Wolfgang Karl Härdle

Research

My Erdös Number: 3 (Serfling -> Deheuvels -> Erdös)

My ORCiD: 00000001-5600-3014

Citations

Welcome to my Google scholar citation statistics, WorldCat Identities , RePEc , Handelsblatt rank statistics, ResearchGate and SSRN publication statistics

Career

- Professor of Statistics at Humboldt-Universität zu Berlin from 1992
- Visiting Professor at CentER, Tilburg University in 1992
- Ordinary Professor at CORE, Catholic University of Louvain in 1990-1992
- Visiting Professor at CORE, Universite Catholique de Louvain in 1989-1990
- Research associate at Bonn University in 1985-1989
- Research associate at Frankfurt University in 1983-1985
- Research associate at Heidelberg University in 1978-1983
- Habilitation in Statistics and Econometrics at Bonn University in 1988
- Doctorate (Dr. rer. Nat.) At University Heidelberg in 1982
- Study at Fridericiana Universität Karlsruhe: Mathematics, Computer Science and Physics - graduated in 1978 as Diplom-Mathematiker

Honors

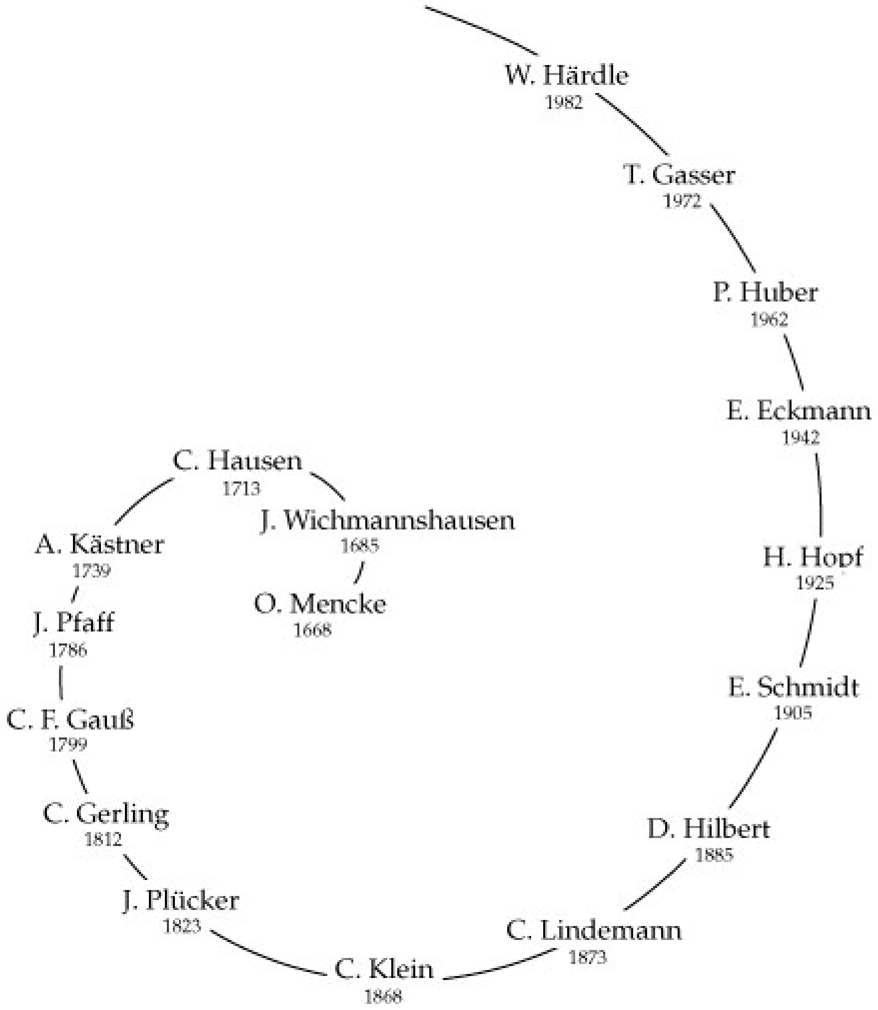
▪ 2019 - 2023	YuShan 玉山 Scholar, Taiwan
▪ 2018 -	Scientific Board of Folia Oeconomica Stetinensia
▪ 2017 -	Charter Fellow, INDI Inst. Nonlinear Dynamics, RUDN University, Moscow

▪	2016 - 2018	Guest Professor, National Jiaotong University, Hsinchu, Taiwan
▪	2015 -	Foreign Expert Professor, Xiamen University, China
▪	2015 -	Academic Committee of MOE Key Lab of Econometrics, Xiamen University, China
▪	2015 -	Honorary Guest Professor, Chung Hua University, Hsinchu, Taiwan
▪	2014 -	IRI THESyS member, Humboldt University Berlin
▪	2013	Honorary Member of the Scientific Council, Inst. Econ. Forecasting, Romanian Academy of Science
▪	2012	Multa Scripsit Award "Econometric Theory", Cambridge University Press
▪	2010 -	Council Member of the International Society for NonParametric Statistics (ISNPS)
▪	2009 -	Advisor: Financial statistics and risk management Master program, Rutgers University
▪	2009-2016	Distinguished Visiting professor WISE, Xiamen University, China
▪	2008	Founding Council Member of the Society for Financial Econometrics (SoFiE)
▪	2007	Faculty Research Prize for outstanding research achievements
▪	2006-2010	Member of the National Center Econometric Research, QUT, Australia
▪	2003 -	"Highly cited scientist" on the list provided by ISI, Institute of Scientific Information. In 2003-2014 the only "highly cited scientist" at Humboldt-Universität zu Berlin.
▪	2002-2013	Advisor: Guanghua School of Management, Beijing University

2001 - 2003	Vice President IASC (Int. Assoc. Of Statistical Computing)
2000-2004	Advisory Board: Ferrell Assett Management, Singapore
1997	Fellow International Statistical Institute
1992	Fellow Institute of Mathematical Statistics

Genealogy spiral

The Mathematics Genealogy Project

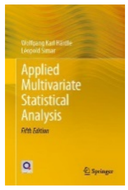


Books and Proceedings

The biggest feature of the textbook "Applied Multivariate Statistical Analysis" by Professor Hadler and Professor Simma is the perfect combination of statistical theory and application. The book provides a large number of cases in the fields of finance and economics to illustrate relevant statistics. Quantitative theory, and readers can download the corresponding MATLAB or R language program to reproduce all the examples and graphics in the book, which is very helpful for readers to quickly understand and flexibly use high-dimensional data statistical analysis methods in practice. .

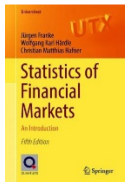
—— Fan Jianqing, Chair Professor of Princeton University, Distinguished Professor of Chinese Academy of Sciences

- **Härdle WK, Simar L** (2019) Applied Multivariate Statistical Analysis. 5th ed., *Springer Verlag, Berlin Heidelberg. ISBN 978-3-030-26005-7, e-ISBN 978-3-030-26006-4 (558 p), DOI:* 10.1007 / 978-3-030-26006-4



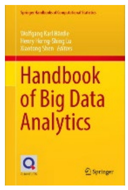
Springer link

- **Franke J, Härdle WK, Hafner C** (2019) Statistics of Financial Markets: an Introduction. 5th ed., *Springer Verlag, Berlin Heidelberg. ISBN 978-3-030-13750-2, e-ISBN 978-3-030-13751-9 (585 p), DOI:* 10.1007 / 978-3-030-13751-9



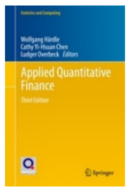
Springer link

- **Härdle WK, Lu HS, Shen CS** (2018) Handbook of Big Data Analytics., *Springer-Verlag Berlin Heidelberg. ISBN 978-3-319-18284-1, DOI:* 10.1007 / 978-3-319-18284-1



Springer link

- **Härdle WK, Chen YC, Overbeck L** (2017) Applied Quantitative Finance. 3rd ed., *Springer-Verlag Berlin Heidelberg. ISBN 978-3-662-54485-3, e-ISBN 978-3-662-54486-0 (516 p), DOI:* 10.1007 / 978-3-662-54486-0



Springer link

- **Härdle WK, Okhrin O, Okhrin Y** (2017) Basic Elements of Computational Statistics., *Springer-Verlag Berlin Heidelberg. ISBN 978-3-319-55335-1, e-ISBN 978-3-319-55336-8 (516 p), DOI:* 10.1007 / 978-3-319-55336-8

Springer link

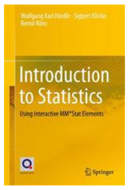
- **Franke J, Härdle WK, Hafner C** (2016) Financial Measurement: Statistical Analysis of Financial Markets , Fourth Edition. Chinese translation of Statistics of Financial Markets: an Introduction. *Mechanical Industry Press. ISBN 9787111549383*

link

- **Van den Berg T, Bommes E, Härdle WK, Petukhina A** (2016) Computing Machines, *License: CC BY-NC-SA 3.0. DOI: 10.20386 / hub-43565*

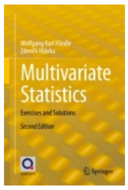
link

- **Härdle WK, Klinke S, Rönz B** (2015) Introduction to Statistics (Using Interactive MM * Stat Elements), *Springer Verlag, Berlin Heidelberg. ISBN 978-3-319-17703-8, e-ISBN 978-3-319-17704-5 (516 p), DOI:* 10.1007 / 978-3-319-17704-5



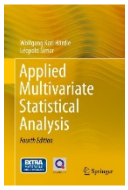
Springer link

- **Härdle WK, Hlávka Z** (2015) Multivariate Statistics: Exercises and Solutions, 2nd ed., *Springer Verlag, Berlin Heidelberg. ISBN 978-3-642-36004-6, e-ISBN 978-3-642-36005-3 (362 p), DOI:* 10.1007 / 978-3-642-36005-3



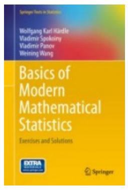
Springer link

- **Härdle WK, Simar L** (2015) Applied Multivariate Statistical Analysis, 4th ed., *Springer Verlag, Berlin Heidelberg. ISBN 978-3-662-45170-0, e-ISBN 978-3-662-45171-7 (580 p), DOI:* 10.1007 / 978-3-662-45171-7



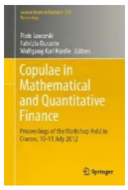
Springer link

- **Härdle WK, Spokoiny V, Panov V, Wang W** (2014) Basics of Modern Mathematical Statistics: Exercises and Solutions, *Springer Verlag, Heidelberg. ISBN 978-3-642-36850-9 (185 p)*



Springer link

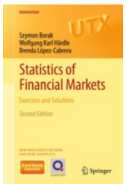
- **Jaworski P, Durante F, Härdle WK** (2013) Copulae in Mathematical and Quantitative Finance, *Springer Verlag, Heidelberg. ISBN 978-3-642-35406-9 (294 p)*



Springer link

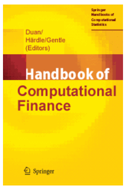
- **Borak S, Härdle WK, López-Cabrera B** (2013) Statistics of Financial Markets, Exercise and Solutions. 2nd ed., *Springer Verlag, Heidelberg. ISBN 978-3-642-33929-5 (246 p)*

  Springer link



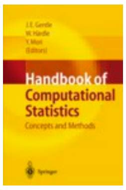
- **Duan JC, Gentle JE, Härdle WK** (2012) Handbook of Computational Finance. *Springer Verlag, Heidelberg. ISBN 978-3-642-17253-3 (900p), DOI:* 10.1007 / 978-3-642-17254-0

  Springer link



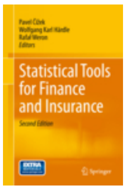
- **Gentle J, Härdle WK, Mori Y** (2012) Handbook of Computational Statistics, Concepts and Methods. 2nd ed. *Springer Verlag, Heidelberg. ISBN 3-540-40464-3 (1078 p) DOI:* 10.1007 / 978-3-642-21551-3

  Springer link



- **Cizek P, Härdle WK, Weron R** (2011) Statistical Tools for Finance and Insurance. 2nd ed., *Springer Verlag, Heidelberg. ISBN 978-3-642-18061-3 (420 p)*

  Springer link

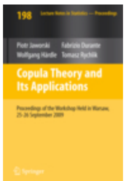


- **Härdle WK, Simar L** (2011) Applied Multivariate Statistical Analysis , Second Edition. Chinese translation of Applied Multivariate Statistical Analysis. *Peking University Press. ISBN 978-7-301-16772-4 / F-2670 (445 p)*

  link

- **Jaworski P, Durante F, Härdle WK, Rychlik T (eds)** (2010) Copula Theory and Its Applications, Proceedings of the Workshop held in Warsaw September 25-26, 2009, Lecture Notes in Statistics , *ISBN 978-3-642-12464- 8, (327 p) DOI:* 10.1007 / 978-3-642-12465-5

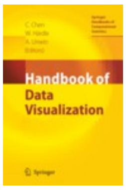
  Springer link



- **Härdle WK, Hautsch N, Overbeck L** (2009) Applied Quantitative Finance. 2nd extended ed., *Springer Verlag, Heidelberg. ISBN 978-3-540-69177-8 (448 p)*

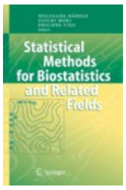
  Springer link

- **Chen CH, Härdle WK, Unwin A** (2008) Handbook of Data Visualization. *Springer Verlag, Heidelberg. ISBN 3-540-33036-4 (936 p)*



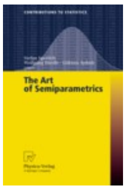
Springer link

- **Härdle WK, Mori Y, Vieu P** (2006) Statistical methods in Biostatistics and Related Fields. *Springer Verlag, Heidelberg. ISBN 3-540-32690-1 (420 p)*



Springer link

Springer link

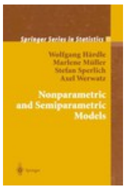


- **Sperlich S, Härdle WK, Aydinli G** (2006) The Art of Semiparametrics *Springer Verlag, Heidelberg. ISBN 3-7908-1700-7 (178p) DOI:* 10.1007 / 3-7908-1701-5

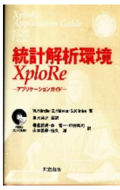
- **Franke J, Härdle WK, Hafner C** (2004) Introduction to the statistics of the financial markets. (2nd edition) *Springer Verlag, Heidelberg. ISBN 3-540-41722-2 (428 p)*

Springer link

- **Härdle WK, Müller M, Sperlich S, Werwatz A** (2004) Nonparametric and Semiparametric Models *Springer Verlag, Heidelberg. ISBN 3-540-20722-8 (340 p)*



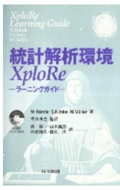
- **Härdle WK, Hlávka Z, Klinke S** (2003) Toukei Kaiseki Kankyo XploRe ¨C Apurikeishon gaido. Japanese translation of XploRe ¨C Application Guide, (translated by Tomoyuki Tarumi, Toshinari Kamakura, Yuichi Mori, Yashiro Yamamoto, Junji Nakano and Hiroshi Yadohisa) *Kyoritsu Shuppan Publisher Tokyo ISBN 4-320-01745-5.*



- **Härdle WK, Rönz B** (2002) COMPSTAT 2002 Proceedings. *Physika Verlag, Heidelberg. ISBN 3-7908-1517-9 (648 p)*

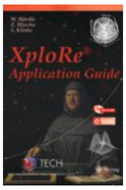
- **Härdle WK, Rönz B** (2001) MM * Stat - an interactive introduction to the world of statistics. *Springer Verlag, Heidelberg. ISBN 3-540-14893-0 (CD ROM + software)*

- **Härdle WK, Klinke S, Müller M** (2001) Toukei Kaiseki Kankyo XploRe ¨C rahningu gaido. Japanese translation of XploRe ¨C Learning Guide, (translated by Tomoyuki Tarumi, Yuichi Mori, Yashiro Yamamoto, Junji Nakano and Hiroshi Yadohisa) *Kyoritsu Shuppan Publisher Tokyo ISBN 4-320-01678-5 C3041.*



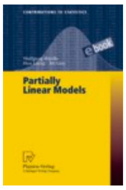
- **Härdle WK, Hlávka Z, Klinke S** (2000) XploRe Application Guide. *Springer Verlag, Heidelberg. ISBN 3-540-67545-0, (525 p)*

Springer link



- **Härdle WK, Liang H, Gao J** (2000) Partially Linear Models. *Physika Verlag, Heidelberg. ISBN 3-7908-1300-1, 17 figs, 11 tabs, (203 p)*

Springer link



- **Franke J, Härdle WK, Stahl G (eds.)** (2000) Measuring Risk in Complex Stochastic Systems. *Lecture Notes in Statistics, Springer Verlag, Heidelberg. ISBN 0-387-98996-X (272 p)*

Springer link

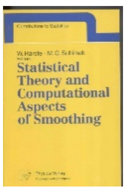
- **Härdle WK, Klinke S, Müller M** (1999) XploRe - the statistical computing environment. *CD-ROM, with Handbook* Learning Guide. *Springer Verlag, Heidelberg. ISBN 3-540-14767-5, (520 p)*

Springer link

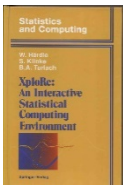
- **Härdle WK, Kerkyiacharian G, Picard D, Tsybakov AB** (1998) Wavelets, Approximation and Statistical Applications. *Lecture Notes in Statistics, 129, Springer Verlag, Heidelberg. ISBN 0-387-98453-4, (265 p)*

Springer link

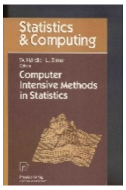
- **Härdle WK, Schimek M (eds.)** (1996) Statistical Theory and Computational Aspects of Smoothing. *Physika Verlag, Heidelberg. ISBN 3-7908-0930-6, (265 p)*



- **Härdle WK, Klinke S, Turlach B** (1995) XploRe - an interactive statistical computing environment. *Springer Verlag, New York. ISBN 0-387-94429-X (387 p)*



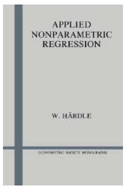
- **Härdle WK, Simar L (eds.)** (1993) Computer Intensive Methods in Statistics. *Physica publishing house. ISBN 3-7908-0677-3 (176 p)*



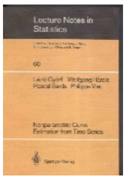
- **Härdle WK** (1993) Prikladnaja Neparametricheskaya Regressija. *Russian Translation of "Applied Nonparametric Regression", MIR Publishers Moscow. (348 p)*

- **Härdle WK** (1991) Smoothing Techniques, with Implementation in S. *Springer Verlag, Heidelberg New York. ISBN 3-540-97367-2 (261 p)*

- **Härdle WK** (1990) Applied Nonparametric Regression. *Econometric Society Monograph Series 19, Cambridge University Press. ISBN 0-521-42950-1 (333 p)*



- **Györfi L, Härdle WK, Sarda P, Vieu P** (1989) Nonparametric Curve Estimation from Time Series. *Lecture Notes in Statistics, 60th Springer Verlag, Heidelberg ISBN 3-540-97174-2 (152 p)*



Springer link

- **Franke J, Härdle WK, Martin D (eds.)** (1984) Robust and Nonlinear Time Series Analysis. *Lecture Notes in Statistics, 26. Springer Verlag, Heidelberg ISBN 3-540-96102-X (286 p)*

Springer link

Discussion Papers (last 3 years)

- Networks of News and Cross-Sectional Returns
- A Financial Risk Meter for China
- Hedging Cryptocurrency Options
- Understanding jumps in high frequency digital asset markets
- Robustifying Markowitz
- A Time-Varying Network for Cryptocurrencies

- High-dimensional Statistical Learning Techniques for Time-varying Limit Order Book Networks
- Financial Risk Meter based on Expectiles
- Rodeo or Ascot: which hat to wear at the crypto race?
- Understanding Smart Contracts: Hype or Hope?
- K-expectiles clustering
- FRM Financial Risk Meter for Emerging Markets
- Data Analytics Driven Controlling: bridging statistical modeling and managerial intuition
- The common and specific components of ination expectation across European countries
- A data-driven P-spline smoother and the P-Spline-GARCH models
- Factorisable Multitask Quantile Regression
- Combining Penalization & Adaption in High Dimension with Application in Bond Risk Premia Forecasting
- Phenotypic convergence of cryptocurrencies
- Dynamic Network Perspective of Cryptocurrencies
- Media-expressed tone, Option Characteristics, and Stock Return Predictability
- Estimating low sampling frequency risk measure by high-frequency data
- Information Arrival, News Sentiment, Volatilities and Jumps of Intraday Returns
- Cooling Measures and housing wealth: evidence from Singapore

Publications (last 5 years)

- **Pele DT, Wesselhöft N, Härdle WK, Kolossiatis M, Yatracos Y** (2021) A statistical Classification of Cryptocurrencies, European Journal of Finance, accepted 20210616
- **Härdle WK, Lopez Cabrera B, Melzer, A** (2021) Pricing Wind Power Futures. J R Stat Soc Series C. 2021;00:1–20. https://doi.org/10.1111/rssc.12499
- **Chen CYH, Härdle WK, Klochkov E** (2021) SONIC: SOcial Networks with Influencers and Communities, J of Econometrics, https://doi.org/10.1016/j.jeconom.2021.02.008

- **Petukhina A, Trimborn S, Härdle WK, Elendner H** (2021) Investing with cryptocurrencies - evaluating the potential of portfolio allocation strategies, Quantitative Finance, https://doi.org/10.1080/14697688.2021.1880023 .
- **Khowaja K, Shcherbatyy M, Härdle WK** (2021) Surrogate Models for Optimization of Dynamical Systems, "Foundations of Modern Statistics", Springer Proceedings in Mathematics & Statistics, to appear 2021
- **Spilak B, Härdle WK** (2020) Tail-risk protection: Machine Learning meets modern Econometrics, Handbook of Financial Econometrics, Mathematics, Statistics and Machine Learning, CF LEE ed., World Scientific Publisher.
- **Lin MB, Khowaja K, Chen CYH, Härdle WK** (2020) Blockchain mechanism and distributional characteristics of cryptos , Advances in Quantitative Analysis of Finance & Accounting (AQAFA), Vol. 18, https://doi.org/10.2139/ssrn.3784776
- **Kim KH, Chao SK, Härdle WKH** (2020) Simultaneous Inference of the Partially Linear Model with a Multivariate Unknown Function. Journal of Statistical Planning and Inference, accepted, 20201013
- **Chen S, Härdle WK, Wang W** (2020) Inflation Co-movement across Countries in Multi-maturity Term Structure: An Arbitrage-Free Approach, Empirical Econometrics to appear
- **Zinovyeva E, Härdle WK, Lessmann S** (2020) Antisocial Online Behavior Detection Using Deep Learning, Decision Support Systems, https://doi.org/10.1016/j.dss.2020.11336
- **Chernozhukov V, Härdle WK, Huang C, Wang W** (2020) LASSO-Driven Inference in Time and Space, Annals of Statistics, to appear 20200916
- **Dautel AJ, Härdle WK, Lessmann St, Seow WV** (2020) Forex Exchange Rate Forecasting Using Deep Recurrent Neural Networks. Digital Finance, DOI: https://doi.org/10.1007/s42521-020-00019-x
- **Hou AJ, Wang W, Chen CYH, Härdle WK,** (2020) Pricing Cryptocurrency options. J Financial Econometrics, Vol. 18, No. 2, 250–279, DOI: https://doi.org/10.1093/jjfinec/nbaa006
- **Chao SK, Härdle WK, Yuan M** (2020) Factorisable Multi-Task Quantile Regression, J Econometric Theory, accepted 20190207, to appear
- **Adamyan L, Efimov, K, Chen CYH, Härdle WK** (2020) Adaptive Weights Clustering of Research Papers., Digital Finance, DOI: https://doi.org/10.1007/s42521-020-00017-z

- **Yu L, Härdle WK, Borke L, Benschop T** (2020) An AI approach to Measuring Financial Risk., Singapore Economic Review, DOI: https://doi.org/10.1142/S0217590819500668
- **Chen CYH, Härdle WK, Mihoci A** (2020) TERES - Tail Event Risk Expectile based Shortfall, Quantitative Finance., DOI: https://doi.org/10.1080/14697688.2020.1786151
- **Chen S, Härdle WK, Wang L** (2020) Estimation and Determinants of Chinese Banks' Total Factor Efficiency: A New Vision Based on Unbalanced Development of Chinese Banks and Their Overall Risk., Computational Statistics, DOI: https://doi.org /10.1007/s00180-019-00951-6
- **Härdle WK, Harvey C, Reule R** (2019) Understanding Cryptocurrencies. J Financial Econometrics, DOI: https://doi.org/10.1093/jjfinec/nbz033
- **Lux M, Härdle WK, Lessmann S** (2019) Data Driven Value-at-Risk Forecasting using a SVR-GARCH-KDE Hybrid. Comp Stat Data Analysis, DOI: https://doi.org/10.1007/s00180-019-00934-7
- **Petukhina AA, Reule RCG, Härdle WK** (2019) Rise of the Machines? Intraday High-Frequency Trading Patterns of Cryptocurrencies, European Journal of Finance, DOI: https://doi.org/10.1080/1351847X.2020.1789684
- **Mihoci A, Althof M, Chen CYH, Härdle WK** (2019) FRM Financial Risk Meter, Digital Finance, https://doi.org/10.1108/S0731-905320200000042016
- **Wesselhöfft N, Härdle WK** (2019) Constrained Kelly Portfolio under alpha stable laws, RSEM Computational Economics, DOI: https://link.springer.com/article/10.1007%2Fs10614-019-09913-y
- **Qian Y, Härdle WK, Chen CYH** (2019) Industry Interdependency Dynamics in a Network Context, Studies in Economics and Finance, DOI: https://doi.org/10.1108/SEF-07-2019-0272
- **Chen S, Härdle WK, Lopez Cabrera B** (2019) Regularization Approach for Network Modeling of German Power Derivative Market, Energy Economics, DOI: https://doi.org/10.1016/j.eneco.2019.06.021
- **Kostmann M, Härdle WK** (2019) Forecasting in Blockchain-Based Local Energy Markets, Energies, DOI: https://doi.org/10.3390/en12142718
- **Zbonakova L, Monti RP, Härdle WK** (2019) Towards the interpretation of time-varying regularization parameters in streaming penalized regression models, Pattern Recognition Letters, DOI: https://doi.org/10.1016/j.patrec.2019.06.021

- **Härdle WK, Nasekin S** (2019) Model-driven statistical arbitrage on LETF option markets, Quantitative Finance, DOI: https://doi.org/10.1080/14697688.2019.1605186
- **Trimborn S, Li MY, Härdle WK** (2019) Investing with cryptocurrencies -A liquidity constrained investment approach. J Financial Econometrics, DOI: https://doi.org/10.1093/jjfinec/nbz016
- **Burdejova P, Härdle WK** (2019) Dynamic semi-parametric factor model for functional expectiles, Computational Statistics, DOI: https://doi.org/10.1007/s00180-019-00883-1
- **Chen CYH, Härdle WK, Xu, X** (2019) Dynamic credit default swaps curves in a network topology, Quantitative Finance, DOI: https://doi.org/10.1080/14697688.2019.1585560
- **Chao SK, Härdle WK, Yuan M** (2019) Factorisable Multi-Task Quantile Regression, J Econometric Theory, DOI: https://doi.org/10.1017/S0266466620000304
- **Zhu X, Wang W, Wang H, Härdle WK** (2019) Network Quantile Autoregression, J Econometrics, DOI: https://doi.org/10.1016/j.jeconom.2019.04.034
- **Chua WS, Chen Y, Härdle WK** (2019) Forecasting Limit Order Book Liquidity Supply-Demand Curves with Functional AutoRegressive Dynamics. Quantitative Finance, DOI: https://doi.org/10.1080/14697688.2019.1622290
- ***Chen CYH, Härdle WK, Okhrin Y*** *(2019) Tail event driven networks of SIFIs, Journal of Econometrics, DOI : https://doi.org/10.1016/j.jeconom.2018.09.016*
- **Chen Y, Härdle WK, Qiang H, Majer, P** (2018) Risk Related Brain Regions Detected with 3D Image FPCA, Statistics and Risk Modeling, 35.89110 DOI: https://doi.org/10.1515/strm-2017-0011
- **Zharova A, Tellinger-Rice J, Härdle WK** (2018) How to Measure the Performance of a Collaborative Research Center, *Scientometrics* , *DOI* : https://doi.org/10.1007/s11192-018-2910-8
- **Ngoc MT, Osipenko M, Härdle WK, Burdejova P** (2018) Principal Components in an Asymmetric Norm, *Journal of Multivariate Analysis, DOI:* https://doi.org/10.1016/j.jmva.2018.10.00
- **Trimborn S, Härdle WK** (2018) CRIX an Index for Cryptocurrencies, *Journal of Empirical Finance, DOI:* https://doi.org/10.1016/j.jempfin.2018.08.004

- **Vomfell L, Härdle WK, Lessmann S** (2018) Improving Crime Count Forecasts Using Twitter and Taxi Data, *Decision Support Systems* , *DOI* : https://doi.org/10.1016/j.dss.2018.07.003
- **Chao SK, Härdle WK, Sheen J, Trück S, Wang BZ** (2018) A note on the impact of news on US household inflation expectations, *Journal of Macroeconomic Dynamics , DOI : http://dx.doi.org/10.1017/S1365100518000482*
- ***Chen CYH, Chiang CT, Härdle WK*** *(2018) Downside risk and stock returns: An empirical analysis of the long-run and short-run dynamics from the G-7 Countries, Journal of Banking and Finance , DOI : https: // doi .org / 10.1016 / j.jbankfin.2018.05.012*
- ***Li YX, Huang C, Härdle WK*** *(2018) Spatial Functional Principal Component Analysis with Applications to Brain Image Data, Journal of Multivariate Analysis, DOI: https://doi.org/10.1016/j.jmva.2018.11.004*
- ***Zhu X, Wang W, Wang H, Härdle WK*** *(2018) Network Quantile Autoregression, Journal of Econometrics, DOI : https://doi.org/10.1016/j.jeconom.2019.04.034*
- ***Grith M, Härdle WK, Kneip, Wagner H*** *(2018) Functional Principal Component Analysis for Derivatives of Multivariate Curves, Statistica Sinica , DOI : https://doi.org/10.5705/ss.202017.0199*
- ***Xu X, Mihoci A, Härdle WK*** *(2018) lCARE - localizing Conditional AutoRegressive Expectiles, Journal of Empirical Finance , DOI : https://doi.org/10.1016/j.jempfin.2018.06.006*
- ***Chao SK, Härdle WK, Huang C*** *(2018) Multivariate factorizable expectile regression with application to fMRI data, Computational Statistics & Data Analysis , DOI : https://doi.org/10.1016/j.csda.2017.12.001*
- ***Belomestny D, Härdle WK, Krymova E*** *(2017) Sieve estimation of the minimal entropy martingale marginal density with application to pricing kernel estimation, International Journal of Theoretical and Applied Finance , DOI : https://doi.org/10.1142/S0219024917500418*
- ***Moro RA, Härdle WK, Schäfer D*** *(2017) Company rating with support vector machine, Statistics & Risk Modeling , DOI : https://doi.org/10.1515/strm-2012-1141*
- ***Liu R, Härdle WK, Zhang G*** *(2017) Statistical Inference for Generalized Additive Partially Linear Model, Journal of Multivariate Analysis , DOI : 10.1016 / j.jmva.2017.07.011*

- ***Fan Y, Härdle WK, Wang W, Zhu L*** *(2017) Single-Index-Based CoVaR With Very High-Dimensional Covariates, Journal of Business and Economic Statistics , DOI : 10.1080 / 07350015.2016.1180990*
- ***Härdle WK, Lee DK, Nasekin S, Petukhina A*** *(2017) Tail Event Driven ASset allocation: evidence from equity and mutual funds' markets, Journal of Asset Management , DOI : 10.1057 / s41260-017-0060-9*
- ***Guo MM, Härdle WK*** *(2017) Adaptive Interest Rate Modeling, Journal of Forecasting , DOI : 10.1002 / for.2431*
- ***Härdle WK, Huang LS*** *(2017) Analysis of Deviance for Hypothesis Testing in Generalized Partially Linear Models, Journal of Business and Economic Statistics , DOI : 10.1080 / 07350015.2017.1330693*
- ***Burdejova P, Härdle WK, Kokoszka P, Xiong Q*** *(2017) Change point and trend analyzes of annual expectile curves of tropical storms, Econometrics and Statistics , DOI : https://doi.org/10.1016/j.ecosta.2016.09.002*
- ***Lu MJ, Härdle WK, Chen CYH*** *(2016) Copula-Based Factor Model for Credit Risk Analysis, Review of Quantitative Finance and Accounting , DOI : 10.1007 / s11156-016-0613-x*
- ***Härdle WK, López Cabrera B, Okhrin O, Wang W*** *(2016) Localizing temperature risk, Journal of the American Statistical Association , DOI : 10.1080 / 01621459.2016.1180985*
- ***Wang Q, Zhang T, Härdle WK*** *(2016) An Extended Single-index Model with Missing Response at Random, Scandinavian Journal of Statistics , DOI : 10.1111 / sjos.12233*
- ***Dai X, Härdle WK, Yu K*** *(2016) Do maternal health problems influence child's worrying status? Evidence from the British Cohort Study, Journal of Applied Statistics , DOI : 10.1080 / 02664763.2016.1155203*
- ***Härdle WK, Huang C*** *(2016) Discussion on "Of quantiles and expectiles: consistent scoring functions, Choquet representations and forecast rankings" by Werner Ehm, Tilmann Gneiting, Alexander Jordan and Fabian Krüger, Journal of the Royal Statistical Society: Series B Statistical Methodology 78 (3): 545 , DOI : 10.1111 / rssb.12154*
- ***Härdle WK, Yu L, Wang W*** *(2016) TENET - Tail Event driven NETwork risk, Journal of Econometrics , DOI : 10.1016 / j.jeconom.2016.02.013*
- ***Härdle WK, Silyakova E*** *(2016) Implied basket Correlation Dynamics, Statistics and Risk Modeling , DOI : 10.1515 / strm-2014-1176*

Articles in Proceedings or Equivalent Publications

- **Zieba M, Härdle WK** (2018) Beta-boosted ensemble for big credit scoring data. Handbook of Big Data Analytics (Härdle, Lu, Shen, eds), Springer Verlag, ISBN 978-3-319-18284-1
- **Borke L, Härdle WK** (2018) Q3-D3-LSA, Handbook of Big data Analytics, (Härdle, Lu, Shen eds), Springer Verlag, ISBN 978-3-319-18284-1, *DOI:* 10.1007 / 978-3 - 319-18284-1
- **Chen CYH, Härdle WKH** (2017) Data Science and Digital Society. Proceedings of the 11th International Conference on Business Excellence, pp. 669 - 675, ISSN 2558-9652 *DOI:* 10.1515 / picbe-2017-0071
- **Chen S, Chen CYH, Härdle WK, Lee TM, One B** (2017) A first econometric analysis of the CRIX family, in Handbook of Blockchain, Digital Finance and Inclusion, Vol 1, Cryptocurrency, FinTech, InsurTech, and Regulation, David LEE Kuo Chuen Robert Deng, eds. ISBN: 9780128104415, Academic Press, Elsevier
- **Zboňáková L, Härdle WK, Wang W** (2017) Time Varying Quantile Lasso. p 331-353, in Applied Quantitative Finance (Härdle, Chen, Overbeck eds) Springer Verlag, *DOI:* 10.1007 / 978-3-662-54486-0
- **Linton M, Teo EGS, Bommes E, Chen CYH, Härdle WK** (2017) Dynamic Topic Modeling for Cryptocurrency Community Forums. p 355-372, Applied Quantitative Finance (Härdle, Chen, Overbeck eds) Springer Verlag, *DOI:* 10.1007 / 978-3-662-54486-0
- **Härdle WK, Phoon KF, Lee D** (2017) Credit Rating Score Analysis.p 223-244 Applied Quantitative Finance, (Härdle WK, Chen YH, Overbeck L eds), Springer Verlag, *DOI:* 10.1007 / 978-3-662-54486 -0
- **Härdle WK, Huang C, Chao SK** (2016) Factorisable Sparse Tail Event Curves with Expectiles, Oberwolfach Report No. 12/2016 "New Developments in Functional and Highly Multivariate Statistical Methodology" 78 (3), *DOI:* 10.1111 / rssb.12154
- **Härdle WK, Trimborn S** (2015) CRIX or evaluating Blockchain based currencies, Oberwolfach Report No. 42/2015 "The Mathematics and Statistics of Quantitative Risk", *DOI:* 10.4171 / OWR / 2015/42
- **Trück S, Weron R, Härdle WK** (2015) The Relationship between Spot and Futures CO2 Emission Allowance Prices in the EU-ETS, in Gronwald and Hintermann (eds) Emission Trading Systems as a Climate Policy Instrument - Evaluation and Prospects, MIT Press DOI : 10.7551 / mitpress / 9780262029285.003.0008

All publications

- 1981-1988 (34 MB)
- 1989-1992 (27 MB)
- 1993-1996 (45 MB)
- 1997-2000 (104 MB)
- 2001-2004 (144 MB)
- 2005-2008 (43 MB)
- 2009-2013 (76 MB)
- 2014-2015 (24 MB)
- 2016-2018 (48 MB)
- 2019 (43 MB)

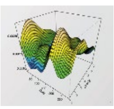
Lectures & Presentations

Cryptos, NFTs, Digital Assets

Cryptos, NFTs, Digital Assets

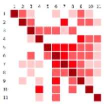
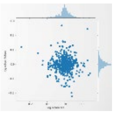
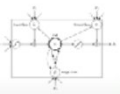
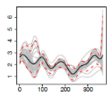
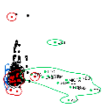
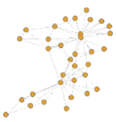
CRRIX: A Machine Learning Based Regulatory Risk Index for Cryptocurrencies

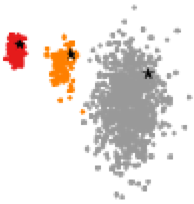
CRRIX: A Machine Learning Based Regulatory Risk Index for Cryptocurrencies



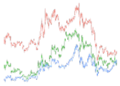
Rise of Machines? Intraday High-Frequency Trading Patterns

Rise of Machines? Intraday High-Frequency Trading Patterns of Cryptocurrencies

of Cryptocurrencies	
 Risk-based versus target-based portfolio strategies in the cryptocurrency market	Risk-based versus target-based portfolio strategies in the cryptocurrency market
 Hedging cryptos with futures	Hedging cryptos with futures
 AI Artificial Intelligence +	AI Artificial Intelligence +
	Rodeo or Ascot: How dynamic is the Crypto Market?
	Functional Data Analysis for Generalized Quantile Regression
	Ladislaus von Bortkiewicz
	A statistical classification of cryptocurrencies
	Understanding cryptocurrencies

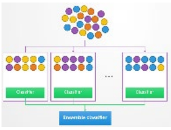


K-expectile clustering



Contagion dynamics in high frequency - modeling shock impacts in cryptocurrency markets

FRM financialriskmeter for Cryptos



Trespassing random forests with a pointed stick for self defense

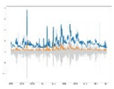
FRM financialriskmeter for Cryptos

CRIX the Coin

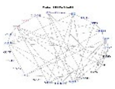
VCRIX

Realized Cryptocurrency Volatility Forecasting

LASSO-Driven Inference in Time and Space

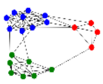


Crypto volatility forecasting: ML vs GARCH

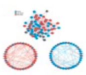


Dynamic Crypto Networks

FRM financialriskmeter

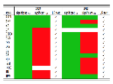


SONIC: Social Networks with Influencers and Communities

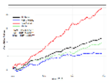


Time Varying LOB Networks

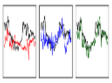
Forecasting in Blockchain-Based Smart Grids: The Art of Smart Energy Trading



Information Arrival, News Sentiment, Volatilities and Jump Risk of Intraday Stock Returns



Covariate-assisted Spectral Clustering in Dynamic Networks: An Application to Cryptocurrencies Market

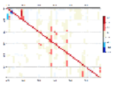


Penalized Adaptive Method in Forecasting with Large Information Set and Structure Change

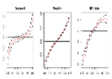
The Econometrics of CRIX

How Sensitive are Tail-Related Risk Measures in a Contamination Neighborhood?

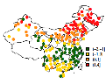
Pricing Green Financial Products



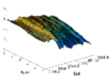
Sparse-Group Network Autoregressive Model for Cryptocurrencies



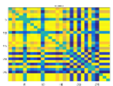
Tales of Sentiment Driven Tails



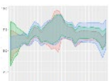
Principal components in an asymmetric norm



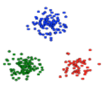
Jointly Modeling and Robust Forecasting High-Dimensional Yield Curves



Tail event driven networks of SIFIs



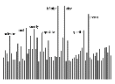
How does the market react to cooling measures? The case of Singapore



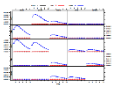
Assignments of JEL codes via adaptive weights clustering

Textual sentiment and sector-specific reaction

Industry Interdependency Dynamics in a Network Context

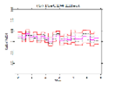


Clustering SFB abstracts

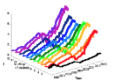


Network Quantile Autoregression

Collective Biographies - the Database BBI - Biographical Background Information

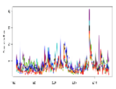


A simultaneous confidence corridor for varying coefficient regression with sparse functional data

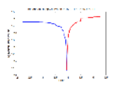


Risk profile clustering strategy in portfolio diversification

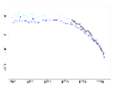
Opportunities and Risks of Climate Change: The Economics of Natural Risks



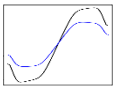
Downside risk and stock returns: An empirical analysis of the long-run and short-run dynamics from the G-7 Countries



Forecasting Limit Order Book Liquidity with Functional AutoRegressive Dynamics

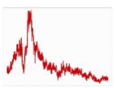


Mortality Model for Multi-Populations: A Semiparametric Comparison Approach

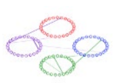


Factorizable Sparse Tail Event Curves with Expectiles

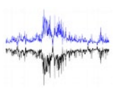
D3-3D-LSA for QuantNet 2.0 and GitHub



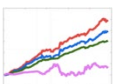
Time varying lasso



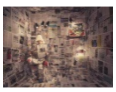
TENET: Tail-Event-Driven NETwork Risk



FASTEC - FActorizable Sparse Tail Event Curves

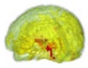


TEDAS - Tail Event Driven ASset Allocation

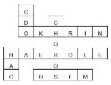


Distillation of News Flow into Analysis of Stock Reactions

Introduction to Islamic Banking: A Basic Concept



Portfolio Decisions and Brain Reactions via the CEAD Method



CDO Surface Dynamics