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PUBLICATION SUMMARY

(Last Updated 13th June 2023)

Summary:	
Scholarly Research Books =	5
Scholarly Research Theses =	2
Scholarly Research Book Chapters =	11
Preprints Journal Papers (submitted in review) =	20
Journal Papers (peer reviewed) Appeared =	122
Conference Papers (peer reviewed) in Proceedings =	41
Technical Reports Industry =	9

Table 1: Summary of Publications: 2004+

SCHOLARLY BOOKS (PEER REVIEWED)

Note: The authored books were peer reviewed at both the proposal level and then again on a 50%+ portion of the content during the book development. Then an external copy editing review was performed twice, as well as an industry review (outside of academia). The edited books (all chapters) were blind peer reviewed as per usual journal academic standards.

1. Dick, J., Kuo, F.Y., Peters, G.W., and Sloan, I.H. editors., 2013. Monte Carlo and Quasi-Monte Carlo Methods 2012. Springer Proceedings in Mathematics Statistics, vol. 65. New York: Springer.
2. Cruz, M.G., Peters, G.W. and Shevchenko, P.V., 2015. Fundamental aspects of operational risk and insurance analytics: A handbook of operational risk. John Wiley Sons.
3. Peters, G.W. and Shevchenko, P.V., 2015. Advances in heavy tailed risk modelling: A handbook of operational risk. John Wiley Sons.
4. Peters, G.W., and Matsui, T. editors., 2015. Theoretical Aspects of Spatial-Temporal Modelling. Springer-Briefs in Statistics, Springer Tokyo.
5. Peters, G.W., and Matsui, T. editors., 2015. Modern Methodology and Applications in Spatial-Temporal Modelling. Springer-Briefs in Statistics, Springer Tokyo.

SCHOLARLY THESES (PEER REVIEWED)

1. Peters G.W. (2009) "Trans-dimensional Markov Chain Monte Carlo and Likelihood Free Inference." PhD. Dissertation (supervised by Dr. Sisson S.A., Dr. Fan Y. and Dr. Shevchenko P.), University of New South Wales, Sydney, Australia.
    - Available at SSRN: https://ssrn.com/abstract=3785580
2. Peters, G.W. Topics in Sequential Monte Carlo Samplers. Cambridge University Engineering Department Thesis, University of Cambridge, 2005.
    - Available at SSRN: https://ssrn.com/abstract=3785582

SCHOLARLY BOOK CHAPTERS (PEER REVIEWED)

Note: All book chapters were published by invitation and went through an academic blind peer review process.

1. Peters, G.W., Korostil, I.A. and Regan, D.G., 2013. HPV Modelling Goes Bayesian: Inference via Advanced Markov Chain Monte Carlo Methods. In Human Papilloma virus: Prevalence, Detection and Management, Nova Science Publishers Chapter 17, pp. 453-526.
2. Del Moral, P., Peters, G.W. and Vergé, C., 2013. An introduction to stochastic particle integration methods: with applications to risk and insurance. In Monte Carlo and Quasi-Monte Carlo Methods 2012 (pp. 39-81) Dick J., Kuo F., Peters G.W., Sloan I. (eds) Springer Proceedings in Mathematics Statistics, vol 65. Springer, Berlin, Heidelberg.
3. Septier, F. and Peters, G.W., 2015. An overview of recent advances in Monte-Carlo methods for Bayesian filtering in high-dimensional spaces. In: Peters G., Matsui T. (eds) Theoretical Aspects of Spatial-Temporal Modeling. SpringerBriefs in Statistics (pp. 31-61). Springer, Tokyo.
4. Azzaoui, N., Clavier, L., Guillin, A. and Peters, G.W., 2015. Spectral Measures of alpha-Stable Distributions: An Overview and Natural Applications in Wireless Communications. In: Peters G., Matsui T. (eds) Theoretical Aspects of Spatial-Temporal Modeling. SpringerBriefs in Statistics (pp. 6394). Springer, Tokyo.
5. Peters, G.W., Nevat, I. and Matsui, T., 2015. How to utilize sensor network data to efficiently perform model calibration and spatial field reconstruction. In: Peters G., Matsui T. (eds) Modern Methodology and Applications in Spatial-Temporal Modeling. SpringerBriefs in Statistics (pp. 25-62). Springer, Tokyo.
6. Ames, M., Peters, G.W., Bagnarosa, G. and Kosmidis, I., 2015. Upside and downside risk exposures of currency carry trades via tail dependence. In Innovations in quantitative risk management (pp. 163-181), Glau K., Scherer M., Zagst R. (eds). Springer Proceedings in Mathematics Statistics, vol 99. Springer, Cham.
7. Peters, G.W. and Panayi, E., 2016. Understanding modern banking ledgers through blockchain technologies: Future of transaction processing and smart contracts on the internet of money. In Banking beyond banks and money (pp. 239-278). Springer, Cham.
8. Peters, G.W. and Vishnia, G.R., 2018. Blockchain architectures for electronic exchange reporting requirements: EMIR, Dodd Frank, MiFID I/II, MiFIR, REMIT, Reg NMS and T2S. In Handbook of Blockchain, Digital Finance, and Inclusion, Volume 2 (pp. 271-329). Academic Press.
9. Peters, G.W., Shevchenko, P.V. and Cohen, R., 2018. Understanding cyber-risk and cyber-insurance. In FinTech: Growth and Deregulation (Chapter 12, pp. 1-31). Risk Books.

10. Peters, G.W., Shevchenko, P.V., Cohen, R. and Maurice, D., 2018. Statistical machine learning analysis of cyber risk data: event case studies. In FinTech: Growth and Deregulation (Chapter 3, 28 pages). Risk Books.

11. Peters, G.W., Panayi, E. and Septier, F., 2018. Sequential Monte Carlo-ABC methods for estimation of stochastic simulation models of the limit order book. In Sisson, S. A. , Y. Fan and M. A. Beaumont (eds.), Handbook of Approximate Bayesian Computation (pp. 437-480). Chapman and Hall/CRC.

SCHOLARLY PREPRINT PAPERS (IN SUBMISSION)

1. Gudmundarson R., Peters G.W., Tzougas G. and Christopoulos D., Portfolio Analytics via Dynamic Graph Learning: Modelling and Testing

2. Andreas Koukorinis, Gareth W. Peters and Guido Germano, Generative-discriminative machine learning models for high-frequency financial regime classification

3. Marta Campi, Gareth W. Peters and Kylie-Anne Richards, Shades of Green: Unveiling the Impact of Municipal Green Bonds on the Environment

4. Romeo Tayewo, François Septier, Ido Nevat and Gareth W. Peters, Prediction of CO2 emissions in the United States via Graph Regression Model

5. Gudmundarson R. and Peters G.W. Graph Two Sample Testing (GTST) Package

6. He P., Kordzakhia N., Peters G.W. and Shevchenko P.V. Multi-Factor Polynomial Diffusion Models for Inter-Temporal Futures Dynamics

7. Gudmundarson R. and Peters G.W. Assessing Portfolio Diversification via Two-Sample Graph Kernel Inference. A case study on the influence of ESG screening

8. Antonian E., Peters G.W. and Chantler M. Iterative Methods for Signal Reconstruction on Product Graphs with Arbitrary Missing Data

9. P. He, N. Kordzakhia, G.W. Peters and P.V. Shevchenko PDSim: a Shiny App for Polynomial Diffusion Simulation Estimation.

10. van Jaarsveldt C., Peters G.W., Ames M. and Chantler M. Long/Short Equity Risk Parity Portfolios via Implicit Factors in Regularized Covariance Regression

11. van Jaarsveldt C., Peters G.W., Ames M. and Chantler M. Package CovRegpy: Portfolio Optimisation through Implicit Factor Extraction, Regularised Covariance Regression, Risk Premia Parity, and Long/Short Equity

12. Marupanthorn P., Nikitopoulos C.S., Ofosu-hene E.D., Peters G.W. and Richards K. Mechanisms to Incentivise Fossil Fuel Divestment and Implications to Investors Risk and Returns

13. Marupanthorn P., Peters G.W., Ofosu-hene E.D., Nikitopoulos C.S. and Richards K. DivFolio: A Shiny Application for Portfolio Divestment in Green Finance Wealth Management

14. Peters G.W., Zhu R., Tzougas G., Rabitti G., Ismaila Y. The Role and Significance of Green Bonds in Funding Transition to a Low Carbon Economy: A case study forecasting portfolios of green bond instrument returns

15. He, Peilun, Kordzakhia, Nino, Peters, Gareth W., Shevchenko, Pavel Multi-Factor Polynomial Diffusion Models for Inter-Temporal Futures Dynamics in Energy Markets

16. Brannelly H., Macrina A. and Peters G.W. Stochastic Measure Distortions Induced by Quantile Processes for Risk Quantification and Valuation

17. Yan H., Peters G.W., G. Bagnarosa and Chan J. Futures Open Interest and Speculative Pressure Dynamics via Bayesian Models of Long Memory Count Processes
18. Brannelly H., Macrina A. and Peters G.W. Quantile Diffusions
19. Antonian E., Peters G.W., Chantler M. and Yan H. GLS Kernel Regression for Network-Structured Data
20. Qikun X., Neufeld A., Peters G.W, Nevat I. and Datta A. A Bonus-Malus Framework for Cyber Risk Insurance and Optimal Cybersecurity Provisioning
21. Toczydlowska D., Peters G.W and Shevchenko P. Parsimonious Feature Extraction Methods: Extending Robust Probabilistic Projections with Generalized Skew-t
22. K.A. Richards, W.T.M. Dunsmuir and G.W. Peters Score Test for Marks in Hawkes Processes

SCHOLARLY JOURNAL PAPERS (PEER REVIEWED)

Note: All authored journal papers were subject to journal-specific academic peer review. Some were single blind, some were double blind, and others were triple blind. In each case, the majority of papers (except for 5 special cases) were subject to revisions from reviewers and extensions of the work in some manner either minor corrections or major corrections. I have not listed these outcomes per paper, as the final result of these processes was an accepted manuscript that appeared (or is to appear) in a peer-reviewed academic publication.

- First two special cases were the paper with the Bank of England (BOE white paper) which was peer reviewed independently by academics and industry experts including revisions prior to publication as a BOE report. The other analogous exception was the HK Monetary Authority report, also peer reviewed in similar fashion to the BOE report – but not an academic journal publication source, rather a government/industry peer reviewed publication white paper.
- Third special cases was the peer reviewed response to the Bank of International Settlements BIS on Basel III Simplified Measurement Approach and proposed changes to the Advanced Measurement Approach. It was published on the BIS website after review.
- Two special cases were the papers that were peer reviewed for the NeurIPS workshop. These papers were peer reviewed as part of the NeurIPS review process and then presented in workshops.
- Optus-Macquarie Cyber Risk Center paper is industry peer reviewed.

2023

1. van Jaarsveldt C., Peters G.W., Ames M. and Chantler M. Tutorial on Empirical Mode Decomposition: Basis Decomposition and Frequency Adaptive Graduation in Non-Stationary Time Series. IEEE Access (to appear)
2. Murakami D., Peters G.W., Septier F. and Matsui T. Spatial-Temporal Generalised Hyperbolic Models with Applications in Heatwave Prediction. 2023. Journal of Spatial Statistics (to appear)
3. Campi M, Peters GW, Toczydlowska D. Ataxic speech disorders and Parkinson's disease diagnostics via stochastic embedding of empirical mode decomposition. PLoS One. 2023 Apr 26;18(4):e0284667. doi: 10.1371/journal.pone.0284667. PMID: 37099544; PMCID: PMC10132693. https://doi.org/10.1371/journal.pone.0284667

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4. Van Jaarsveldt, C., Ames, M., Peters, G., Chantler, M. (2023). Package AdvEMDpy: Algorithmic variations of empirical mode decomposition in Python. Annals of Actuarial Science, 1-37. doi:10.1017/S1748499523000088
https://tinyurl.com/rfcsd4w2

   - SSRN preprint https://ssrn.com/abstract=3947132

5. Antonian et al., (2023). PyKronecker: A Python Library for the Efficient Manipulation of Kronecker Products and Related Structures. Journal of Open Source Software, 8(81), 4900, https://doi.org/10.21105/joss.04900

6. Ames M., Bagnarossa G., Gao S., Matsui T. and Peters G.W. (2023) A Harvested Acreage Weighted Spatio-Temporal Model for Country Crop Yields (to appear North American Actuarial Journal NAAJ)

   - SSRN preprint https://ssrn.com/abstract=3447047

7. Peters GW, Malavasi M, Sofronov G, Shevchenko PV, Trück S, Jang J. Cyber loss model risk translates to premium mispricing and risk sensitivity. Geneva Pap Risk Insur Issues Pract. 2023;48(2):372-433. doi: 10.1057/s41288-023-00285-x. Epub 2023 Mar 18. PMID: 37207021; PMCID: PMC10024527.
https://doi.org/10.1057/s41288-023-00285-x

   - SSRN preprint https://ssrn.com/abstract=4009941

8. Peters, G., Chudtong, M., De Gaetano, A. (2023). Analysis of option-like fund performance fees in asset management via Monte Carlo actuarial distortion pricing. Annals of Actuarial Science, 1-43. doi:10.1017/S1748499522000203
https://doi.org/10.1017/S1748499522000203

   - SSRN preprint https://ssrn.com/abstract=3946347

9. Chalkiadakis I., Peters G.W. and Ames M. (2023). Hybrid ARDL-MIDAS-Transformer Time-Series Regressions for Multi-Topic Crypto Market Sentiment Driven by Price and Technology Factors. Digital Finance (to appear)

   - SSRN preprint https://ssrn.com/abstract=3908066

10. Shevchenko PV, Jang J, Malavasi M, Peters GW, Sofronov G, Trück S. The nature of losses from cyber-related events: risk categories and business sectors. Journal of Cybersecurity. 2023 Jan 1;9(1):tyac016. https://doi.org/10.1093/cybsec/tyac016

    - SSRN preprint https://arxiv.org/pdf/2202.10189

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11. Malavasi M, Peters GW, Shevchenko PV, Trück S, Jang J, Sofronov G. Cyber risk frequency, severity and insurance viability. Insurance: Mathematics and Economics. 2022 Sep 1;106:90-114.
https://doi.org/10.1016/j.insmatheco.2022.05.003

    - SSRN preprint https://ssrn.com/abstract=3940329

12. Peters GW, Yan H, Chan J. Model Risk in Mortality-linked Contingent Claims Pricing. Journal of Risk Model Validation. 2022 Aug 2;16(3).
http://doi.org/10.21314/JRMV.2022.022

- SSRN preprint https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4262766

13. Chen WY, Peters GW, Gerlach RH, Sisson SA. Dynamic quantile function models. Quantitative Finance. 2022 Sep 2;22(9):1665-91.
https://doi.org/10.1080/14697688.2022.2053193

- SSRN preprint https://ssrn.com/abstract=2999451

14. Zheng C, Egan M, Clavier L, Peters GW, Gorce JM. On the interference arising from random spatial fields of interferers utilizing multiple subcarriers. EURASIP Journal on Wireless Communications and Networking. 2022 Dec;2022(1):1-29. https://doi.org/10.1186/s13638-022-02110-w

15. Chalkiadakis I, Zaremba A, Peters GW, Chantler MJ. On-chain analytics for sentiment-driven statistical causality in cryptocurrencies. Blockchain: Research and Applications. 2022 Jun 1;3(2):100063.
https://doi.org/10.1016/j.bcra.2022.100063

- SSRN preprint https://ssrn.com/abstract=3742063

16. Zaremba AB, Peters GW. Statistical Causality for Multivariate Nonlinear Time Series via Gaussian Process Models. Methodology and Computing in Applied Probability. 2022 Mar 30:1-46.
https://doi.org/10.1007/s11009-022-09928-3

- SSRN preprint https://ssrn.com/abstract=3609497

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17. Chalkiadakis I, Yan H, Peters GW, Shevchenko PV. Infection rate models for COVID-19: Model risk and public health news sentiment exposure adjustments. Plos one. 2021 Jun 28;16(6):e0253381.
https://doi.org/10.1371/journal.pone.0253381

- SSRN preprint https://ssrn.com/abstract=3813417

18. Clinet S, Dunsmuir WT, Peters GW, Richards KA. Asymptotic distribution of the score test for detecting marks in hawkes processes. Statistical Inference for Stochastic Processes. 2021 Oct;24(3):635-68.
https://doi.org/10.1007/s11203-021-09245-5

- SSRN preprint https://ssrn.com/abstract=3380754

19. B. Chakraborty, D. M. Divakaran, I. Nevat, G. W. Peters and M. Gurusamy, "Cost-Aware Feature Selection for IoT Device Classification," in IEEE Internet of Things Journal, vol. 8, no. 14, pp. 11052-11064, 15 July15, 2021, doi: 10.1109/JIOT.2021.3051480.
https://doi.org/10.1109/JIOT.2021.3051480

20. Clavier L, Peters GW, Septier F, Nevat I. Impulsive noise modeling and robust receiver design. EURASIP Journal on Wireless Communications and Networking. 2021 Dec;2021(1):1-30.
https://doi.org/10.1186/s13638-020-01868-1

21. P. Shevchenko, J. Jang, M. Malavasi, G.W. Peters, G. Sofronov S. Truck 2021. Quantification of Cyber Risk - Risk Categories and Business Sectors. Optus Macquarie University Cyber Security Hub. Telecommunications Industry Optus White Paper.

22. Tipakornrojanakit K., Chudtong M., Peters G.W. and Satiracoo P. 2021. Covariance Forecasting Methods For Dynamic Asset Allocation. International Journal of Data Science and Big Data Analytics. ISSN: 2710-2599, IJDSBDA11012021MTN009 https://www.svedbergopen.com/

- SSRN preprint https://ssrn.com/abstract=3722136

23. Jiang Y, Macrina A, Peters GW. Multiple barrier-crossings of an Ornstein-Uhlenbeck diffusion in consecutive periods. Stochastic Analysis and Applications. 2021 Jul 4;39(4):569-609. https://doi.org/10.1080/07362994.2020.1818581

    - SSRN preprint https://ssrn.com/abstract=3334142

24. Murakami D, Peters GW, Matsui T, Yamagata Y. Spatio-Temporal Analysis of Urban Heatwaves Using Tukey g-and-h Random Field Models. IEEE Access. 2020 Jul 31;9:79869-88. https://doi.org/10.1109/ACCESS.2020.3013255

    - SSRN preprint https://ssrn.com/abstract=3575789

25. Yan H, Peters GW, Chan J. Mortality models incorporating long memory for life table estimation: a comprehensive analysis. Annals of Actuarial Science. 2021 Nov;15(3):567-604. https://doi.org/10.1017/S1748499521000014

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26. Campi M, Peters GW, Azzaoui N, Matsui T. Machine learning mitigants for speech based cyber risk. IEEE Access. 2021 Oct 1;9:136831-60. https://doi.org/10.1109/ACCESS.2021.3117080

    - SSRN preprint https://ssrn.com/abstract=3643826

27. Peters, Gareth W., Ido Nevat, Sai Ganesh Nagarajan, and Tomoko Matsui. 2021. "Spatial Warped Gaussian Processes: Estimation and Efficient Field Reconstruction" Entropy 23, no. 10: 1323. https://doi.org/10.3390/e23101323

    - SSRN preprint https://ssrn.com/abstract=3159687

28. Fabio S. Dias, Gareth W. Peters, Option pricing with polynomial chaos expansion stochastic bridge interpolators and signed path dependence, Applied Mathematics and Computation, Volume 411, 2021, 126484, ISSN 0096-3003. https://doi.org/10.1016/j.amc.2021.126484

    - SSRN preprint https://ssrn.com/abstract=3588871

29. Jimeno A. Fonseca, Ido Nevat, Gareth W. Peters, Quantifying the uncertain effects of climate change on building energy consumption across the United States, Applied Energy, Volume 277, 2020, 115556, ISSN 0306-2619. https://doi.org/10.1016/j.apenergy.2020.115556

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30. Q. Xiang, I. Nevat and G. W. Peters, "Bayesian Spatial Field Reconstruction With Unknown Distortions in Sensor Networks," in IEEE Transactions on Signal Processing, vol. 68, pp. 4336-4351, 2020, doi: 10.1109/TSP.2020.3011023. https://doi.org/10.1109/TSP.2020.3011023

    - SSRN preprint https://ssrn.com/abstract=3656297

31. Maciej Marowka, Gareth W. Peters, Nikolas Kantas, Guillaume Bagnarosa, Factor-Augmented Bayesian Cointegration Models: A Case-Study on The Soybean Crush Spread, Journal of the Royal Statistical Society Series C: Applied Statistics, Volume 69, Issue 2, April 2020, Pages

483–500
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33. Koh JY, Peters GW, Nevat I, Leong D. Privacy considerations in participatory data collection via spatial Stackelberg incentive mechanisms. Methodology and Computing in Applied Probability. 2021 Sep;23:1097-128.
https://doi.org/10.1007/s11009-020-09798-7

- SSRN preprint https://ssrn.com/abstract=3158616

34. Ames M, Bagnarosa G, Matsui T, Peters GW, Shevchenko PV. Which risk factors drive oil futures price curves?. Energy Economics. 2020 Mar 1;87:104676.
https://doi.org/10.1016/j.eneco.2020.104676

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35. Jing Yang Koh, Gareth W. Peters, Ido Nevat, Derek Leong, Probabilistic routing in wireless networks with privacy guarantees, Computer Communications, Volume 151, 2020, Pages 228-237, ISSN 0140-3664,
https://doi.org/10.1016/j.comcom.2019.12.045

36. Vishnia GR, Peters GW. Auditchain: A trading audit platform over blockchain. Frontiers in Blockchain. 2020 Feb 26;3:9.
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42. Georgescu DI, Higham NJ, Peters GW. Explicit solutions to correlation matrix completion problems, with an application to risk management and insurance. Royal Society open science. 2018 Mar 14;5(3):172348.
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    - SSRN preprint https://ssrn.com/abstract=2569134

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