

Publikationsverzeichnis (Stand Februar 2025)

## Bücher

**S. Desmettre, R. Korn (2018)**, *Lehrbuch, Moderne Finanzmathematik: Theorie und praktische Anwendungen: Band II, Erweiterungen des Black-Scholes Modells, Zins, Kreditrisiko und Statistik*; Springer Verlag  
<https://link.springer.com/book/10.1007/978-3-658-21000-7>

## Veröffentlichungen in referierten Zeitschriften

- [29] **F. Aichinger, S. Desmettre (2025)**, *Pricing of geometric Asian options in the Volterra-Heston model*, akzeptiert zur Veröffentlichung in **Review of Derivatives Research** am 10. Februar 2025
- [28] **E. Buckwar, S. Desmettre, A. Mallinger, A. Meddah (2024)**, *American option pricing using generalised stochastic hybrid systems*, akzeptiert zur Veröffentlichung in **Journal of Stochastic Analysis**
- [27] **S. Desmettre, C. Laudagé, J. Sass (2024)**, *Scalarized Utility-Based Multi-Asset Risk Measures*, **Scandinavian Actuarial Journal**, online veröffentlicht am 10. Oktober 2024, <https://doi.org/10.1080/03461238.2024.2410211>
- [26] **C. Laudagé, F. Aichinger, S. Desmettre (2024)**, *A Comparative Study of Factor Models for Different Periods of the Electricity Spot Price Market*, **Journal of Commodity Markets**, 36, 100435, <https://doi.org/10.1016/j.jcomm.2024.100435>
- [25] **B. Yilmaz, C. Laudagé, R. Korn, S. Desmettre (2024)**, *Electricity GANs: Generative Adversarial Networks for Electricity Price Scenario Generation*, **Commodities**, 3, 254-280, <https://doi.org/10.3390/commodities3030016>
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- [23] **F. Aichinger, S. Desmettre (2023)**, *Utility Maximization in Multivariate Volterra Models*, **SIAM Journal on Financial Mathematics**, 14(1), 52–98, <https://doi.org/10.1137/21M1464543>
- [22] **A. Brunhuemer, L. Larcher, P. Seidl, S. Desmettre, J. Kofler, G. Larcher (2022)**, *Supervised Machine Learning Classification for Short Straddles on the S&P500*, **Risks**, 10(12), 235, 25 Seiten, <https://doi.org/10.3390/risks10120235>
- [21] **S. Desmettre, J. Wenzel (2021/22)**, *On the Valuation of Discrete Asian Options in High Volatility Environments*, **Applied Mathematical Finance**, 28(6), 508–533, <https://doi.org/10.1080/1350486X.2022.2108858>

- [20] **S. Desmettre, S. Hochgerner, S. Omerovic, S. Thonhauser (2022)**, A Mean-Field Extension of the LIBOR Market Model, **International Journal of Theoretical and Applied Finance**, No. 25, Issue No. 01, Article No. 2250005, <https://doi.org/10.1142/S0219024922500054>
- [19] **S. Desmettre, M. Wahl, R. Zagst (2022)**, Dynamic Surplus Optimization with Performance- and Index-Linked Liabilities, **European Actuarial Journal**, 12, 607–645, <https://doi.org/10.1007/s13385-021-00292-z>
- [18] **S. Desmettre, G. Leobacher, L.C.G. Rogers (2021)**, Change of drift in one-dimensional diffusions, **Finance & Stochastics**, 25(2), 359–381, <https://doi.org/10.1007/s00780-021-00451-w>
- [17] **S. Desmettre, C. Laudagé, J. Sass (2020)**, Good Deal Bounds for Option Prices under Value-at-Risk and Expected Shortfall Constraints, **Risks**, 8(4), 114, 22 Seiten, <https://doi.org/10.3390/risks8040114>
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## Arbeitspapiere

- [3] **D. Khurana, S. Desmettre, E. Buckwar (2024)**, *Exact simulation of the first-passage time of SDEs to time-dependent thresholds*, verfügbar unter <https://arxiv.org/abs/2412.13060>
- [2] **L. De Gennaro Aquino, S. Desmettre, Y. Havrylenko, M. Steffensen (2024)**, *Equilibrium control theory for Kihlstrom–Mirman preferences in continuous time*, verfügbar unter <https://arxiv.org/abs/2407.16525>
- [1] **S. Desmettre, S. Merkel, A. Mickel, A. Steinicke (2023)**, *Worst-Case Optimal Investment in Incomplete Markets*, verfügbar unter <https://arxiv.org/abs/2311.10021>

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- [3] **J. Varela, N. Wehn, S. Desmettre, R. Korn (2017)**, *Real-Time Financial Risk Measurement of Dynamic Complex Portfolios with Python and PyOpenCL*, 7th Workshop on Python for High-Performance and Scientific Computing (PyHPC '17), Denver (USA)
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- [2] **S. Desmettre, R. Korn (2015)**, *10 Computational Challenges in Finance*, 'FPGA Based Accelerators for Financial Applications', Springer
- [1] **S. Desmettre, R. Korn, T. Sayer (2015)**, *Option Pricing in Practice - Heston's Stochastic Volatility Model*, 'Currents in Industrial Mathematics', Springer

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## Veröffentlichte Software: R-Pakete auf CRAN

**RobAStRDA: Interpolation Grids for Packages of the RobASt Family**, Autoren *P. Ruckdeschel und M. Kohl*, mit Beiträgen von S. Desmettre, G. Kroisandt, E. Massini, D. und M. Pupashenko, B. Spangl, Version 1.1.0, 07/2018

**RobExtremes: Optimally Robust Estimation for Extreme Value Distributions**, Autoren *P. Ruckdeschel und M. Kohl*, mit Beiträgen von S. Desmettre, G. Kroisandt, E. Massini, D. Pupashenko und B. Spangl, Version 1.1.0, 04/2019