

List of scientific publications  
for  
Fred Espen Benth

February 15, 2018

**In refereed journals**

1. *An Explicit Functional Process Solution to a Stochastic Partial Differential Equation with Applications to Non Linear Filtering*. Stochastics and Stochastics Reports, Vol. **51**, pp. 195-216, 1994.
2. *Topological Aspects of the Hida Distributions. - A Remark -*. Coauthor: Matthias Timpel (University of Mannheim, Germany). Stochastics and Stochastics Reports, Vol. **51**, pp. 293-299, 1994.
3. *On the Martingale Property for Generalized Stochastic Processes*. Coauthor: Jürgen Potthoff (University of Mannheim, Germany). Stochastics and Stochastic Reports, Vol. **58**, pp. 349-367, 1996.
4. *On the Positivity of the Stochastic Heat Equation*. Potential Analysis, **6**, pp. 127-148, 1997.
5. *A White Noise Approach to a Class of Non-linear Stochastic Heat Equations*. Coauthors: Thomas Deck and Jürgen Potthoff (both University of Mannheim, Germany). Journal of Functional Analysis, Vol 146, No. 2, June 1, pp. 382-415, 1997.
6. *Nonlinear Evolution Equations with Gradient Coupled Noise*. Coauthors: Thomas Deck and Jürgen Potthoff (both University of Mannheim, Germany) and Ludwig Streit (University of Bielefeld, Germany). Letters in Mathematical Physics, Vol 43, Nr. 3, February 1998.
7. *A Remark on the Equivalence between Poisson and Gaussian SPDE's*. Coauthor: Jon Gjerde (University of Oslo, Norway). Potential Analysis **8**, pp. 179-193, 1998
8. *Explicit Strong Solutions of SPDE's with Applications to Non-Linear Filtering*. Coauthors: Thomas Deck and Jürgen Potthoff (both University of Mannheim, Germany) and Gjermund Våge (University of Oslo, Norway). Acta Applicandae Mathematicae, Vol 51, No. 2, April, pp. 215-242, 1998

9. *Convergence Rates for Finite Element Approximations of SPDEs*. Coauthor: Jon Gjerde (University of Oslo, Norway). *Stochastics and Stochastics Reports*, Vol 63, pp. 313-326, 1998
10. *The Gross Derivative and Generalized Random Variables*. *Infinite Dimensional Analysis, Quantum Probability and Related Topics*, Vol 2, No. 3 September, pp. 381-396, 1999
11. *A Nonlinear Parabolic Equation with Noise. A Reduction Method*. Coauthor: Håkon Gjessing (University of Bergen, Norway). *Potential Analysis*, Vol 12(4), pp. 385-401, 2000.
12. *Smoothed Langevin proposals in Metropolis-Hastings algorithms*. Coauthors: Øivind Skare and Arnaldo Frigessi (both Norwegian Computing Centre, Norway). *Statistics & Probability Letters*, Vol 49, pp. 345-354, 2000.
13. *Markov jump processes with a singularity*. Coauthors: Ole E. Barndorff-Nielsen and Jens Ledet Jensen (both University of Aarhus, Denmark). *Advances of Applied Probability*, Vol 32, pp. 779-799, 2000.
14. *On weighted  $L^2(\Omega)$ -Spaces, their Duals and Ito Integration*. *Stochastic Analysis and Applications*, Vol 19(3), pp. 329-341, 2001.
15. *Kriging with inequality constraints*. Coauthor: Petter Abrahamsen (Norwegian Computing Centre, Norway). *Mathematical Geology*, **33**(6), pp. 719-744, 2001.
16. *Optimal portfolio selection with consumption and nonlinear integro-differential equations with gradient constraint: A viscosity solution approach*. Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). *Finance & Stochastics*, Vol. 5(3), pp. 275-303, 2001.
17. *Optimal portfolio management rules in a non-Gaussian market with durability and intertemporal substitution*, Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). *Finance & Stochastics*, Vol. 5(4), pp. 447-467, 2001.
18. *A note on portfolio management under non-gaussian logreturns*, Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). *International Journal of Applied and Theoretical Finance*, Vol. 4(5), pp. 711-732, 2001.
19. *Donsker's Delta function and the covariance between generalized functionals*. Coauthor: Siu-Ah Ng (University of Pietermaritzburg, South Africa). *Journal of the London Mathematical Society*, Vol 66(2), pp. 1-13, 2002.

20. *Portfolio optimization in a Lévy market with intertemporal substitution and transaction costs*, Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). *Stochastics and Stochastics Reports*, Vol 74(3-4), pp. 517-569, 2002.
21. *Explicit representation of the minimal variance portfolio in markets driven by Lévy processes*. Co-authors: G. Di Nunno (University of Pavia, Italy), A. Løkka (University of Oslo), B. Øksendal (University of Oslo) and F. Proske (University of Oslo). *Mathematical Finance*, Vol 13(1), pp. 55-72, 2003.
22. *Some regularity results for the stochastic pressure equation of Wick-type*, Coauthor: Thomas Gorm Theting (University of Trondheim, Norway). *Stochastic Analysis and Applications*, Vol 20(6), pp. 1191-1223, 2003.
23. *A semilinear Black & Scholes partial differential equation for valuing American options*. Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). *Finance and Stochastics*, Vol 7(3), pp. 277-298, 2003.
24. *Merton's Portfolio Optimization Problem in a Black & Scholes Market with non-Gaussian Stochastic Volatility of Ornstein-Uhlenbeck Type*. Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). *Mathematical Finance*, Vol 13(2), pp. 215-244, 2003.
25. *Quasi Monte Carlo evaluation of sensitivities of options in commodity and energy markets*. Coauthors: Lars Oswald Dahl (Storebrand Investments) and Kenneth Hvistendahl Karlsen (University of Bergen, Norway). *International Journal of Theoretical and Applied Finance*, Vol. 6(8), pp. 865-884, 2003.
26. *Arbitrage-free pricing of weather derivatives based on fractional Brownian motion*. *Applied Mathematical Finance*, 10(4), pp. 303-324, 2003.
27. *A note on arbitrage-free pricing of forward contracts in energy markets*. Coauthors: Lars Ekeland, Ragnar Hauge and Bjørn Fredrik Nielsen (Norwegian Computing Centre, Norway). *Applied Mathematical Finance*, 10(4), pp. 325-336, 2003.
28. *On a connection between singular stochastic control and optimal stopping*. Coauthor: Kristin Reikvam (University of Oslo, Norway). *Applied Mathematics and Optimization*, Vol. 49, pp. 27-41, 2004.
29. *The normal inverse Gaussian distribution and spot price modelling in energy markets*. Coauthor: Jurate Saltyte-Benth (University of Oslo and Klaipeda). *International Journal of Theoretical and Applied Finance*, Vol. 7(2), pp. 177-192, 2004.

30. *Anticipative calculus for Lévy processes and stochastic differential equations*. Coauthor: Arne Løkka (King's College, UK). *Stochastics and Stochastics Reports*, Vol 76(3), pp. 191-211, 2004.
31. *On a semilinear Black & Scholes partial differential equation for valuing American options: approximate solutions and convergence*. Coauthors: Kenneth Hvistendahl Karlsen (University of Oslo, Norway) and Kristin Reikvam (University of Oslo, Norway). *Interfaces and Free Boundaries*, Vol 6, pp. 379-404, 2004.
32. *Stochastic modelling of temperature variations with a view towards weather derivatives*. Coauthor: Jurate Saltyte-Benth (University of Oslo and Klaipeda). *Applied Mathematical Finance*, Vol 12(1), pp. 53-85, 2005.
33. *A pde representation of the density of the minimal entropy martingale measure in stochastic volatility markets*. Coauthor: Kenneth Hvistendahl Karlsen (University of Oslo). *Stochastics and Stochastics Reports*, Vol 77(2), pp. 109-137, 2005
34. *A note on Merton's portfolio selection problem for the Schwartz mean-reversion model*. Coauthor: Kenneth Hvistendahl Karlsen (University of Oslo). *Stochastic Analysis and Applications*, Vol 23(4), pp. 687-704, 2005.
35. *The density process of the minimal entropy martingale measure in a stochastic volatility model with jumps<sup>1</sup>*. Co-author: Thilo Meyer-Brandis (University of Oslo). *Finance and Stochastics*, Vol. 9(4), pp. 563-575, 2005.
36. *A quasi-Monte Carlo algorithm for the normal inverse Gaussian distribution and valuation of financial derivatives*. Coauthors: Martin Groth and Paul C. Kettler (both CMA, University of Oslo). *International Journal of Theoretical and Applied Finance*, Vol. 9(5), pp. 843-867, 2006.
37. *Analytical approximation for the price dynamics of spark spread options*. Coauthor: Jurate Saltyte-Benth (Akershus University Hospital and University of Klaipeda, Lithuania). *Studies of Nonlinear Dynamics & Econometrics*, Vol. 10(3), article 8, 2006  
(electronic publication: <http://www.bepress.com/snede/vol10/iss3/art8>)
38. *A non-Gaussian Ornstein-Uhlenbeck process for electricity spot price modeling and derivatives pricing*. Coauthors: Jan Kallsen (Technical University of Munich, Germany) and Thilo Meyer-Brandis (University of Oslo, Norway). *Applied Mathematical Finance*, Vol 14(2), pp. 153-169, May 2007
39. *Valuing volatility and variance swaps for a non-Gaussian Ornstein-Uhlenbeck stochastic volatility model*. Co-authors: Martin Groth (University of Oslo) and Rodwell Kufakunesu (University of Zimbabwe). *Applied Mathematical Finance*, Vol 14(4), pp. 347-363, September 2007

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<sup>1</sup>Former title: *Indifference pricing and the minimal entropy martingale measure in a stochastic volatility model with jumps*

40. *A spatial-temporal model for temperature with seasonal variance*, Co-authors: Jurate Saltyte Benth (University of Oslo and Klaipeda, Lithuania) and Paulius Jalinskas (University of Vilnius and Lithuanian Meteorological Services, Lithuania). *Journal of Applied Statistics*, 34(7), pp. 823-841, September 2007.
41. *Extracting and applying smooth forward curves from average-based commodity contracts with seasonal variation*. Co-authors: Steen Koekebakker (Agder University College) and Fridthjof Ollmar (Agder Energy). *Journal of Derivatives*, 15(1), pp. 52-66, Fall 2007.
42. *The volatility of temperature and pricing of weather derivatives*. Coauthor: Jurate Saltyte-Benth (University of Oslo). *Quantitative Finance*, 7(5), pp. 553-561, 2007.
43. *Putting a price on temperature*. Co-authors: Jurate Saltyte Benth (University of Oslo) and Steen Koekebakker (University of Agder). *Scandinavian Journal of Statistics*, 34, pp. 746-767, 2007.
44. *Stochastic modeling of financial electricity contracts*. Coauthor: Steen Koekebakker (University of Agder, Norway). *Energy Economics*, 30(3), pp. 1116-1157, 2008. This paper was awarded the FIBE-price 2006 by Cappelen Akademisk Forlag. Visit <http://paraplyen.nhh.no/cgi-bin/paraplyen/imaker?id=17230> for more information (in norwegian)
45. *Pricing forward contracts in power markets by the certainty equivalence principle: explaining the sign of the market risk premium*. Co-authors: Alvaro Cartea (Birkbeck, University of London, UK) and Rüdiger Kiesel (University of Ulm). *Journal of Banking and Finance*, 32(10), pp. 2006–2021, 2008.
46. *Dynamic pricing of wind futures*. Coauthor: Jurate Saltyte Benth (University of Oslo). *Energy Economics*, 31(1), pp. 16–24, 2009.
47. *Utility indifference pricing of interest-rate guarantees*. Co-author: Frank Proske (University of Oslo). *International Journal of Theoretical and Applied Finance*, 12(1), pp. 63–82, 2009.
48. *Pricing of exotic energy derivatives based on arithmetic spot models*. Co-author: Rodwell Kufakunesu (University of Pretoria, South Africa). *International Journal of Theoretical and Applied Finance*, 12(4), pp. 491–506, 2009.
49. *The minimal entropy martingale measure and numerical option pricing for the Barndorff-Nielsen – Shephard stochastic volatility model*. Coauthor: Martin Groth (University of Oslo). *Stochastic Analysis and Applications*, 27(5), pp. 875–896, 2009.

50. *The information premium for non-storable commodities*. Co-author: Thilo Meyer-Brandis (University of Oslo). *Journal of Energy Markets*, 2(3), pp. 111–140, 2009.
51. *Modeling term structure dynamics in the Nordic electricity swap market*. Co-authors: Dennis Frestad and Steen Koekebakker (University of Agder). *Energy Journal*, 31(2), pp. 53–86, 2010.
52. *The implied risk aversion from utility indifference option pricing in a stochastic volatility model*. Co-authors: Martin Groth (University of Oslo) and Carl Lindberg (Chalmers University). *International Journal of Applied Mathematics and Statistics*, 16(M10), pp. 11–37, 2010
53. *Analysis and modelling of wind speed in New York*. Co-author: Jurate Saltyte Benth (University of Oslo). *Journal of Applied Statistics*, 37(6), pp. 893–909, 2010
54. *Derivative-free Greeks for the Barndorff-Nielsen and Shephard stochastic volatility model*. Co-authors: Martin Groth and Olli Wallin (both University of Oslo). *Stochastics*, 82(3), pp. 291–313, 2010.
55. *HMM filtering and parameter estimation of an electricity spot price model*. Co-authors: Christina Erlwein (Fraunhofer Institute, Kaiserslautern, Germany) and Rogemar Mamon (University of Western Ontario, London, Canada). *Energy Economics*, 32, pp. 1034–1043, 2010.
56. *Dynamic copula models for the spark spread*. Co-author: Paul C. Kettler (University of Oslo). *Quantitative Finance*, 11(3), pp. 407–421, 2011
57. *Hedging of spatial temperature risk with market-traded futures*. Co-authors: Andrea Barth (University of Oslo) and Jürgen Potthoff (University of Mannheim). *Applied Mathematical Finance*, 18(2), pp. 93–117, 2011.
58. *Pricing of basket options using univariate normal inverse Gaussian approximations*. Co-author: Pål Nicolai Henriksen (University of Oslo). *Journal of Forecasting*, 30(3), pp. 355–376, 2011.
59. *Robustness of option prices and their deltas in markets modelled by jump-diffusions*. Co-authors: Giulia Di Nunno and Asma Khedher (University of Oslo). *Communications on Stochastic Analysis*, 5(2), pp. 285–307, 2011.
60. *The stochastic volatility model of Barndorff-Nielsen and Shephard in commodity markets*. *Mathematical Finance*, 21(4), pp. 595–625, 2011.
61. *Weather derivatives and stochastic modelling of temperature*. Co-author: Jūratė Šaltytė Benth (University of Oslo). *International Journal of Stochastic Analysis*, Vol 2011, Article ID 576791, 21 pages, 2011.
62. *The risk premium and the Esscher transform in power markets*. Co-author: Carlo Sgarra (Politecnico Milano, Italy). *Stochastic Analysis and Applications*, 30, pp. 20–43, 2012.

63. *On the optimal exercise of swing options in electricity markets.* Co-authors: Jukka Lempa (University of Oslo) and Trygve Kastberg Nilsen (University of Agder). *Journal of Energy Markets*, 4(4), pp. 3–28, 2012.
64. *A critical view on temperature modelling for application in weather derivatives markets.* Co-author: Jūratė Šaltytė Benth (University of Oslo). *Energy Economics*, 34, pp. 592–602, 2012.
65. *Pricing of temperature index insurance.* Co-author Che Mohd Imran Che Taib (University of Oslo). *Review of Development Finance*, 2, pp. 22–31, 2012.
66. *A critical empirical study of three electricity spot price models.* Co-authors: Anna Nazarova (University of Oslo and University of Duisburg-Essen) and Rüdiger Kiesel (University of Duisburg-Essen). *Energy Economics*, 34(5), pp. 1589–1616, 2012.
67. *Modeling the forward surface of mortality.* Co-authors: Daniel Bauer (Georgia State University) and Rüdiger Kiesel (University of Duisburg-Essen). *SIAM Journal of Financial Mathematics*, 3(1), pp. 639–666, 2012.
68. *Computing optimal recovery policies for financial markets.* Co-authors: Geir Dahl (University of Oslo) and Carlo Mannino (University of Rome, Italy). *Operations Research*, 60, pp. 1373–1388, 2012.
69. *Computations of Greeks in multi-factor models with applications to power and commodity markets.* Co-authors: Giulia Di Nunno and Asma Khedher (University of Oslo). *Journal of Energy Markets*, 5(4), pp. 3–31, 2013.
70. *An empirical study of the information premium on electricity markets.* Co-authors: Richard Biegler-König and Rüdiger Kiesel (Both University of Duisburg-Essen). *Energy Economics*, 36, pp. 55–77, 2013.
71. *Cross-commodity spot price modeling with stochastic volatility and leverage for energy markets.* Co-author: Linda Vos (University of Oslo and Agder). *Advances in Applied Probability*, 45(2), pp. 545–571, 2013.
72. *Pricing of forwards and options in a multivariate non-Gaussian stochastic volatility model for energy markets.* Co-author: Linda Vos (University of Oslo and Agder). *Advances in Applied Probability*, 45(2), pp. 572–594, 2013.
73. *Modelling energy spot prices by volatility modulated Lévy-driven Volterra processes.* Co-authors: Ole E. Barndorff-Nielsen (University of Aarhus) and Almut Veraart (Imperial College). *Bernoulli*, 19(3), pp. 803–845, 2013.
74. *On the speed towards the mean of continuous time autoregressive moving average processes with applications to energy markets.* Co-author: Imran bin Che Taib (University of Oslo). *Energy Economics*, 40 September, pp. 259–268, 2013.

75. *Lévy process simulation by stochastic step functions*. Co-author: Torquil MacDonald Sørensen (University of Oslo). *SIAM Journal on Scientific Computing*, **35**(5), pp. A2207–A2224, 2013.
76. *Stability of Merton’s portfolio optimization problem for Lévy models*. Co-author: Maren D. Schmeck (University of Oslo). *Stochastics*, **85**(5), pp. 833–858, 2013.
77. *A note on convergence of option prices and their Greeks for Lévy models*. Co-authors: Giulia Di Nunno and Asma Khedher (University of Oslo). *Stochastics*, **85**(6), pp. 1015–1039, 2013.
78. *On stochastic integration for volatility modulated Lévy-driven Volterra processes*. Co-authors: Ole E. Barndorff-Nielsen (University of Aarhus), Jan Pedersen (University of Aarhus) and Almut Veraart (Imperial College, London). *Stochastic Processes and Their Applications*, **124**(1), pp. 812–847, 2014.
79. *Approximating Lévy semistationary processes via Fourier methods in the context of power markets*. Co-authors: Heidar Eyjolfsson (University of Oslo) and Almut Veraart (Imperial College, London). *SIAM Journal of Financial Mathematics*, **5**, pp. 71–98, 2014.
80. *The CARMA interest rate model*. Co-authors: Arne Andresen (Norwegian University of Science and Technology), Steen Koekebakker and Valeri Zakamouline (both University of Agder). *International Journal of Theoretical and Applied Finance*, **17**(2), pp. ??-?? (27 pages), 2014.
81. *Optimal portfolios in commodity markets*. Co-author: Jukka Lempa (University of Oslo). *Finance & Stochastics*, **18**(2), pp. 407–430, 2014.
82. *On stochastic integration for volatility modulated Brownian-driven Volterra processes via white noise analysis*. Co-authors: Ole Barndorff-Nielsen and Benedykt Szozda (both University of Aarhus). *Infinite Dimensional Analysis Quantum Probability and Related Fields*, **17**(2), pp. 14500, 2014.
83. *Pricing and hedging options in energy markets using Black-76*. Co-author: Maren Schmeck (University of Oslo). *Journal of Energy Markets*, **7**(2), pp. 35–69, 2014.
84. *Futures pricing in electricity markets based on stable CARMA spot models*. Co-authors: Gernot Müller and Claudia Klüppelberg (Technical University of Munich), and Linda Vos (University of Oslo and Agder). *Energy Economics*, **44**, pp. 392–406, 2014.
85. *Representation of infinite dimensional forward price models in commodity markets*. Co-author: Paul Krühner (University of Oslo). *Communications in Mathematics and Statistics*, **2**(1), pp. 47–106, 2014.



86. *Modelling electricity futures by ambit fields*. Co-authors: Ole E. Barndorff-Nielsen and Almut Veraart (University of Aarhus). *Advances in Applied Probability*, **46**(3), pp. 719–745, 2014.
87. *A pricing measure to explain the risk premium in power markets*. Co-author: Salvador Ortiz-Latorre (University of Oslo). *SIAM Journal of Financial Mathematics*, **5**, pp. 685–728, 2014.
88. *The forward dynamics in energy markets – infinite dimensional modeling and simulation*. Co-author: Andrea Barth (ETH Zürich). *Stochastics*, **86**(6), pp. 932–966, 2014.
89. *Pricing of spread options on a bivariate jump market and stability to model risk*. Co-authors: Giulia Di Nunno (University of Oslo), Asma Khedher (Technical University Munich) and Maren Schmeck (University of Cologne). *Applied Mathematical Finance*, **22**(1), pp. 28–62, 2015.
90. *Forward prices as functionals of the spot path in commodity markets modeled by Lévy semistationary processes*. Co-author: Sara Ana Solanilla Blanco (University of Oslo). *International Journal of Theoretical and Applied Finance*, **18**(2), pp. 1550010 (35 p.), 2015.
91. *Pricing and hedging quanto options in energy markets*. Co-authors: Nina Lange (Copenhagen Business School) and Tor Åge Myklebust (Norwegian School of Economics NHH). *Journal of Energy Markets*, **8**(1), pp. 1–35, 2015.
92. *Subordination of Hilbert space valued Lévy processes*. Co-author: Paul Krühner (University of Oslo). *Stochastics*, **87**(3), pp. 458–476, 2015.
93. *Stochastic dynamical modelling of spot freight rates*. Co-authors: Steen Koekebakker (University of Agder) and Imran bin Che Taib (University of Oslo). *IMA Journal of Management Mathematics*, **26**(3), pp. 273–297, 2015.
94. *Derivatives pricing in energy markets: an infinite dimensional approach*. Co-author: Paul Krühner (Dortmund University). *SIAM Journal of Financial Mathematics*, **6**(1), pp. 825–869, 2015.
95. *A change of measure preserving the affine structure in the BNS model for commodity markets*. Co-author: Salvador Ortiz-Latorre (University of Oslo). *International Journal of Theoretical and Applied Finance*, **18**(6), 1550038, 2015.
96. *Pricing and hedging Asian-style options in energy*. Co-author: Nils Deatering (Ludwig-Maximilian University Munich). *Finance & Stochastics*, **19**(4), pp. 849–889, 2015.

97. *Pricing of forwards and other derivatives in cointegrated commodity markets*. Co-author: Steen Koekebakker (University of Agder). *Energy Economics*, **52**, pp 104–117, 2015.
98. *Approximation of the price dynamics of heating degree day and cooling degree day temperature futures*. Co-author: Sara Ana Solanilla Blanco (University of Oslo). *Journal of Energy Markets*, **8**(4), pp.69–92, 2015.
99. *Simulation of volatility modulated Volterra processes using hyperbolic stochastic partial differential equations*. Co-author: Heidar Eyjolfsson (University of Bergen). *Bernoulli*, **22**(2), pp. 774–793, 2016.
100. *Pricing and hedging of energy spread options and volatility modulated Volterra processes*. Co-author: Hanna Zdanowicz (University of Oslo). *International Journal of Theoretical and Applied Finance*, **19**(1), 1650002, 2016.
101. *Integration theory for infinite dimensional volatility modulated Volterra processes*. Co-author: Andre Süss (University of Barcelona). *Bernoulli*, **22**(3), pp. 1383–1430, 2016.
102. *Stochastic modelling of Supramax spot and forward freight rates*. Co-author: Steen Koekebakker (University of Agder). *Maritime Economics & Logistics*, **18**(4), pp. 391–413, 2016.
103. *Representation and approximation of ambit fields in Hilbert space*. Co-author: Heidar Eyjolfsson (University of Bergen). *Stochastics*, **89**(1), pp. 311–347, 2017.
104. *Calibration of temperature futures by changing the mean reversion*. Co-author: Salvador Ortiz-Latorre (University of Oslo). *Journal of Energy Markets*, **10**(1), pp. 1–25, 2017
105. *Optimal management of green certificates in the Swedish-Norwegian market*. Co-authors: Marcus Eriksson (University of Oslo) and Sjur Westgaard (NTNU Trondheim). *Journal of Energy Markets*. **10**(2), pp. 1–39, 2017
106. *Stochastic modelling of photovoltaic power generation and electricity prices*. Co-author: Noor 'Adilah Ibrahim (University of Oslo and Islamic Science University of Malaysia). *Journal of Energy Markets*, **10**(3), pp. 1–33, 2017.
107. *A regime-switching copula approach to modeling day-ahead prices in coupled electricity markets*. Co-author: Anca Pircalabu (NEAS and University of Aalborg). *Energy Economics*, **68**, pp. 283–302, 2017.
108. *Ornstein-Uhlenbeck processes in Hilbert space with non-Gaussian stochastic volatility*. Co-authors: Barbara Rüdiger (Wuppertal University) and Andre Süss (University of Oslo). *Stochastic Processes and their Applications*, **128**, pp. 461–486, 2018.

## In refereed proceedings and book collections

1. *Integrals in the Hida Distribution Space,  $(S)^*$* . In “Stochastic Analysis and Related Topics; Stochastic Monographs Vol. 8”, pp. 89-101. T. Lindstrøm, B. Øksendal and A. S. Ustunel (eds.). Gordon and Breach Science Publishers, 1993.
2. *A Note on the Population Growth in a Crowded Stochastic Environment*. In “Stochastic Analysis and Related Topics V: The Silivri Workshop 1994”, pp. 111-120. H. Korezlioglu, B. Øksendal and A. S. Ustunel (eds.). Birkhäuser Verlag, 1996.
3. *A Generalized Feynman-Kac Formula for the Stochastic Heat Problem with Anticipating Initial Conditions*. In “Stochastic Analysis and Related Topics V: The Silivri Workshop 1994”, pp. 121-134. H. Korezlioglu, B. Øksendal and A. S. Ustunel (eds.). Birkhäuser Verlag, 1996.
4. *Wick Products of Complex Valued Random Variables*. Coauthors: Jan Ubøe (Stord/Haugesund College, Norway), Bernt Øksendal (University of Oslo, Norway) and Tusheng Zhang (Stord/Haugesund College, Norway). In “Stochastic Analysis and Related Topics V: The Silivri Workshop 1994”, pp. 135-156. H. Korezlioglu, B. Øksendal and A. S. Ustunel (eds.). Birkhäuser Verlag, 1996.
5. *Numerical Solution of the Pressure Equation for Fluid Flow in a Stochastic Medium*. Coauthor: Jon Gjerde (University of Oslo, Norway). In “Stochastic Analysis and Related Topics, Vol VI: The Geilo Workshop 1996”, pp.175-186. L. Decreusefond, J. Gjerde, B. Øksendal and A. S. Ustunel (eds.). Birkhäuser Verlag, 1998.
6. *The Burgers Equation with a Non-Gaussian Random Force*. Coauthor: Ludwig Streit (University of Bielefeld, Germany). In “Stochastic Analysis and Related Topics, Vol VI: The Geilo Workshop 1996”, pp.187-210. L. Decreusefond, J. Gjerde, B. Øksendal and A. S. Ustunel (eds.). Birkhäuser Verlag, 1998.
7. *Gaussian field with unknown trend conditioned on inequality data*. Coauthor: Petter Abrahamsen (Norwegian Computing Centre, Norway). In A. Buccianti, G. Nardi og R. Potenza (eds.), Proceedings of IAMG'98, Vol 1, Int. Assoc. for Math. Geol, De Frede Editore, Naples, Italy, pp. 333-338, 1999.
8. *Portfolio management and correlation*. Coauthors: Jon Gjerde and Sigurd Sannan (both Norwegian Computing Centre, Norway). In R. Norberg, P. Embrechts, C. Hipp, P. Lillevold, J. Paulsen, E. Shiu and D. Wilkie (eds.), Proceedings of the AFIR 2000 Colloquium, Tromsø, Norway. pp. 75-86, 2000.

9. *Quantification of risk in norwegian stocks via the normal inverse Gaussian distribution*. Coauthor: Erik Bølviken (University of Oslo, Norway). In R. Norberg, P. Embrechts, C. Hipp, P. Lillevold, J. Paulsen, E. Shiu and D. Wilkie (eds.), *Proceedings of the AFIR 2000 Colloquium, Tromsø, Norway*. pp. 87-98, 2000.
10. *Laser cooling and stochastics*. Coauthor: Ole E. Barndorff-Nielsen (University of Aarhus, Denmark). In M.C.M. de Gunst, C.A.J. Klaassen and A.W. van der Vaart (Eds.): *State of the Art in Probability and Mathematical Statistics; Festschrift for Willem R. van Zwet*. Lecture Notes - Monograph Series. Inst. Mathematical Statistics, pp. 50-71, 2000.
11. *On the existence of optimal controls for a singular stochastic control problem in finance*. Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). In "Mathematical Finance", M. Kohlmann and S. Tang (eds.), Birkhäuser Verlag, Basel, pp. 79-88, 2001.
12. *Fast Evaluation of the Asian Basket Option by Singular Value Decomposition*. Coauthor: Lars Oswald Dahl (Storebrand and University of Trondheim, Norway). In "Monte Carlo and Quasi-Monte Carlo Methods 2000", K.-T. Fang, F.J. Hickernell and H. Niederreiter (eds.), Springer Verlag, pp. 201-214, 2002.
13. *Light, atoms and singularities*. Coauthors: Ole E. Barndorff-Nielsen and Jens Ledet Jensen (both University of Aarhus, Denmark). In "Progress in Probability: Proceedings of the Third seminar on Stochastic Analysis, Random Fields and Applications, Ascona 1999", R.C. Dalang, M. Dozzi and R. Russo (eds.), Birkhäuser Verlag, Vol. 52, pp. 1-18, 2002.
14. *Lévy model robustness and sensitivity*. Co-authors Giulia Di Nunno and Asma Khedher (University of Oslo). In *QP-PQ: Quantum Probability and White Noise Analysis*, Proceedings of the 29th Conference in Hammamet, Tunisia, 13-18 October 2008. H. Ouerdiane and A Barhoumi (eds.), World Scientific, Vol. 25, pp. 153-184, 2010.
15. *A continuous time model for interest rate with autoregressive and moving average components*. Co-authors Steen Koekebakker and Valeri Zakamouline (University of Agder). AIP Conference Proceedings. – September 30, 2010 – Volume 1281, pp. 531-534, 2010
16. *Electricity forward contracts*. In the Encyclopedia of Quantitative Finance, R. Cont (ed.), Wiley, Vol. 2, pp. 546-549, 2010.
17. *Option pricing: General principles*. In the Encyclopedia of Quantitative Finance, R. Cont (ed.), Wiley, Vol. 3, pp. 1327-1331, 2010.
18. *On forward price modelling in power markets*. In "Alternative Investments and Strategies", R. Kiesel, M. Scherer and R. Zagst (eds.), World Scientific, Ch.5, pp. 93-122, 2010.

19. *Pricing of Asian temperature risk*. Co-authors: Wolfgang Härdle and Brenda Lopez Cabrera (Humboldt University Berlin). In “Statistical Tools for Finance and Insurance”, P. Cizek, W. Härdle and R. Weron (eds.), Springer-Verlag Berlin Heidelberg, Ch. 5, pp. 163–199, 2011.
20. *Ambit processes and stochastic partial differential equations*. Co-authors: Ole E. Barndorff-Nielsen and Almut Veraart (University of Aarhus). In “Advanced Mathematical Methods for Finance”, G. Di Nunno and B. Øksendal (eds.), Springer-Verlag Berlin Heidelberg, Ch. 2, pp. 35–74, 2011.
21. *Stochastic modelling of power prices by Volterra processes*. In ‘Handelingen Contactforum Actuarial and Financial Mathematics Conference, Interplay between Finance and Insurance’, February 7-8, 2013, Vanmaele, M., Deelstra, G., De Schepper, A., Dhaene, J., Schoutens, W., Vanduffel, S., Vyncke, D. (Eds.). Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussel, 2013
22. *Modeling temperature for pricing weather derivatives*. In ‘Mathematical Modeling with Multidisciplinary Applications’, X.-S. Yang (ed.), John Wiley & Sons, Hoboken, New Jersey, Ch. 11, pp. 257–285, 2013.
23. *Stochastic volatility and dependency in energy markets – multi-factor modelling*. In the Paris-Princeton Lecture Notes on Mathematical Finance 2013, V. Henderson and R. Sircar (eds.), Springer Verlag, Ch. 2, pp. 109–167, 2013.
24. *Energy derivatives with volume control*. Co-author: Marcus Eriksson (University of Oslo). In ”Handbook of Risk Management in Energy Production and Trading”, R. Kovacevic, G. Pflug and T. Vespucci (eds.), International Series in Operational Research and Management Science Vol 199, Springer Verlag, Ch. 16, pp. 418–438, 2013.
25. *Stochastic modeling of power markets using stationary processes*. Co-author: Heidar Eyjolfsson (University of Oslo). In Seminars on Stochastic Analysis, Random Fields and Applications VII, R. Dalang, M. Dozzi, and F. Russo (eds.). Progress in Probability Vol. 67, pp. 261–284, Birkhäuser, 2013. .
26. *Electricity options and additional information*. Co-authors: Richard Biegler-König and Rüdiger Kiesel (Both University of Duisburg-Essen). In Quantitative Energy Finance: Modeling, Pricing and Hedging in Energy and Commodity Markets. F. E. Benth, V. Kholodnyi and P. Laurence (eds.), Ch. 11, pp 285–305, Springer Science+Business Media New York, 2014.
27. *Forward prices in markets driven by continuous-time autoregressive processes..* Co-author: Sara Ana Solanilla Blanco (University of Oslo). In ‘Recent Advances in Financial Engineering’, Proceedings of the International Workshop on Finance 2012, Tokyo Metropolitan University. A.

- Takahashi, Y. Muromachi and T. Shibata (eds.), pp. 1–24, World Scientific, 2014.
28. *Pricing futures and options in electricity markets*. Co-author: Maren Schmeck (University of Oslo). In "The Interrelationship between Financial and Energy Markets" S. Ramos and H. Veiga (eds.), Lecture Notes in Energy 54, Springer Verlag, pp. 233–260, 2014.
  29. *Indifference pricing of weather futures based on electricity futures*. Co-authors: Stephan Ebbeler and Rüdiger Kiesel (both University of Essen-Duisburg). In "Energy Pricing Models: Recent Advances, Methods, and Tools", M. Prokopczuk (ed.), Palgrave Macmillan, NY, Ch. 8, pp. 223–267, 2014.
  30. *Pricing energy spread options*. Co-author: Hanna Zdanowicz (University of Oslo). In "Handbook of Multi-Commodity Markets and Products", A. Roncoroni, G. Fusai and M. Cummins (eds.), Wiley Finance Series, Wiley & Sons, Chichester, Ch. 17, pp. 801–826, 2015.
  31. *Recent advances in ambit stochastics with a view towards tempo-spatial stochastic volatility/intermittency*. Co-authors: O. E. Barndorff-Nielsen (University of Aarhus) and A. Veraart (Imperial College, London). Proceedings of the Amamef conference in Warsaw, June 2013, Banach Center Publications. Banach Center Publ. 104, pp. 25–60, 2015
  32. *Cross-commodity modelling by multivariate ambit fields*. Co-authors: O. E. Barndorff-Nielsen (University of Aarhus) and A. Veraart (Imperial College, London). In *Commodities, Energy and Environmental Finance*, Fields Institute Communications Series: Rene Aid, Mike Ludkovski and Ronnie Sircar (eds.), Springer Verlag. pp. 109–148, 2015
  33. *Weak stationarity of Ornstein-Uhlenbeck processes with stochastic speed of mean reversion*. Co-author: Asma Khedher (Technical University of Munich). In *The Fascination of Probability, Statistics and their Applications. In honour of Ole E. Barndorff-Nielsen*. M. Podolskij, R. Stelzer, S. Thorbjørnsen and A. Veraart (eds.). Springer Verlag, Cham, pp. 153–189, 2016.
  34. *Cointegrated commodity markets and pricing of derivatives in a non-Gaussian framework*. In *Advanced Modelling in Mathematical Finance. Festschrift in honour of Ernst Eberlein*. J. Kallsen and A. Papapantoleon (eds.). Springer Verlag, pp. 477–496, 2016.
  35. *Stochastic volatility modeling of emission allowance futures prices in the European emission trading system market*. Co-authors: Marcus Eriksson (University of Oslo) and Sjur Westgaard (Norwegian University of Science and Technology, Trondheim). In *Real Options in Energy and Commodity Markets*. N. Secomandi (ed.) World Scientific – Now Publishers Series in Business: Vol 12. Chapter 3, pp. 63–115, 2017.

## Research monographs and edited books

1. Matematisk finans – en innføring i opsjonsteori med stokastisk analyse. Universitetsforlaget, 2002. p. 128. (*Monograph in norwegian*)
2. Option Pricing with Stochastic Analysis – An Introduction to Mathematical Finance. Springer Verlag, 2003. p. 162.
3. Stochastic Analysis and Applications – The Abel Symposium 2005. F. E. Benth, G. Di Nunno, T. Lindstrøm, B. Øksendal, T. Zhang (eds.). Springer Verlag, 2007. p. 678.
4. Stochastic Modelling of Electricity and Related Markets. World Scientific, 2008, p. 330. Co-authored with J. Saltyte Benth (Univ. Oslo) and S. Koekebakker (Univ. Agder)
5. Modelling and Pricing in Financial Markets for Weather Derivatives. World Scientific, 2012, p. 242. Co-authored with J. Saltyte Benth.
6. Quantitative Energy Finance – Modeling, Pricing and Hedging in Energy and Commodity Markets. F. E. Benth, V. A. Kholodnyi and P. Laurence (eds.). Proceedings from the Wolfgang Pauli Institute, Vienna. Springer Verlag, 2014, p. 308.
7. Stochastics of Environmental and Financial Economics (Centre of Advanced Study, Oslo, Norway, 2014-2015). F. E. Benth and G. Di Nunno (eds.). Springer Proceedings in Mathematics & Statistics Vol 138, Springer Verlag, Cham, 2016, p. 362. (Springer Open)

## Miscellanea

1. *OBX-indeksen for 1995. Tilpasning med to ulike modeller og konsekvenser av dette.* Derivatet, No. 7, 1997. (*In norwegian*)
2. *Portfolio management in non-Gaussian markets.* Proceedings, 32e Congrès national d'analyse numérique (Canum 2000), Port d'Albret, Landes, France. pp. B40-B44, 2000.
3. *Optimal portfolio problems in Lévy markets.* Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). Extended abstracts, symposium in honour of Ole E. Barndorff-Nielsen. Statistical memoirs, University of Aarhus, Denmark. pp. 7-13, 2000.
4. *Merton's portfolio optimization problem and non-Gaussian stochastic volatility.* Coauthors: Kenneth Hvistendahl Karlsen (University of Bergen, Norway) and Kristin Reikvam (University of Oslo, Norway). Mini-proceedings: 2nd MaPhySto Conference on Lévy processes: Theory and Applications. MaPhySto Miscellanea no. 22, University of Aarhus, Denmark. pp. 50-59, 2002.

5. *Industridag med fokus på modellering av risiko i elektrisitetsmarkedet* (in Norwegian). Co-author: Helge Galdal (Centre of Mathematics for Applications, University of Oslo, Norway). Kraftjournalen no. 6, pp. 98-99, 2004.
6. Review of the monograph “Stochastic calculus of variations in mathematical finance” by Paul Malliavin and Anton Thalmaier. In *Math. Reviews*, 2007b:91002, February 2007.
7. A general approach to modelling and pricing in energy and weather markets. Argo – New Frontiers in Practical Risk Management, Issue 1, Winter 2014, pp. 57–60.
8. *Forsikrer seg mot fornybar risiko* (in Norwegian). KLIMA, June 26, 2015. Available at <http://cicero.uio.no/no/posts/klima/forsikrer-seg-mot-fornybar-risiko>
9. Kriging smooth futures curves. Energy Risk, February 2015, pp. 64–69.

### Papers accepted for publication

1. *A structural model for electricity forward prices*. Manuscript May 2016. Co-author: Florentina Paraschiv (University of St. Gallen). Available on SSRN: <http://ssrn.com/abstract=2783296> To appear in Journal of Banking & Finance.
2. *Continuous-time autoregressive moving-average processes in Hilbert space*. Manuscript January 2017. Co-author: Andre Süß (Univ. Barcelona). Available at [arxiv:1701.04618](https://arxiv.org/abs/1701.04618). To appear in the proceedings of the Abel Symposium 2016, E. Celledoni, G. Di Nunno, H. Munthe-Kaas and K. Ebrahimi-Fard (eds.), Springer Verlag.
3. *Multivariate modeling and analysis of regional ocean freight rates*. Manuscript, May 2017. Co-authors: Roar Adland (School of Economics, Bergen) and Steen Koekebakker (University of Agder, Kristiansand). Available at SSRN: <https://ssrn.com/abstract=2968773>. To appear in Transportation Research Part E: Logistics and Transportation Review.
4. *Approximation of forward curve models in commodity markets with arbitrage-free finite dimensional models*. Manuscript December 2015. Co-author: Paul Krühner (Technical University Vienna). Available on [arXiv:1512.05983](https://arxiv.org/abs/1512.05983). To appear in Finance & Stochastics.
5. *A non-Gaussian Ornstein-Uhlenbeck model for pricing wind power futures*. Manuscript, June 2017. Co-author: Anca Pircalabu (NEAS and University of Aalborg). Available at SSRN: <https://ssrn.com/abstract=2979341>. To appear in Applied Mathematical Finance



## Working papers

1. *A note on the multi-dimensional monotone follower problem and its connection to optimal stopping*. Research Report 1999-10, MaPhySto, University of Aarhus, Denmark. Coauthor: Kristin Reikvam (University of Oslo, Norway).
2. *Valuation of Asian Basket Options with Quasi-Monte Carlo Techniques and Singular Value Decomposition*, Research Report 7-2001, MaPhySto, University of Aarhus, Denmark. Coauthor: Lars Oswald Dahl (Storebrand and University of Trondheim, Norway).
3. *Valuing target redemption notes by a stratified Longstaff-Schwartz algorithm*. Statistical Research Report, University of Oslo, E-print No. 4, October 2009. Co-author: Pål Nicolai Henriksen (University of Oslo).
4. *The Heston stochastic volatility model in Hilbert space*. Manuscript, June 2017. Co-author: Iben Simonsen (University of Oslo). Available at arXiv:1706.03500.
5. *Pricing of commodity derivatives on processes with memory*. Manuscript, August 2017. Co-authors: Michele Vanmaele (University of Ghent) and Asma Khedher (University of Amsterdam). Available at arXiv:1711.00307.
6. *Additive energy forward curves in a Heath-Jarrow-Morton framework*. Manuscript, September 2017. Co-authors: Marco Piccirilli and Tiziano Vargiolu (University of Padova). Available at arXiv:1709.03310.
7. *Cointegration in continuous time for factor models*. Manuscript, October 2017. Co-author: Andre Sues (Zurich).