

# Assoz. Univ.-Prof. Dr. Sascha Desmettre

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Publikationsverzeichnis (Stand Februar 2024)

## 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

- [24] **S. Desmettre, M. Steffensen (2023)**, *Equilibrium Investment with Random Risk Aversion*, **Mathematical Finance**, 33(3), 946-975, <https://doi.org/10.1111/mafi.12394>.
- [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>.
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- [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>.
- [16] **N. Bäuerle, S. Desmettre (2020)**, *Portfolio Optimization in Fractional and Rough Heston Models*, **SIAM Journal on Financial Mathematics**, 11(1), 240-273, <https://doi.org/10.1137/18M1217243>.

- [15] **W. Bock, S. Desmettre, J.L. da Silva (2020)**, *Integral Representation of Generalized Grey Brownian Motion*, **Stochastics**, 92(4), 552–565, <https://doi.org/10.1080/17442508.2019.1641093>.
- [14] **C. Laudagé, S. Desmettre, J. Wenzel (2019)**, *Severity Modeling of Extreme Insurance Claims for Tariffication*, **Insurance: Mathematics and Economics**, 88, 77–92, <https://doi.org/10.1016/j.insmatheco.2019.06.002>.
- [13] **S. Coskun, R. Korn, S. Desmettre (2019)**, *Application of the Heath-Platen Estimator in the Fong-Vasicek Short Rate Model*, **The Journal of Computational Finance**, 23(1), 1–24, <https://doi.org/10.21314/JCF.2019.366>.
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- [10] **S. Desmettre, J. de Kock, P. Ruckdeschel, F.T. Seifried (2018)**, *Generalized Pareto Processes and Fund Liquidity Risk*, **Quantitative Finance**, 18(8), 1327–1343, <https://doi.org/10.1080/14697688.2017.1410214>.
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- [8] **S. Desmettre, R. Korn, J. Varela, N. Wehn (2016)**, *Nested MC-Based Risk Measurement of Complex Portfolios: Acceleration and Energy Efficiency*, **Risks**, 4(4), 35 Seiten, <https://doi.org/10.3390/risks4040036>.
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- [3] **S. Desmettre (2012)**, *Optimal Investment for Executive Stockholders with Exponential Utility*, **Decisions in Economics and Finance**, 35(2), 151–170, <https://doi.org/10.1007/s10203-011-0119-x>.
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- [4] **F. Aichinger, S. Desmettre (2024)**, *Pricing of geometric Asian options in the Volterra-Heston model*, verfügbar unter <https://arxiv.org/abs/2402.15828>.
- [3] **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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- [1] **S. Desmettre, C. Laudagé, J. Sass (2023)**, *Scalarized Utility-Based Multi-Asset Risk Measures*, verfügbar unter <https://ssrn.com/abstract=3924271>.

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## Tagungsberichte

- [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).
- [2] **J. Varela, C. Kestel, C. de Schryver, N. Wehn, S. Desmettre, R. Korn (2015)**, *Optimization Strategies for Portable Code for Monte Carlo-Based Value-at-Risk Systems*, Proceedings of the 8th Workshop on High Performance Computational Finance (WHPCF '15), Austin (USA).
- [1] **B. Spangl, S. Desmettre, P. Ruckdeschel (2015)**, *Statistical Models for Dynamics in Extreme Value Processes*, Proceedings of the 30th International Workshop on Statistical Modeling, Linz (Austria), Volume 1, 360–366.

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## Buchkapitel

- [3] **S. Desmettre, R. Horsky, R. Korn (2019)**, *Das Kapitalmarktmodell als Basis der Simulation*, Praxishandbuch Lebensversicherungsmathematik: Simulation und Klassifikation von Produkten, VVW GmbH.
- [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

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**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.