

## 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 Göteborg University, Department of Economics*, 2008.
- [3] A.E.Kyprianou J. C. Pardo A. Kuznetsov and K. van Schaik. A wiener-hopf monte carlo simulation technique for lévy process.about the a.s. convergence of the kohonen algorithm with a general neighborhood function. *The Annals of Applied Probability*, 21(6):2171–2190, 2011.
- [4] 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.
- [5] A.Ahdida and A.Alfonsi. A mean-reverting sde on correlation matrices. *Stochastic Processes and their Applications*, 123(4), 2013.
- [6] A.Alfonsi, C.Labart, and J.Lelong. Stochastic local intensity loss models with interacting particle system. *Mathematical Finance*, to appear, 0(0):1–29, 2014.
- [7] A.Alfonsi and P.Blanc. Dynamic optimal execution in a mixed-market-impact hawkes price model. *Finance & Stochastics*, to appear, 2015.
- [8] 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.
- [9] A.Brace M.Musiela E.Schogl. A simulation algorithm based on measure relationship in the lognormal market models. *Working Paper*, 1998.
- [10] 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.
- [11] L.CLEWLOW A.CARVEHILL. On the simulation of contingent claims. *Journal of Derivatives*, pages 66–73, Winter 1994.

- [12] H.GEMAN A.EYDELAND. Domino effects:inverting the laplace transform. *RISK*Avril, 1995.
- [13] A.Kalife S.Mouti L.Goudenege. Managing gap risks in icppi for life insurance companies: A risk/return/cost analysis. *Insurance Markets and Companies: Analyses and Actuarial Computations*, 2, 2014.
- [14] A.Kawai. Analytical and monte carlo swaptions pricing under the forward swap measure. *Journal of Computational Finance*, 6-1:101–111, 2002.
- [15] A.Kebaier J.Lelong. Coupling importance sampling and multilevel monte carlo using sample average approximation. *preprint*, 2015.
- [16] A.Kohatsu Higa P.Tankov. Jump-adapted discretization schemes for levy-driven sdes. *To appear in Stochastic Processes and their Applications*, 2011.
- [17] A.Kolodko J.Schoenmakers. Iterative construction of optimal bermudan stopping time. *Finance & Stochastics*, 10:27–49, 2006.
- [18] Arthur Albert. *Regression and the Moore-Penrose Pseudoinverse*. Academic Press, 1972.
- [19] 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.
- [20] 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.
- [21] 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.
- [22] Hansjörg Albrecher and Martin Predota. Bounds and approximations for discrete Asian options in a variance-gamma model. *Grazer Math. Ber.*, 345:35–57, 2002.
- [23] Hansjörg Albrecher and Martin Predota. On Asian option pricing for NIG Lévy processes. *J. Comput. Appl. Math.*, 172:153–168, 2004.

- [24] A Alfonsi. High order discretization schemes for the CIR process: application to affine term structure and Heston models. *Math. Comp.*, 79(269):209–237, 2010.
- [25] A. Alfonsi. High order discretization schemes for the CIR process: Application to affine term structure and heston models. *Mathematics of Computation*, 79:209–237, 2010.
- [26] A.Li P.Ritchken L.Sankarasubramanian. Lattice methods for pricing american interest rate claims. *The Journal of Finance*, 50:719–737, 1995.
- [27] 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.
- [28] 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.
- [29] G.Fusai A.Meucci. Discretely monitored asian options under Lévy processes. *J. Banking Finan.*, 2008.
- [30] A. Ammar, B. Mokdad, F. Chinesta, and R. Keunings. A new family of solvers for some classes of multidimensional partial differential equations encountered in kinetic theory modeling of complex fluids. *J. Non-Newtonian Fluid Mech.*, 139:153–176, 2006.
- [31] L. Andersen and R. Brotherton-Ratcliffe. Extended LIBOR market models with stochastic volatility. *J. Comput. Finance*, 9:1–40, 2005.
- [32] Jesper Andreasen. The pricing of discretely sampled Asian and look-back options: a change of numeraire approach. *J. Comput. Finance*, 2(1):5–30, 1998.
- [33] A. Andreoli, F. Caravenna, P. Dai Pra, and G. Posta. Scaling and multiscaling in financial series: a simple model. *Advances in Applied Probability*, 44(4):1018–1051, 2012.
- [34] S. Ankirchner. Monotone utility convergence. *J. Appl. Probab.*, 43:622–633, 2006.

- [35] 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.
- [36] S. Antonelli, F. Scarlatti. Pricing options under stochastic volatility : a power series approach. *Finance Stoch.*, 13:269–303, 2009.
- [37] I.A. ANTONOV and V.M. SALEEV. An economic method of computing  $lp_\tau$ -sequences. *USSR Comput. Maths. Math. Phys*, 19:252–256, 1980.
- [38] A.PELSSER-T.VORST. The binomial model and the greeks. *The Journal Of Derivatives*, Spring:45–49, 1994.
- [39] D. Applebaum. *Lévy Processes and Stochastic Calculus*. Cambridge University Press, 2004.
- [40] D. Applebaum. *Lévy Processes and Stochastic Calculus*. Cambridge University Press, 2nd edition, 2009.
- [41] S.Crepey A.Rahal. Pricing convertible bonds with call protection. *Journal of Computational Finance*, to appear, 2011.
- [42] 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.
- [43] A.Sepp. Pricing options on realized variance in the heston model with jumps in returns and volatility. *Journal of Computational Finance*, 11-4, 2008.
- [44] S. Asmussen and P. W. Glynn. *Stochastic Simulation: Algorithms and Analysis*. Springer, 2007.
- [45] 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.
- [46] Søren 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.
- [47] E. Gobet A.Suleiman. New approximations in local volatility models. *Hal Preprint*, 2010.

- [48] G.FUSAI A.TAGLIANI. Accurate valuation of asian options using moments. *International Journal Of Theoretical and Applied Finance*, 2.
- [49] Mukarram Attari. Option Pricing Using Fourier Transforms: A Numerically Efficient Simplification. *SSRN eLibrary*, 2004.
- [50] B.Lapeyre A.Turki. American options based on malliavin calculus and nonparametric variance reduction methods. *SIAM J. Financial Math.* to appear, 1, 2012.
- [51] A.Van Haastrect A.Pelsser. Efficient, almost exact simulation of the heston stochastic volatility model. *Preprint*, 2008.
- [52] 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.
- [53] C. W. Oosterlee A.W. van der Stoepb, L. A. Grzelakb. The heston stochastic-local volatility model: Efficient monte carlo simulation. *International Journal of Theoretical and Applied Finance*, to appear, 2014.
- [54] J.HULL A.WHITE. The pricing of options on assets with stochastics volatility. *J.Of Finance*, 42:281–300, 1987.
- [55] J.HULL A.WHITE. The use of the control variate technique in option pricing. *J.Of Finance and Quantitative Analysis*, 23:237–251, 1988.
- [56] J.HULL A.WHITE. Efficient procedures for valuing european and american path-dependent options. *The Journal of Derivatives*, 1:21–31, 1993.
- [57] 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.
- [58] E.APPOLONI M.GAUDENZI A.ZANETTE. The binomial interpolated lattice method for step double barrier options. *International Journal of Theoretical and Applied Finance*, 17(6), 2014.
- [59] M.BRIANI L.CARAMELLINO A.ZANETTE. A hybrid tree-finite difference approach for the bates model. *Preprint*, 2013.

- [60] M.BRIANI L.CARAMELLINO A.ZANETTE. A hybrid tree-finite difference approach for the heston model. *Preprint Arxiv 1307.7178*, 2013.
- [61] M.BRIANI L.CARAMELLINO A.ZANETTE. A hybrid tree-finite difference approach for heston-hull-white type model. *Preprint*, 2014.
- [62] 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.
- [63] Ettore P. Jourdain B. Adaptive optimal allocation in stratified sampling methods. *Preprint Cermics hal-00192540*, pages 1–25, 2007.
- [64] D. Backus, S. Foresi, and L. Wu. Accounting for biases in Black-Scholes. *SSRN/585623*, 2004.
- [65] M. Barchmann. Portfolio theory with jump processes. Diploma thesis, TU Dresden, 2009.
- [66] O. E. Barndorff-Nielsen. Exponentially decreasing distributions for the logarithm of particle size. *Proc. R. Soc. Lond. A*, 353:401–419, 1977.
- [67] O. E. Barndorff-Nielsen. Normal inverse Gaussian distributions and stochastic volatility modelling. *Scand. J. Statist.*, 24:1–13, 1997.
- [68] O. E. Barndorff-Nielsen. Processes of normal inverse Gaussian type. *Finance Stoch.*, 2:41–68, 1998.
- [69] 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.
- [70] O. E. Barndorff-Nielsen, T. Mikosch, and S. Resnick, editors. *Lévy Processes: Theory and Applications*. Birkhäuser, 2001.
- [71] O. E. Barndorff-Nielsen and K. Prause. Apparent scaling. *Finance Stoch.*, 5:103–113, 2001.
- [72] 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.
- [73] 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.

- [74] 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.
- [75] 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.
- [76] G. Barone-Adesi and R. E. Whaley. Efficient analytic approximation of American option values. *J. Finance*, 42:301–320, 1987.
- [77] B.Arouna. Variance reduction and robbind-monro algorithm. Technical report, Cermics, 2002.
- [78] B.Arouna. Robbind-monro algorithm and variance reduction. *Journal of Computational Finance*, 7-2:335–362, 2003-04.
- [79] 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.
- [80] David S. Bates. Jump and stochastic volatility: Exchange rate processes implicit in deutsche mark in options. *Review of Financial Studies*, 9:69–107, 1996.
- [81] B.Dupire. <pricing on a smile. *Risk magazine*, 7:18–20, 1994.
- [82] F. Bellini and M. Frittelli. On the existence of minimax martingale measures. *Math. Finance*, 12:1–21, 2002.
- [83] 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.
- [84] D. Belomestny and M. Reiß. Optimal calibration for exponential Lévy models. WIAS Preprint No. 1017, 2005.
- [85] D. Belomestny and M. Reiß. Spectral calibration of exponential Lévy models. *Finance Stoch.*, 10:449–474, 2006.
- [86] D. Belomestny and J. Schoenmakers. A jump-diffusion LIBOR model and its robust calibration. *Quant. Finance*, 11:529–546, 2011.

- [87] Ahmed Ben Alaya, Mohamed Kebaier. Multilevel monte carlo for asian options and limit theorems. *Monte Carlo Methods Appl.*, 20(3):167–221, 2014.
- [88] Eric Benhamou. Fast Fourier transform for discrete Asian options. *J. Comput. Finance*, 6(1):49–68, 2002.
- [89] W. Benner, L. Zhyapkov, and S. Jortzik. A multi-factor cross-currency LIBOR market model. *J. Derivatives*, 16:53–71, 2009.
- [90] H. Berestycki, J. Busca, and I. Florent. Computing the implied volatility in stochastic volatility models. *Comm. Pure Appl. Math.*, 57:1352–1373, 2004.
- [91] M. Bernhart, P. Tankov, and X. Warin. A finite dimensional approximation for pricing moving average options. *SIAM J. Financial Math*, 2:989–1013, 2011.
- [92] J. Bertoin. Some elements on Lévy processes. In *Stochastic processes: Theory and methods*, volume 19 of *Handbook of Statistics*, pages 117–144. 2001.
- [93] Jean Bertoin. *Lévy processes*. Cambridge University Press, 1996.
- [94] A. Beskos, O. Papaspiliopoulos, and Gareth O. Roberts. Retrospective exact simulation of diffusion sample paths. *Bernoulli*, 12(6), December 2006.
- [95] 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.
- [96] C. Beveridge. Very long-stepping in the spot measure of the LIBOR market model. *Wilmott J.*, 2(6):289–299, 2010.
- [97] 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.
- [98] 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.



- [99] T. R. Bielecki and M. Rutkowski. *Credit Risk: Modeling, Valuation and Hedging*. Springer, 2002.
- [100] Nick H. Bingham. Fluctuation theory in continuous time. *Adv. Appl. Probab.*, 7:705–766, 1975.
- [101] T. Björk. *Arbitrage Theory in Continuous Time*. Oxford University Press, 2nd edition, 2004.
- [102] T. Björk, G. Di Masi, Y. Kabanov, and W. Runggaldier. Towards a general theory of bond markets. *Finance Stoch.*, 1:141–174, 1997.
- [103] B.Jourdain A.Zanette. Moments and strike matching binomial algorithm for pricing american put options. *Decis. Econ. Finance*, 31, 2008.
- [104] F. Black. The pricing of commodity contracts. *J. Financ. Econ.*, 3:167–179, 1976.
- [105] Fischer Black and Myron Scholes. The pricing of options and corporate liabilities. *J. Polit. Econ.*, 81:637–654, 1973.
- [106] P. Blæsild. The two-dimensional hyperbolic distribution and related distributions, with an application to Johanssen’s bean data. *Biometrika*, 68:251–263, 1981.
- [107] B.LAPEYRE, A.SULEM, and D.TALAY. *Understanding Numerical Analysis for Financial Models*. Cambridge University Press, To appear.
- [108] P.JAILLET D.LAMBERTON B.LAPEYRE. Variational inequalities and the pricing of American options. *Acta Applicandae Mathematicae*, 21:263–289, 1990.
- [109] S. Bochner. *Harmonic Analysis and the Theory of Probability*. University of California Press, 1955.
- [110] B.OKSENDAL. An introduction to malliavin calculus with applications to economics. *Working Paper 3/96*, 96.
- [111] K. Borovkov and A. Novikov. On a new approach to calculating expectations for option pricing. *J. Appl. Probab.*, 39:889–895, 2002.
- [112] Nina Boyarchenko and Sergei Levendorski. The eigenfunction expansion method in multi-factor quadratic term structure models. *Mathematical Finance*, 17(4):503–539, 2007.

- [113] Svetlana I. Boyarchenko and Sergei Z. Levendorskiĭ. Barrier options and touch-and-out options under regular Lévy processes of exponential type. *Ann. Appl. Probab.*, 12:1261–1298, 2002.
- [114] Svetlana I. Boyarchenko and Sergei Z. Levendorskiĭ. *Non-Gaussian Merton-Black-Scholes Theory*. World Scientific, 2002.
- [115] Svetlana I. Boyarchenko and Sergei Z. Levendorskiĭ. Perpetual American options under Lévy processes. *SIAM J. Control Optim.*, 40:1663–1696, 2002.
- [116] E. BRAATEN and G. WELLER. An improved low-discrepancy sequence for multidimensional quasi-monte carlo integration. *Journal of Comput. Phys.*, (33):249–258, 1979.
- [117] 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.
- [118] A. Brace, D. Gątarek, and M. Musiela. The market model of interest rate dynamics. *Math. Finance*, 7:127–155, 1997.
- [119] P. BRATLEY and B.L. FOX. Algorithm 659. implementing sobol’s quasirandom sequence generator. *ACM Transactions on Mathematical Software*, 14(1):88–100, 1988.
- [120] D. Breeden and R. Litzenberger. Prices of state-contingent claims implicit in option prices. *J. Business*, 51:621–651, 1978.
- [121] L. Breiman. *Probability*. Addison-Wesley Publishing Company, 1968.
- [122] 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.
- [123] D. Brigo and F. Mercurio. *Interest Rate Models*. Springer, 2001.
- [124] D. Brigo and F. Mercurio. *Interest Rate Models: Theory and Practice*. Springer, 2nd edition, 2006.
- [125] Damiano Brigo and Aurélien Alfonsi. Credit default swap calibration and derivatives pricing with the ssrd stochastic intensity model. *Finance and Stochastics*, 9(1):29–42, 2005.

- [126] M. Broadie and P. Glasserman. Estimating security price derivatives using simulation. *Management Science*, 42(2):269–285, 1996.
- [127] C.W. Oosterlee B.Zhang. Efficient pricing of commodity options with early-exercise under the ornstein–uhlenbeck process. *Applied Numerical Mathematics*, 62(2), 2012.
- [128] C.W. Oosterlee B.Zhang. Efficient pricing of asian options under levy processes based on fourier cosine expansions. part i: European-style products. *Siam J. Finan. Math.*, 4(1):399–426, 2013.
- [129] C. Kahl, P.Jackel. Fast strong approximation monte-carlo schemes for stochastic volatility models. *Journal of Quantitative Finance*, 6:513–536, 2006.
- [130] E. Cancès, V. Ehrlacher, and T. Lelièvre. Convergence of a greedy algorithm for high-dimensional convex nonlinear problems, 2010. To appear in Mathematical Models and Methods in Applied Sciences.
- [131] R. Carmona and M. Tehranchi. *Interest Rate Models: an Infinite Dimensional Stochastic Analysis Perspective*. Springer, 2006.
- [132] P. CARR. Randomization and the american put. Technical report, Morgan Stanley Bank - New York, 1997.
- [133] 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.
- [134] 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.
- [135] P. Carr, H. Geman, D. B. Madan, and M. Yor. Stochastic volatility for Lévy processes. *Math. Finance*, 13:345–382, 2003.
- [136] P. Carr, H. Geman, D. B. Madan, and M. Yor. Self-decomposability and option pricing. *Math. Finance*, 17:31–57, 2007.
- [137] P. Carr and D. B. Madan. Option valuation using the fast Fourier transform. *J. Comput. Finance*, 2(4):61–73, 1999.
- [138] P. Carr and L. Wu. Static Hedging of Standard Options. *CRIF Working Paper series* CRIF Working Paper series, 22, 2004.

- [139] P. Carr and L. Wu. Time-changed Lévy processes and option pricing. *J. Financ. Econ.*, 71:113–141, 2004.
- [140] Peter Carr. European put call symmetry. Preprint, Cornell University, 1994.
- [141] Peter Carr and Marc Chesney. American put call symmetry. Preprint, H.E.C., 1996.
- [142] Peter Carr, Katrina Ellis, and Vishal Gupta. Static hedging of exotic options. *J. Finance*, 53:1165–1190, 1998.
- [143] Peter Carr, Hélyette Geman, Dilip B. Madan, and Marc Yor. Stochastic volatility for Lévy processes. *Math. Finance*, 13(3):345–382, 2003.
- [144] Peter Carr, Hélyette Geman, Dilip B. Madan, and Marc Yor. Pricing options on realized variance. *Finance Stoch.*, 9(4):453–475, 2005.
- [145] 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.
- [146] Peter Carr and Dilip B. Madan. Saddlepoint methods for option pricing. *Journal of Computational Finance*, 2011 to appear.
- [147] Peter Carr, Dilip B. Madan, and Robert H Smith. Option valuation using the fast fourier transform. *Journal of Computational Finance*, 2:61–73, 1999.
- [148] A. Carverhill and L. Clewlow. Flexible convolution. In *From Black-Scholes to Black Holes*, pages 165–171. Risk Publications, 1992.
- [149] G.H.Meyer C.Chiarella, B.Kang. he evaluation of barrier option prices under stochastic volatility. *J.of Economic Dynamics and Control*, 64, 2014.
- [150] C.C.W.Leentvaar C.W. Oosterlee. The effect of coordinate transformations for sparse grid pricing of basket options. *Preprint, to appear JCAM*, 2007.
- [151] C.E.LEMKE. Bimatrix equilibrium points and Mathematical Programming. *Management Science*, 11:681–689, 1965.

- [152] Kyriakou I. Cerny, A. An improved convolution algorithm for discretely sampled asian options. *Quantitative Finance to appear*, 2010.
- [153] T. Chan. Pricing contingent claims on stocks driven by Lévy processes. *Ann. Appl. Probab.*, 9:504–528, 1999.
- [154] J.F. Chassagneux and S. CrÃlpey. Doubly reflected BSDEs with Call Protection and their Approximation. *Preprint*, 2010.
- [155] Zhang Chen, Ken Vetzal, and Peter A Forsyth. The effect of modelling parameters on the value of gmwb guarantees. *Insurance: Mathematics and Economics*, 43(1):165–173, 2008.
- [156] Zhuliang Chen and Peter A Forsyth. A numerical scheme for the impulse control formulation for pricing variable annuities with a guaranteed minimum withdrawal benefit (gmwb). *Numerische Mathematik*, 109(4):535–569, 2008.
- [157] 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.
- [158] M. Chesney and M. Jeanblanc. Pricing American currency options in an exponential Lévy model. *Appl. Math. Finance*, 11:207–225, 2004.
- [159] M. Chesney, M. Jeanblanc-Picqué, and M. Yor. Brownian excursions and Parisian barrier options. *Adv. in Appl. Probab.*, 29:165–184, 1997.
- [160] C.Labart J.Lelong. Pricing double barrier parisian options using laplace transforms. *preprint CERMICS*, 2006.
- [161] C.Labart J.Lelong. Pricing parisian options. *preprint CERMICS*, 2006.
- [162] COCHRAN. *Sampling Techniques*. Wiley Series in Probabilities and Mathematical Statistics, 1977.
- [163] P. Collin-Dufresne and R. S. Goldstein. Pricing swaptions within an affine framework. *J. Derivatives*, 10:9–26, 2002.
- [164] R. Cont. Empirical properties of asset returns: stylized facts and statistical issues. *Quant. Finance*, 1:223–236, 2001.
- [165] R. Cont and P. Tankov. *Financial Modelling with Jump Processes*. Chapman & Hall / CRC Press, 2004.

- [166] R. Cont and P. Tankov. *Financial Modelling with Jump Processes*. Chapman and Hall/CRC Press, 2004.
- [167] R. Cont and P. Tankov. Nonparametric calibration of jump-diffusion option pricing models. *J. Comput. Finance*, 7(3):1–49, 2004.
- [168] 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.
- [169] 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.
- [170] R. Cont and E. Voltchkova. Integro-differential equations for option prices in exponential Lévy models. *Finance Stoch.*, 9:299–325, 2005.
- [171] J. M. Corcuera, D. Nualart, and W. Schoutens. Completion of a Lévy market by power-jump assets. *Finance Stoch.*, 9:109–127, 2005.
- [172] 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.
- [173] 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.
- [174] R. Carmona S. Crepey. Monte carlo computation of small loss probabilities. Technical report, Preprint, 2008.
- [175] C.Rogers P.Di Graziano. A dynamic approach to the modelling of credit derivatives using markov chains. *Preprint*, 2006.
- [176] 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.
- [177] G.FUSAI D.I.ABRAHAMS C.SGARRA. An exact analytical solution for discrete barrier options. *Working Paper SEMEQ Department University Piemonte Orientale Italy*, 2004.
- [178] C. Bernard Z. Cui. Pricing of timer options. *Journal of Computational Finance*, 2011.

- [179] C.W.CRYER. The solution of a quadratic programming problem using systematic overrelaxation. *SIAM J. Control*, 9:385–392, 1971.
- [180] C.W.CRYER. The efficient solution of linear complementarity problems for tridiagonal minkowski matrices. *ACM Trans. Math. Software*, 9:199–214, 1983.
- [181] 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.
- [182] D. D.-Castelle and D. Marie. *Probabilit s et Statisques (tome 2.)*. Masson, France, 1983.
- [183] A. Daniluk and D. Ga tarek. A fully log-normal LIBOR market model. *Risk*, 18(9):115–118, 2005.
- [184] D.Belomestny and J.Schoenmakers. A jump-diffusion libor model and its robust calibration. *Preprint*, 2006.
- [185] D.Belomestny and J.Schoenmakers. A stochastic volatility libor model and its robust calibration. *Preprint*, 2007.
- [186] J.Schoenmakers D.Belostomeny, C.Bender. True upper bounds for bermudean products via non-nested monte carlo. *Mathematical finance*, 191, 2009.
- [187] P. CARR D.B.MADAN. Option valuation using the fast fourier transform. *Journal of Computational Finance*, 2(2):61–73, 1998.
- [188] D.Brigo and M.Morini. An empirically efficient analytical cascade calibration of the. *Preprint*, 2005.
- [189] D.Brigo P. Pallavicini Torresetti. Calibration of cdo tranches with the dynamical generalized-poisson loss model. *Preprint*, 2006.
- [190] A. Deitmar. *A First Course in Harmonic Analysis*. Springer, 2nd edition, 2004.
- [191] D.E.KNUTH. *The Art of Computer programming, Seminumerical Algorithms*, volume 2. Addison-Wesley, 1981.
- [192] Freddy Delbaen and Walter Schachermayer. A general version of the fundamental theorem of asset pricing. *Math. Ann.*, 300:463–520, 1994.



- [193] Freddy Delbaen and Walter Schachermayer. The fundamental theorem of asset pricing for unbounded stochastic processes. *Math. Ann.*, 312:215–250, 1998.
- [194] 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.
- [195] 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.
- [196] L. Devroye. *Non-Uniform Random Variate Generation*. Springer, 1986.
- [197] P.CARR D.FAGUET. Fast accurate valuation of american options. *working paper*, 1994.
- [198] Yann d’Halluin, Peter A Forsyth, and George Labahn. A semi-lagrangian approach for american asian options under jump diffusion. *SIAM Journal on Scientific Computing*, 27(1):315–345, 2005.
- [199] Di Graziano C.Rogers. A dynamic approach to the modelling of credit derivatives using markov chains. *Preprint*, 2006.
- [200] G. Dimitroff, S. Lorenz, and A. Szimayer. A parsimonious multi-asset Heston model: Calibration and derivatives pricing. *Working Paper*, September 2009.
- [201] D.LAMBERTON. Random walk approximation and option prices. *Proceedings of the 5th CAP Workshop on Mathematical Finance, Columbia University, November 1998*, page Unknown, 1999.
- [202] D.LAMBERTON and B.LAPEYRE. *Introduction to Stochastic Calculus Applied to Finance*. Chapman and Hall, 1996.
- [203] A.Turki D.Lamberton. European options sensitivity with respect to the correlation for multidimensional heston models. *preprint*, 2013.
- [204] E.DIA D.Lamberton. Monte carlo for pricing asian options in jump models. Technical report, Université Paris–Est, 2010.
- [205] J.BARRAQUAND D.MARTINEAU. Numerical valuation of high dimensional multivariate american securities. *J.Of Finance and Quantitative Analysis*, 30:383–405, 1995.



- [206] G. Doetsch. *Handbuch der Laplace-Transformation*. Birkhäuser, 1950.
- [207] D.S. Clark . Necessary and sufficient conditions for the robbins-monro method. *Stochastic Processes and their Applications*, 17:359–367, 1984.
- [208] J. du Toit and G. Peskir. Selling a stock at the ultimate maximum. *Ann. Appl. Probab.*, 19:983–1014, 2009.
- [209] J.-C. Duan and J.-G. Simonato. Empirical martingale simulation of asset prices. *Manangement Science*, 44-9:1218–1233, 1998.
- [210] F. Dubois and T. Lelievre. Efficient pricing of asian options by the pde approach. *Journal of Computational Finance*, 8(2), 2004.
- [211] F. Dubois and T. Lelièvre. Efficient pricing of Asian options by the PDE approach. *Journal of Computational Finance*, 10(2), 2006.
- [212] 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.
- [213] D. Duffie, D. Filipović, and W. Schachermayer. Affine processes and applications in finance. *Ann. Appl. Probab.*, 13:984–1053, 2003.
- [214] Darrell Duffie, Jun Pan, and Kenneth Singleton. Transform analysis and asset pricing for affine jump-diffusions. *Econometrica*, 68(6):1343–1376, 2000.
- [215] D. Dufresne. The integrated square-root process. *Research paper number 90, Center for Actuarial Studies, University of Melbourne*, Novembre 2001.
- [216] D. Dufresne, J. Garrido, and M. Morales. Fourier inversion formulas in option pricing and insurance. *Methodol. Comput. Appl. Probab.*, 11:359–383, 2009.
- [217] 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.
- [218] Bruno Dupire. Pricing with a smile. *Risk*, 7:18–20, 1994.
- [219] Cornelis W. Oosterlee e S. Jain. Pricing higher-dimensional american options using the stochastic grid method. *International Journal of Computer Mathematics*, 89(9):1186–1211, 2012.

- [220] E. Alos. A generalization of the hull and white formula with applications to option pricing approximation. *Finance and Stochastics*, 10-3:353–365, 2006.
- [221] E. Eberlein, K. Glau, and A. Papapantoleon. Analysis of Fourier transform valuation formulas and applications. *Appl. Math. Finance*, 17:211–240, 2010.
- [222] 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).
- [223] E. Eberlein, J. Jacod, and S. Raible. Lévy term structure models: no-arbitrage and completeness. *Finance Stoch.*, 9:67–88, 2005.
- [224] E. Eberlein, J. Kallsen, and J. Kristen. Risk management based on stochastic volatility. *J. Risk*, 5(2):19–44, 2003.
- [225] 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.
- [226] E. Eberlein and W. Kluge. Valuation of floating range notes in Lévy term structure models. *Math. Finance*, 16:237–254, 2006.
- [227] 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.
- [228] E. Eberlein, W. Kluge, and A. Papapantoleon. Symmetries in Lévy term structure models. *Int. J. Theor. Appl. Finance*, 9:967–986, 2006.
- [229] E. Eberlein, W. Kluge, and Ph. J. Schönbucher. The Lévy LIBOR model with default risk. *J. Credit Risk*, 2:3–42, 2006.
- [230] E. Eberlein and N. Koval. A cross-currency Lévy market model. *Quant. Finance*, 6:465–480, 2006.
- [231] E. Eberlein and D. Madan. On correlating Lévy processes. Preprint, 2009.
- [232] E. Eberlein and F. Özkan. Time consistency of Lévy models. *Quant. Finance*, 3:40–50, 2003.

- [233] E. Eberlein and F. Özkan. The Lévy LIBOR model. *Finance Stoch.*, 9:327–348, 2005.
- [234] E. Eberlein and A. Papapantoleon. Equivalence of floating and fixed strike Asian and lookback options. *Stochastic Process. Appl.*, 115:31–40, 2005.
- [235] 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.
- [236] E. Eberlein, A. Papapantoleon, and A. N. Shiryaev. On the duality principle in option pricing: semimartingale setting. *Finance Stoch.*, 12:265–292, 2008.
- [237] E. Eberlein, A. Papapantoleon, and A. N. Shiryaev. Esscher transform and the duality principle for multidimensional semimartingales. *Ann. Appl. Probab.*, 19:1944–1971, 2009.
- [238] 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.
- [239] 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.
- [240] 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.
- [241] 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).
- [242] Ernst Eberlein and Jean Jacod. On the range of options prices. *Finance Stoch.*, 1:131–140, 1997.

- [243] Ernst Eberlein and Ulrich Keller. Hyperbolic distributions in finance. *Bernoulli*, 1:281–299, 1995.
- [244] Ernst Eberlein and Sebastian Raible. Term structure models driven by general Lévy processes. *Math. Finance*, 9:31–53, 1999.
- [245] E.Derman and I. Kani. Riding on a smile. *Risk magazine*, 1994.
- [246] E.Eberlein F.Ozkan. The levy libor model. *Finance & Stochastics*, IX:327–348, 2005.
- [247] C.Labart E.Gobet. Iciam conference proceeding (zurich, juillet 2007), 2 pages. *A sequential Monte Carlo algorithm for solving BSDE.*, 2007.
- [248] L.C.G.ROGERS E.J.STAPLETON. Fast accurate binomial pricing. *preprint*, 1997.
- [249] E.LEVY. Pricing european average rate currency options. *J.Of International Money and Finance*, 11:474–491, 1992.
- [250] R. Elliot, M. Jeanblanc, and M. Yor. On models of default risk. *Math. Finance*, 10:179–195, 2000.
- [251] J. Elstrodt. *Maß- und Integrationstheorie*. Springer, 2nd edition, 1999.
- [252] Benhamou Eric Gobet Emmanuel and Miri Mohammed. Smart expansion and fast calibration for jump diffusions. *Finance Stochastics*, 13(4), 2009.
- [253] Benhamou Eric Gobet Emmanuel and Miri Mohammed. Analytical formulas for local volatility model with stochastic rates. *Quantitative Finance, to appear*, 2011.
- [254] Benhamou Eric Gobet Emmanuel and Miri Mohammed. Time dependent heston model. *SIAM J. Financial Math.*, 1, 2011.
- [255] Goldberg Errais, Giesecke. Pricing credit from the top down with affine point processes. Technical report, Preprint, 2007.
- [256] F. Esche and M. Schweizer. Minimal entropy preserves the Lévy property: how and why. *Stochastic Process. Appl.*, 115:299–327, 2005.
- [257] A.B.Trolle E.Schwartz. Unspanned stochastic volatility and the pricing of commodity derivatives. *Review of Financial Studies*, 22-11:4423–4461, 2009.

- [258] 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.
- [259] M.J.BRENNAN E.S.SCHWARTZ. The valuation of the American put option. *J. of Finance*, 32:449–462, 1977.
- [260] N.JACKSON E.SULI. Adaptive finite element solution of 1d european option pricing problems. Technical Report 5, Oxford Computing Laboratory, 1997.
- [261] E. FOURNIE J.M.LASRY et al. An application of malliavin calculs to montecarlo methods in finance. *working paper*, 1997.
- [262] M. Fukasawa et al. Model-free implied volatility: from surface to index. *Internat. J. Theoret. Appl. Finance*, 14, 2011.
- [263] E.TEMAM. Monte carlo methods for asian options. *preprint*, 98-144 CERMICS, 1998.
- [264] C.W. Oosterlee F. Fang. A fourier-based valuation method for bermudan and barrier options under heston’s model. *SIAM*, 31:826–848, 2008.
- [265] C.W. Oosterlee F. Fang. Pricing early-exercise and discrete barrier options by fourier-cosine series expansions. *Numerische Mathematik*, 114:27–62, 2009.
- [266] C.W. Oosterlee F. Fang. A novel option pricing method based on fourier-cosine series expansions. *Siam J. Finan. Math.*, 2:439–463, 2011.
- [267] F. Mercurio and D. Brigo. Lognormal-mixture dynammics and calibration to market volatility smiles. *Preprint*, 2001.
- [268] J. Fajardo and E. Mordecki. Pricing derivatives on two-dimensional Lévy processes. *Int. J. Theor. Appl. Finance*, 9:185–197, 2006.
- [269] J. Fajardo and E. Mordecki. Skewness premium with Lévy processes. Working paper, IBMEC, 2006.
- [270] J. Fajardo and E. Mordecki. Symmetry and duality in Lévy markets. *Quant. Finance*, 6:219–227, 2006.

- [271] F.Black and P.Karasinski. Bond and option pricing when short rates are lognormal. *Financial Analyst Journal*, Juli-August:52–59, 1991.
- [272] Paul Fearnhead, O. Papaspiliopoulos, and Gareth O. Roberts. Particle filters for partially observed diffusions. *Working paper. Lancaster University.*, 2006.
- [273] W. Feller. *An Introduction to Probability Theory and its Applications*, volume II. Wiley, 2nd edition, 1971.
- [274] 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.
- [275] Qian Feng and Cornelis W. Oosterlee. Monte carlo calculation of exposure profiles and greeks for bermudan and barrier options under the heston hull-white model. *Available at SSRN 2494233*, 2014.
- [276] D. Filipović. Time-inhomogeneous affine processes. *Stochastic Process. Appl.*, 115:639–659, 2005.
- [277] D. Filipović. *Term-Structure Models: A Graduate Course*. Springer, 2009.
- [278] F.Jamshidian. Bond,futures and option evaluation in the quadratric interest rate model. *Applied Mathematical Finance*, 3:93–115, 1996.
- [279] A Forde, M. Jaquier. Robust approximations for pricing asian options and volatility swaps under stochastic volatility. *Applied Mathematical Finance*, 17(3), 2010.
- [280] M. Jaquier A Forde. Small-time asymptotics for implied volatility under the heston model. *International Journal of Theoretical and Applied Finance*, 12(6), 2009.
- [281] M. Jaquier A Mijatovic A. Forde. Asymptotic formulae for implied volatility under the heston model. *Proc. R. Soc*, 466(2124):3593–3620, 2010.
- [282] 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.

- [283] 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.
- [284] R. Frey and J. Backhaus. Dynamic hedging of synthetic cdo-tranches with spread-and contagion risk. Technical report, Preprint, department of mathematics, Universität Leipzig, 2008.
- [285] C. Fries. *Mathematical Finance: Theory, Modeling, Implementation*. Wiley, 2007.
- [286] C. Fries and F. Eckstädt. A hybrid Markov-functional model with simultaneous calibration to the interest rate and FX smile. *Quant. Finance*, 2010. (forthcoming).
- [287] C. Fries and M. Rott. Cross currency and hybrid Markov functional models. Preprint, 2004.
- [288] M. Frittelli. The minimal entropy martingale measure and the valuation problem in incomplete markets. *Math. Finance*, 10:39–52, 2000.
- [289] 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.
- [290] T. Fujiwara and Y. Miyahara. The minimal entropy martingale measures for geometric Lévy processes. *Finance Stoch.*, 7:509–531, 2003.
- [291] D. Gatarek, P. Bachert, and R. Maksymiuk. *The LIBOR Market Model in Practice*. Wiley, 2006.
- [292] J. Gatheral. *The Volatility Surface*. John Wiley & Sons, Inc., 2006.
- [293] P Gauthier and D Possamai. Efficient simulation of the double heston model. Technical report, Daiwa Capital Markets and Ecole Polytechnique, January 2010.
- [294] 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.
- [295] 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.

- [296] H. Geman and A. Eydeland. Domino effect. *Risk*, pages 65–67, April 1995.
- [297] H. Geman, N. El Karoui, and J.C. Rochet. Changes of numÃraires, changes of probability measure and option pricing. *J. Appl. Probab.*, 32(2):443–458, 1995.
- [298] H. Geman and M. Yor. Bessel processes, asian option and perpetuities. *Mathematical Finance*, 3(4), 1993.
- [299] H. U. Gerber and E. S. W. Shiu. Martingale approach to pricing perpetual American options on two stocks. *Math. Finance*, 6:303–322, 1996.
- [300] P. Glasserman. *Monte Carlo Methods in Financial Engineering*. Applications of Mathematics. Springer, 2003.
- [301] 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.
- [302] P. Glasserman and S. G. Kou. The term structure of simple forward rates with jump risk. *Math. Finance*, 13:383–410, 2003.
- [303] P. Glasserman and N. Merener. Cap and swaption approximations in LIBOR market models with jumps. *J. Comput. Finance*, 7:1–36, 2003.
- [304] P. Glasserman and N. Merener. Numerical solution of jump-diffusion LIBOR market models. *Finance Stoch.*, 7:1–27, 2003.
- [305] P. Glasserman and X. Zhao. Arbitrage-free discretization of lognormal forward LIBOR and swap rate models. *Finance Stoch.*, 4:35–68, 2000.
- [306] Paul Glasserman. *Monte Carlo Methods in Financial Engineering*. Springer, 2003.
- [307] Paul Glasserman and Kyoung-Kuk Kim. Gamma expansion of the heston stochastic volatility model. *Finance and Stochastics*, pages 1–30, 2009.
- [308] Paul Glasserman and Kyoung-Kuk Kim. Saddlepoint approximations for affine jump-diffusion models. *Journal of Economic Dynamics and Control*, 33:37–52, 2009.



- [309] Thomas Goll and Jan Kallsen. Optimal portfolios for logarithmic utility. *Stochastic Process. Appl.*, 89:31–48, 2000.
- [310] Thomas Goll and Jan Kallsen. A complete explicit solution to the log-optimal portfolio problem. *Ann. Appl. Probab.*, 13:774–799, 2003.
- [311] Thomas Goll and Ludger Rüschendorf. Minimax and minimal distance martingale measures and their relationship to portfolio optimization. *Finance Stoch.*, 5:557–581, 2001.
- [312] 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.
- [313] Goute, S. Oudjane N. Russo F. Variance optimal hedging for processes with independent increments and applications. applications to electricity market. *Journal of Computational Finance*, 17(2), 2014.
- [314] G.PAGES. A space vector quantization for numerical integration. *Journal of Applied and Computational Mathematics*, 89:1–38, 1997.
- [315] D.LAMBERTON G.PAGES. Sur l’approximation des réduites. *Ann. Inst. Henri Poincaré*, 26:331–355, 1990.
- [316] 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.
- [317] G.Pages, J.Printems. Functional quantization for numerics with an application to option pricing. *Monte Carlo Methods and its Applications*, 11(4), 2005.
- [318] J. O. Grabbe. The pricing of call and put options on foreign exchange. *J. Int. Money Finance*, 2:239–253, 1983.
- [319] 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.
- [320] Z. Grbac. *Credit risk in Lévy LIBOR modeling: rating based approach*. PhD thesis, Univ. Freiburg, 2010.
- [321] Priscilla Greenwood and Jim Pitman. Fluctuation identities for Lévy processes and splitting at the maximum. *Adv. Appl. Probab.*, 12:893–902, 1980.

- [322] Priscilla Greenwood and Jim Pitman. Fluctuation identities for random walk by path decomposition at the maximum. *Adv. Appl. Probab.*, 12:291–293, 1980.
- [323] B. Grigelionis. Processes of Meixner type. *Lith. Math. J.*, 39:33–41, 1999.
- [324] Lech A. Grzelak and Cornelis W. Oosterlee. On the heston model with stochastic interest rates. *Siam J. Finan. Math.*, 2(1), 2011.
- [325] P.BJERKSUND G.STENSLAND. Closed form aproximation of american options prices. *to appear in Scandinavian Journal of Management*, 1992. Working Paper Norwegian School of Economics and Business Administration.
- [326] P.BJERKSUND G.STENSLAND. Closed form spread option valuation. *Quuantitative Finance*, 2011. to appear.
- [327] A. A. Gushchin and E. Mordecki. Bounds on option prices for semi-martingale market models. *Proc. Steklov Inst. Math.*, 237:73–113, 2002.
- [328] Allan Gut. *An Intermediate Course in Probability*. Springer, 1995.
- [329] .Guyon and P. Henry-LabordÃre. Being particular about calibration. *Risk magazine*, January, 2012.
- [330] 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.
- [331] Patrick S. Hagan, Deep Kumar, Andrew S. Lesniewski, and Diana E. Woodward. Managing smile risk. *Wilmott Magazine*, 2002.
- [332] 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.
- [333] Jrgen Hakala and Uwe Wystup. Barrier options – an overview. In Jrgen Hakala and Uwe Wystup, editors, *Foreign Exchange Risk*, pages 29–36. Risk Publications, 2002.
- [334] J. M. Harrison and S. R. Pliska. Martingales and stochastic integrals in the theory of continous trading. *Stochastic Process. Appl.*, 11:215–260, 1981.

- [335] M. J. Harrison and D.M. Kreps. Martingales and arbitrage in multi-period securities markets. *J. Econ. Theory*, 20:381–408, 1979.
- [336] 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.
- [337] Espen Gaarder Haug. A look in the antimatter mirror. *Wilmott Magazine*, pages September, 38–42, 2002.
- [338] H.Buhler. Consistent variance curve models. *Finance and Stochastics*, 10-2, 2006.
- [339] 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.
- [340] R.GESKE H.E.JOHNSON. The american put options valued analytically. *J.of Financial Economics*, 39:1511–1524, 1984.
- [341] V. Henderson, David Hobson, William Shaw, and Rafal Wojakowski. Bounds for in-progress floating-strike Asian options using symmetry. *Ann. Oper. Res.*, 2004. (forthcoming).
- [342] V. Henderson and R. Wojakowski. On the equivalence of floating- and fixed-strike Asian options. *J. Appl. Probab.*, 39:391–394, 2002.
- [343] M. Henrard. Swaptions: 1 price, 10 deltas, and ... 6 1/2 gammas. Working paper, 2005.
- [344] P. Henry-Labordère. A general asymptotic implied volatility for stochastic volatility models. Preprint, [ArXiv:cond-mat/0504317](#), 2005.
- [345] P. Henry-Labordère. Cutting cva’s complexity. *Risk magazine*, 4(July), 2012.
- [346] 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.
- [347] H. Heuser. *Lehrbuch der Analysis I*. Teubner, 10th edition, 1993.
- [348] H.F. Chen and Y.M. Zhu. Stochastic approximation procedure with randomly varying truncations. *Scientia Sinica (series A)*, 29(9):914–926.

- [349] H.FAURE. Discrépance de suites associées à un système de numération (en dimension  $s$ ). *Acta Arithmetica*, XLI:337–361, 1982.
- [350] N. Hilber, N. Reich, C. Schwab, and C. Winter. Numerical methods for Lévy processes. *Finance Stoch.*, 13:471–500, 2009.
- [351] H.J.KUSHNER. *Probability Methods for Approximations in Stochastic Control and for Elliptic Equations*. Academic Press, New York, 1977.
- [352] H.JOHNSON. Options on the maximum of the minimum of several assets. *J.Of Finance and Quantitative Analysis*, 22:227–283, 1987.
- [353] 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.
- [354] R.C.HEYNEN H.M.KAT. Partial barrier options. *Journal of Financial Engineering*, 3:253–274, 1994.
- [355] H.NEIDERREITER. *Random Number Generation and Quasi Monte Carlo Methods*. Society for Industrial and Applied mathematics, 1992.
- [356] H.NIEDERREITER. Points sets and sequences with small discrepancy. *Monatsh.Math*, 104:273–337, 1987.
- [357] D. Hobson, P. Laurence, and T.-H. Wang. Static-arbitrage upper bounds for the prices of basket options. *Quant. Finance*, 5:329–342, 2005.
- [358] J.K. Hoogland and Colin D.D. Neumann. Asians and cash dividends: exploiting symmetries in pricing theory. Technical report, CWI, 2000.
- [359] H.P.BERMIN, editor. *Essays on Lookback and Barrier Options: A Malliavin Calculus Approach*. Lund Economic Studies, 1998.
- [360] J.-Z. Huang and L. Wu. Specification analysis of option pricing models based on time-changed Lévy processes. *J. Finance*, 59:1405–1439, 2004.
- [361] 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.

- [362] F. Hubalek, J. Kallsen, and L. Krawczyk. Variance-optimal hedging for processes with stationary independent increments. *Ann. Appl. Probab.*, 16:853–885, 2006.
- [363] 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).
- [364] F. Hubalek and A. Papapantoleon. Approximation of SDEs and applications to LIBOR models. Working paper, TU Berlin, 2009.
- [365] B. Huge and D. Lando. Swap pricing with two-sided default risk in a rating-based model. *European Finance Rev.*, 3:239–268, 1999.
- [366] 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.
- [367] P. J. Hunt and J. E. Kennedy. *Financial Derivatives in Theory and Practice*. Wiley, 2nd edition, 2004.
- [368] Ph. Hunt, J. Kennedy, and A. Pelsser. Markov-functional interest rate models. *Finance Stoch.*, 4:391–408, 2000.
- [369] Phil J. Hunt and Joanne E. Kennedy. *Financial derivatives in theory and practice*. John Wiley and Sons, 2000.
- [370] C. Hunter, P. Jäckel, and M. Joshi. Getting the drift. *Risk*, 14:81–84, 2001.
- [371] T. R. Hurd and Z. Zhou. A Fourier transform method for spread option pricing. *SIAM J. Financial Math.*, 1:142–157, 2010.
- [372] DEMPSTER HUTTON. Fast numerical valuation of american, exotic and complex options. *Applied Mathematical Finance*, 4:1–20, 1997.
- [373] M.ABRAMOWITZ I.A.STEGUN, editor. *Handbook of Mathematical Functions*. Dover, 9th edition, 1970.
- [374] 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.

- [375] I.J.KIM. The analytic valuation of american options. *Review of Financial Studies*, (3):547–572, 1990.
- [376] 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.
- [377] K.J. in 't Hout and S. Foulon. Adi finite difference schemes for option pricing in the heston model with correlation. *Int. J. Numer. Anal. Mod.*, 7:303–320, 2010.
- [378] J. Infante Acevedo. *Méthodes et modèles numériques appliqués aux risques du marché et à l'évaluation financière*. PhD thesis, Université de Paris-Est.
- [379] J.E. Ingersoll. *Theory of Financial Decision Making*. Rowman & Littlefield, 1987.
- [380] INRIA. *Probabilites numeriques. Chap 1: suites a discrepancy faible et integration numerique*.
- [381] R. Ivanov and A. Papapantoleon. On the “buy and hold” principle for spectrally negative Lévy processes. Preprint, TU Berlin, 2009.
- [382] HAMMERSLEY J. and HANDSCOMB D. *Monte Carlo Methods*. Chapman and Hall, London, 1979.
- [383] Kolodko A. Schoenmakers J. Iterative construction of the optimal bermudan stopping time. *Finance Stoch.*, 10:27–49, 2006.
- [384] L. O. Gracia J. J. Masdemont. Haar wavelets-based approach for quantifying credit portfolio losses. *Quantitative Finance to appear*, 2011.
- [385] J. Kennedy, P. Hunt A. Pelsser. Markov-functional interest rate models. *Finance & Stochastics*, 4:391–408, 2000.
- [386] J. Jacod and A. N. Shiryaev. *Limit Theorems for Stochastic Processes*. Springer, 2nd edition, 2003.
- [387] 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.

- [388] Jean Jacod and Albert N. Shiryaev. *Limit Theorems for Stochastic Processes*. Springer, 1987.
- [389] G.RUIZ-GOLDSTEIN J.A.GOLDSTEIN, editor. *Semigroups of linear and nonlinear operators and applications*. Kluwer Academic Publisher, 1992.
- [390] Jaillet, P., E. Ronn and S. Tompaidis. Valuation of commodity-based swing options. *preprint*.
- [391] Shashi Jain and Cornelis W. Oosterlee. The stochastic grid bundling method: Efficient pricing of bermudan options and their greeks. *Applied Mathematic and Computation*, 269, 2015.
- [392] F. Jamshidian. An exact bond option formula. *J. Finance*, 44:205–209, 1989.
- [393] F. Jamshidian. LIBOR and swap market models and measures. *Finance Stoch.*, 1:293–330, 1997.
- [394] F. Jamshidian. LIBOR market model with semimartingales. Working Paper, NetAnalytic Ltd., 1999.
- [395] 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.
- [396] L. ANDERSEN J.ANDREASEN. Volatility smile fitting and numerical methods for pricing. *preprint*, 1999.
- [397] 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.
- [398] R. A. Jarrow and S. M. Turnbull. Pricing derivatives on financial securities subject to credit risk. *J. Finance*, 50:53–85, 1995.
- [399] 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.
- [400] J.BARRAQUAND. Numerical valuation of high dimensional multivariate european securities. *Manangement Science*, pages 1882–1891, 1995.



- [401] J.BUSCA. A finite element method for the valuation of american options. Technical report, C.A.R. Internal Report, 1998.
- [402] C.Tebaldi. J.Da Fonseca, M.Grasselli. A multifactor volatility heston model. *Quantitative Finance*, 8(6):591–604, 2008.
- [403] M.BROADIE J.DETEMPLE. American option valuation : new bounds, approximations and a comparison of existing methods. *Review of financial studies*, to appear, 1995.
- [404] N.Privault J.D.Yu. Stratified approximations for the pricing of options on average. *Journal of Computational Finance*, 2015.
- [405] M. Jeanblanc and M. Rutkowski. Modelling of default risk: an overview. In *Mathematical finance: theory and practice*. Higher education press, Beijing, 2000.
- [406] 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).
- [407] T. Jeulin. *Semi martingales et grossissement d’une filtration*, volume 833 of *Lecture Notes in Math.* Springer, Berlin, 1980.
- [408] 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.
- [409] T. Jeulin and M. Yor. Inégalité de Hardy, semimartingales, et faux-amis. In *Séminaire de Probabilités, XIII (Univ. Strasbourg, Strasbourg, 1977/78)*, volume 721 of *Lecture Notes in Math.*, pages 332–359. Springer, Berlin, 1979.
- [410] J.E.ZHANG. A semy-analtical method for pricing and hedging continuously-sampled arithmetic average rate options. *preprint*, September 2000.
- [411] 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.
- [412] M S. Joshi J.H. Chan. Fast and accurate long stepping simulation of the heston stochastic volatility model. Technical report, SSRN, 2011.



- [413] 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.
- [414] J.Hull and A.WHITE. Valuing derivative securities using the explicit finite difference method. *Journal of Financial and Quantitative Analysis*, 25:87–100, 1990.
- [415] 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.
- [416] J.Hull and A.WHITE. Numerical procedures for implementing term structure models ii:two-factor models. *The Journal of Derivatives*, 2:37–48, 1994.
- [417] J.Hull and A.WHITE. Numerical procedures for implementing term structure models i:single factor models. *The Journal of Derivatives*, 2:7–16, 1994.
- [418] J.Hull and A.WHITE. Valuing credit derivatives using an implied copula approach. *The Journal of Derivatives*, 14(2):8–28, 2006.
- [419] 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.
- [420] M.Keller-Ressel J.Muhle-Kar. Asymptotic and exact pricing options on variance. *Finance and Stochastics*, 17-1, 2013.
- [421] S. JOE. Randomization of lattice rules for numerical multiple integration. *Journal of Computational and Applied Mathematics*, (31):299–304, 1990.
- [422] H. Johnson and R. Stulz. The pricing of options with default risk. *J. Finance*, 42:267–280, 1987.
- [423] B. Jørgensen. *Statistical Properties of the Generalized Inverse Gaussian Distribution*. Lecture Notes Stat. 9. Springer, 1982.
- [424] M. Joshi and A. Stacey. New and robust drift approximations for the LIBOR market model. *Quant. Finance*, 8:427–434, 2008.
- [425] Benjamin Jourdain and Mohamed Sbai. Exact retrospective Monte Carlo computation of arithmetic average Asian options. *Monte Carlo Methods Appl.*, 13(2):135–171, 2007.

- [426] Benjamin Jourdain and Mohamed Sbai. High order discretization schemes for stochastic volatility models. *Quantitative Finance*, to appear, 2011.
- [427] J.P.Laurent J.Gregory. Basket default swaps, cdo's and factor copulas. *Journal of Risk*, 7(4), 2005.
- [428] D.W.PEACEMAN-H.H.RACHFORD Jr. The numerical solution of parabolic and elliptic differential equations. *J.of Siam*, 3:28–42, 1955.
- [429] 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.
- [430] 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.
- [431] J.Schoenmakers. Iterating cancelable snowballs and related exotics in a many-factor libor model. *Risk*, September, 2006.
- [432] C.Cuchiero M. Keller-Ressel J.Teichmann. Polynomial processes and their applications to mathematical finance. Technical report, Preprint arXiv/0812.4740, 2008.
- [433] J.Teichmann C.Bayer. Cubature on wiener space in infinite dimension. finite difference methods for spdes and hjm-equations. *Preprint: arXiv:0712.3763v1*, 2008.
- [434] S.Ikonen J.Toivanen. Componentwise splitting methods for pricing american options under stochastic volatility. *International Journal of Theoretical and Applied Finance*, 2:331–361, 2007.
- [435] Julian Guyon. Volatilité stochastique : étude d'un modèle ergodique. Technical report, Université Paris VI, 2002.
- [436] J.Zhu. A simple and exact simulation approach to heston model. *Preprint*, 2008.
- [437] 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.

- [438] J. Kallsen and A. N. Shiryaev. The cumulant process and Esscher's change of measure. *Finance Stoch.*, 6:397–428, 2002.
- [439] J. Kallsen and A. N. Shiryaev. Time change representation of stochastic integrals. *Theory Probab. Appl.*, 46:522–528, 2002.
- [440] J. Kallsen and P. Tankov. Characterization of dependence of multidimensional Lévy processes using Lévy copulas. *J. Multivariate Anal.*, 97:1551–1572, 2006.
- [441] A.KHANNA K.AMIN. Convergence of american option values from discrete to continuous time financial models. *Mathematical finance*, 4:289–304, 1994.
- [442] I. Karatzas and S. E. Shreve. *Brownian Motion and Stochastic Calculus*. Springer, 2nd edition, 1991.
- [443] I. Karatzas and S. E. Shreve. *Methods of Mathematical Finance*. Springer, 1998.
- [444] I. Karatzas and Steven E. Shreve. *Brownian motion and stochastic calculus*. Springer-Verlag New-York, second edition, 1991.
- [445] N. El Karoui, M. Jeanblanc, and S. E. Shreve. Robustness of the Black & Scholes formula. *Mathematical Finance*, 8(2):93–126, 1998.
- [446] Y. Katznelson. *An Introduction to Harmonic Analysis*. Cambridge University Press, 3rd edition, 2004.
- [447] R. Kawai. A multivariate Lévy process model with linear correlation. *Quant. Finance*, 9:597–606, 2009.
- [448] Kiyoshi Kawazu and Shinzo Watanabe. Branching processes with immigration and related limit theorems. *Theor. Probab. Appl.*, 16:36–54, 1971.
- [449] C.Strugarek K.Barty, J.S.Roy. Temporal difference learning with kernels for pricing american style options. *Preprint*, 2005.
- [450] M. Keller. Moment explosions and long-term behavior of affine stochastic volatility models. *Mathematical Finance*, 21(1):73–98, 2011.
- [451] U. Keller. *Realistic modelling of financial derivatives*. PhD thesis, University of Freiburg, 1997.

- [452] M. Keller-Ressel, A. Papapantoleon, and J. Teichmann. A new approach to LIBOR modeling. *Math. Finance*, 2010. (forthcoming, minor revision).
- [453] 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.
- [454] A. Papapantoleon Keller-Ressel M. and J. Teichmann. A new approach to libor modeling. *Preprint*, arXiv/0904.0555, 2009.
- [455] Evis Këllezi and Nick Webber. Valuing Bermudan options when asset returns are Lévy processes. *Quant. Finance*, 4:87–100, 2004.
- [456] 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.
- [457] 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.
- [458] Duffie Darrel Pan Jun Singleton Kenneth. Transform analysis and asset pricing for affine jump-diffusions. *Econometrica*, pages 1343–1376, 68 2000.
- [459] El Khatib and N. Privault. Computations of greeks in a market with jumps via the malliavin calculus. *Finance and Stochastics*, to appear, 2003.
- [460] F. Kilin. Accelerating the calibration of stochastic volatility models. Working paper, HfB, 2007.
- [461] K.Larsson. Pricing commodity swaptions in multifactor models. *Journal of Derivatives*, 19-2:32–44, 2011.
- [462] K.Larsson. Multi-asset spread option pricing and hedging. *Quantitative Finance*, 12(6), 2012.
- [463] P. E. Kloeden and E. Platen. *Numerical Solution of Stochastic Differential Equations*. Springer, 3rd edition, 1999.
- [464] W. Kluge. *Time-inhomogeneous Lévy processes in interest rate and credit risk models*. PhD thesis, Univ. Freiburg, 2005.

- [465] W. Kluge and A. Papapantoleon. On the valuation of compositions in Lévy term structure models. *Quant. Finance*, 9:951–959, 2009.
- [466] L. KOCIS and W.J. WHITEN. Computational investigations of low discrepancy sequences. *ACM Transactions on Mathematical Software*, 23(2):266–294, June 1997.
- [467] A. Kohatsu-Higa and P. Tankov. Jump-adapted discretization schemes for Lévy-driven SDEs. *Stochastic Process. Appl.*, 120:2258–2285, 2010.
- [468] 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.
- [469] E. Kole, K. Koedijk, and M. Verbeek. Selecting copulas for risk management. *J. Banking Finance*, 31:2405–2423, 2007.
- [470] S. G. Kou and H. Wang. First passage times of a jump diffusion process. *Adv. Appl. Prob.*, 35:504–531, 2003.
- [471] S. G. Kou and H. Wang. Option pricing under a double exponential jump diffusion model. *Management Science*, 50(9):1178–1192, 2004.
- [472] Steven G. Kou. A jump diffusion model for option pricing. *Manag. Sci.*, 48:1086–1101, 2002.
- [473] Steven G. Kou and Hui Wang. First passage times of a jump diffusion process. *Adv. Appl. Probab.*, 35:504–531, 2003.
- [474] Steven G. Kou and Hui Wang. Option pricing under a double exponential jump diffusion model. *Manag. Sci.*, 50:1178–1192, 2004.
- [475] D. Kreps. Arbitrage and equilibrium in economies with infinitely many commodities. *J. Math. Econ.*, 8:15–35, 1981.
- [476] A. Kriegl and P. W. Michor. *The Convenient Setting of Global Analysis*. American Mathematical Society, 1997.
- [477] P.A.FORSYTH K.R.VETZAL. An optimal stochastic control framework for determining the cost of hedging of variable annuities. *Preprint*, 2013.
- [478] 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.

- [479] R.ZVAN P.A.FORSYTH K.R.VETZAL. Pde methods for pricing barrier options. *Technical Report Department of Computer Science, University of Waterloo*, 1998.
- [480] 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.
- [481] U. Küchler and S. Tappe. Bilateral gamma distributions and processes in financial mathematics. *Stochastic Process. Appl.*, 118:261–283, 2008.
- [482] O. Kudryavtsev and S. Levendorskiĭ. Pricing of first touch digitals under normal inverse Gaussian processes. *Int. J. Theor. Appl. Finance*, 9:915–949, 2006.
- [483] O. Kudryavtsev and S. Levendorskiĭ. Fast and accurate pricing of barrier options under Lévy processes. *Finance Stoch.*, 13:531–562, 2009.
- [484] Oleg Kudryavtsev and Sergei Levendorskiĭ. Fast and accurate pricing of barrier options under Lévy processes. *Finance Stoch.*, 13(4):531–562, 2009.
- [485] H. Kunita. *Stochastic flows and stochastic differential equations*, volume 24. CAMBRIDGE UNIVERSITY PRESS, 1990.
- [486] O. Kurbanmuradov, K. Sabelfeld, and J. Schoenmakers. Lognormal approximations to LIBOR market models. *J. Comput. Finance*, 6:69–100, 2002.
- [487] S. Kusuoka and D. W. Stroock. Precise asymptotics of certain Wiener functionals. *J. Funct. Anal.*, 99:1–74, 1991.
- [488] A. Kuznetsov. Wiener–Hopf factorization for a family of Lévy processes related to theta functions. Preprint, York University, 2009.
- [489] A. Kuznetsov. Wiener–Hopf factorization and distribution of extrema for a family of Lévy processes. *Ann. Appl. Probab.*, 2010. (forthcoming).
- [490] A. E. Kyprianou. *Introductory Lectures on Fluctuations of Lévy Processes with Applications*. Springer, 2006.
- [491] 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.

- [492] A. E. Kyprianou and M. R. Pistorius. Perpetual options and Canadization through fluctuation theory. *Ann. Appl. Probab.*, 13:1077–1098, 2003.
- [493] A. E. Kyprianou and V. Rivero. Special, conjugate and complete scale functions for spectrally negative Lévy processes. *Electron. J. Probab.*, 13:1672–1701, 2008.
- [494] 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).
- [495] A. E. Kyprianou, W. Schoutens, and P. Wilmott, editors. *Exotic Option Pricing and Advanced Lévy Models*. Wiley, 2005.
- [496] A. E. Kyprianou and B. A. Surya. On the Novikov–Shiryaev optimal stopping problem in continuous time. *Elect. Comm. Probab.*, 10:146–154, 2005.
- [497] S.TURNBULL WAKEMAN L. A quick algorithm for pricing european average options. *J.Of Financial and Quantitative Analysis*, 26:377–389, 1991.
- [498] L. Andersen and J. Andreasen. Jump-diffusion processes: Volatility smile fitting and numerical methods for pricing. *Preprint*, 1999.
- [499] L. Kaisajuntti, J. Kennedy. An n-dimensional markov-functional interest rate mode. *Preprint*, 2008.
- [500] P. Ladevèze. Nonlinear computational structural mechanics: new approaches and non-incremental methods of calculations. 1999.
- [501] D. Lamberton and B. Lapeyre. *Introduction to Stochastic Calculus Applied to Finance*. Chapman & Hall/CRC Financial Mathematics Series, 2007.
- [502] L.Andersen. Volatility skews and extension of the libor market models. *Applied Mathematical Finance*, 7:1–32, 2000.
- [503] L.Andersen. Simple and efficient simulation of the heston stochastic volatility models. *Journal of Computational Finance*, 11-3, 2008.
- [504] L.Andersen J.Sidenious. Extension to the gaussian copula: Random recovery and random factor loadings. *Journal of Credit Risk*, 1(1), 2005.



- [505] B. LAPEYRE, E. PARDOUX, and R. SENTIS. *Methodes de Monte Carlo pour les equations de transport et de diffusion*. Number 29. Mathematiques & Applications, 1998.
- [506] B. Lapeyre and E. Temam. Competitive Monte Carlo methods for pricing asian options. *Journal of Computational Finance*, 5(1), 2001.
- [507] I.Loumrhari L.Badouraly Kassim, J.Lelong. Importance sampling for jump processes and applications to finance. *Journal of Computational Finance*, 19(2), 2015.
- [508] K. Palmer. L.B.Chang. Smooth convergence in the binomial model. *Finance Stoch.*, 11(1), 2007.
- [509] L.C.G.ROGERS and D.TALAY, editors. *Numerical Methods in Finance*. Publications of the Newton Institute. Cambridge University Press, 1997.
- [510] C. Le Bris, T. Lelièvre, and Y. Maday. Results and questions on a nonlinear approximation approach for solving high-dimensional partial differential equations. *Constructive Approximation*, 30(3):621–651, 2009.
- [511] H.Ben Hameur M.Breton P. L’Ecuyer. A numerical procedure for pricing american-style asian option. *preprint*, 1999.
- [512] P. L’ECUYER. Maximally equidistributed combined tausworthe generators.
- [513] P. L’ECUYER. Random numbers for simulation. *Communications of the ACM*, 33(10), Octobre 1990.
- [514] P. L’ECUYER. Uniform random number generation. *The Annals of Operations Research*, 53:77–120, 1994.
- [515] P. L’ECUYER. Random number generation. In *In the Hanbook of Simulation*. 1998.
- [516] P. L’ECUYER. Good parameters and implementations for combined multiple recursive random number generators. *Shorter version in Operations Research*, 47(1):249–260, 1999.
- [517] 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.



- [518] Sergei Z. Levendorskiĭ. Pricing of the American put under Lévy processes. *Internat. J. Theoret. Appl. Finance*, 7:303–335, 2004.
- [519] E. Levy. Pricing european average rate currency options. *Journal of International Money and Finance*, 11(5):474–491, October 1992.
- [520] Alan Lewis. A simple option formula for general jump-diffusion and other exponential Lévy processes. Working paper, Optioncity.net., 2001.
- [521] Minqiang Li, Jieyun Zhou, and Shi-Jie Deng. Multi-asset spread option pricing and hedging. *Quantitative Finance*, 10(3):305–324, 2010.
- [522] 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.
- [523] J. Lillestøl. Some crude approximation, calibration and estimation procedures for NIG variates. Working paper, 2002.
- [524] S. Lindset. Pricing of multi-period rate of return guarantees. *Insurance: Mathematics and Economics*, 33:629–644, 2003.
- [525] V. LINETSKY. Step options (the feynman-kac approach to occupation time derivatives). Technical Report 96-18, University of Michigan, IOE Technical Report, 1996.
- [526] 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.
- [527] Alex Lipton. Assets with jumps. *Risk*, 15(9):149–153, 2002.
- [528] Stuart P. Lloyd. Least squares quantization in pcm. *Information Theory, IEEE Transactions on*, 28(2):129–137, 1982.
- [529] L.MACMILLAN. Analytic approximation for the American put option. *Advances in Futures and Options Research*, 1:119–139, 1986.
- [530] R. Lord. Partially exact and bounded approximations for arithmetic Asian options. *Journal of Computational Finance*, 10(2), 2006.
- [531] R. Lord. *Efficient pricing algorithms for exotic derivatives*. PhD thesis, Univ. Rotterdam, 2008.

- [532] C. Lotz and L. Schlögl. Default risk in a market model. *J. Banking Finance*, 24:301–327, 2000.
- [533] E. Luciano and W. Schoutens. A multivariate jump-driven financial asset model. *Quant. Finance*, 6(5):385–402, 2006.
- [534] E. Luciano and P. Semeraro. Extending time-changed Lévy asset models through multivariate subordinators. Preprint, 2007.
- [535] E. Lukacs. *Characteristic Functions*. Griffin, 2nd edition, 1970.
- [536] L.Wu. Fast at-the-money calibration of the libor market model using lagrange multipliers. *Journal of Computational Finance*, 6-2, 2002.
- [537] P. CARR L.Wu. Static hedging of standard options. Technical report, preprint, 2003.
- [538] D. B. Madan and E. Seneta. The variance gamma (VG) model for share market returns. *J. Business*, 63:511–524, 1990.
- [539] D. B. Madan and M. Yor. Representing the CGMY and Meixner processes as time changed Brownian motions. *J. Comput. Finance*, 12:27–47, 2008.
- [540] 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.
- [541] Y. Malevergne and D. Sornette. How to account for extreme co-movements between individual stocks and the market. *J. Risk*, 6:71–116, 2004.
- [542] Maller-Solomon-Szymaier. A multinomial approximation for american option price in levy process models. *Mathematical finance*, 16-4:589–694, 2006.
- [543] Carr Peter Geman Helyette Madan Dilip B. Yor Marc. Option valuation using the fast fourier transform. *Math. Finance*, 13(3):345–382, 2003.
- [544] W. Margrabe. The value of an option to exchange one asset for another. *J. Finance*, 33:177–186, 1978.
- [545] D. Marie. *Algorithmes stochastiques*. Springer-Verlag, France, 1996.
- [546] D. Marie. *Random Iterative Models*. Springer-Verlag, France, 1997.

- [547] H. Masuda. On multidimensional Ornstein–Uhlenbeck processes driven by a general Lévy process. *Bernoulli*, 10:97–120, 2004.
- [548] 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.
- [549] 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.
- [550] 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.
- [551] M.Attari. Option pricing using fourier transforms: A numerically efficient simplification. Technical report, Preprint, 2004.
- [552] 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.
- [553] M.Avellaneda, C. Friedman, R. Holmes, and D. Samperi. Calibrating volatility surfaces via relative entropy minimization. *Appl. Math. Finance*, 4:37–64, 1997.
- [554] L.Andersen M.Broadie. Primal-dual simulation algorithm for pricing multidimensional american options. *Manangement Science*, 50-9:1222–1234, 2004.
- [555] M.Broadie M.Cao. Improved lower and upper bound algorithm for pricing american options by simulation. *Quant. Finance*, 8-8:845–861, 2008.
- [556] R. L. McDonald and M. D. Schroder. A parity result for American options. *J. Comput. Finance*, 1(3):5–13, 1998.
- [557] A. McNeil, R. Frey, and P. Embrechts. *Quantitative Risk Management: Concepts, Techniques and Tools*. Princeton University Press, 2005.
- [558] 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.

- [559] F.DIENER M.DIENER. Asymptotics of the binomial formula for option pricing. *Preprint Universite de Nice Sophia-Antipolis*, 1999.
- [560] R. Merton. On the pricing of corporate debt: the risk structure of interest rates. *J. Finance*, 29:449–470, 1974.
- [561] R. C. Merton. Theory of rational option pricing. *Bell J. Econ. Manag. Sci.*, 4:141–183, 1973.
- [562] R. C. Merton. Option pricing with discontinuous returns. *Bell J. Financ. Econ.*, 3:145–166, 1976.
- [563] M.Gaudenzi A Zanette. Pricing american barrier options with discrete dividends by binomial trees. *Decis. Econ. Finance*, 32, 2009.
- [564] M.Giles. Multi-level monte carlo path simulation. *Operations Research*, 56-3:607–617, 2008.
- [565] P.BALDI L.CARAMELLINO M.G.IOVINO. Pricing single and double barrier options via sharp large deviations. *Preprint*, 1997.
- [566] 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.
- [567] 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.
- [568] M.Grasselli. The 4/2 stochastic volatility model. *Preprint*, 2014.
- [569] M.H.Vellekoop J.V.Nieuwenhuis. Efficient pricing of derivatives on assets with discrete dividends. *Applied Mathematical Finance*, 13-3:265–284, 2006.
- [570] P. Mikkelsen. Cross-currency LIBOR market models. CAF Working Paper No. 85, 2002.
- [571] 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.
- [572] G.Fusai D.Marazzina M.Marena. Pricing fixed and floating asian options in a discretely monitored framework. *SIAM J. Financial Math*, 2:383–403, 2011.

- [573] A.Turki A.Bouselmi M.Mikou. Toward a coherent monte carlo simulation of cva. *Monte Carlo Methods Appl.*, 20(3):195–216, 2014.
- [574] M.Ninomiya and S.Ninomiya. A new higher-order weak approximation scheme for stochastic differential equations and the runge–kutta method. *Finance & Stochastics*, 13-3, 2009.
- [575] I. Molchanov and M. Schmutz. Geometric extension of put-call symmetry in the multiasset setting. Preprint, Arxiv 0806.4506, 2008.
- [576] Ernesto Mordecki. Optimal stopping and perpetual options for Lévy processes. *Finance Stoch.*, 6:473–493, 2002.
- [577] W.J. MOROKOFF and R.E. CAFLISH. Quasi-random sequences and their discrepancies. *SIAM, Journal of Scientific Computing*, 15(6):1251–1279, nov 1994.
- [578] 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.
- [579] M.RUBINSTEIN. Return to oz. *Risk*, 7(11):67–71, 1994.
- [580] E.REINER M.RUBINSTEIN. Breaking down the barriers. *Risk*, 4:28–35, 191.
- [581] J.C.COX M.RUBINSTEIN. *Options Markets*. Prentice–Hall, London, 1985.
- [582] J.COX S.ROSS M.RUBINSTEIN. Option pricing: a simplified approach. *J. of Economics*, January 1978.
- [583] F.BLACK M.SCHOLES. The pricing of Options and Corporate Liabilities. *Journal of Political Economy*, 81:635–654, 1973.
- [584] Y.SAAD M.SCHULTZ. Gmres: A generalized minimal residual algorithm for solving nonsymmetric linear sytems. *SIAM J. Sci. Static.Comput.*, 7:856–869, 1986.
- [585] A. Müller and D. Stoyan. *Comparison Methods for Stochastic Models and Risks*. Wiley, 2002.
- [586] M. Musiela and M. Rutkowski. Continuous-time term structure models: forward measure approach. *Finance Stoch.*, 1:261–291, 1997.

- [587] M. Musiela and M. Rutkowski. *Martingale Methods in Financial Modelling*. Springer, 1997.
- [588] M. Musiela and M. Rutkowski. *Martingale Methods in Financial Modelling*. Springer, 2nd edition, 2005.
- [589] M.YOR. On some exponential functionals of brownian motion. *Adv. Appl. Pro.*, 24:509–531, 1992.
- [590] D.REVUZ M.YOR. *Continuous Martingales and Brownian Motion*. 1994.
- [591] H.GEMAN M.YOR. Bessel processes, asian options, and perpetuities. *Mathematical finance*, 3:349–375, 1993.
- [592] H.GEMAN M.YOR. Pricing and hedging double barrier options: a probabilistic approach. *Mathematical finance*, 6:365–378, 1996.
- [593] M. CHESNEY M.JEANBLANC-PIQUÉ M.YOR. Brownian excursion and parisian barrier options. *Advances in Applied Probability*, 29:165–184, 1997.
- [594] N.BOULEAU. *Probabilités de l'ingénieur, variables aléatoires et simulation*. Ed Hermann, 1986.
- [595] N.El Karoui and J.Jiao. Approximation of large portfolio losses by stein's method and zero bias transformation. *Preprint*, 2006.
- [596] J. Neveu. *Martingales À Temps Discrét*. Masson, 1972.
- [597] Laurent Nguyen-Ngoc. Exotic options in general exponential Lévy models. Prépublication n° 850, Université Paris VI, 2003.
- [598] 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).
- [599] H. NIEDERREITER. Random number generation and quasi-monte carlo methods. *SIAM*, 1992.
- [600] 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.

- [601] 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.
- [602] 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.
- [603] N.KUNIMOTO N.IKEDA. Pricing options with curved boundaries. *Mathematical finance*, 2:275–298, 1992.
- [604] N.Jackson, E.Süli, and S. Howison. Computation of deterministic volatility surfaces. *Journal Computational Finance*, 2(2), 1999.
- [605] N.J.NEWTON. Variance reduction for simulated diffusions. *SIAM J. Appl. Math.*, 54(6):1780–1805, 1994.
- [606] 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.
- [607] N.Moreni. Pricing american options:a variance reduction technique for the longstaff-schwartz algorithm. Technical report, Cermics, 2003.
- [608] N.Moreni. Methodes de monte carlo et valorisation d'options. *Phd Thesis*, 2005.
- [609] F.Mercurio N.Moreni. Pricing inflation indexed options with stochastic volatility. *Preprint*, 2006.
- [610] A. Nouy. A generalized spectral decomposition technique to solve a class of linear stochastic partial differential equations. *Comput. Methods Appl. Mech. Engrg.*, 196:4521–4537, 2007.
- [611] A. Nouy. A priori tensor approximations for the numerical solution of high-dimensional problems: alternative definitions. *Preprint*, 2007.
- [612] S.Ninomiya N.Victoir. Weak approximation and derivative pricing. *Preprint*, 2005.
- [613] 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.



- [614] O.Kudrayavtsev and A.Zanette. Efficient pricing of swing options in lévy-driven models. *Quantitative Finance*, 13(4), 2013.
- [615] S.Levendroskii O.Kudrayavtsev. Fast pricing of american and barrier options under levy processes. *Finance and Stochastics*, 13(4), 2009.
- [616] O.Kudryavtsev. A wiener-hopf monte carlo simulation approach for pricing path-dependent options under lévy process. *Preprint*, 2014.
- [617] O.Kurbanmuradov K.Sabelfeld J.Schoenmakers. Lognormal approximation to libor market models. *Journal of Computational Finance*, 6-1:69–100, 2002.
- [618] Lech A. Grzelak Cornelis W. Oosterlee. On cross-currency models with stochastic volatility and correlated interest rates. *Applied Mathematical Finance*, to appear, 2012.
- [619] O.Vasicek. An equilibrium characterisation of the term structure. *Journal Financial Economics*, 5:177–188, 1977.
- [620] A.B. OWEN. Monte carlo variance of scrambled net quadrature. *SIAM, Journal of Numerical Analysis*, 34(5):1884–1910, 1997.
- [621] A.B. OWEN. Scrambled net variance for integrals of smooth functions. *The annals of statistics*, 25(4):1542–156, 1997.
- [622] F. Özkan and T. Schmidt. Credit risk with infinite dimensional Lévy processes. *Statist. Decisions*, 23:281–299, 2005.
- [623] Fehmi Özkan. *Lévy processes in credit risk and market models*. PhD thesis, University of Freiburg, 2002.
- [624] C.Pisani P. Baldi. Simple simulation scheme for cir and wishart processes. *International Journal of Theoretical and Applied Finance*, 16(8), 2013.
- [625] 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.
- [626] A. Papapantoleon. An introduction to Lévy processes with applications in finance. Lecture Notes, TU Vienna ([arXiv/0804.0482](https://arxiv.org/abs/0804.0482)), 2008.
- [627] A. Papapantoleon. Copulas and tail dependence coefficients for a class of Lévy models. In preparation, 2010.

- [628] A. Papapantoleon. A note on the strong Taylor and Picard approximations for LIBOR models. Preprint, 2010.
- [629] A. Papapantoleon. Old and new approaches to LIBOR modeling. *Stat. Neerlandica*, 2010. (forthcoming).
- [630] A. Papapantoleon, J. Schoenmakers, and D. Skovmand. On efficient and accurate log-Lévy approximations for Lévy-driven LIBOR models. Preprint, TU Berlin, 2011.
- [631] 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.
- [632] A. Papapantoleon and D. Skovmand. Picard approximation of stochastic differential equations and application to LIBOR models. Preprint, arXiv/1007:3362, 2010.
- [633] R. CRANLEY T.N.L. PATTERSON. Randomization of number theoretic methods for multiple integration. *SIAM, Journal of Numerical Analysis*, 13(6), Dec 1976.
- [634] P.Austing. Repricing the cross smile: An analytic joint density. Preprint, 2010.
- [635] A. PAZY. *Semigroups of Linear Operators and Applications to partial Differential Equations*. Springer, 1983.
- [636] P.Carr G.Yang. Simulating american bond options in an hjm framework. *Working Paper Morgan Stanley*, 1997.
- [637] P.Carr G.Yang. Simulating bermudan interest rate derivatives. *Working Paper Morgan Stanley*, 1998.
- [638] P.Carr R.Lee. Realized volatility and variance: Options via swap. *Risk magazine*, May 2007.
- [639] P.COHORT. Weak and strong law of large numbers for the random normalised distortion. *Submitted for publication*, 2000.
- [640] P.Collin-Dufresne and R.S. Goldstein. Pricing swaoptions within an affine framework. *The Journal of Derivatives*, Fall:1–18, 2002.

- [641] 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.
- [642] M.B. Pedersen. Bermudan swaptions in the libor market model. *SimCorp Financial Research Working Paper*, 1999.
- [643] A. Pelsser, R. Pietersz, and M. van Regenmortel. Bridging Brownian LIBOR. *Wilmott Mag.*, 18:98–103, 2005.
- [644] 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.
- [645] G. Peskir and A. N. Shiryaev. *Optimal Stopping and Free-Boundary Problems*. Birkhäuser, 2006.
- [646] P.Etore E.Gobet. Stochastic expansion for the pricing of call options with discrete dividends. *Applied Mathematical Finance*, to appear, 2012.
- [647] H.KUSHNER P.G.DUPUIS. *Numerical Methods for Stochastic Control Problems in Continuous Time*. Springer-Verlag, 1992.
- [648] M.BROADIE P.GLASSERMANN. Pricing american-style securities using simulation. *J.of Economic Dynamics and Control*, 21:1323–1352, 1997.
- [649] M.BROADIE P.GLASSERMANN. A stochastic mesh method for pricing high-dimensional american options. *Working Paper*, Columbia University:1–37, 1997.
- [650] P.Glassermann N.Merener. Numerical solution of jump-diffusion libor market models. *Finance and Stochastics*, 7:1–27, 2003.
- [651] P.Glassermann X.Zhao. Arbitrage-free discretization of lognormal libor and swap rate models. *Finance and Stochastics*, 4:35–68, 2000.
- [652] P.Glassermann X.Zhao. Fast greeks by simulation of forward libor models. *Journal of Computational Finance*, 3-1:5–39, 2000.
- [653] P.Glassermann Z.Liu. Estimating greeks in simulating levy-driven models. *Journal of Computational Finance*, 14-2, 2010.

- [654] M. A. Pinsky. Fourier inversion for piecewise smooth functions in several variables. *Proc. Amer. Math. Soc.*, 118:903–910, 1993.
- [655] P.J.Schonbucher. A tree implementation of a credit spread model for credit derivatives. *Journal of Computational Finance*, 6-2, 2002.
- [656] G.CH. Plufg. *Optimization of stochastic models*. Kluwer Academic Publisher, 1996.
- [657] J. Poirot and P. Tankov. Monte Carlo option pricing for tempered stable (CGMY) processes. *Asia-Pac. Finan. Markets*, 13:327–344, 2006.
- [658] D. Pommier. *Méthodes numériques sur des grilles sparse appliquées à l'évaluation d'options en finance*. PhD thesis, Université Pierre et Marie Curie, 2008.
- [659] N. U. Prabhu. *Stochastic Storage Processes*. Springer, 2nd edition, 1998.
- [660] K. Prause. *The generalized hyperbolic model: estimation, financial derivatives, and risk measures*. PhD thesis, Univ. Freiburg, 1999.
- [661] S. J. Press. Linear combinations of non-central chi-square variates. *Ann. Math. Statist.*, 37:480–487, 1966.
- [662] P.RITCHKEN. On pricing barrier options. *Journal Of Derivatives*, pages 19–28, Winter 95 1995.
- [663] B.KAMRAD P.RITCHKEN. Multinomial approximating models for options with k state variables. *Management Science*, 37:1640–1652, 1991.
- [664] N. Privault. *An Elementary Introduction to Stochastic Interest Rate Modeling*. World Scientific, 2008.
- [665] Ph. Protter. *Stochastic Integration and Differential Equations*. Springer, 3rd edition, 2004.
- [666] P.GLASSERMAN P.HEIDELBERGER P.SHAHABUDDIN. Gaussian importance sampling and stratification computational issue. *Computer Science/Mathematics*, September, 1998.
- [667] P.GLASSERMAN P.HEIDELBERGER P.SHAHABUDDIN. Asymptotically optimal importance sampling and stratification for pricing path-dependent options. *Mathematical Finance*, 2, April:117–152, 1999.

- [668] D. Psychoyios, G. Skiadopoulos, and P. Alexakis. A review of stochastic volatility processes: properties and implications. *J. Risk Finance*, 4:43–60, 2003.
- [669] D.BEAGKEHOLE D.DYBVIG P.ZHOU. Going to extremes:correcting simulation bias in exotic option valuation. *Financial Analyst Journal*, pages 62–68, Jan-Feb 1997.
- [670] R. Cont and A.Minca. Recovering portfolio default intensities implied by cdo quotes. *To appear in Mathematical Finance*, 2008.
- [671] 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.
- [672] S. Jaimungal R. Jackson and V. Surkov. Fourier space time-stepping for option pricing with levy models. *Journal of Computational Finance*, 12-2, 2008.
- [673] R. W. Lee. Option pricing by transform methods: extensions, unification and error control. *Journal of Computational Finance*, 7, 2004.
- [674] DeVore R.A. and Temlyakov V.N. Some remarks on greedy algorithms. *Adv. Comput. Math.*, 5:173–187, 1996.
- [675] S. Raible. *Lévy processes in finance: Theory, numerics, and empirical facts*. PhD thesis, Univ. Freiburg, 2000.
- [676] 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.
- [677] R.BARRETT, editor. *Templates for the solution of linear systems:building blocks for iterative methods*. Siam, 1998.
- [678] R.BREEN. The accelerated binomial option pricing. *J.Of Finance and Quantitative Analysis*, 26:153–164, 1991.
- [679] L.Andersen R.Brotherton-Ratcliffe. Extended libor market models with stochastic volatility. *Journal of Computational Finance*, 9(1), 2005.
- [680] L.ANDERSON R.BROTHERTON-RATCLIFFE. Exact exotics. *Risk*, 9:85–89, Oct 1996.

- [681] R.Carmona N.Touzi. Optimal multiple stopping and valuation of swing options. *Mathematical Finance*, 18(2), 2008.
- [682] R.C.MERTON. Option pricing when the underlying stocks returns are discontinuous. *Journ. Financ. Econ.*, 5:125–144, 1976.
- [683] R.D.Smith. An almost exact simulation method for the heston model. *Journal of Computational Finance*, 11-1, 2007.
- [684] O. Reiß and U. Wystup. Efficient computation of option price sensitivities using homogeneity and other tricks. *J. Derivatives*, 9:41–53, 2001.
- [685] D. Revuz and M. Yor. *Continuous martingales and Brownian motion*. Springer-Verlag Berlin Heidelberg, 1991.
- [686] Daniel Revuz and Marc Yor. *Continuous Martingales and Brownian Motion*. Springer, 3rd edition, 1999.
- [687] G.BARONE-ADESI R.E.WHALEY. Efficient analytic approximation of American option values. *Journal of Finance*, 42:301–320, 1987.
- [688] 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.
- [689] 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.
- [690] 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.
- [691] R.Lord. Partially exact and bounded approximations for arithmetic asian options. *Journal of Computational Finance*, 10-2, 2006.
- [692] R.Lord C.Kahl. Optimal fourier inversion in semi-analytical option pricing. *Journal of Computational Finance*, 10-4, 2007.
- [693] R.Lord, R.Koekkoek, D.J.C.Van Dijk. A comparison of biased simulation schemes for stochastic volatility models. *Preprint*, 2006.
- [694] A.GERSHO R.M.GRAY. *Vector Quantization and Signal Compression*. Kluwer, 7th edition, 1992.

- [695] 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.
- [696] L. C. G. Rogers and Z. Shi. The value of an Asian option. *J. Appl. Probab.*, 32(4):1077–1088, 1995.
- [697] L. C. G. Rogers and L. A. M. Veraart. A stochastic volatility alternative to SABR. *Journal of Applied Probability*, 45(4):1071–1085, 2008.
- [698] L. Chris G. Rogers. Evaluating first-passage probabilities for spectrally one-sided Lévy processes. *J. Appl. Probab.*, 37:1173–1180, 2000.
- [699] L. Chris G. Rogers. Monte Carlo valuation of American options. *Math. Finance*, 12:271–286, 2002.
- [700] L. Chris G. Rogers and Zo Shi. The value of an Asian option. *J. Appl. Probab.*, 32:1077–1088, 1995.
- [701] L.C.G. Rogers. Montecarlo valuation of american option. *Preprint*, 2000.
- [702] S. Del Bano Rollin, A. Ferreira-Castilla, and F. Utzet. A new look at the Heston characteristic function. <http://arxiv.org/abs/0902.2154>, 21, 2009.
- [703] 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.
- [704] 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.
- [705] J.N.TSITSIKLIS B.VAN ROY. Regression methods for pricing complex american-style options. *Working Paper*, MIT:1–22, 2000.
- [706] R.SEDGEWICK. *Algorithms*. Addison–Wesley, 1987.
- [707] R.STULZ. Options on the minimum or the maximum of two risky assets. *J. of Finance*, 10:161–185, 1992.



- [708] R.GLOWINSKI J-L.LIONS R.TREMOLIERES. *Analyse Numérique des Inéquations Variationnelles*. Dunod, 1976.
- [709] R.Y. RUBINSTEIN. *Simulation and the Monte Carlo Method*. Wiley Series in Probabilities and Mathematical Statistics, 1981.
- [710] Walter Rudin. *Real and Complex Analysis*. McGraw-Hill, 3rd edition, 1987.
- [711] .C.W.Oosterlee M.J. Ruijter. Two-dimensional fourier cosine series expansion method for pricing financial options. *SIAM J. Sci. Comput.*, 34(5), 2012.
- [712] .F.T. Aalber C.W.Oosterlee M.J. Ruijter. On the fourier cosine series expansion (cos) method for stochastic control problems. *Preprint*, 2012.
- [713] A.CONZE R.VISWANATHAN. Path dependent options: the case of lookback options. *J. of Finance*, 46:1893–1907, 1992.
- [714] 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.
- [715] S. Kusuoka. A remark on default risk models. *Advanced Mathematical Economics*, 1:69–82, 1999.
- [716] P. A. Samuelson. Rational theory of warrant pricing. *Indust. Manag. Rev.*, 6:13–31, 1965.
- [717] 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.
- [718] J.COX J.E.INGERSOLL S.A.ROSS. An intertemporal general equilibrium model of asset prices. *Econometrica*, pages 145–166, 53 1985.
- [719] K. Sato. Self-similar processes with independent increments. *Probab. Theory Related Fields*, 89:285–300, 1991.
- [720] K. Sato. *Lévy Processes and Infinitely Divisible Distributions*. Cambridge University Press, 1999.

- [721] F. Sauvigny. *Partial Differential Equations 2*. Springer, 2006.
- [722] S.BABBS. Binomial valuation of lookback options. *working paper, Midland Global Markets London*, 1992.
- [723] R. Schilling. *Measures, Integrals and Martingales*. Cambridge University Press, 2005.
- [724] E. Schlögl. A multicurrency extension of the lognormal interest rate market models. *Finance Stoch.*, 6:173–196, 2002.
- [725] R. Schmidt. *Dependencies of Extreme Events in Finance*. PhD thesis, Univ. Ulm, 2003.
- [726] T. Schmidt. Copulas and dependent measurement. In R. Cont, editor, *Encyclopedia of Quantitative Finance*, 2009.
- [727] J. Schoenmakers. *Robust LIBOR Modelling and Pricing of Derivative Products*. Chapman & Hall/CRC Press, 2005.
- [728] Schonbucher. Portfolio losses and the term structure of loss transition rates: a new methodology for the pricing of portfolio credit derivatives. *Preprint*, 2005.
- [729] P. J. Schönbucher. A LIBOR market model with default risk. Working paper, University of Bonn, 2000.
- [730] W. Schoutens. Meixner processes: Theory and applications in finance. EURANDOM Report 004, EURANDOM, Eindhoven, 2002.
- [731] 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.
- [732] W. Schoutens. *Lévy Processes in Finance: Pricing Financial Derivatives*. Wiley, 2003.
- [733] W. Schoutens, E. Simons, and J Tistaert. A perfect calibration ! now what ? UCS Technical Report 03, K.U.Leuven, 2003.
- [734] W. Schoutens and J. L. Teugels. Lévy processes, polynomials and martingales. *Comm. Statist. Stochastic Models*, 14:335–349, 1998.
- [735] Wim Schoutens. Exotic options under Lévy models: an overview. *J. Comput. Appl. Math.*, 189(1-2):526–538, 2006.

- [736] M. Schroder. Changes of numeraire for pricing futures, forwards and options. *Rev. Financ. Stud.*, 12:1143–1163, 1999.
- [737] 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.
- [738] A. V. Selivanov. On the martingale measures in exponential Lévy models. *Theory Probab. Appl.*, 49:261–274, 2005.
- [739] 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.
- [740] S.FIGLEWSKI-B:GAO. The adaptive mesh model:a new approach to efficient option pricing. *Journal of Financial Economics*, 53:331–351, 1999.
- [741] P.BOYLE J.EVNINE S.GIBBS. Numerical evaluation of multivariate contingent claims. *Review of Financial Studies*, 2:241–250, 1989.
- [742] L. A. Shepp and A. N. Shiryaev. A new look at pricing of the “Russian option”. *Theory Probab. Appl.*, 39:103–119, 1994.
- [743] 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.
- [744] A. N. Shiryaev, Z. Xu, and X. Y. Zhou. Thou shalt buy and hold. *Quant. Finance*, 8:765–776, 2008.
- [745] Albert N. Shiryaev. *Essentials of Stochastic Finance: Facts, Models, Theory*. World Scientific, 1999.
- [746] H. NIEDERREITER P.J.S. SHIUE. Monte carlo and quasi-monte carlo methods in scientific computing. *Lecture Notes in Statistics*,Ed Springer, 106, 1995.
- [747] P.WILMOTT J.DEWYNE S.HOWISON. *Option pricing Mathematical Models and Computation*. Oxford Financial Press, 1993.
- [748] M. Siopacha. *Taylor expansions of option prices by means of Malliavin calculus*. PhD thesis, Vienna University of Technology, 2006.

- [749] M. Siopacha and J. Teichmann. Weak and strong Taylor methods for numerical solutions of stochastic differential equations. *Quant. Finance*, 11:517–528, 2011.
- [750] George Skiadopoulos. Volatility smile consistent option models: a survey. *Int. J. Theor. Appl. Finance*, 4:403–437, 2001.
- [751] M.BROADIE P.GLASSERMANN S.KOU. A continuity correction for discrete barrier options. *Mathematical Finance*, 7, 1997.
- [752] D. Skovmand. *LIBOR market models – theory and applications*. PhD thesis, Univ. Aarhus, 2008.
- [753] O.Kudryavtsev S.Levendorskiy. Fast pricing of american and barrier options under levy processes. *Preprint*, 2007.
- [754] S.B.Boyarchenko S.Levendorskiy. Efficient variations of the fourier transform in applications to option pricing. *Journal of Computational Finance*, 18, 2014.
- [755] 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.
- [756] S.M. Ould Aly. Forward variance dynamics : Bergomi’s model revisited. *Applied Mathematical Finance*, 21(1), 2014.
- [757] S.M. Ould Aly. Option pricing for stochastic volatility models: Vol-of-vol expansion. *SIAM J. Financial Math*, 5-1:729–752, 2014.
- [758] S.M.T.Ehrlichman S.G.Henderson. Adaptive control variates for pricing multi-dimensional american options. *Journal of Computational Finance*, 11-1, 2007.
- [759] I.M. SOBOL. Uniformly distributed sequences with an additional uniformity property. *USSR Comput. Maths. Math. Phys*, 16:236–242, 1976.
- [760] F. Spitzer. *Principles of Random Walk*. Van Nostrand, 1964.
- [761] E. M. Stein and G. Weiss. *Introduction to Fourier Analysis on Euclidean Spaces*. Princeton University Press, 1971.

- [762] L. Stentoft. Value function approximation or stopping time approximation: a comparison of two recent numerical methods for american option pricing using simulation and regression. *Journal of Computational Finance*, 18(1), 2014.
- [763] E.LEVY S.TURNBULL. Average intelligence. *RISK*, 5(2):377–389, 1992.
- [764] G. Lian. S.Zhu. A closed-form exact solution for pricing variance swaps with stochastic volatility. *Mathematical Finance*, 21(2), 2011.
- [765] K.J. in 't Hout T. Haentjens. Alternating direction implicit finite difference schemes for the heston hull-white partial differential equation. *J.Computational Finance*, 16:83–110, 2012.
- [766] K.J. in 't Hout T. Haentjens and K. Volders. Adi schemes with ikonentoivanen splitting for pricing american put options in the heston model. *Numerical Analysis and Applied Mathematics*, eds. T. E. Simos et. al., *AIP Conf. Proc.*, 1281:231–234, 2010.
- [767] M. Ben Taarit and B. Lapeyre. A forward solution for computing derivatives exposure. Technical report, Ecole des Ponts ParisTech, 2016.
- [768] P. Tankov. *Processes in Finance: Inverse Problems and Dependence Modelling*. PhD thesis, Ecole Polytechnique, 2004.
- [769] P. Tankov. Pricing and hedging gap risk. P.Tankov. *J. Comput. Finance*, 13(3), 2010.
- [770] J. Teichmann. Calculating the Greeks by cubature formulae. *Proc. R. Soc. Lond. A*, 462:647–670, 2006.
- [771] V. N. Temlyakov. Greedy approximation. *j-ACTA-NUMERICA*, 17:235–409, 2008.
- [772] S. TEZUKA. A generalization of faure sequences and its efficient implementation. Technical report, Winter Simulaiton Conference, 1995.
- [773] T.H.F.Cheuk, T.C.F.Vorst. Complex barrier options. *The Journal of Derivatives*, 4:8–22, 1996.
- [774] G. W. P. Thompson. Fast narrow bounds on the value of Asian options. *Working paper. Judge Institute U. of Combridge*, 1999.

- [775] G.W.P. THOMPSON. Fast narrow bounds on the value of asian options. *Working paper Judge Institute U. of Cambridge*, 1999.
- [776] J.BARRAQUAND T.PUDET. The pricing of american path-dependent contingent claims. *Mathematical Finance*, 6(1):17–51, 1996.
- [777] 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.
- [778] Q.ZHANG T.TAKSAR. Analytical approximation for american lookback options. *preprint*, 1998.
- [779] S. Turnbull and L. Wakeman. A quick algorithm for pricing european average options. *Journal of Financial and Quantitative Analysis*, 16:377–389, 1991.
- [780] T.CHEUK T.VORST. Lookback options and the observation frequency. *working paper, Erasmus University Rotterdam*, 1994.
- [781] T.CHEUK T.VORST. Complex barrier options. *Journal of Derivatives*, 4:8–22, 1996.
- [782] E. A. v. Hammerstein. Lévy-Khintchine representations of multivariate generalized hyperbolic distributions and some of their limiting cases. *Preprint, University of Freiburg*, 2004.
- [783] S. Singor L. A. Grzelak C. W. Oosterlee D.D.B. van Bragt. Inflation products with stochastic volatility and stochastic interest rates. *Insurance: Mathematics and Economics*, 52(2), 2013.
- [784] 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.
- [785] V.Bally E.Temam. Empirical semi-groups and calibration. *Preprint*, 2004.
- [786] A. Černý. Optimal continuous-time hedging with leptokurtic returns. *Math. Finance*, 17:175–203, 2007.
- [787] R.Carmona V.Durlemaan. Pricing and hedging spread options. *SIAM Rev.*, 45, 2003.

- [788] R.Carmona V.Durlemann. Generalizing the black-scholes formula to multivariate contingent claims. *Journal of Computational Finance*, 9(2), 2005.
- [789] J. Vecer. A new pde approach for pricing arithmetic asian options. *Journal of Computational Finance*, 4(4), 2001.
- [790] L.C.G. Rogers L.A.M. Veraart. A stochastic volatility alternative to sabr. *J. Appl. Probab.*, 45(4):1071–1085, 2008.
- [791] Jan Večer. Unified Asian pricing. *Risk*, 15(6):113–116, 2002.
- [792] Jan Večer and Mingxin Xu. Pricing Asian options in a semimartingale model. *Quant. Finance*, 4(2):170–175, 2004.
- [793] Eberlein R.Frey E. A. von Hammerstein. Advanced credit portfolio modeling and cdo pricing. In Springer, editor, *in Mathematics âŠ Key Technology for the Future*, W. JÄdger, and H.-J. Krebs, (Eds.),, pages 253–280, 2008.
- [794] 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.
- [795] T. Vorst. Prices and hedge ratios of average exchange rate options. *International Review of Financial Analysis*, 1(3):179–193, 1992.
- [796] L. Vostrikova. On regularity properties of Bessel flow. *Stochastics*, 81(5):431–453, 2009.
- [797] V.Piterbarg. A stochastic volatility forward libor model with a term structure of volatility smiles. *SSRN*, 2003.
- [798] V.Piterbarg. Pricing and hedging callable libor exotics in forward libor models. *Journal of Computational Finance*, 8-2, 2005.
- [799] S.Levendroskii O.Kudrayavtsev V.Zherder. The relative efficiency of numerical methods for pricing american options under levy procecess. *Journal of Computational Finance*, 9(2), Winter 2005-2006.
- [800] W. Wagner. Unbiased Monte Carlo evaluation of certain functional integrals. *J. Comput. Phys.*, 71(1):21–33, 1987.
- [801] 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.



- [802] W. Wagner. Unbiased multi-step estimators for the Monte Carlo evaluation of certain functional integrals. *J. Comput. Phys.*, 79(2):336–352, 1988.
- [803] W. Wagner. Unbiased Monte Carlo estimators for functionals of weak solutions of stochastic differential equations. *Stochastics Stochastics Rep.*, 28(1):1–20, 1989.
- [804] S. T. Tse J. W. L. Wan. Low-bias simulation scheme for the heston model by inverse gaussian approximation. *Quantitative Finance*, 13(6):919–937, 2013.
- [805] FU MADAN WANG. Pricing continuous time asian options: A comparison of analytical and monte carlo methods. *College of Business and Management*, 1996.
- [806] Wang, Y., Caflisch, R. Pricing and hedging american-style options: A simple simulation-based approach. *Journal of Computational Finance*, 13-4, 2010.
- [807] 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.
- [808] O. Weick. Portfolio optimierung. Master’s thesis, University of Freiburg, 2003.
- [809] 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.
- [810] W.HACKBUSCH and U.TROTTEBERG, editors. *Multigrid Methods*, volume 960 of *Lecture Notes in Math*. Springer Verlag, 1981.
- [811] DAVID VERNON WIDDER. *The Laplace Transform*. Princeton University press, 1941.
- [812] D. Williams. *Probability with Martingales*. Cambridge University Press, 1995.
- [813] P. Wilmott. *Derivatives: The Theory and Practice of Financial Engineering*. Wiley, 1998.

- [814] H.A. Windcliff, P.A. Forsyth, and K.R. Vetzal. Numerical methods and volatility models for valuing cliquet options. *Applied Mathematical Finance*, 13, 2006.
- [815] W.M.Schmidt. On a general class of one-factor models for the term structure of interest rat. *Finance & Stochastics*, 1:3–24, 1997.
- [816] B. Wong and C. C. Heyde. On the martingale property of stochastic exponentials. *J. Appl. Probab.*, 41(3):654–664, 2004.
- [817] L. Wu and F. Zhang. LIBOR market model with stochastic volatility. *J. Industr. Manag. Optim.*, 2:199–227, 2006.
- [818] W.WAGNER. Monte carlo evaluation of functionals of stochastic differential equations—variance reduction and numerical examples. *Stoch. Analysis Appl.*, 6:447–468, 1988.
- [819] J.ABATE W.WHITT. Numerical inversion of laplace transform of probability distribution. *ORSA Journal of Computing*, 7(1), Winter 1995.
- [820] Uwe Wystup. Vanilla options. In Jürgen Hakala and Uwe Wystup, editors, *Foreign Exchange Risk*, pages 3–14. Risk Publications, 2002.
- [821] X.Burtschell J.P.Laurent J.Gregory. A comparative analysis of cdo pricing models. *The Journal of Derivatives*, 16(4), 2009.
- [822] J.Yang T.R.Hurd X.Zhang. Saddlepoint approximation method for pricing cdos. *Journal of Computational Finance*, 8(2):1–20, 2006.
- [823] Y. Achdou and O. Pironneau. A numerical procedure for the calibration of volatility with American options. *Applied Mathematical Finance*, to appear, 2005.
- [824] S. Tompaidis C. Yang. Pricing american-style options by monte carlo simulation: Alternatives to ordinary least squares. *Journal of Computational Finance*, 18(2), 2014.
- [825] Y.D.LYUU. Very fast algorithms for barrier option pricing and the ballot problem. *Journal of Derivatives*, Spring, 1998.
- [826] 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.

- [827] P.BOYLE Y.TIAN. Pricing path-dependent options under the cev process. *Working Paper*, 1997.
- [828] P.BOYLE Y.TIAN. An explicit finite difference approach to the pricing of barrier options. *Applied Mathematical Finance*, (5):17–43, 1998.
- [829] Y.W.KWOK. *Mathematical models of financial derivatives*. Springer Finance, 1998.
- [830] Y.W.KWOK. Some theoretical aspects of option pricing algorithms. *Preprint Hong-Kong University of Science and Technology*, 1999.
- [831] E.Appolloni L.Caramellino A Zanette. A robust tree method for pricing american options with the cox-ingersoll-ross interest rate model. *IMA Journal of Management Mathematics*, to appear, 2014.
- [832] M.Gaudenzi M.A.Lepellere A Zanette. The singular points binomial method for pricing american path-dependent options. *J. Comput. Finance*, 14, 2010.
- [833] X. Zhang. Analyse numérique des options américaines dans un modèle de diffusion avec sauts. Technical report, CERN-École Nationale des Ponts et Chaussées, 94.
- [834] T. R. Hurd Z. Zhou. A fourier transform method for spread option pricing. *SIAM J. Financial Math*, 1:142–157, 2010.
- [835] L.C.G.ROGERS Z.SHI. The value of an asian option. *J. Appl. Probab.*, 32(4):1077–1088, 1995.