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PUBLICATION SUMMARY

(Last Updated 19th February 2025)

Summary:	
Scholarly Research Books =	5
Scholarly Research Theses =	2
Scholarly Research Book Chapters =	12
Preprints Journal Papers (submitted in review) =	24
Journal Papers (peer reviewed) Appeared =	141
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.
12. Peters, G.W. and Loke S., 2023. Introduction to Fixed Income Markets and Bonds. In ..., H. Chapman and Hall/CRC.

SCHOLARLY PREPRINT PAPERS (IN SUBMISSION)

1. He P., Peters G.W., Kordzakhi N. and Shevchenko P.V., Multi-Factor Function-on-Function Regression of Bond Futures on WTI Commodity Futures Term Structure Dynamics.
2. Chalkiadakis I, Peters G.W., Bagnarosa G. and Gohin A., Structural changes and statistical causal relationships in agricultural commodities markets: the impact of public news sentiment and institutional announcements.
3. Angles d'Auriac L., Chalkiadakis I, Peters G.W. and Frau-Meigs D., A text time-series model for candidates' rhetoric during the 2020 US presidential elections: are VPs coming out of the shadows?
4. Mohammad Hadi Sehatpour, Marta Campi, Christina S. Nikitopoulos, Gareth W. Peters and Kylie-Anne Richards, Anatomy of Municipal Green Bond Yield Spreads
5. Andreas Koukorinis, Gareth W. Peters and Guido Germano, Memory, persistence, and the price process in interest rate futures contracts: A statistical investigation at the mesoscale using kernel two-sample testing
6. Malavasi M., Trueck S., Peters G.W., Shevchenko P.V., Jang J., Sofronov G., Cyber Risk Taxonomyies: Statistical Analysis of Operational Cybersecurity Risk Classifications.
7. Gudmundarson R.L., Peters G.W., Christopoulos D. and Tzougas G., Systematic ESG Risk and Firm Valuation: Sector-Specific Insights Using Factor Models and Causal Inference
8. Gudmundarson R.L., Christopoulos D., Tzougas G. and Peters G.W., The Impact of ESG Ratings on Company Valuation. A sector and country specific case study.
9. Gudmundarson R.L., Tzougas G., Peters G.W., Chen Z. and Christopoulos D., Spatial Temporal Mixed Poisson Models: A Case Study in Property Insurance in Greece.
10. Campi M., Staerman G. and Peters G.W. Signature Isolation Forest
11. Campi M., Peters G.W., Caldani S., Thai Van H. and Pia Bucci M. Eye Movement Vestibular Features for Clustering of Neurodevelopmental deficits with Machine Learning Approaches
12. Campi M., Peters G.W., Buhl M., Norvan P. and Thai-Van H. Hearing Loss Incidence Risk Profiles with State-Space Models
13. Goffard P-O., Piette P. and Peters G.W., Market-based Insurance Ratemaking
14. Sojoudi M., Bernard C., Dupuy P. and Peters G.W., Yield Spreads of USA Green Muni Bonds vs Non-Green Muni Bonds
15. Sojoudi M., Peters G.W., Lazar E. and Tran V., Identifying Shocks in Oil Futures Returns Curves using AR-MIDAS Regression Models
16. Gudmundarson R., Peters G.W., Tzougas G. and Christopoulos D., Portfolio Analytics via Dynamic Graph Learning: Modelling and Testing
17. He P., Peters G.W., Kordzakhia N. and Shevchenko P.V. State-Space Dynamic Functional Regression for Multicurve Fixed Income Spread Analysis and Stress Testing
18. Antonian E., Peters G.W. and Chantler M. Iterative Methods for Signal Reconstruction on Product Graphs with Arbitrary Missing Data
19. P. He, N. Kordzakhia, G.W. Peters and P.V. Shevchenko PDSim: a Shiny App for Polynomial Diffusion Simulation Estimation.
20. 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

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

22. Brannelly H., Macrina A. and Peters G.W. Quantile Diffusions

23. Antonian E., Peters G.W., Chantler M. and Yan H. GLS Kernel Regression for Network-Structured Data

24. Toczydlowska D., Peters G.W and Shevchenko P. Parsimonious Feature Extraction Methods: Extending Robust Probabilistic Projections with Generalized Skew-t

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.

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1. Chalkiadakis I, Angles d'Auriac L., Peters G.W. and Frau-Meigs D., A text dataset of campaign speeches of the main tickets in the 2020 US presidential election. Nature Scientific Data, 2025 (to appear).
2. Sojoudi M., Bernard C., Dupuy P. and Peters G.W., Green Spread of US Municipal Bonds. Annals of Operational Research, 2025 (to appear).
3. 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, 2025 Journal of Forecasting (to appear).
4. Marupanthorn P., Nikitopoulos C.S., Ofosu-hene E.D., Peters G.W. and Richards K. Fossil Fuel Divestment and Implications to Investors Risk and Returns, Commodity Insights Digest, 2025 (to appear)
5. Andreas Koukorinis, Gareth W. Peters and Guido Germano, Generative-discriminative machine learning models for high-frequency financial regime classification. Methodology and Computing in Applied Probability, 2025 (to appear).
6. Azzaoui N., Peters G.W., Guillin A. and Matsui T., Spectral characterization of the family of α-Stable processes that generalize Gaussian process models. ... 2025 (to appear)

2024

7. K.A. Richards, W.T.M. Dunsmuir and G.W. Peters Score Test for Marks in Hawkes Processes. International Journal of Data Science and Analytics (to appear).
8. van Jaarsveldt C., Peters G.W., Ames M. and Chantler M. Long/Short Equity Risk Parity Portfolios via Implicit Factors in Regularized Covariance Regression, IEEE Access, 2024 (to appear)

9. 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, Energy Economics, 2024 (to appear).
10. Marta Campi, Gareth W. Peters and Kylie-Anne Richards, Shades of Green: Unveiling the Impact of Municipal Green Bonds on the Environment, Franklin Open. 2024 (to appear)
11. Gudmundarson R. and Peters G.W. Assessing Portfolio Diversification via Two-Sample Graph Kernel Inference. A case study on the influence of ESG screening. PlosOne. 2024 (to appear)
12. 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. Annals of Actuarial Science. 2024 (to appear)
13. Antonian E., Peters G.W. and Chantler M. Bayesian Reconstruction of Cartesian Product Graph Signals with General Patterns of Missing Data. Journal of the Franklin Institute. 2024 (to appear)
14. 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. 2024. Annals of Actuarial Science. 2024 (to appear)
15. Gudmundarson R.L., Peters G.W. GTST: A Python package for graph two-sample testing, Journal of Open Research Software. 2024 (to appear).
16. He, P., Kordzakhia, N., Peters, G. W. and Shevchenko, P. V. 2024 Multi-factor polynomial diffusion models and inter-temporal futures dynamics, in 2021-2022 MATRIX Annals, Springer, pp. 363–382. DOI: https://doi.org/10.1007/978-3-031-47417-0_18.

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17. He, Peilun, Kordzakhia, Nino, Peters, Gareth W., Shevchenko, Pavel Multi-Factor Polynomial Diffusion Models for Inter-Temporal Futures Dynamics in Energy Markets, Matrix Annals, Editors: David R. Wood Jan de Gier Cheryl E. Praeger. 2021-2022. (to appear)
18. Qikun X., Neufeld A., Peters G.W, Nevat I. and Datta A. A Bonus-Malus Framework for Cyber Risk Insurance and Optimal Cybersecurity Provisioning. 2023. European Actuarial Journal (to appear)
19. 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)
20. 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)
21. Romeo Tayewo, François Septier, Ido Nevat and Gareth W. Peters, Prediction of CO2 emissions in the United States via Graph Regression Model. 2023. Entropy (to appear)
22. 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
    - SSRN preprint https://ssrn.com/abstract=4173535

23. 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
24. 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
25. 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
26. 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
27. 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
28. 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
29. 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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30. 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
31. 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

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https://doi.org/10.1080/14697688.2022.2053193

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33. 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

34. 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.
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35. 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.
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36. 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

37. 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.
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38. 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.
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40. 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.

41. 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/

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42. 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
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46. 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
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47. 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.
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48. 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.
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51. Yan, H., Peters, G., Chan, J. (2020). MULTIVARIATE LONG-MEMORY COHORT MORTALITY MODELS. ASTIN Bulletin: The Journal of the IAA, 50(1), 223-263. doi:10.1017/asb.2019.35 https://doi.org/10.1017/asb.2019.35
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52. 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.
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57. Dalessandro A, Peters GW. Efficient and Accurate Evaluation Methods for Concordance Measures via Functional Tensor Characterizations of Copulas. Methodology and Computing in Applied Probability. 2020 Sep;22:1089-124.
    https://doi.org/10.1007/s11009-019-09752-2
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58. Fung MC, Peters GW, Shevchenko PV. Cohort effects in mortality modelling: a Bayesian state-space approach. Annals of Actuarial Science. 2019 Mar;13(1):109-44.
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