics, pages 117–144, 2001.

- [78] Jean Bertoin. Lévy processes. Cambridge University Press, 1996.
- [79] A. Beskos, O. Papaspiliopoulos, and Gareth O. Roberts. Retrospective exact simulation of diffusion sample paths. *Bernoulli*, 12(6), December 2006.
- [80] A. Beskos, O. Papaspiliopoulos, Gareth O. Roberts, and Paul Fearnhead. Exact and computationally efficient likelihood-based estimation for discretely observed diffusion processes. to appear in the Journal of the Royal Statistical Society, Series B., 2007.
- [81] C. Beveridge. Very long-stepping in the spot measure of the LIBOR market model. Wilmott J., 2(6):289–299, 2010.
- [82] Philipp Beyer and Joerg Kienitz. Pricing Forward Start Options in Models Based on (Time-Changed) Levy Processes. *The Icfai University Journal of Derivatives Markets, Vol. VI, No. 2, pp. 7-23, April 2009*, 2008.
- [83] F. Biagini, Y. Bregman, and T. Meyer-Brandis. Pricing of catastrophe insurance options written on a loss index with reestimation. *Insurance Math. Econom.*, 43:214–222, 2008.
- [84] T. R. Bielecki and M. Rutkowski. *Credit Risk: Modeling, Valuation and Hedging.* Springer, 2002.
- [85] Nick H. Bingham. Fluctuation theory in continuous time. Adv. Appl. Probab., 7:705–766, 1975.
- [86] T. Björk. Arbitrage Theory in Continuous Time. Oxford University Press, 2nd edition, 2004.
- [87] T. Björk, G. Di Masi, Y. Kabanov, and W. Runggaldier. Towards a general theory of bond markets. *Finance Stoch.*, 1:141–174, 1997.
- [88] B.Jourdain A.Zanette. Moments and strike matching binomial algorithm for pricing american put options. *Decis. Econ. Finance*, (31), 2008.
- [89] F. Black. The pricing of commodity contracts. J. Financ. Econ., 3:167–179, 1976.
- [90] Fischer Black and Myron Scholes. The pricing of options and corporate liabilities. J. Polit. Econ., 81:637–654, 1973.

[91] P. Blæsild. The two-dimensional hyperbolic distribution and related distributions, with an application to Johannsen's bean data. *Biometrika*, 68:251–263, 1981.

- [92] B.LAPEYRE, A.SULEM, and D.TALAY. *Understanding Numerical Analysis for Financial Models*. Cambridge University Press, To appear.
- [93] P.JAILLET D.LAMBERTON B.LAPEYRE. Variational inequalities and the pricing of American options. *Acta Applicandae Mathematicae*, 21:263–289, 1990.
- [94] S. Bochner. Harmonic Analysis and the Theory of Probability. University of California Press, 1955.
- [95] B.OKSENDAL. An introduction to malliavin calculus with applications to economics. Working Paper 3/96, 96.
- [96] K. Borovkov and A. Novikov. On a new approach to calculating expectations for option pricing. *J. Appl. Probab.*, 39:889–895, 2002.
- [97] Svetlana I. Boyarchenko and Sergei Z. Levendorskii. Barrier options and touch-and-out options under regular Lévy processes of exponential type. *Ann. Appl. Probab.*, 12:1261–1298, 2002.
- [98] Svetlana I. Boyarchenko and Sergei Z. Levendorskii. Non-Gaussian Merton-Black-Scholes Theory. World Scientific, 2002.
- [99] Svetlana I. Boyarchenko and Sergei Z. Levendorskii. Perpetual American options under Lévy processes. SIAM J. Control Optim., 40:1663–1696, 2002.
- [100] E. BRAATEN and G. WELLER. An improved low-discrepancy sequence for multidimensional quasi-monte carlo integration. *Journal of Comput. Phys.*, (33):249–258, 1979.
- [101] A. Brace, T. Dun, and G. Barton. Towards a central interest rate model. In E. Jouini, J. Cvitanić, and M. Musiela, editors, *Option Pricing, Interest Rates and Risk Management*, pages 278–313. Cambridge University Press, 2001.
- [102] A. Brace, D. Gatarek, and M. Musiela. The market model of interest rate dynamics. *Math. Finance*, 7:127–155, 1997.

[103] P. BRATLEY and B.L. FOX. Algorithm 659. implementing sobol's quasirandom sequence generator. *ACM Transactions on Mathematical Software*, 14(1):88–100, 1988.

- [104] D. Breeden and R. Litzenberger. Prices of state-contingent claims implicit in option prices. *J. Business*, 51:621–651, 1978.
- [105] L. Breiman. *Probability*. Addison-Wesley Publishing Company, 1968.
- [106] M. Brenner and M.G. Subrahmanyam. A simple approach to option valuation and hedging in the Black-Scholes model. *Financial Analysts J.*, 50(2):25–28, 1994.
- [107] D. Brigo and F. Mercurio. Interest Rate Models. Springer, 2001.
- [108] D. Brigo and F. Mercurio. *Interest Rate Models: Theory and Practice*. Springer, 2nd edition, 2006.
- [109] M. Broadie and P. Glasserman. Estimating security price derivatives using simulation. *Management Science*, 42(2):269–285, 1996.
- [110] C. Kahl, P.Jackel. Fast strong approximation monte-carlo schemes for stochastic volatility models. *Journal of Quantitative Finance*, 6:513–536, 2006.
- [111] R. Carmona and M. Tehranchi. Interest Rate Models: an Infinite Dimensional Stochastic Analysis Perspective. Springer, 2006.
- [112] P. CARR. Randomization and the american put. Technical report, Morgan Stanley Bank - New York, 1997.
- [113] P Carr and Itkin A. Pricing swaps and options on quadratic variation under stochastic time change models discrete observations case. *Review of Derivatives Research*, 2010. Forthcoming.
- [114] P. Carr, H. Geman, D. B. Madan, and M. Yor. The fine structure of asset returns: An empirical investigation. *J. Business*, 75:305–332, 2002.
- [115] P. Carr, H. Geman, D. B. Madan, and M. Yor. Stochastic volatility for Lévy processes. *Math. Finance*, 13:345–382, 2003.
- [116] P. Carr, H. Geman, D. B. Madan, and M. Yor. Self-decomposability and option pricing. *Math. Finance*, 17:31–57, 2007.

[117] P. Carr and D. B. Madan. Option valuation using the fast Fourier transform. *J. Comput. Finance*, 2(4):61–73, 1999.

- [118] P. Carr and L. Wu. Static Hedging of Standard Option. Technical report, 2004.
- [119] P. Carr and L. Wu. Time-changed Lévy processes and option pricing. J. Financ. Econ., 71:113–141, 2004.
- [120] Peter Carr. European put call symmetry. Preprint, Cornell University, 1994.
- [121] Peter Carr and Marc Chesney. American put call symmetry. Preprint, H.E.C., 1996.
- [122] Peter Carr, Katrina Ellis, and Vishal Gupta. Static hedging of exotic options. *J. Finance*, 53:1165–1190, 1998.
- [123] Peter Carr, Hélyette Geman, Dilip B. Madan, and Marc Yor. Stochastic volatility for Lévy processes. *Math. Finance*, 13(3):345–382, 2003.
- [124] Peter Carr, Hélyette Geman, Dilip B. Madan, and Marc Yor. Pricing options on realized variance. *Finance Stoch.*, 9(4):453–475, 2005.
- [125] Peter Carr and Ali Hirsa. Why be backward? Forward equations for American options. Risk, 16(1):103–107, 2003. Reprinted in A. Kyprianou, W. Schoutens and P. Wilmott (Eds.) (2005), Exotic option pricing and advanced Lévy Models. pp. 237–257, Wiley.
- [126] Peter Carr and Dilip B. Madan. Saddlepoint methods for option pricing. *Journal of Computational Finance*, 2011 to appear.
- [127] Peter Carr, Dilip B. Madan, and Robert H Smith. Option valuation using the fast fourier transform. *Journal of Computational Finance*, 2:61–73, 1999.
- [128] A. Carverhill and L. Clewlow. Flexible convolution. In *From Black-Scholes to Black Holes*, pages 165–171. Risk Publications, 1992.
- [129] C.C.W.Leentvaar C.W. Oosterlee. The effect of coordinate transformations for sparse grid pricing of basket options. *Preprint, to appear JCAM*, 2007.
- [130] C.E.LEMKE. Bimatrix equilibrium points and Mathematical Programming. *Management Science*, 11:681–689, 1965.

[131] Kyriakou I. Cerny, A. An improved convolution algorithm for discretely sampled asian options. *Quantitative Finance to appear*, 2010.

- [132] T. Chan. Pricing contingent claims on stocks driven by Lévy processes. *Ann. Appl. Probab.*, 9:504–528, 1999.
- [133] J.F. Chassagneux and S. CrÃČÂľpey. Doubly reflected BSDEs with Call Protection and their Approximation. *Preprint*, 2010.
- [134] M. Chesney and R. Gibson. State space symmetry and two factor option pricing models. In P. P. Boyle, F. A. Longstaff, and P. Ritchken, editors, *Advances in Futures and Options Research*, volume 8, pages 85–112. Elsevier, 1995.
- [135] M. Chesney and M. Jeanblanc. Pricing American currency options in an exponential Lévy model. *Appl. Math. Finance*, 11:207–225, 2004.
- [136] M. Chesney, M. Jeanblanc-Picqué, and M. Yor. Brownian excursions and Parisian barrier options. *Adv. in Appl. Probab.*, 29:165–184, 1997.
- [137] C.Labart J.Lelong. Pricing double barrier parisian options using laplace transforms. *preprint CERMICS*, 2006.
- [138] C.Labart J.Lelong. Pricing parisian options. preprint CERMICS, 2006.
- [139] COCHRAN. Sampling Techniques. Wiley Series in Probabilities and Mathematical Statistics, 1977.
- [140] P. Collin-Dufresne and R. S. Goldstein. Pricing swaptions within an affine framework. *J. Derivatives*, 10:9–26, 2002.
- [141] R. Cont. Empirical properties of asset returns: stylized facts and statistical issues. *Quant. Finance*, 1:223–236, 2001.
- [142] R. Cont and P. Tankov. Financial Modelling with Jump Processes. Chapman & Hall / CRC Press, 2004.
- [143] R. Cont and P. Tankov. Financial Modelling with Jump Processes. Chapman and Hall/CRC Press, 2004.
- [144] R. Cont and P. Tankov. Nonparametric calibration of jump-diffusion option pricing models. *J. Comput. Finance*, 7(3):1–49, 2004.
- [145] R. Cont and P. Tankov. Retrieving Lévy processes from option prices: regularization of an ill-posed inverse problem. *SIAM J. Control Optim.*, 45:1–25, 2006.

[146] R. Cont and E. Voltchkova. A finite difference scheme for option pricing in jump-diffusion and exponential Lévy models. SIAM J. Numer. Anal., 43:1596–1626, 2005.

- [147] R. Cont and E. Voltchkova. Integro-differential equations for option prices in exponential Lévy models. *Finance Stoch.*, 9:299–325, 2005.
- [148] J. M. Corcuera, D. Nualart, and W. Schoutens. Completion of a Lévy market by power-jump assets. *Finance Stoch.*, 9:109–127, 2005.
- [149] J. M. Corcuera, D. Nualart, and W. Schoutens. Moment derivatives and Lévy-type market completion. In A. Kyprianou, W. Schoutens, and P. Wilmott, editors, *Exotic Option Pricing and Advanced Lévy Models*, pages 169–193. Wiley, 2005.
- [150] R. M. Corless, G. H. Gonnet, D. E. G. Hare, D. J. Jeffrey, and D. E. Knuth. On the lambert W function. Advances in Computational Mathematics, 5:329–359, 1996.
- [151] R. Carmona S. Crepey. Monte carlo computation of small loss probabilities. Technical report, Preprint, 2008.
- [152] C.Rogers P.Di Graziano. A dynamic approach to the modelling of credit derivatives using markov chains. *Preprint*, 2006.
- [153] N.Hilber A.M.Matache C.Schwab. Sparse wavelet methods for option pricing under stochastic volatility. *Journal of Computational Finance*, 8(4):1–42, 2005.
- [154] G.FUSAI D.I.ABRAHAMS C.SGARRA. An exact analytical solution for discrete barrier options. Working Paper SEMEQ Department University Piemonte Orientale Italy, 2004.
- [155] C.W.CRYER. The solution of a quadratic programming problem using systematic overrelaxation. SIAM J. Control, 9:385–392, 1971.
- [156] C.W.CRYER. The efficient solution of linear complementarity problems for tridiagonal minkowski matrices. *ACM Trans. Math. Softwave*, 9:199–214, 1983.
- [157] A.BRANDT C.W.CRYER. Multigrid algorithm for the solutions of linear complementarity problems arising from free boundary problems. Siam J.Sci.Stat.Comp, 4:655–684, Dic 1983.

[158] D. D.-Castelle and D. Marie. ProbabilitÃČÂls et Statisques (tome 2.). Masson, France, 1983.

- [159] A. Daniluk and D. Gątarek. A fully log-normal LIBOR market model. $Risk,\ 18(9):115-118,\ 2005.$
- [160] D.Belomestny J.Schoenmakers. A jump-diffusion libor model and its robust calibration. *Preprint*, 2006.
- [161] D.Belomestny Mathew J.Schoenmakers. A stochastic volatility libor model and its robust calibration. *Preprint*, 2007.
- [162] J.Schoenmakers D.Belostomeny, C.Bender. True upper bounds for bermudean products via non-nested monte carlo. *Mathematical finance*, 191, 2009.
- [163] P. CARR D.B.MADAN. Option valuation using the fast fourier transform. *Journal of Computational Finance*, 2(2):61–73, 1998.
- [164] D.Brigo A.Alfonsi. Credit default swap calibration and derivatives pricing with the ssrd stochastic intensity model. *Finance & Stochastics*, 9, 2005.
- [165] D.Brigo M.Morini. An empirically efficient analytical cascade calibration of the. *Preprint*, 2005.
- [166] D.Brigo P. Pallavicini Torresetti. Calibration of cdo tranches with the dynamical generalized-poisson loss model. *Preprint*, 2006.
- [167] A. Deitmar. A First Course in Harmonic Analysis. Springer, 2nd edition, 2004.
- [168] D.E.KNUTH. The Art of Computer programming, Seminumerical Algorithms, volume 2. Addison-Wesley, 1981.
- [169] Freddy Delbaen and Walter Schachermayer. A general version of the fundamental theorem of asset pricing. *Math. Ann.*, 300:463–520, 1994.
- [170] Freddy Delbaen and Walter Schachermayer. The fundamental theorem of asset pricing for unbounded stochastic processes. *Math. Ann.*, 312:215–250, 1998.
- [171] M. A. H. Dempster and S. S. G. Hong. Spread option valuation and the fast Fourier transform. In *Mathematical Finance Bachelier Congress* 2000, pages 203–220. Springer, 2002.

[172] J. Detemple. American options: symmetry properties. In J. Cvitanić, E. Jouini, and M. Musiela, editors, *Option Pricing, Interest Rates and Risk Management*, pages 67–104. Cambridge University Press, 2001.

- [173] L. Devroye. Non-Uniform Random Variate Generation. Springer, 1986.
- [174] P.CARR D.FAGUET. Fast accurate valuation of american options. working paper, 1994.
- [175] Di Graziano C.Rogers. A dynamic approach to the modelling of credit derivatives using markov chains. *Preprint*, 2006.
- [176] D.LAMBERTON. Random walk approximation and option prices. Proceedings of the 5th CAP Workshop on Mathematical Finance, Columbia University, November 1998, page Unknown, 1999.
- [177] D.LAMBERTON and B.LAPEYRE. Introduction to Stochastic Calculus Applied to Finance. Chapman and Hall, 1996.
- [178] J.BARRAQUAND D.MARTINEAU. Numerical valuation of high dimensional multivariate american securieties. *J.Of Finance and Quantitative Analysis*, 30:383–405, 1995.
- [179] G. Doetsch. Handbuch der Laplace-Transformation. Birkhäuser, 1950.
- [180] D.S. Clark . Necessary and sufficient conditions for the robbins-monro method. Stochastic Processes and their Applications, 17:359–367, 1984.
- [181] J. du Toit and G. Peskir. Selling a stock at the ultimate maximum. *Ann. Appl. Probab.*, 19:983–1014, 2009.
- [182] J.-C. Duan and J.-G. Simonato. Empirical martingale simulation of asset prices. *Management Science*, 44-9:1218–1233, 1998.
- [183] F. Dubois and T. Lelievre. Efficient pricing of asian options by the pde approach. *Journal of Computational Finance*, 8(2), 2004.
- [184] F. Dubois and T. Lelièvre. Efficient pricing of Asian options by the PDE, approach. *Journal of Computational Finance*, 10(2), 2006.
- [185] P. Duchesne and P. Lafaye de Micheaux. Computing the distribution of quadratic forms: Further comparisons between the Liu–Tang–Zhang approximation and exact methods. *Comput. Statist. Data Anal.*, 54:858–862, 2010.

[186] D. Duffie, D. Filipović, and W. Schachermayer. Affine processes and applications in finance. *Ann. Appl. Probab.*, 13:984–1053, 2003.

- [187] Darrell Duffie, Jun Pan, and Kenneth Singleton. Transform analysis and asset pricing for affine jump-diffusions. *Econometrica*, 68(6):1343–1376, 2000.
- [188] D. Dufresne, J. Garrido, and M. Morales. Fourier inversion formulas in option pricing and insurance. *Methodol. Comput. Appl. Probab.*, 11:359–383, 2009.
- [189] T. Dun, G. Barton, and E. Schlögl. Simulated swaption delta-hedging in the lognormal forward LIBOR model. *Int. J. Theor. Appl. Finance*, 4:677–709, 2001.
- [190] Bruno Dupire. Pricing with a smile. Risk, 7:18–20, 1994.
- [191] E.Alos. A generalization of the hull and white formula with applications to option pricing approximation. *Finance and Stochastics*, 10-3:353–365, 2006.
- [192] E. Eberlein, K. Glau, and A. Papapantoleon. Analysis of Fourier transform valuation formulas and applications. *Appl. Math. Finance*, 17:211–240, 2010.
- [193] E. Eberlein, K. Glau, and A. Papapantoleon. Analyticity of the Wiener–Hopf factors and valuation of exotic options in Lévy models. In G. Di Nunno and B. Øksendal, editors, *Advanced Mathematical Methods in Finance*. Springer, 2010. (forthcoming).
- [194] E. Eberlein, J. Jacod, and S. Raible. Lévy term structure models: no-arbitrage and completeness. *Finance Stoch.*, 9:67–88, 2005.
- [195] E. Eberlein, J. Kallsen, and J. Kristen. Risk management based on stochastic volatility. *J. Risk*, 5(2):19–44, 2003.
- [196] E. Eberlein and W. Kluge. Exact pricing formulae for caps and swaptions in a Lévy term structure model. *J. Comput. Finance*, 9:99–125, 2006.
- [197] E. Eberlein and W. Kluge. Valuation of floating range notes in Lévy term structure models. *Math. Finance*, 16:237–254, 2006.

[198] E. Eberlein and W. Kluge. Calibration of Lévy term structure models. In M. Fu, R. A. Jarrow, J.-Y. Yen, and R. J. Elliott, editors, *Advances in Mathematical Finance: In Honor of Dilip B. Madan*, pages 155–180. Birkhäuser, 2007.

- [199] E. Eberlein, W. Kluge, and A. Papapantoleon. Symmetries in Lévy term structure models. *Int. J. Theor. Appl. Finance*, 9:967–986, 2006.
- [200] E. Eberlein, W. Kluge, and Ph. J. Schönbucher. The Lévy LIBOR model with default risk. *J. Credit Risk*, 2:3–42, 2006.
- [201] E. Eberlein and N. Koval. A cross-currency Lévy market model. *Quant. Finance*, 6:465–480, 2006.
- [202] E. Eberlein and D. Madan. On correlating Lévy processes. Preprint, 2009.
- [203] E. Eberlein and F. Özkan. Time consistency of Lévy models. *Quant. Finance*, 3:40–50, 2003.
- [204] E. Eberlein and F. Özkan. The Lévy LIBOR model. Finance Stoch., 9:327–348, 2005.
- [205] E. Eberlein and A. Papapantoleon. Equivalence of floating and fixed strike Asian and lookback options. *Stochastic Process. Appl.*, 115:31–40, 2005.
- [206] E. Eberlein and A. Papapantoleon. Symmetries and pricing of exotic options in Lévy models. In Andreas Kyprianou, Wim Schoutens, and Paul Wilmott, editors, Exotic Option Pricing and Advanced Lévy Models, pages 99–128. Wiley, 2005.
- [207] E. Eberlein, A. Papapantoleon, and A. N. Shiryaev. On the duality principle in option pricing: semimartingale setting. *Finance Stoch.*, 12:265–292, 2008.
- [208] E. Eberlein, A. Papapantoleon, and A. N. Shiryaev. Esscher transform and the duality principle for multidimensional semimartingales. Ann. Appl. Probab., 19:1944–1971, 2009.
- [209] E. Eberlein and K. Prause. The generalized hyperbolic model: financial derivatives and risk measures. In H. Geman, D. Madan, S. Pliska, and T. Vorst, editors, *Mathematical Finance Bachelier Congress 2000*, pages 245–267. Springer, 2002.

[210] E. Eberlein and E. A. v. Hammerstein. Generalized hyperbolic and inverse Gaussian distributions: limiting cases and approximation of processes. In R.C. Dalang, M. Dozzi, and F. Russo, editors, Seminar on Stochastic Analysis, Random Fields and Applications IV, Progress in Probability 58, pages 221–264. Birkhäuser, 2004.

- [211] Ernst Eberlein. Application of generalized hyperbolic Lévy motions to finance. In Ole E. Barndorff-Nielsen, Thomas Mikosch, and Sidney I. Resnick, editors, *Lévy Processes: Theory and Applications*, pages 319–336. Birkhäuser, 2001.
- [212] Ernst Eberlein. Jump-type Lévy processes. In T. G. Andersen, R. A. Davis, and J.-P. Kreißand Th. Mikosch, editors, *Handbook of Financial Time Series*. Springer, 2007. (forthcoming).
- [213] Ernst Eberlein and Jean Jacod. On the range of options prices. *Finance Stoch.*, 1:131–140, 1997.
- [214] Ernst Eberlein and Ulrich Keller. Hyperbolic distributions in finance. Bernoulli, 1:281–299, 1995.
- [215] Ernst Eberlein and Sebastian Raible. Term structure models driven by general Lévy processes. *Math. Finance*, 9:31–53, 1999.
- [216] E.Derman and I. Kani. Riding on a smile. Risk magazine.
- [217] D.Lamberton E.DIA. Monte carlo for pricing asian options in jump models. *Preprint*, 2010.
- [218] E.Eberlein F.Ozkan. The levy libor model. Finance & Stochastics, IX:327–348, 2005.
- [219] C.Labart E.Gobet. Proceeding de la confÃČÂÎrence iciam (zÃČÂijrich, juillet 2007), 2 pages. A sequential Monte Carlo algorithm for solving BSDE., 2007.
- [220] L.C.G.ROGERS E.J.STAPLETON. Fast accurate binomial pricing. preprint, 1997.
- [221] E.LEVY. Pricing european average rate currency options. *J. Of International Money and Finance*, 11:474–491, 1992.
- [222] R. Elliot, M. Jeanblanc, and M. Yor. On models of default risk. *Math. Finance*, 10:179–195, 2000.

[223] J. Elstrodt. Maß- und Integrationstheorie. Springer, 2nd edition, 1999.

- [224] Benhamou Eric Gobet Emmanuel and Miri Mohammed. Time dependent heston model. SIAM J. Financial Math., 1:289âĂŞ325.
- [225] Benhamou Eric Gobet Emmanuel and Miri Mohammed. Analytical formulas for local volatility model with stochastic rates. *Quantitative Finance*, to appear, 2011.
- [226] Goldberg Errais, Giesecke. Pricing credit from the top down with affine point processes. Technical report, Preprint, 2007.
- [227] F. Esche and M. Schweizer. Minimal entropy preserves the Lévy property: how and why. *Stochastic Process. Appl.*, 115:299–327, 2005.
- [228] F.A.LONGSTAFF E.S.SCHWARTZ. Valuing american options by simulations: a simple least-squares approach. Working Paper Anderson Graduate School of Management University of California, 25, 1998.
- [229] M.J.BRENNAN E.S.SCHWARTZ. The valuation of the American put option. *J. of Finance*, 32:449–462, 1977.
- [230] N.JACKSON E.SULI. Adaptive finite element solution of 1d european option pricing problems. Technical Report 5, Oxford Computing Laboratory, 1997.
- [231] E. FOURNIE J.M.LASRY et al. An application of malliavin calculs to montecarlo methods in finance. *working paper*, 1997.
- [232] E.TEMAM. Monte carlo methods for asian options. *preprint*, 98-144 CERMICS, 1998.
- [233] C.W. Oosterlee F. Fang. A fourier-based valuation method for bermudan and barrier options under heston's model. *SIAM*, 31:826–848, 2008.
- [234] C.W. Oosterlee F. Fang. Pricing early-exercise and discrete barrier options by fourier-cosine series expansions. *Numerische Mathematik*, 114:27–62, 2009.
- [235] C.W. Oosterlee F. Fang. A novel option pricing method based on fourier-cosine series expansions. *Siam J. Finan. Math.*, 2:439–463, 2011.

[236] F. Mercurio and D. Brigo. Lognormal-mixture dynammics and calibration to market smiles. *Preprint*, 2001.

- [237] J. Fajardo and E. Mordecki. Pricing derivatives on two-dimensional Lévy processes. *Int. J. Theor. Appl. Finance*, 9:185–197, 2006.
- [238] J. Fajardo and E. Mordecki. Skewness premium with Lévy processes. Working paper, IBMEC, 2006.
- [239] J. Fajardo and E. Mordecki. Symmetry and duality in Lévy markets. *Quant. Finance*, 6:219–227, 2006.
- [240] F.Black and P.Karasinski. Bond and option pricing when short rates are lognormal. *Financial Analyst Journal*, Juli-August:52–59, 1991.
- [241] Paul Fearnhead, O. Papaspiliopoulos, and Gareth O. Roberts. Particle filters for partially observed diffusions. *Working paper. Lancaster University.*, 2006.
- [242] W. Feller. An Introduction to Probability Theory and its Applications, volume II. Wiley, 2nd edition, 1971.
- [243] L. Feng and V. Linetsky. Computing exponential moments of the discrete maximum of a levy process and look-back options. *Journal of Computational Finance*, 13(4):501–529, 2009.
- [244] D. Filipović. Time-inhomogeneous affine processes. *Stochastic Process. Appl.*, 115:639–659, 2005.
- [245] D. Filipović. Term-Structure Models: A Graduate Course. Springer, 2009.
- [246] F.Jamshidian. Bond, futures and option evaluation in the quadratric interest rate model. *Applied Mathematical Finance*, 3:93–115, 1996.
- [247] A Forde, M. Jaquier. Robust approximations for pricing asian options and volatility swaps under stochastic volatility. *Applied Mathematical Finance*, 17(3), 2010.
- [248] M. Jaquier A Forde. Small-time asymptotics for implied volatility under the heston model. *International Journal of Theoretical and Applied Finance*, 12(6), 2009.
- [249] M. Jaquier A Mijatovic A. Forde. Asymptotic formulae for implied volatility under the heston model. *Proc. R. Soc*, 466(2124):3593–3620, 2010.

[250] R. Carmona J.P. Fouque and D. Vesta. Interacting particle systems for the computation of rare credit portfolio losses. *Finance and Stochastics*, 13(4), 2009.

- [251] E. Fournié, J.-M. Lasry, J. Lebuchoux, P.-L. Lions, and N. Touzi. Applications of Malliavin calculus to Monte Carlo methods in finance. *Finance Stoch.*, 3:391–412, 1999.
- [252] R. Frey and J. Backhaus. Dynamic hedging of synthetic cdo-tranches with spread-and contagion risk. Technical report, Preprint, department of mathematics, UniversitÃČÂdt Leipzig, 2008.
- [253] C. Fries. Mathematical Finance: Theory, Modeling, Implementation. Wiley, 2007.
- [254] C. Fries and F. Eckstädt. A hybrid Markov-functional model with simultaneous calibration to the interest rate and FX smile. *Quant. Finance*, 2010. (forthcoming).
- [255] C. Fries and M. Rott. Cross currency and hybrid Markov functional models. Preprint, 2004.
- [256] M. Frittelli. The minimal entropy martingale measure and the valuation problem in incomplete markets. *Math. Finance*, 10:39–52, 2000.
- [257] M. Fu, D. Madan, and T. Wang. Pricing continuous asian options: a comparison of monte carlo and laplace transform inversion methods. *Journal of Computational Finance*, 2(2), 1999.
- [258] T. Fujiwara and Y. Miyahara. The minimal entropy martingale measures for geometric Lévy processes. *Finance Stoch.*, 7:509–531, 2003.
- [259] D. Gatarek, P. Bachert, and R. Maksymiuk. *The LIBOR Market Model in Practice*. Wiley, 2006.
- [260] G.BARLES. Convergence of numerical schemes for degenerate parabolic equations arising in finance theory. In L.C.G. Rogers and D. Talay, editors, *Numerical Methods in Finance*, Publications of the Newton Institute, pages 1–21. Cambridge University Press, 1997.
- [261] H. Geman, N. El Karoui, and J.-C. Rochet. Changes of numéraire, changes of probability measures and option pricing. J. Appl. Probab., 32:443–458, 1995.

[262] H. Geman and A. Eydeland. Domino effect. Risk, pages 65–67, April 1995.

- [263] H. Geman, N. El Karoui, and J.C. Rochet. Changes of numÃČÂlraires, changes of probability measure and option pricing. *J. Appl. Probab.*, 32(2):443–458, 1995.
- [264] H. Geman and M. Yor. Bessel processes, asian option and perpetuities. Mathematical Finance, 3(4), 1993.
- [265] H. U. Gerber and E. S. W. Shiu. Martingale approach to pricing perpetual American options on two stocks. *Math. Finance*, 6:303–322, 1996.
- [266] P. Glasserman. Monte Carlo methods in financial engineering, volume 53 of Applications of Mathematics (New York). Springer-Verlag, New York, 2004. Stochastic Modelling and Applied Probability.
- [267] P. Glasserman and S. G. Kou. The term structure of simple forward rates with jump risk. *Math. Finance*, 13:383–410, 2003.
- [268] P. Glasserman and N. Merener. Cap and swaption approximations in LIBOR market models with jumps. *J. Comput. Finance*, 7:1–36, 2003.
- [269] P. Glasserman and N. Merener. Numerical solution of jump-diffusion LIBOR market models. *Finance Stoch.*, 7:1–27, 2003.
- [270] P. Glasserman and X. Zhao. Arbitrage-free discretization of lognormal forward LIBOR and swap rate models. *Finance Stoch.*, 4:35–68, 2000.
- [271] Paul Glasserman. Monte Carlo Methods in Financial Engineering. Springer, 2003.
- [272] Paul Glasserman and Kyoung-Kuk Kim. Gamma expansion of the heston stochastic volatility model. *Finance and Stochastics*, pages 1–30, 2009.
- [273] Paul Glasserman and Kyoung-Kuk Kim. Saddlepoint approximations for affine jump-diffusion models. *Journal of Economic Dynamics and Control*, 33:37–52, 2009.
- [274] Thomas Goll and Jan Kallsen. Optimal portfolios for logarithmic utility. *Stochastic Process. Appl.*, 89:31–48, 2000.

[275] Thomas Goll and Jan Kallsen. A complete explicit solution to the log-optimal portfolio problem. Ann. Appl. Probab., 13:774–799, 2003.

- [276] Thomas Goll and Ludger Rüschendorf. Minimax and minimal distance martingale measures and their relationship to portfolio optimization. *Finance Stoch.*, 5:557–581, 2001.
- [277] G.H. Golub and C.F. Van Loan. *Matrix computations*. Johns Hopkins Studies in the Mathematical Sciences. Johns Hopkins University Press, Baltimore, MD, third edition, 1996.
- [278] Goute, S. Oudjane N. Russo F. Variance optimal hedging for processes with independent increments and applications. applications to electricity market. *Preprint*, 2010.
- [279] G.PAGES. A space vector quantization for numerical integration. *Journal of Applied and Computational Mathematics*, 89:1–38, 1997.
- [280] D.LAMBERTON G.PAGES. Sur l'approximation des réduites. *Ann. Inst. Henri Poincaré*, 26:331–355, 1990.
- [281] J.C.FORT G.PAGES. About the a.s. convergence of the kohonen algorithm with a general neighborhood function. *The Annals of Applied Probability*, 5(4), 1995.
- [282] G.Pages, J.Printems. Functional quantization for numerics with an application to option pricing. *Monte Carlo Methods and its Applications*, to appear.
- [283] J. O. Grabbe. The pricing of call and put options on foreign exchange. J. Int. Money Finance, 2:239–253, 1983.
- [284] S. E. Graversen, G. Peskir, and A. N. Shiryaev. Stopping Brownian motion without anticipation as close as possible to its ultimate maximum. *Theory Probab. Appl.*, 45:41–50, 2000.
- [285] Z. Grbac. Credit risk in Lévy LIBOR modeling: rating based approach. PhD thesis, Univ. Freiburg, 2010.
- [286] Priscilla Greenwood and Jim Pitman. Fluctuation identities for Lévy processes and splitting at the maximum. *Adv. Appl. Probab.*, 12:893–902, 1980.

[287] Priscilla Greenwood and Jim Pitman. Fluctuation identities for random walk by path decomposition at the maximum. *Adv. Appl. Probab.*, 12:291–293, 1980.

- [288] B. Grigelionis. Processes of Meixner type. Lith. Math. J., 39:33–41, 1999.
- [289] P.BJERKSUND G.STENSLAND. Closed form approximation of american options prices. to appear in Scandinavian Journal of Management, 1992. Working Paper Norwegian School of Economics and Business Administration.
- [290] A. A. Gushchin and E. Mordecki. Bounds on option prices for semi-martingale market models. *Proc. Steklov Inst. Math.*, 237:73–113, 2002.
- [291] Allan Gut. An Intermediate Course in Probability. Springer, 1995.
- [292] H.-F. Chen, L. Guo, and A.-J. Gao. Convergence and robustness of the robbins-monro algorithm truncated at randomly varying bounds. *Stochastic Processes and their Applications*, 27:217–231, 1988.
- [293] Patrick S. Hagan, Deep Kumar, Andrew S. Lesniewski, and Diana E. Woodward. Managing smile risk. *Wilmott Magazine*, 2002.
- [294] J. Hakala and U. Wystup. Heston's stochastic volatility model applied to foreign exchange options. In J. Hakala and U. Wystup, editors, Foreign Exchange Risk, pages 267–282. Risk Publications, 2002.
- [295] Jürgen Hakala and Uwe Wystup. Barrier options an overview. In Jürgen Hakala and Uwe Wystup, editors, *Foreign Exchange Risk*, pages 29–36. Risk Publications, 2002.
- [296] J. M. Harrison and S. R. Pliska. Martingales and stochastic integrals in the theory of continous trading. *Stochastic Process. Appl.*, 11:215–260, 1981.
- [297] M. J. Harrison and D.M. Kreps. Martingales and arbitrage in multiperiod securities markets. *J. Econ. Theory*, 20:381–408, 1979.
- [298] Jürgen Hartinger and Martin Predota. Pricing Asian options in the hyperbolic model: A fast Quasi-Monte Carlo approach. *Grazer Math. Ber.*, 345:1–33, 2002.

[299] Espen Gaarder Haug. A look in the antimatter mirror. Wilmott Magazine, pages September, 38–42, 2002.

- [300] H.Buhler. Consistent variance curve models. Finance and Stochastics, 10-2, 2006.
- [301] D. Heath, R. Jarrow, and A. Morton. Bond pricing and the term structure of interest rates: a new methodology for contingent claims valuation. *Econometrica*, 60:77–105, 1992.
- [302] R.GESKE H.E.JOHNSON. The american put options valued analytically. *J. of Financial Economics*, 39:1511–1524, 1984.
- [303] V. Henderson, David Hobson, William Shaw, and Rafal Wojakowski. Bounds for in-progress floating-strike Asian options using symmetry. *Ann. Oper. Res.*, 2004. (forthcoming).
- [304] V. Henderson and R. Wojakowski. On the equivalence of floating- and fixed-strike Asian options. *J. Appl. Probab.*, 39:391–394, 2002.
- [305] M. Henrard. Swaptions: 1 price, 10 deltas, and ... 6 1/2 gammas. Working paper, 2005.
- [306] P. Henry-Labordère. A general asymptotic implied volatility for stochastic volatility models. Preprint, ArXiV:cond-mat/0504317, 2005.
- [307] Steven L. Heston. A closed-form solution for options with stochastic volatility with applications to bond and currency options. *Rev. Financ. Stud.*, 6:327–343, 1993.
- [308] H. Heuser. Lehrbuch der Analysis I. Teubner, 10th edition, 1993.
- [309] H.F. Chen and Y.M. Zhu. Stochastic approximation procedure with randomly varying truncations. *Scientia Sinica (series A)*, 29(9):914–926.
- [310] H.FAURE. Discrépance de suites associées à un système de numération (en dimension s). *Acta Arithmetica*, XLI:337–361, 1982.
- [311] N. Hilber, N. Reich, C. Schwab, and C. Winter. Numerical methods for Lévy processes. *Finance Stoch.*, 13:471–500, 2009.
- [312] H.J.KUSHNER. Probability Methods for Approximations in Stochastic Control and for Elliptic Equations. Academic Press, New York, 1977.

[313] H.JOHNSON. Options on the maximum of the minimum of several assets. J.Of Finance and Quantitative Analysis, 22:227–283, 1987.

- [314] D.BUNCH H.JOHNSON. A simple and numerically efficient valuation method for american puts using a modified geske-johnsohn approach. *J. of Finance*, 47:809–816, 1992.
- [315] R.C.HEYNEN H.M.KAT. Partial barrier options. *Journal of Financial Engineering*, 3:253–274, 1994.
- [316] H.NEIDERREITER. Random Number Generation and Quasi Monte Carlo Methods. Society for Industrial and Applied mathematics, 1992.
- [317] H.NIEDERREITER. Points sets ans sequences with small discrepancy. $Monatsh.Math,\ 104:273-337,\ 1987.$
- [318] D. Hobson, P. Laurence, and T.-H. Wang. Static-arbitrage upper bounds for the prices of basket options. *Quant. Finance*, 5:329–342, 2005.
- [319] J.K. Hoogland and Colin D.D. Neumann. Asians and cash dividends: exploiting symmetries in pricing theory. Technical report, CWI, 2000.
- [320] H.P.BERMIN, editor. Essays on Lookback and Barrier Options: A Malliavin Calculus Approach. Lund Economic Studies, 1998.
- [321] J.-Z. Huang and L. Wu. Specification analysis of option pricing models based on time-changed Lévy processes. *J. Finance*, 59:1405–1439, 2004.
- [322] F. Hubalek and J. Kallsen. Variance-optimal hedging and Markowitz-efficient portfolios for multivariate processes with stationary independent increments with and without constraints. Working paper, TU München, 2005.
- [323] F. Hubalek, J. Kallsen, and L. Krawczyk. Variance-optimal hedging for processes with stationary independent increments. *Ann. Appl. Probab.*, 16:853–885, 2006.
- [324] F. Hubalek and A. E. Kyprianou. Old and new examples of scale functions for spectrally negative Lévy processes. In R.C. Dalang, M. Dozzi, and F. Russo, editors, *Seminar on Stochastic Analysis, Random Fields and Applications VI*, Progress in Probability. Birkhäuser, 2010. (forthcoming).

[325] F. Hubalek and A. Papapantoleon. Approximation of SDEs and applications to LIBOR models. Working paper, TU Berlin, 2009.

- [326] B. Huge and D. Lando. Swap pricing with two-sided default risk in a rating-based model. *European Finance Rev.*, 3:239–268, 1999.
- [327] J. Hull and A. White. The impact of default risk on the prices of options and other derivative securities. *J. Banking Finance*, 19:299–322, 1995.
- [328] P. J. Hunt and J. E. Kennedy. Financial Derivatives in Theory and Practice. Wiley, 2nd edition, 2004.
- [329] Ph. Hunt, J. Kennedy, and A. Pelsser. Markov-functional interest rate models. *Finance Stoch.*, 4:391–408, 2000.
- [330] Phil J. Hunt and Joanne E. Kennedy. Financial derivatives in theory and practice. John Wiley and Sons, 2000.
- [331] C. Hunter, P. Jäckel, and M. Joshi. Getting the drift. *Risk*, 14:81–84, 2001.
- [332] T. R. Hurd and Z. Zhou. A Fourier transform method for spread option pricing. SIAM J. Financial Math., 1:142–157, 2010.
- [333] DEMPSTER HUTTON. Fast numerical valuation of american, exotic and complex options. *Applied Mathematical Finance*, 4:1–20, 1997.
- [334] M.ABRAMOWITZ I.A.STEGUN, editor. *Handbook of Mathematical Functions*. Dover, 9th edition, 1970.
- [335] E.DERMAN I.KANI D.ERGENER I.BARDHAN. Enhanced numerical methods for options with barriers. *Financial Analyst Journal*, pages 65–74, Nov-Dec 95 1995.
- [336] I.J.KIM. The analytic valuation of american options. Review of Financial Studies, (3):547–572, 1990.
- [337] I.M.SOBOL. The distribution of points in a cube and the approximate evaluation of integrals. *U.S.S.R. Computational Math.and Math.Phys.*, 7(4):86–112, 1967.
- [338] J.E. Ingersoll. *Theory of Financial Decision Making*. Rowman & Littlefield, 1987.
- [339] INRIA. Probabilites numeriques. Chap 1: suites a discrepance faible et integration numerique.

[340] R. Ivanov and A. Papapantoleon. On the "buy and hold" principle for spectrally negative Lévy processes. Preprint, TU Berlin, 2009.

- [341] HAMMERSLEY J. and HANDSCOMB D. *Monte Carlo Methods*. Chapman and Hall, London, 1979.
- [342] Kolodko A. Schoenmakers J. Iterative construction of the optimal bermudan stopping time. *Finance Stoch.*, 10:27–49, 2006.
- [343] J. Kennedy, P. Hunt A. Pelsser. Markov-functional interest rate models. Finance & Stochastics, 4:391–408, 2000.
- [344] J. Jacod and A. N. Shiryaev. *Limit Theorems for Stochastic Processes*. Springer, 2nd edition, 2003.
- [345] Jean Jacod. Intégrales stochastiques par rapport à une semi-martingale vectorielle et changements de filtration. In Séminaire de Probabilités XIV, 1978/79, Lecture Notes Math. 784, pages 161–172. Springer, 1980.
- [346] Jean Jacod and Albert N. Shiryaev. *Limit Theorems for Stochastic Processes*. Springer, 1987.
- [347] G.RUIZ-GOLDSTEIN J.A.GOLDSTEIN, editor. Semigroups of linear and nonlinear operators and applications. Kluwer Academic Publisher, 1992.
- [348] Jaillet, P., E. Ronn and S. Tompaidis. Valuation of commodity-based swing options. *preprint*.
- [349] F. Jamshidian. An exact bond option formula. J. Finance, 44:205–209, 1989.
- [350] F. Jamshidian. LIBOR and swap market models and measures. *Finance Stoch.*, 1:293–330, 1997.
- [351] F. Jamshidian. LIBOR market model with semimartingales. Working Paper, NetAnalytic Ltd., 1999.
- [352] J.ANDREASEN. The pricing of discretely sampled asian and lookback options: a change of numeraire approach. *The Journal of Computational Finance*, 2(1):5–23, 1998.
- [353] L. ANDERSEN J.ANDREASEN. Volatility smile fitting and numerical methods for pricing. *preprint*, 1999.

[354] R. Jarrow, H. Li, and F. Zhao. Interest rate caps "smile" too! But can the LIBOR market models capture the smile? *J. Finance*, 62:345–382, 2007.

- [355] R. A. Jarrow and S. M. Turnbull. Pricing derivatives on financial securities subject to credit risk. *J. Finance*, 50:53–85, 1995.
- [356] R. C.Source J.B. C. Van Ginderen, H. Garcia. On the pricing of credit spread options: A two factor hw?bk algorithm. *Int. J. Theor. and Appl. Finance*, 6-5:491, 2003.
- [357] J.BARRAQUAND. Numerical valuation of high dimensional multivariate european securities. *Manangement Science*, pages 1882–1891, 1995.
- [358] J.BUSCA. A finite element method for the valuation of american options. Technical report, C.A.R. Internal Report, 1998.
- [359] M.BROADIE J.DETEMPLE. American option valuation: new bounds, approximations and a comparison of existing methods. Review of financial studies, to appear, 1995.
- [360] M. Jeanblanc and M. Rutkowski. Modelling of default risk: an overview. In *Mathematical finance: theory and practice*. Higher education press, Beijing, 2000.
- [361] M. Jeannin and M. Pistorius. A transform approach to compute prices and greeks of barrier options driven by a class of Lévy processes. *Quant. Finance*, 2009. (forthcoming).
- [362] T. Jeulin. Semi martingales et grossissement d'une filtration, volume 833 of Lecture Notes in Math. Springer, Berlin, 1980.
- [363] T. Jeulin. Sur la convergence absolue de certaines intégrales. In Seminar on Probability, XVI, volume 920 of Lecture Notes in Math., pages 248–256. Springer, Berlin, 1982.
- [364] T. Jeulin and M. Yor. Inégalité de Hardy, semimartingales, et fauxamis. In Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78), volume 721 of Lecture Notes in Math., pages 332–359. Springer, Berlin, 1979.
- [365] J.E.ZHANG. A semy-analtycal method for pricing and hedging continuously-sampled arithmetic average rate options. *preprint*, September 2000.

[366] J.F.Bonnans H.Zidani. onsistency of generalized finite difference schemes for the stochastic hjb equation. SIAM Journal on Numerical Analysis, 41(3):1008–1021, 2003.

- [367] M S. Joshi J.H. Chan. Fast and accurate long stepping simulation of the heston stochastic volatility model. *Preprint*, 2011.
- [368] J.H.HALTON. On the efficiency of certain quasi-random sequences of points in evaluating multi-dimensional integrals. *Numer. Math.*, 2:84–90 et erratum, 1960.
- [369] J.Hull and A.WHITE. Valuing derivative securities using the explicit finite difference method. *Journal of Financial and Quantitative Analysis*, 25:87–100, 1990.
- [370] J.Hull and A.WHITE. One factor interest rate models and the valuation of interest rate derivative securities. *Journal of Financial and Quantitative Analysis*, 28:235–254, 1993.
- [371] J.Hull and A.WHITE. Numerical procedures for implementing term structure models ii:two-factor models. *The Journal of Derivatives*, 2:37–48, 1994.
- [372] J.Hull and A.WHITE. Numerical procedures for implementing term structure models is ingle factor models. *The Journal of Derivatives*, 2:7–16, 1994.
- [373] J.Hull and A.WHITE. Valuing credit derivatives using an implied copula approach. *The Journal of Derivatives*, 14(2):8–28, 2006.
- [374] J.Hull A.White. Valuation of a cdo and an n^{th} to default cds without monte carlo simulation. The Journal of Derivatives, 2:8–23, 2004.
- [375] S. JOE. Randomization of lattice rules for numerical multiple integration. *Journal of Computational and Applied Mathematics*, (31):299–304, 1990.
- [376] H. Johnson and R. Stulz. The pricing of options with default risk. *J. Finance*, 42:267–280, 1987.
- [377] B. Jørgensen. Statistical Properties of the Generalized Inverse Gaussian Distribution. Lecture Notes Stat. 9. Springer, 1982.
- [378] M. Joshi and A. Stacey. New and robust drift approximations for the LIBOR market model. *Quant. Finance*, 8:427–434, 2008.

[379] Benjamin Jourdain and Mohamed Sbai. Exact retrospective Monte Carlo computation of arithmetic average Asian options. *Monte Carlo Methods Appl.*, 13(2):135–171, 2007.

- [380] Benjamin Jourdain and Mohamed Sbai. High order discretization schemes for stochastic volatility models. Quantitative Finance, to appear, 2011.
- [381] J.P.Laurent J.Gregory. Basket default swaps, cdo's and factor copulas. preprint.
- [382] D.W.PEACEMAN-H.H.RACHFORD Jr. The numerical solution of parabolic and elliptic differential equations. *J. of Siam*, 3:28–42, 1955.
- [383] Jr J.DOUGLAS H.H.RACHFORD Jr. On the numerical solution of heat conduction problems in two and tree-space variables. *Trans Amer. Math. Soc.*, 82:421–439, 1956.
- [384] J.Schoenmakers. Calibration of libor models to caps and swaptions: a way around intrinsic instabilities via parsimonious structures and a collateral market criterion. *Preprint*, 2003.
- [385] J.Schoenmakers. Iterating cancelable snowballs and related exotics in a many-factor libor model. *Risk*, September, 2006.
- [386] C.Cuchiero M. Keller-Ressel J.Teichmann. Polynomial processes and their applications to mathematical finance. Technical report, Preprint arXiv/0812.4740, 2008.
- [387] J.Teichmann C.Bayer. Cubature on wiener space in infinite dimension. finite difference methods for spdes and hjm-equations. *Preprint:* arXiv:0712.3763v1, 2008.
- [388] Julian Guyon. VolatilitÃČÂl stochastique : ÃČÂltude d'un mod-ÃČÂle ergodique. notes de cours de M2 de Nicole El Karoui, "Mod-ÃČÂles stochastiques en finance", chapitre "VolatilitÃČÂl stochastique", UniversitÃČÂl Paris V.
- [389] J.Zhu. A simple and exact simulation approach to heston model. *Preprint*, 2008.
- [390] J. Kallsen. A didactic note on affine stochastic volatility models. In Yu. Kabanov, R. Lipster, and J. Stoyanov, editors, From Stochastic Calculus to Mathematical Finance: The Shiryaev Festschrift, pages 343–368. Springer, 2006.

[391] J. Kallsen and A. N. Shiryaev. The cumulant process and Esscher's change of measure. *Finance Stoch.*, 6:397–428, 2002.

- [392] J. Kallsen and A. N. Shiryaev. Time change representation of stochastic integrals. *Theory Probab. Appl.*, 46:522–528, 2002.
- [393] J. Kallsen and P. Tankov. Characterization of dependence of multidimensional Lévy processes using Lévy copulas. *J. Multivariate Anal.*, 97:1551–1572, 2006.
- [394] A.KHANNA K.AMIN. Convergence of american option values from discrete to continuous time financial models. *Mathematical finance*, 4:289–304, 1994.
- [395] I. Karatzas and S. E. Shreve. Brownian Motion and Stochastic Calculus. Springer, 2nd edition, 1991.
- [396] I. Karatzas and S. E. Shreve. *Methods of Mathematical Finance*. Springer, 1998.
- [397] I. Karatzas and Steven E. Shreve. Brownian motion and stochastic calculus. Springer-Verlag New-York, second edition, 1991.
- [398] Y. Katznelson. An Introduction to Harmonic Analysis. Cambridge University Press, 3rd edition, 2004.
- [399] R. Kawai. A multivariate Lévy process model with linear correlation. Quant. Finance, 9:597–606, 2009.
- [400] Kiyoshi Kawazu and Shinzo Watanabe. Branching processes with immigration and related limit theorems. *Theor. Probab. Appl.*, 16:36–54, 1971.
- [401] K.Barty, J.S.Roy, C.Strugarek. Temporal difference learning with kernels for pricing american style options. *Preprint*, 2005.
- [402] U. Keller. Realistic modelling of financial derivatives. PhD thesis, University of Freiburg, 1997.
- [403] M. Keller-Ressel. Non-parametric calibration of the Barndorff-Nielsen–Shephard model. Working paper, TU Vienna, 2006.
- [404] M. Keller-Ressel. Affine processes theory and applications to finance. PhD thesis, TU Vienna, 2008.

[405] M. Keller-Ressel, A. Papapantoleon, and J. Teichmann. A new approach to LIBOR modeling. *Math. Finance*, 2010. (forthcoming, minor revision).

- [406] M. Keller-Ressel and T. Steiner. Yield curve shapes and the asymptotic short rate distribution in affine one-factor models. *Finance Stoch.*, 12:149–172, 2008.
- [407] A. Papapantoleon Keller-Ressel M. and J. Teichmann. A new approach to libor modeling. *Preprint*, arXiv/0904.0555, 2009.
- [408] Evis Këllezi and Nick Webber. Valuing Bermudan options when asset returns are Lévy processes. *Quant. Finance*, 4:87–100, 2004.
- [409] A. Kemna and A. Vorst. A pricing method for options based on average asset values. *Journal of Banking and Finance*, 14(1):113–129, 1990.
- [410] A.G.Z KEMNA and A.C.F.VORST. A pricing method for options based on average asset values. *J. Banking Finan.*, pages 113–129, March 1990.
- [411] Duffie Darrel Pan Jun Singleton Kenneth. Transform analysis and asset pricing for affine jump-diffusions. *Econometrica*, pages 1343–1376, 68 2000.
- [412] El Khatib and N. Privault. Computations of greeks in a market with jumps via the malliavin calculus. *Finance and Stochastics*, to appear, 2003.
- [413] F. Kilin. Accelerating the calibration of stochastic volatility models. Working paper, HfB, 2007.
- [414] P. E. Kloeden and E. Platen. Numerical Solution of Stochastic Differential Equations. Springer, 3rd edition, 1999.
- [415] W. Kluge. Time-inhomogeneous Lévy processes in interest rate and credit risk models. PhD thesis, Univ. Freiburg, 2005.
- [416] W. Kluge and A. Papapantoleon. On the valuation of compositions in Lévy term structure models. *Quant. Finance*, 9:951–959, 2009.
- [417] L. KOCIS and W.J. WHITEN. Computational investigations of low discrpeancy sequences. *ACM Transactions on Mathematical Software*, 23(2):266–294, June 1997.

[418] A. Kohatsu-Higa and P. Tankov. Jump-adapted discretization schemes for Lévy-driven SDEs. *Stochastic Process. Appl.*, 120:2258–2285, 2010.

- [419] A. Kohatsu-Higa and K. Yasuda. A review of some recent results of Malliavin Calculus and its applications. *Radon Ser. Comput. Appl. Math.* (forthcoming), 2009.
- [420] E. Kole, K. Koedijk, and M. Verbeek. Selecting copulas for risk management. *J. Banking Finance*, 31:2405–2423, 2007.
- [421] S. G. Kou and H. Wang. First passage times of a jump diffusion process. *Adv. Appl. Prob.*, 35:504–531, 2003.
- [422] S. G. Kou and H. Wang. Option pricing under a double exponential jump diffusion model. *Management Science*, 50(9):1178–1192, 2004.
- [423] Steven G. Kou. A jump diffusion model for option pricing. *Manag. Sci.*, 48:1086–1101, 2002.
- [424] Steven G. Kou and Hui Wang. First passage times of a jump diffusion process. Adv. Appl. Probab., 35:504–531, 2003.
- [425] Steven G. Kou and Hui Wang. Option pricing under a double exponential jump diffusion model. *Manag. Sci.*, 50:1178–1192, 2004.
- [426] D. Kreps. Arbitrage and equilibrium in economies with infinitely many commodities. J. Math. Econ., 8:15–35, 1981.
- [427] A. Kriegl and P. W. Michor. *The Convenient Setting of Global Analysis*. American Mathematical Society, 1997.
- [428] R.ZVAN P.A.FORSYTH K.R.VETZAL. Convergence of lattice and PDE methods for pricing asian options. Working Paper Department of Computer Science, University of Waterloo, 1998.
- [429] R.ZVAN P.A.FORSYTH K.R.VETZAL. Pde methods for pricing barrier options. *Technical Report Department of Computer Science, University of Waterloo*, 1998.
- [430] R.ZVAN P.A.FORSYTH K.R.VETZAL. Robust numerical methods for pde models of asian option. *Journal of Computational Finance*, 1:39–78, 1998.
- [431] U. Küchler and S. Tappe. Bilateral gamma distributions and processes in financial mathematics. *Stochastic Process. Appl.*, 118:261–283, 2008.

[432] O. Kudryavtsev and S. Levendorskii. Pricing of first touch digitals under normal inverse Gaussian processes. *Int. J. Theor. Appl. Finance*, 9:915–949, 2006.

- [433] O. Kudryavtsev and S. Levendorskii. Fast and accurate pricing of barrier options under Lévy processes. *Finance Stoch.*, 13:531–562, 2009.
- [434] Oleg Kudryavtsev and Sergei Levendorskiĭ. Fast and accurate pricing of barrier options under Lévy processes. *Finance Stoch.*, 13(4):531–562, 2009.
- [435] O. Kurbanmuradov, K. Sabelfeld, and J. Schoenmakers. Lognormal approximations to LIBOR market models. *J. Comput. Finance*, 6:69–100, 2002.
- [436] S. Kusuoka and D. W. Stroock. Precise asymptotics of certain Wiener functionals. *J. Funct. Anal.*, 99:1–74, 1991.
- [437] A. Kuznetsov. Wiener-Hopf factorization for a family of Lévy processes related to theta functions. Preprint, York University, 2009.
- [438] A. Kuznetsov. Wiener-Hopf factorization and distribution of extrema for a family of Lévy processes. *Ann. Appl. Probab.*, 2010. (forthcoming).
- [439] A. E. Kyprianou. Introductory Lectures on Fluctuations of Lévy Processes with Applications. Springer, 2006.
- [440] A. E. Kyprianou and R. Loeffen. Lévy processes in finance distinguished by their coarse and fine path properties. In A. Kyprianou, W. Schoutens, and P. Wilmott, editors, Exotic Option Pricing and Advanced Lévy Models, pages 1–28. Wiley, 2005.
- [441] A. E. Kyprianou and M. R. Pistorius. Perpetual options and Canadization through fluctuation theory. *Ann. Appl. Probab.*, 13:1077–1098, 2003.
- [442] A. E. Kyprianou and V. Rivero. Special, conjugate and complete scale functions for spectrally negative Lévy processes. *Electron. J. Probab.*, 13:1672–1701, 2008.
- [443] A. E. Kyprianou, V. Rivero, and R. Song. Convexity and smoothness of scale functions and de Finetti's control problem. *J. Theoret. Probab.*, 2009. (forthcoming).

[444] A. E. Kyprianou, W. Schoutens, and P. Wilmott, editors. *Exotic Option Pricing and Advanced Lévy Models*. Wiley, 2005.

- [445] A. E. Kyprianou and B. A. Surya. On the Novikov–Shiryaev optimal stopping problem in continuous time. *Elect. Comm. Probab.*, 10:146–154, 2005.
- [446] S.TURNBULL WAKEMAN L. A quick algorithm for pricing european average options. *J. Of Financial and Quantitative Analysis*, 26:377–389, 1991.
- [447] L. Andersen and J. Andreasen. Jump-diffusion processes: Volatility smile fitting and numerical methods for pricing. *Preprint*, 1 999.
- [448] L. Kaisajuntti, J. Kennedy. An n-dimensional markov-functional interest rate mode. *Preprint*, 2008.
- [449] L.Andersen. Volatility skews and extension of the libor market models. *Applied Mathematical Finance*, 7:1–32, 2000.
- [450] L.Andersen. Simple and efficient simulation of the heston stochastic volatility models. *Journal of Computational Finance*, 11-3, 2008.
- [451] L.Andersen J.Sidenious. Extension to the gaussian copula: Random recovery and random factor loadings. *preprint*.
- [452] B. LAPEYRE, E. PARDOUX, and R. SENTIS. Methodes de Monte Carlo pour les equations de transport et de diffusion. Number 29. Mathematiques & Applications, 1998.
- [453] B. Lapeyre and E. Temam. Competitive Monte Carlo methods for pricing asian options. *Journal of Computational Finance*, 5(1), 2001.
- [454] L.C.G.ROGERS and D.TALAY, editors. *Numerical Methods in Finance*. Publications of the Newton Institute. Cambridge University Press, 1997.
- [455] H.Ben Hameur M.Breton P. L'Ecuyer. A numerical procedure for pricing american-style asian option. *preprint*, 1999.
- [456] P. L'ECUYER. Maximally equidistributed combined tausworthe generators.
- [457] P. L'ECUYER. Random numbers for simulation. Communications of the ACM, 33(10), Octobre 1990.

[458] P. L'ECUYER. Uniform random number generation. The Annals of Operations Research, 53:77–120, 1994.

- [459] P. L'ECUYER. Random number generation. In *In the Hanbook of Simulation*. 1998.
- [460] P. L'ECUYER. Good parameters and implementations for combined multiple recursive random number generators. Shorter version in Operations Research, 47(1):249–260, 1999.
- [461] Sergei Levendorskiĭ, Oleg Kudryavtsev, and Vadim Zherder. The relative efficiency of numerical methods for pricing American options under Lévy processes. J. Comput. Finance, 9:69–98, 2005.
- [462] Sergei Z. Levendorskii. Pricing of the American put under Lévy processes. *Internat. J. Theoret. Appl. Finance*, 7:303–335, 2004.
- [463] E. Levy. Pricing european average rate currency options. *Journal of International Money and Finance*, 11(5):474–491, October 1992.
- [464] Alan Lewis. A simple option formula for general jump-diffusion and other exponential Lévy processes. Working paper, Optioncity.net., 2001.
- [465] S. Li. The distribution of the dividend payments in the compound Poisson risk model perturbed by diffusion. *Scand. Actuar. J.*, 2006(2):73–85, 2006.
- [466] J. Lillestøl. Some crude approximation, calibration and estimation procedures for NIG variates. Working paper, 2002.
- [467] S. Lindset. Pricing of multi-period rate of return guarantees. *Insurance:* Mathematics and Economics, 33:629–644, 2003.
- [468] V. LINETSKY. Step options (the feynman-kac approach to occupation time derivatives). Technical Report 96-18, University of Michigan, IOE Technical Report, 1996.
- [469] REGNIER H. LIONS P.L. Calcul du prix et des sensibilites d'une option americaine par une methode de monte-carlo. Technical report, Preprint, 2000.
- [470] Alex Lipton. Assets with jumps. Risk, 15(9):149–153, 2002.

[471] L.MACMILLAN. Analytic approximation for the American put option. Advances in Futures and Options Research, 1:119–139, 1986.

- [472] R. Lord. Partially exact and bounded approximations for arithmetic Asian options. *Journal of Computational Finance*, 10(2), 2006.
- [473] R. Lord. Efficient pricing algorithms for exotic derivatives. PhD thesis, Univ. Rotterdam, 2008.
- [474] C. Lotz and L. Schlögl. Default risk in a market model. *J. Banking Finance*, 24:301–327, 2000.
- [475] E. Luciano and W. Schoutens. A multivariate jump-driven financial asset model. *Quant. Finance*, 6(5):385–402, 2006.
- [476] E. Luciano and P. Semeraro. Extending time-changed Lévy asset models through multivariate subordinators. Preprint, 2007.
- [477] E. Lukacs. Characteristic Functions. Griffin, 2nd edition, 1970.
- [478] L.Wu. Fast at-the-money calibration of the libor market model using lagrange multipliers. *Journal of Computational Finance*, 6-2, 2002.
- [479] P. CARR L.Wu. Static hedging of standard options. Technical report, preprint, 2003.
- [480] D. B. Madan and E. Seneta. The variance gamma (VG) model for share market returns. *J. Business*, 63:511–524, 1990.
- [481] D. B. Madan and M. Yor. Representing the CGMY and Meixner processes as time changed Brownian motions. *J. Comput. Finance*, 12:27–47, 2008.
- [482] B.M.GOLDMAN H.B.SOSIN M.A.GATTO. Path dependent options: buy at low, sell at high. *J. of Finance*, 34:111–127, 1979.
- [483] Y. Malevergne and D. Sornette. How to account for extreme comovements between individual stocks and the market. *J. Risk*, 6:71–116, 2004.
- [484] Maller-Solomon-Szymaier. A multinomial approximation for american option price in levy process models. *Mathematical finance*, 16-4:589–694, 2006.

[485] Carr Peter Geman Helyette Madan Dilip B. Yor Marc. Option valuation using the fast fourier transform. *Math. Finance*, 13(3):345–382, 2003.

- [486] W. Margrabe. The value of an option to exchange one asset for another. J. Finance, 33:177–186, 1978.
- [487] D. Marie. Algorithmes stochastiques. Springer-Verlag, France, 1996.
- [488] D. Marie. Random Iterative Models. Springer-Verlag, France, 1997.
- [489] H. Masuda. On multidimensional Ornstein–Uhlenbeck processes driven by a general Lévy process. *Bernoulli*, 10:97–120, 2004.
- [490] A.-M. Matache, C. Schwab, and T. P. Wihler. Fast numerical solution of parabolic integro-differential equations with applications in finance. *SIAM J. Sci. Comput.*, 27:369–393, 2005.
- [491] A.-M. Matache, T. v. Petersdorff, and C. Schwab. Fast deterministic pricing of options on Lévy driven assets. M2AN Math. Model. Numer. Anal., 38:37–72, 2004.
- [492] Ana-Maria Matache, Pal-Andrej Nitsche, and Christoph Schwab. Wavelet Galerkin pricing of American options on Lévy driven assets. *Quant. Finance*, 5:403–424, 2005.
- [493] M.Attari. Option pricing using fourier transforms: A numerically efficient simplification. Technical report, Preprint, 2004.
- [494] M.Avellaneda, C. Friedman, R. Buff, and N. Granchamp. Weighted monte-carlo: A new technique for calibrating asset-pricing models. *Int. J. Theor. and Appl. Finance*, 4(1):>91–119, 2001.
- [495] M.Avellaneda, C. Friedman, R. Holmes, and D. Samperi. Calibrating volatility surfaces via relative entropy minimization. Appl. Math. Finance, 4:37–64, 1997.
- [496] M.B. Pedersen. Bermudan swaptions in the libor market model. Sim-Corp Financial Research Working Paper, 1999.
- [497] L.Andersen M.Broadie. Primal-dual simulation algorithm for pricing multidimensional american options. *Management Science*, 50-9:1222–1234, 2004.

[498] M.Broadie M.Cao. Improved lower and upper bound algorithm for pricing american options by simulation. *Quant. Finance*, 8-8:845–861, 2008.

- [499] R. L. McDonald and M. D. Schroder. A parity result for American options. *J. Comput. Finance*, 1(3):5–13, 1998.
- [500] A. McNeil, R. Frey, and P. Embrechts. *Quantitative Risk Management: Concepts, Techniques and Tools.* Princeton University Press, 2005.
- [501] M.Costabile M.Gaudenzi I.Massabo A Zanette. Evaluating fair premiums of equity-linked policies with surrender option in a bivariate model. *Insurance Math. Econom*, 45-2, 2009.
- [502] F.DIENER M.DIENER. Asymptotics of the binomial formula for option pricing. *Preprint Universite de Nice Sophia-Antipolis*, 1999.
- [503] R. Merton. On the pricing of corporate debt: the risk structure of interest rates. J. Finance, 29:449–470, 1974.
- [504] R. C. Merton. Theory of rational option pricing. Bell J. Econ. Manag. Sci., 4:141–183, 1973.
- [505] R. C. Merton. Option pricing with discontinuous returns. *Bell J. Financ. Econ.*, 3:145–166, 1976.
- [506] M.Gaudenzi A Zanette. Pricing american barrier options with discrete dividends by binomial trees. *Decis. Econ. Finance*, 32, 2009.
- [507] M.Gaudenzi M.A.Lepellere A Zanette. The singular points binomial method for pricing american path-dependent options. *J. Comput. Finance*, 14, 2010.
- [508] M.Giles. Multi-level monte carlo path simulation. *Operations Research*, 56-3:607–617, 2008.
- [509] P.BALDI L.CARAMELLINO M.G.IOVINO. Pricing single and double barrier options via sharp large deviations. *Preprint*, 1997.
- [510] P.BALDI L.CARAMELLINO M.G.IOVINO. Pricing complex barrier options with general features using sharp large deviation estimate. *Proceedings of the MCQMC Conference, Calremont (LA), USA*, 1999.
- [511] P.BALDI L.CARAMELLINO M.G.IOVINO. Pricing general barrier options: a numerical approach using sharp large deviations. *To appear in Mathematical Finance* (1999), 1999.

[512] M.H.Vellekoop J.V.Nieuwenhuis. Efficient pricing of derivatives on assets with discrete dividends. *Applied Mathematical Finance*, 13-3:265–284, 2006.

- [513] P. Mikkelsen. Cross-currency LIBOR market models. CAF Working Paper No. 85, 2002.
- [514] K. R. Miltersen, K. Sandmann, and D. Sondermann. Closed form solutions for term structure derivatives with log-normal interest rates. *J. Finance*, 52:409–430, 1997.
- [515] G.Fusai D.Marazzina M.Marena. Pricing fixed and floating asian options in a discretely monitored framewor. SIAM J. Financial Math, 2:383–403, 2011.
- [516] M.Ninomiya and S.Ninomiya. A new higher-order weak approximation scheme for stochastic differential equations and the rungeÃćÂĂÂŞkutta method. Finance & Stochastics, 13-3, 2009.
- [517] I. Molchanov and M. Schmutz. Geometric extension of put-call symmetry in the multiasset setting. Preprint, Arxiv 0806.4506, 2008.
- [518] Ernesto Mordecki. Optimal stopping and perpetual options for Lévy processes. *Finance Stoch.*, 6:473–493, 2002.
- [519] W.J. MOROKOFF and R.E. CAFLISH. Quasi-random sequences and their discrepancies. *SIAM, Journal of Scientific Computing*, 15(6):1251–1279, nov 1994.
- [520] G.BARLES C.DAHER M.ROMANO. Convergence of numerical schemes for problems arising in finance theory. *Math. Models and Meth.* in Appl. Sciences, 5:125–143, 1995.
- [521] M.RUBINSTEIN. Return to oz. Risk, 7(11):67-71, 1994.
- [522] E.REINER M.RUBINSTEIN. Breaking down the barriers. *Risk*, 4:28–35, 191.
- [523] J.C.COX M.RUBINSTEIN. Options Markets. Prenctice-Hall, London, 1985.
- [524] J.COX S.ROSS M.RUBINSTEIN. Option pricing: a simplified approach. *J. of Economics*, January 1978.

[525] F.BLACK M.SCHOLES. The pricing of Options and Corporate Liabilities. *Journal of Political Economy*, 81:635–654, 1973.

- [526] Y.SAAD M.SCHULTZ. Gmres: A generalized minimal residual algorithm for solving nonsymmetric linear sytems. SIAM J. Sci. Static. Comput., 7:856–869, 1986.
- [527] A. Müller and D. Stoyan. Comparison Methods for Stochastic Models and Risks. Wiley, 2002.
- [528] M. Musiela and M. Rutkowski. Continuous-time term structure models: forward measure approach. *Finance Stoch.*, 1:261–291, 1997.
- [529] M. Musiela and M. Rutkowski. *Martingale Methods in Financial Modelling*. Springer, 1997.
- [530] M. Musiela and M. Rutkowski. *Martingale Methods in Financial Modelling*. Springer, 2nd edition, 2005.
- [531] M.YOR. On some exponiancial functionals of brownian motion. *Adv. Appl. Pro.*, 24:509–531, 1992.
- [532] D.REVUZ M.YOR. Continuous Martingales and Brownian Motion. 1994.
- [533] H.GEMAN M.YOR. Besssel processes, asian options, and perpetuities. Mathematical finance, 3:349–375, 1993.
- [534] H.GEMAN M.YOR. Pricing and hedging double barrier options: a probabilistic approach. *Mathematical finance*, 6:365–378, 1996.
- [535] M. CHESNEY M.JEANBLANC-PIQUÉ M.YOR. Brownian excursion and parisian barrier options. Advances in Applied Probability, 29:165– 184, 1997.
- [536] N.BOULEAU. ProbabilitÃČÂls de l'ingÃČÂlnieur, variables alÃČÂlatoires et simulation. Ed Hermann, 1986.
- [537] S.Levendorskiy N.Boyarchenko. The eigenfunction expansion method in multi-factor quadratic term structure models. *Mathematical finance*, 17-4:509–539, 2006.
- [538] N.El Karoui J.Jiao. Approximation of large portfolio losses by stein's method and zero bias transformation. *Preprint*, 2006.

- [539] J. Neveu. Martingales ÃČÂä Temps DiscrÃČÂÍt. Masson, 1972.
- [540] Laurent Nguyen-Ngoc. Exotic options in general exponential Lévy models. Prépublication n° 850, Université Paris VI, 2003.
- [541] Laurent Nguyen-Ngoc and Marc Yor. Lookback and barrier options under general Lévy processes. In Yacine Ait-Sahalia and Lars-Peter Hansen, editors, *Handbook of Financial Econometrics*. North-Holland, 2005. (forthcoming).
- [542] H. NIEDERREITER. Random number generation and quasi-monte carlo methods. *SIAM*, 1992.
- [543] H. NIEDERREITER. New developments in uniform pseudorandom number and vector generation. In Springer, editor, In Lecture Notes in Statistics, 106: Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, volume 106, pages 87–120, 1994.
- [544] J. Aase Nielsen and Klaus Sandmann. Pricing of Asian exchange rate options under stochastic interest rates as a sum of options. Discussion Paper No. B-431, Universität Bonn, 1999.
- [545] J. Aase Nielsen and Klaus Sandmann. Pricing of Asian exchange rate options under stochastic interest rates as a sum of options. *Finance Stoch.*, 6:355–370, 2002.
- [546] N.KUNIMOTO N.IKEDA. Pricing options with curved boundaries. Mathematical finance, 2:275–298, 1992.
- [547] N.Jackson, E.Süli, and S. Howison. Computation of deterministic volatility surfaces. *Journal Computational Finance*, 2(2), 1999.
- [548] N.J.NEWTON. Variance reduction for simulated diffusions. SIAM J. Appl. Math., 54(6):1780-1805, 1994.
- [549] N.JU. Pricing an american option by approximating its early exercise boundary as a multipiece exponential function. *The Review of Financial Studies*, 11, 3:627–646, 1998.
- [550] N.Moreni. Pricing american options:a variance reduction technique for the longstaff-schwartz algorithm. Technical report, Cermics, 2003.
- [551] N.Moreni. Methodes de monte carlo et valorisation d'options. *Phd Thesis*, 2005.

[552] F.Mercurio N.Moreni. Pricing inflation indexed options with stochastics volatility. *Preprint*, 2006.

- [553] M.Broadie O.Kaya. 2004 winter simulation conference (wsc'04)). Exact Simulation of Option Greeks under Stochastic Volatility and Jump Diffusion Models, 2:535–543, 2004.
- [554] S.Levendroskii O.Kudrayavtsev. Fast pricing of american and barrier options under levy processes. preprint available at SSRN: http://ssrn.com/abstract=1040061.
- [555] O.Kurbanmuradov K.Sabelfeld J.Schoenmakers. Lognormal approximation to libor market models. *Journal of Computational Finance*, 6-1:69–100, 2002.
- [556] Lech A. Grzelak Cornelis W. Oosterlee. On the heston model with stochastic interest rates. *Preprint*, 2010.
- [557] O.Vasicek. An equilibrium characterisaton of the term structure. *Journal Financial Economics*, 5:177–188, 1977.
- [558] A.B. OWEN. Monte carlo variance of scrambled net quadrature. SIAM, Journal of Numerical Analysis, 34(5):1884–1910, 1997.
- [559] A.B. OWEN. Scrambled net variance for integrals of smooth functions. *The annals of statistics*, 25(4):1542–156, 1997.
- [560] F. Özkan and T. Schmidt. Credit risk with infinite dimensional Lévy processes. *Statist. Decisions*, 23:281–299, 2005.
- [561] Fehmi Özkan. Lévy processes in credit risk and market models. PhD thesis, University of Freiburg, 2002.
- [562] G. PAGES and Y.J. XIAO. Sequences with low discreoancy and pseudo random numbers: theoretical results and numerical tests. *J. Statist. Comput. Simul*, 56:163–188, 1997.
- [563] A. Papapantoleon. An introduction to Lévy processes with applications in finance. Lecture Notes, TU Vienna (arXiv/0804.0482), 2008.
- [564] A. Papapantoleon. Copulas and tail dependence coefficients for a class of Lévy models. In preparation, 2010.
- [565] A. Papapantoleon. A note on the strong Taylor and Picard approximations for LIBOR models. Preprint, 2010.

[566] A. Papapantoleon. Old and new approaches to LIBOR modeling. *Stat. Neerlandica*, 2010. (forthcoming).

- [567] A. Papapantoleon, J. Schoenmakers, and D. Skovmand. On efficient and accurate log-Lévy approximations for Lévy-driven LIBOR models. Preprint, TU Berlin, 2011.
- [568] A. Papapantoleon and M. Siopacha. Strong Taylor approximation of SDEs and application to the Lévy LIBOR model. In M. Vanmaele et al., editors, *Proceedings of the Actuarial and Financial Mathematics Conference*, pages 47–62. 2010.
- [569] A. Papapantoleon and D. Skovmand. Picard approximation of stochastic differential equations and application to LIBOR models. Preprint, arXiv/1007:3362, 2010.
- [570] R. CRANLEY T.N.L. PATTERSON. Randomization of number theoretic methods for multiple integration. *SIAM*, *Journal of Numerical Analysis*, 13(6), Dec 1976.
- [571] A. PAZY. Semigroups of Linear Operators and Applications to partial Differential Equations. Springer, 1983.
- [572] P.Carr G.Yang. Simulating american bond options in an hjm framework. Working Paper Morgan Stanley, 1997.
- [573] P.Carr G.Yang. Simulating bermudan interest rate derivatives. Working Paper Morgan Stanley, 1998.
- [574] P.Carr R.Lee. Realized volatility and variance: Options via swap. *Risk magazine*, May 2007.
- [575] P.COHORT. Weak and strong law of large numbers for the random normalised distortion. Submited for publication, 2000.
- [576] P.Collin-Dufresne and R.S. Goldstein. Pricing swaoptions within an affine framework. *The Journal of Derivatives*, Fall:1–18, 2002.
- [577] G. Peccati and M. Yor. Hardy's inequality in $L^2([0,1])$ and principal values of Brownian local times. In *Asymptotic methods in stochastics*, volume 44 of *Fields Inst. Commun.*, pages 49–74. Amer. Math. Soc., Providence, RI, 2004.
- [578] A. Pelsser, R. Pietersz, and M. van Regenmortel. Bridging Brownian LIBOR. Wilmott Mag., 18:98–103, 2005.

[579] G. Peskir and A. N. Shiryaev. A note on the call-put parity and a call-put duality. *Theory Probab. Appl.*, 46:167–170, 2002.

- [580] G. Peskir and A. N. Shiryaev. Optimal Stopping and Free-Boundary Problems. Birkhäuser, 2006.
- [581] P.Etore E.Gobet. Stochastic expansion for the pricing of call options with discrete dividends. *Applied Mathematical Finance*, to appear, 2012.
- [582] H.KUSHNER P.G.DUPUIS. Numerical Methods for Stochastic Control Problems in Continous Time. Springer-Verlag, 1992.
- [583] M.BROADIE P.GLASSERMANN. Pricing american-style securities using simulation. *J. of Economic Dynamics and Control*, 21:1323–1352, 1997.
- [584] M.BROADIE P.GLASSERMANN. A stochastic mesh method for pricing high-dimensional american options. *Working Paper*, Columbia University:1–37, 1997.
- [585] P.Glassermann N.Merener. Numerical solution of jump-diffusion libor market models. *Finance and Stochastics*, 7:1–27, 2003.
- [586] P.Glassermann X.Zhao. Arbitrage-free discreitzation of lognormal libor and swap rate models. *Finance and Stochastics*, 4:35–68, 2000.
- [587] P.Glassermann X.Zhao. Fast greeks by simulation of forward libor models. *Journal of Computational Finance*, 3-1:5–39, 2000.
- [588] P.Glassermann Z.Liu. Estimating greeks in simulating levy-driven models. *Journal of Computational Finance*, 14-2, 2010.
- [589] M. A. Pinsky. Fourier inversion for piecewise smooth functions in several variables. *Proc. Amer. Math. Soc.*, 118:903–910, 1993.
- [590] P.J.Schonbucher. A tree implementation of a credit spread model for credit derivatives. *Journal of Computational Finance*, 6-2, 2002.
- [591] G.CH. Plufg. Optimization of stochastic models. Kluwer Academic Publisher, 1996.
- [592] J. Poirot and P. Tankov. Monte Carlo option pricing for tempered stable (CGMY) processes. *Asia-Pac. Finan. Markets*, 13:327–344, 2006.

[593] N. U. Prabhu. Stochastic Storage Processes. Springer, 2nd edition, 1998.

- [594] K. Prause. The generalized hyperbolic model: estimation, financial derivatives, and risk measures. PhD thesis, Univ. Freiburg, 1999.
- [595] S. J. Press. Linear combinations of non-central chi-square variates. *Ann. Math. Statist.*, 37:480–487, 1966.
- [596] P.RITCHKEN. On pricing barrier options. *Journal Of Derivatives*, pages 19–28, Winter 95 1995.
- [597] B.KAMRAD P.RITCHKEN. Multinomial approximating models for options with k state variables. *Management Science*, 37:1640–1652, 1991.
- [598] N. Privault. An Elementary Introduction to Stochastic Interest Rate Modeling. World Scientific, 2008.
- [599] Ph. Protter. Stochastic Integration and Differential Equations. Springer, 3rd edition, 2004.
- [600] P.GLASSERMAN P.HEIDELBERGER P.SHAHABUDDIN. Gaussian importance sampling and stratification computational issue. *Computer Science/Mathematics*, September, 1998.
- [601] P.GLASSERMAN P.HEIDELBERGER P.SHAHABUDDIN. Asymptotically optimal importance sampling and stratification for prcing path-dependent options. *Mathematical Finance*, 2,April:117–152, 1999.
- [602] D. Psychoyios, G. Skiadopoulos, and P. Alexakis. A review of stochastic volatility processes: properties and implications. *J. Risk Finance*, 4:43–60, 2003.
- [603] D.BEAGKEHOLE D.DYBVIG P.ZHOU. Going to extremes:correcting simulation bias in exotic option valuation. *Financial Analyst Journal*, pages 62–68, Jan-Fev 1997.
- [604] R. Cont and A.Minca. Recovering portfolio default intensities implied by cdo quotes. *To appear in Mathematical Finance*, 2008.
- [605] R. Cont and E. Voltchkova. A finite difference scheme for option pricing in jump diffusion and exponential lévy models. SIAM Journal on Numerical Analysis, 43(4):1596–1626, 2005.

[606] S. Jaimungal R. Jackson and V. Surkov. Fourier space time-stepping for option pricing with levy models. *Journal of Computational Finance*, 12-2, 2008.

- [607] R. W. Lee. Option pricing by transform methods: extensions, unification and error control. *Journal of Computational Finance*, 7, 2004.
- [608] S. Raible. Lévy processes in finance: Theory, numerics, and empirical facts. PhD thesis, Univ. Freiburg, 2000.
- [609] R.Bahr C.Chiarella N.El-Hassan X.Zheng. The reduction of forward rate volatility hjm models to markovian form: pricing european bond options. *Journal of Computational Finance*, 3-3:47–72, 2000.
- [610] R.BARRETT, editor. Templates for the solution of linear systems:building blocks for iterative methods. Siam, 1998.
- [611] R.BREEN. The accelerated binomial option pricing. *J.Of Finance and Quantitative Analysis*, 26:153–164, 1991.
- [612] L.Andersen R.Brotherton-Ratcliffe. Extended libor market models with stochastic volatility. *Journal of Computational Finance*, 9(1), 2005.
- [613] L.ANDERSON R.BROTHERTON-RATCLIFFE. Exact exotics. *Risk*, 9:85–89, Oct 1996.
- [614] R.Carmona N.Touzi. Optimal multiple stopping and valuation of swing options. *preprint*.
- [615] R.C.MERTON. Option pricing when the underlying stocks returns are discontinuous. *Journ. Financ. Econ.*, 5:125–144, 1976.
- [616] R.D.Smith. An almost exact simulation method for the heston model. Journal of Computational Finance, 11-1, 2007.
- [617] O. Reiß and U. Wystup. Efficient computation of option price sensitivities using homogeneity and other tricks. *J. Derivatives*, 9:41–53, 2001.
- [618] D. Revuz and M. Yor. Continuous martingales and Brownian motion. Springer-Verlag Berlin Heidelberg, 1991.
- [619] Daniel Revuz and Marc Yor. Continuous Martingales and Brownian Motion. Springer, 3rd edition, 1999.

[620] G.BARONE-ADESI R.E.WHALEY. Efficient analytic approximation of American option values. *Journal of Finance*, 42:301–320, 1987.

- [621] Claudia Ribeiro and Nick Webber. A Monte Carlo method for the normal inverse Gaussian option valuation model using an inverse Gaussian bridge. Preprint, City University, 2003.
- [622] Claudia Ribeiro and Nick Webber. Valuing path-dependent options in the variance-gamma model by Monte Carlo with a gamma bridge. *J. Comput. Finance*, 7(2):81–100, 2004.
- [623] R.Lagnado and S. Osher. A technique for calibrating derivative security pricing models: numerical solution of an inverse problem. *J. Comp. Fin.*, 1(1):13–25, 1997.
- [624] R.Lord. Partially exact and bounded approximations for arithmetic asian options. *Journal of Computational Finance*, 10-2, 2006.
- [625] R.Lord C.Kahl. Optimal fourier inversion in semi-analytical option pricing. *Journal of Computational Finance*, 10-4, 2007.
- [626] R.Lord, R.Koekkoek, D.J.C.Van Dijk. A comparison of biased simulation schemes for stochastic volatility models. *Preprint*, 2006.
- [627] A.GERSHO R.M.GRAY. Vector Quantization and Signal Compression. Kluwer, 7th edition, 1992.
- [628] M.J.SABIN R.M.GRAY. Global convergence and empirical consistency of the generalised lloyd algorithm. *IEEE Transactions on Information Theory*, 32:148–155, March 1986.
- [629] L. C. G. Rogers and Z. Shi. The value of an Asian option. J. Appl. $Probab.,\ 32(4):1077-1088,\ 1995.$
- [630] L. C. G. Rogers and L. A. M. Veraart. A stochastic volatility alternative to SABR. *Journal of Applied Probability*, 45(4):1071–1085, 2008.
- [631] L. Chris G. Rogers. Evaluating first-passage probabilities for spectrally one-sided Lévy processes. J. Appl. Probab., 37:1173–1180, 2000.
- [632] L. Chris G. Rogers. Monte Carlo valuation of American options. *Math. Finance*, 12:271–286, 2002.
- [633] L. Chris G. Rogers and Zo Shi. The value of an Asian option. *J. Appl. Probab.*, 32:1077–1088, 1995.

[634] L.C.G. Rogers. Montecarlo valuation of american option. *Preprint*, 2000.

- [635] J. Rosiński. Series representations of Lévy processes from the perspective of point processes. In O. E. Barndorff-Nielsen, Th. Mikosch, and S. I. Resnick, editors, *Lévy Processes: Theory and Applications*, pages 401–415. Birkhäuser, 2001.
- [636] J.N.TSITSIKLIS B.VAN ROY. Optimal stopping of markov processes: Hilbert spaces theory, approximations algorithms and an application to pricing high-dimensional financial derivatives. *IEEE Transactions on Automatic Control*, 44(10):1840–1851, October 1999.
- [637] J.N.TSITSIKLIS B.VAN ROY. Regression methods for pricing complex american-style options. *Working Paper*, MIT:1–22, 2000.
- [638] R.SEDGEWICK. Algorithms. Addison-Wesley, 1987.
- [639] R.STULZ. Options on the minimum or the maximum of two risky assets. J. of Finance, 10:161–185, 1992.
- [640] R.GLOWINSKI J-L.LIONS R.TREMOLIERES. Analyse Numérique des Inéquations Variationnelles. Dunod, 1976.
- [641] R.Y. RUBINSTEIN. Simulation and the Monte Carlo Method. Wiley Series in Probabilities and Mathematical Statistics, 1981.
- [642] Walter Rudin. Real and Complex Analysis. McGraw-Hill, 3rd edition, 1987.
- [643] A.CONZE R.VISWANATHAN. Path dependent options: the case of lookback options. *J. of Finance*, 46:1893–1907, 1992.
- [644] T. H. Rydberg. A note on the existence of unique equivalent martingale measures in a markovian setting. *Finance and Stochastics*, 1(3):251–257, 1997.
- [645] S. Kusuoka. A remark on default risk models. *Advanced Mathemati-* calEconomics, 1:69–82, 1999.
- [646] P. A. Samuelson. Rational theory of warrant pricing. *Indust. Manag. Rev.*, 6:13–31, 1965.

[647] K. Sandmann, D. Sondermann, and K. R. Miltersen. Closed form term structure derivatives in a Heath–Jarrow–Morton model with log-normal annually compounded interest rates. In *Proceedings of the Seventh Annual European Futures Research Symposium Bonn*, pages 145–165, 1995. Chicago Board of Trade.

- [648] J.COX J.E.INGERSOLL S.A.ROSS. An intertemporal general equilibrium model of asset prices. *Econometrica*, pages 145–166, 53 1985.
- [649] K. Sato. Self-similar processes with independent increments. *Probab. Theory Related Fields*, 89:285–300, 1991.
- [650] K. Sato. Lévy Processes and Infinitely Divisible Distributions. Cambridge University Press, 1999.
- [651] F. Sauvigny. Partial Differential Equations 2. Springer, 2006.
- [652] S.BABBS. Binomial valuation of lookback options. working paper, Midland Global Markets London, 1992.
- [653] R. Schilling. *Measures, Integrals and Martingales*. Cambridge University Press, 2005.
- [654] E. Schlögl. A multicurrency extension of the lognormal interest rate market models. *Finance Stoch.*, 6:173–196, 2002.
- [655] R. Schmidt. Dependencies of Extreme Events in Finance. PhD thesis, Univ. Ulm, 2003.
- [656] T. Schmidt. Copulas and dependent measurement. In R. Cont, editor, Encyclopedia of Quantitative Finance, 2009.
- [657] J. Schoenmakers. Robust LIBOR Modelling and Pricing of Derivative Products. Chapman & Hall/CRC Press, 2005.
- [658] Schonbucher. Portfolio losses and the term structure of loss transition rates: a new methodology for the pricing of portfolio credit derivatives. *Preprint*, 2005.
- [659] P. J. Schönbucher. A LIBOR market model with default risk. Working paper, University of Bonn, 2000.
- [660] W. Schoutens. Meixner processes: Theory and applications in finance. EURANDOM Report 004, EURANDOM, Eindhoven, 2002.

[661] W. Schoutens. The Meixner process: Theory and applications in finance. In O. E. Barndorff-Nielsen, editor, Mini-proceedings of the 2nd MaPhySto Conference on Lévy Processes, pages 237–241, 2002.

- [662] W. Schoutens. Lévy Processes in Finance: Pricing Financial Derivatives. Wiley, 2003.
- [663] W. Schoutens, E. Simons, and J Tistaert. A perfect calibration! now what? UCS Technical Report 03, K.U.Leuven, 2003.
- [664] W. Schoutens and J. L. Teugels. Lévy processes, polynomials and martingales. Comm. Statist. Stochastic Models, 14:335–349, 1998.
- [665] Wim Schoutens. Exotic options under Lévy models: an overview. *J. Comput. Appl. Math.*, 189(1-2):526–538, 2006.
- [666] M. Schroder. Changes of numeraire for pricing futures, forwards and options. *Rev. Financ. Stud.*, 12:1143–1163, 1999.
- [667] K. Schürger. Laplace transforms and suprema of stochastic processes. In K. Sandmann and P. J. Schönbucher, editors, Advances in Finance and Stochastics, pages 285–294. Springer, 2002.
- [668] A. V. Selivanov. On the martingale measures in exponential Lévy models. *Theory Probab. Appl.*, 49:261–274, 2005.
- [669] M.A.MILEVSKY S.E.POSNER. Asian options, the sum of lognormals and the reciprocal gamma distribution. *J.Of Financial and Quantitative Analysis*, 3:409–422, September 1998.
- [670] S.FIGLEWSKI-B:GAO. The adaptive mesh model: a new approach to efficient option pricing. *Journal of Financial Economics*, 53:331–351, 1999.
- [671] P.BOYLE J.EVNINE S.GIBBS. Numerical evaluation of multivariate contingent claims. *Review of Financial Studies*, 2:241–250, 1989.
- [672] L. A. Shepp and A. N. Shiryaev. A new look at pricing of the "Russian option". *Theory Probab. Appl.*, 39:103–119, 1994.
- [673] A. N. Shiryaev, Yu. M. Kabanov, D. O. Kramkov, and A.V. Mel'nikov. Toward the theory of pricing of options of both European and American types. II. Continuous time. *Theory Probab. Appl.*, 39:61–102, 1994.

[674] A. N. Shiryaev, Z. Xu, and X. Y. Zhou. Thou shalt buy and hold. *Quant. Finance*, 8:765–776, 2008.

- [675] Albert N. Shiryaev. Essentials of Stochastic Finance: Facts, Models, Theory. World Scientific, 1999.
- [676] H. NIEDERREITER P.J.S. SHIUE. Monte carlo and quasi-monte carlo methods in scientific computing. Lecture Notes in Statistics, Ed Springer, 106, 1995.
- [677] P.WILMOTT J.DEWYNE S.HOWISON. Option pricing Mathematical Models and Computation. Oxford Financial Press, 1993.
- [678] M. Siopacha. Taylor expansions of option prices by means of Malliavin calculus. PhD thesis, Vienna University of Technology, 2006.
- [679] M. Siopacha and J. Teichmann. Weak and strong Taylor methods for numerical solutions of stochastic differential equations. *Quant. Finance*, 11:517–528, 2011.
- [680] George Skiadopoulos. Volatility smile consistent option models: a survey. *Int. J. Theor. Appl. Finance*, 4:403–437, 2001.
- [681] M.BROADIE P.GLASSERMANN S.KOU. A continuity correction for discrete barrier options. *Mathematical Finance*, 7, 1997.
- [682] D. Skovmand. LIBOR market models theory and applications. PhD thesis, Univ. Aarhus, 2008.
- [683] O.Kudryavtsev S.Levendorskiy. Fast pricing of american and barrier options under levy processes. *Preprint*, 2007.
- [684] S.L.HESTON. A closed-form solution for options with stochastic volatility with applications to bond and currency options. *Review of Financial Studies*, 6(2):327–343, 1993.
- [685] S.M. Ould Aly. Forward variance dynamics: Bergomi's model revisited. *Preprint hal-00624812*.
- [686] S.M. Ould Aly. Option pricing for a lognormal stochastic volatility model. *Preprint hal-00623935*.
- [687] S.M.T.Ehrlichman S.G.Henderson. Adaptive control variates for pricing multi-dimensional american options. *Journal of Computational Finance*, 11-1, 2007.

[688] S.Ninomiya N.Victoir. Weak approximation and derivative pricing. *Preprint*, 2005.

- [689] I.M. SOBOL. Uniformly distributed sequencs with an additional uniformity property. *USSR Comput. Maths. Math. Phys*, 16:236–242, 1976.
- [690] F. Spitzer. Principles of Random Walk. Van Nostrand, 1964.
- [691] E. M. Stein and G. Weiss. *Introduction to Fourier Analysis on Euclidean Spaces*. Princeton University Press, 1971.
- [692] E.LEVY S.TURNBULL. Average intelligence. RISK, 5(2):377–389, 1992.
- [693] P. Tankov. Processes in Finance: Inverse Problems and Dependence Modelling. PhD thesis, Ecole Polytechnique, 2004.
- [694] J. Teichmann. Calculating the Greeks by cubature formulae. *Proc. R. Soc. Lond. A*, 462:647–670, 2006.
- [695] S. TEZUKA. A generalization of faure sequences and its efficient implementation. Technical report, Winter Simulation Conference, 1995.
- [696] T.H.F.Cheuk, T.C.F.Vorst. Complex barrier options. *The Journal of Derivatives*, 4:8–22, 1996.
- [697] G. W. P. Thompson. Fast narrow bounds on the value of Asian options. Working paper. Judge Institute U. of Combridge, 1999.
- [698] G.W.P. THOMPSON. Fast narrow bounds on the value of asian options. Working paper Judge Institute U. of Cambridge, 1999.
- [699] J.BARRAQUAND T.PUDET. The pricing of american pathdependent contingent claims. *Mathematical Finance*, 6(1):17–51, 1996.
- [700] T.S.HO-R.C.STAPLETON-M.G.SUBRAHMANYAM. A simple technique for the valuation and hedging of american options. *The Journal of Derivatives*, pages 52–66, Fall 1994.
- [701] Q.ZHANG T.TAKSAR. Analytical approximation for american look-back options. *preprint*, 1998.
- [702] S. Turnball and L. Wakeman. A quick algorithm for pricing european average options. *Journal of Financial and Quantitative Analysis*, 16:377–389, 1991.

[703] T.CHEUK T.VORST. Lookback options and the observation frequency. working paper, Erasmus University Rotterdam, 1994.

- [704] T.CHEUK T.VORST. Complex barrier options. *Journal of Derivatives*, 4:8–22, 1996.
- [705] E. A. v. Hammerstein. Lévy-Khintchine representations of multivariate generalized hyperbolic distributions and some of their limiting cases. Preprint, University of Freiburg, 2004.
- [706] G.PAGES V.BALLY. A quantization method for the discretization of bsde's and reflected bsde's. Working Paper Université Paris XII, pages 1–40, 2000.
- [707] V.Bally E.Temam. Empirical semi-groups and calibration. *Preprint*, 2004.
- [708] A. Černý. Optimal continuous-time hedging with leptokurtic returns. Math. Finance, 17:175–203, 2007.
- [709] R.Carmona V.Durlemann. Generalizing the black-scholes formula to multivariate contingent claims. *Journal of Computational Finance*, 9(2), 2005.
- [710] J. Vecer. A new pde approach for pricing arithmetic asian options. Journal of Computational Finance, 4(4), 2001.
- [711] L.C.G. Rogers L.A.M. Veraart. A stochastic volatility alternative to sabr. *J. Appl. Probab.*, 45(4):1071–1085, 2008.
- [712] Jan Večeř. Unified Asian pricing. Risk, 15(6):113–116, 2002.
- [713] Jan Večeř and Mingxin Xu. Pricing Asian options in a semimartingale model. *Quant. Finance*, 4(2):170–175, 2004.
- [714] Eberlein R.Frey E. A. von Hammerstein. Advanced credit portfolio modeling and cdo pricing. In Springer, editor, in Mathematics ÃćÂĂÂŞ Key Technology for the Future, W. JÃČÂdger, and H.-J. Krebs, (Eds.),, pages 253–280, 2008.
- [715] H.VAN DER VORST. Bi-cgstab: A fast and smoothly converging variant of bi-cg for the solution of nonsymmetric linear systems. *SIAM J. Sci. Static.Comput.*, 13:631–644, 1992.

[716] T. Vorst. Prices and hedge ratios of average exchange rate options. *International Review of Financial Analysis*, 1(3):179–193, 1992.

- [717] V.Piterbarg. A stochastic volatility forward libor model with a term structure of volatility smiles. *Preprint*.
- [718] V.Piterbarg. Pricing and hedging callable libor exotics in forward libor models. *Journal of Computational Finance*, 8-2, 2005.
- [719] S.Levendroskii O.Kudrayavtsev V.Zherder. The relative efficiency of numerical methods for pricing american options under levy proceess. *Journal of Computational Finance*, 9(2), Winter 2005-2006.
- [720] W. Wagner. Unbiased Monte Carlo evaluation of certain functional integrals. J. Comput. Phys., 71(1):21–33, 1987.
- [721] W. Wagner. Monte Carlo evaluation of functionals of solutions of stochastic differential equations. Variance reduction and numerical examples. Stochastic Anal. Appl., 6(4):447–468, 1988.
- [722] W. Wagner. Unbiased multi-step estimators for the Monte Carlo evaluation of certain functional integrals. *J. Comput. Phys.*, 79(2):336–352, 1988.
- [723] W. Wagner. Unbiased Monte Carlo estimators for functionals of weak solutions of stochastic differential equations. *Stochastics Stochastics Rep.*, 28(1):1–20, 1989.
- [724] FU MADAN WANG. Pricing continuous time asian options: A comparaison of analytical and monte carlo methods. *College of Business and Management*, 1996.
- [725] Wang, Y., Caffisch, R. Pricing and hedging american-style options: A simple simulation-based approach. *Journal of Computational Finance*, 13-4, 2010.
- [726] N. Webber. Simulation methods with Lévy processes. In Andreas Kyprianou, Wim Schoutens, and Paul Wilmott, editors, Exotic Option Pricing and Advanced Lévy Models, pages 29–49. Wiley, 2005.
- [727] O. Weick. Portfolio optimierung. Master's thesis, University of Freiburg, 2003.

[728] W.T. VETTERLING W.H. PRESS, S.S. TEUTOLSKY and B.P. FLANNERY. *Numerical Recipes in C. The art of scientific computing*. Cambridge University Press, 1992.

- [729] W.HACKBUSCH and U.TROTTENBERG, editors. *Multigrid Methods*, volume 960 of *Lecture Notes in Math.* Springer Verlag, 1981.
- [730] DAVID VERNON WIDDER. *The Laplace Transform*. Princeton University press, 1941.
- [731] D. Williams. *Probability with Martingales*. Cambridge University Press, 1995.
- [732] P. Wilmott. Derivatives: The Theory and Practice of Financial Engineering. Wiley, 1998.
- [733] H.A. Windcliff, P.A. Forsyth, and K.R. Vetzal. Numerical methods and volatility models for valuing cliquet options. *Applied Mathematical Finance*, 13, 2006.
- [734] W.M.Schmidt. On a general class of one-factor models for the term structure of interest rat. *Finance & Stochastics*, 1:3–24, 1997.
- [735] B. Wong and C. C. Heyde. On the martingale property of stochastic exponentials. *J. Appl. Probab.*, 41(3):654–664, 2004.
- [736] L. Wu and F. Zhang. LIBOR market model with stochastic volatility. J. Industr. Manag. Optim., 2:199–227, 2006.
- [737] W.WAGNER. Monte carlo evaluation of functionals of stochastic differential equations—variance reduction and numerical examples. *Stoch. Analysis Appl.*, 6:447–468, 1988.
- [738] J.ABATE W.WHITT. Numerical inversion of laplace transform of probability distribution. *ORSA Journal of Computing*, 7(1), Winter 1995.
- [739] Uwe Wystup. Vanilla options. In Jürgen Hakala and Uwe Wystup, editors, Foreign Exchange Risk, pages 3–14. Risk Publications, 2002.
- [740] X.Burtschell J.P.Laurent J.Gregory. A comparative analysis of cdo pricing models. *preprint*.
- [741] J.Yang T.R.Hurd X.Zhang. Saddlepoint approximation method for pricing cdos. *Journal of Computational Finance*, 8(2):1–20, 2006.

[742] Y. Achdou and O. Pironneau. A numerical procedure for the calibration of volatility with American options. *Applied Mathematical Finance*, to appear, 2005.

- [743] Y.D.LYUU. Very fast algorithms for barrier option pricing and the ballot problem. *Journal of Derivatives*, Spring, 1998.
- [744] Y.Tang J.Lang. A nonexploding bushy tree technique and its application to the multifactor interest rate market model. *Journal of Computational Finance*, 4-4:5–31, 2001.
- [745] P.BOYLE Y.TIAN. Pricing path—dependent options under the cev process. Working Paper, 1997.
- [746] P.BOYLE Y.TIAN. An explicit finite difference approach to the pricing of barrier options. *Applied Mathematical Finance*, (5):17–43, 1998.
- [747] Y.W.KWOK. Mathematical models of financial derivatives. Springer Finance, 1998.
- [748] Y.W.KWOK. Some theoretical aspects of option pricing algorithms. Preprint Hong-Kong University of Science and Technology, 1999.
- [749] X. Zhang. Analyse numérique des options américaines dans un modèle de diffusion avec sauts. Technical report, CERNA-Ecole Nationale des Ponts et Chaussées, 94.
- [750] L.C.G.ROGERS Z.SHI. The value of an asian option. J. Appl. Probab., 32(4):1077-1088, 1995.