Recent significant publications (2004 onwards) – Gareth W. Peters

Summary:

Scholarly Research Books Author = 2

Scholarly Research Books Editor = 3

Scholarly Book Chapters = 16

Journal Papers (peer reviewed) Appeared = 105

Conference Papers (peer reviewed) in Proceedings = 41

Preprints Journal Papers (submitted) = 17

Scholarly Books In Preparation = 3

Note: all references are in Harvard style citation format.

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 copyediting 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. 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.
- 2. **Peters, G.W.** and Shevchenko, P.V., 2015. *Advances in heavy tailed risk modeling: A handbook of operational risk.* John Wiley & Sons.
- 3. 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.
- 4. **Peters G.W.** and Matsui, T. editors., 2015. *Theoretical Aspects of Spatial-Temporal Modeling*. SpringerBriefs in Statistics, Springer Tokyo.
- 5. **Peters G.W.** and Matsui, T. editors., 2015. *Modern Methodology and Applications in Spatial-Temporal Modeling*. SpringerBriefs in Statistics, Springer Tokyo.

Scholarly book chapters (peer reviewed)

Note: The authored book chapters were invited, however they were all subject to standard scientific review process as would be the case for a journal paper.

- 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. 63-94). 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.

Refereed journal articles (peer reviewed)

Note: The authored journal papers were all 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.

- 1. Chen W. Y., Peters G.W., Gerlach R. and Sisson S. 2021. Dynamic Quantile Function Models. Quantitative Finance (to appear)
- 2. Chalkiadakis I., Yan H., Peters G.W. and Shevchenko P.V. 2021. Infection Rate Models for COVID-19: Model Risk and Public Health News Sentiment Exposure Adjustment. *PLOS ONE* (to appear)
- 3. Dias F. and Peters G.W. 2021. Option Pricing with Polynomial Chaos Expansion and Signed Path Dependence. *Applied Mathematics and Computation*. (to appear).
- 4. S. Clinet, W.T.M. Dunsmuir, **G.W. Peters** & K.A. Richards 2021. Asymptotic Distribution of the Score Test for Detecting Marks in Hawkes Processes. *Statistical Inference for Stochastic Processes*. (to appear)
- 5. Ju B., Divakaran D., Nevat I., **Peters G.W.** and Gurusamy M. 2021. Cost-aware Feature Selection for IoT Device Classification. *IEEE Internet of Things Journal* (to appear)
- 6. Laurent Clavier, **Peters G.W**., François Septier, Ido Nevat 2021. Impulsive Noise Modeling and Robust Receiver Design. *EURASIP Journal on Wireless Communications and Networking*. (to appear)
- 7. 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*. (to appear)
- 8. 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. (to appear)
- 9. Jiang, Y., Macrina, A. and **Peters, G.W.**, 2021. Multiple barrier-crossings of an Ornstein-Uhlenbeck diffusion in consecutive periods. *Stochastic Analysis and Applications* (to appear)
- 10. Murakami, D., **Peters, G.W.**, Matsui, T. and Yamagata, Y., 2021. Spatiotemporal analysis of urban heatwaves using Tukey g-and-h random field models. *IEEE Access* (to appear)
- 11. Yan, H., **Peters, G. W.** and Chan, J., 2021. Mortality models incorporating long memory improves life table estimation: a comprehensive analysis. *Annals of Actuarial Science*. (to appear)
- 12. Fonseca, J.A., Nevat, I. and **Peters, G.W.**, 2020. Quantifying the uncertain effects of climate change on building energy consumption across the United States. *Applied Energy*, 277, p.115556.
- 13. Xiang, Q., Nevat, I. and **Peters, G. W.**, 2020. Bayesian Spatial Field Reconstruction with Unknown Distortions in Sensor Networks. *IEEE Transactions on Signal Processing*, to Appear.
- 14. Marowka, M., **Peters, G.W.**, Kantas, N. and Bagnarosa, G., 2020. Factor-augmented Bayesian cointegration models: a case-study on the soybean crush spread. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, to Appear
- 15. Yan, H., **Peters, G.W.** and Chan, J.S., 2020. Multivariate Long-Memory Cohort Mortality Models. *ASTIN Bulletin: The Journal of the IAA*, *50*(1), pp.223-263.

- 16. Koh, J.Y., **Peters, G.W.**, Nevat, I. and Leong, D., 2020. Privacy Considerations in Participatory Data Collection via Spatial Stackelberg Incentive Mechanisms. *Methodology and Computing in Applied Probability*, pp. 1-32.
- 17. Ames, M., Bagnarosa, G., Matsui, T., **Peters, G.W.** and Shevchenko, P.V., 2020. Which risk factors drive oil futures price curves? *Energy Economics*, 87, p.104676.
- 18. Koh, J.Y., **Peters, G.W.**, Nevat, I. and Leong, D., 2020. Probabilistic routing in wireless networks with privacy guarantees. *Computer Communications*, *151*, pp. 228-237.
- 19. Vishnia, G.R. and **Peters, G.W.**, 2020. AuditChain: A Trading Audit Platform Over Blockchain. *Frontiers in Blockchain*, *3*, p.9.
- 20. Dias, F.S. and **Peters, G.W.**, 2019. A Non-parametric Test and Predictive Model for Signed Path Dependence. *Computational Economics 56*, pp.1-38.
- 21. Dalessandro, A. and **Peters, G.W.**, 2019. Efficient and Accurate Evaluation Methods for Concordance Measures via Functional Tensor Characterizations of Copulas. *Methodology and Computing in Applied Probability*, pp. 1-36.
- 22. Fung, S.M.C., Peters, G. and Shevchenko, P.V., 2019. Cohort effects in mortality modelling: a Bayesian state-space approach. *Annals of Actuarial Science*. 13, 1, p. 109-144 36
- 23. Ming, D., Huang, C., **Peters, G.W.** and Galasso, C., 2019. An Advanced Estimation Algorithm for Ground-Motion Models with Spatial Correlation. *Bulletin of the Seismological Society of America*, 109(2), pp.541-566.
- 24. **Peters, G.W.**, 2019. General Quantile Time Series Regressions for Applications in Population Demographics. Risks (invited special issue) *Risks* 2018, 6, 97;
- 25. Georgescu, D.I., Higham, N.J. and **Peters, G.W.**, 2018. Explicit solutions to correlation matrix completion problems, with an application to risk management and insurance. *Royal Society open science*, 5(3), p. 172348.
- 26. Zhang, P., Nevat, I., **Peters, G.W.,** Septier, F. and Osborne, M.A., 2018. Spatial field reconstruction and sensor selection in heterogeneous sensor networks with stochastic energy harvesting. *IEEE Transactions on Signal Processing*, 66(9), pp. 2245-2257.
- 27. Ames, M., Bagnarosa, G., **Peters, G.W.** and Shevchenko, P.V., 2018. Understanding the interplay between covariance forecasting factor models and risk-based portfolio allocations in currency carry trades. *Journal of Forecasting*, 37(8), pp.805-831.
- 28. **Peters, G.W.**, Clark, G., Thirlwell, J. and Kulwal, M., 2018. Global Perspectives on Operational Risk Management and Practice: A Survey by the Institute of Operational Risk (IOR) and the Center for Financial Professionals (CeFPro). *Journal of Operational Risk*, *13*(4), pp. 47-88.
- 29. Dalessandro, A. and **Peters, G.W.,** 2018. Tensor approximation of generalized correlated diffusions and functional copula operators. *Methodology and Computing in Applied Probability*, 20(1), pp.237-271.
- 30. Panayi, E., **Peters, G.W.**, Danielsson, J. and Zigrand, J.P., 2018. Designating market maker behaviour in limit order book markets. *Econometrics and Statistics*, *5*, pp.20-44.

- 31. Yan, S., **Peters, G.W.**, Nevat, I. and Malaney, R., 2017. Location verification systems based on received signal strength with unknown transmit power. *IEEE Communications Letters*, 22(3), pp.650-653.
- 32. Targino, R.S., **Peters, G.W.**, Sofronov, G. and Shevchenko, P.V., 2017. Optimal exercise strategies for operational risk insurance via multiple stopping times. *Methodology and Computing in Applied Probability*, 19(2), pp.487-518.
- 33. Egan, M., **Peters, G.W.**, Nevat, I., Shirvanimoghaddam, M. and Collings, I.B., 2017. A ruin theoretic design approach for wireless cellular network sharing with facilities. *Transactions on Emerging Telecommunications Technologies*, 28(7), p.e3141.
- 34. Zhang, P., Nevat, I., **Peters, G.W.**, Fruehwirt, W., Huang, Y., Anders, I. and Osborne, M., 2017. Sensor Selection and Random Field Reconstruction for Robust and Cost-effective Heterogeneous Weather Sensor Networks for the Developing World. (peer reviewed Neural Information Processing Workshop.) *arXiv preprint arXiv:1711.04308*.
- 35. Fruehwirt, W., Gerstgrasser, M., Zhang, P., Weydemann, L., Waser, M., Schmidt, R., Benke, T., Dal-Bianco, P., Ransmayr, G., Grossegger, D., Garn, H., Peters G.W., Roberts S. and Dorffner G. 2017. Riemannian tangent space mapping and elastic net regularization for cost-effective EEG markers of brain atrophy in Alzheimer's disease. (peer reviewed Neural Information Processing Workshop.) *arXiv* preprint arXiv:1711.08359.
- 36. **Peters, G.W.**, Targino, R.S. and Wüthrich, M.V., 2017. Bayesian modelling, Monte Carlo sampling and capital allocation of insurance risks. *Risks*, *5*(4), p.53.
- 37. Marowka, M., **Peters, G.W.**, Kantas, N. and Bagnarosa, G., 2017. Some recent developments in Markov Chain Monte Carlo for cointegrated time series. *ESAIM: Proceedings and Surveys*, *59*, pp.76-103.
- 38. Toczydlowska, D., **Peters, G.W.**, Fung, M.C. and Shevchenko, P.V., 2017. Stochastic period and cohort effect state-space mortality models incorporating demographic factors via probabilistic robust principal components. *Risks*, *5*(3), p.42.
- 39. Panayi, E., **Peters, G.W.** and Kyriakides, G., 2017. Statistical modelling for precision agriculture: A case study in optimal environmental schedules for Agaricus Bisporus production via variable domain functional regression. *PloS One*, *12*(9), p.e0181921.
- 40. Nevat, I., Zhang, P., Frenkel, G. and **Peters, G.W.**, 2017. Parameter estimation in sensor networks under probabilistic censoring. *IEEE Transactions on Signal Processing*, 65(15), pp.4047-4058.
- 41. Fung, M.C., **Peters, G.W.** and Shevchenko, P.V., 2017. A unified approach to mortality modelling using state-space framework: characterisation, identification, estimation and forecasting. *Annals of Actuarial Science*, 11(2), pp.343-389.
- 42. Ames, M., Bagnarosa, G. and **Peters, G.W.**, 2017. Violations of uncovered interest rate parity and international exchange rate dependences. *Journal of International Money and Finance*, 73, pp.162-187.
- 43. De Freitas, M.L., Egan, M., Clavier, L., Goupil, A., **Peters, G.W.** and Azzaoui, N., 2017. Capacity Bounds for Additive Symmetric alpha-Stable Noise Channels. *IEEE Transactions on Information Theory*, 63(8), pp.5115-5123.
- 44. Nevat, I., Zhang, P., Frenkel, G. and **Peters, G.W.**, 2017. Parameter estimation in sensor networks under probabilistic censoring. *IEEE Transactions on Signal Processing*, 65(15), pp.4047-4058.

- 45. Koh, J.Y., Leong, D., **Peters, G.W.**, Nevat, I. and Wong, W.C., 2017. Optimal privacy-preserving probabilistic routing for wireless networks. *IEEE Transactions on Information Forensics and Security*, *12*(9), pp.2105-2114.
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- 49. **Peters, G.W.**, Chen, W.Y. and Gerlach, R.H., 2016. Estimating quantile families of loss distributions for non-life insurance modelling via L-moments. *Risks*, *4*(2), p.14.
- 50. **Peters, G.W.**, Shevchenko, P.V., Hassani, B. and Chapelle, A., 2016. Should the advanced measurement approach be replaced with the standardized measurement approach for operational risk?. *Journal of Operational Risk*, 11(3), pp. 1-49.
- 51. **Peters**, **G.W.**, Shevchenko, P.V., Hassani, B. and Chapelle, A., 2016. Standardized measurement approach for operational risk: Pros and cons. Response to Basel Committee BIS 2016 consultative call for SMA proposal. June. Basel Committee Website Publication.
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- 53. **Peters, G.W.**, Targino, R.S. and Wüthrich, M.V., 2017. Full Bayesian analysis of claims reserving uncertainty. *Insurance: Mathematics and Economics*, 73, pp.41-53.
- 54. Murakami, D., **Peters, G.W.**, Yamagata, Y. and Matsui, T., 2016. Participatory sensing data tweets for micro-urban real-time resiliency monitoring and risk management. *IEEE Access*, *4*, pp.347-372.
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- 57. Yan, S., Nevat, I., **Peters, G.W.** and Malaney, R., 2016. Location verification systems under spatially correlated shadowing. *IEEE Transactions on Wireless Communications*, *15*(6), pp.4132-4144.
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- 59. Nguyen, T.L.T., Septier, F., Rajaona, H., **Peters, G.W.**, Nevat, I. and Delignon, Y., 2015. A Bayesian perspective on multiple source localization in wireless sensor networks. *IEEE Transactions on Signal Processing*, 64(7), pp.1684-1699.
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- 63. Panayi, E. and **Peters, G.W.**, 2015. Stochastic simulation framework for the limit order book using liquidity-motivated agents. *International Journal of Financial Engineering*, 2(02), p.1550013.
- 64. Targino, R.S., **Peters, G.W.** and Shevchenko, P.V., 2015. Sequential Monte Carlo Samplers for capital allocation under copula-dependent risk models. *Insurance: Mathematics and Economics*, 61, pp.206-226.
- 65. Zhang, P., Nevat, I., **Peters, G.W.**, Xiao, G. and Tan, H.P., 2015. Event detection in wireless sensor networks in random spatial sensors deployments. *IEEE Transactions on Signal Processing*, 63(22), pp.6122-6135.
- 66. Yan, S., Malaney, R., Nevat, I. and Peters, G.W., 2015. Location verification systems for VANETs in Rician fading channels. *IEEE Transactions on Vehicular Technology*, 65(7), pp.5652-5664.
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- 74. Nevat, I., **Peters, G.W.**, Doucet, A. and Yuan, J., 2014. Joint channel and Doppler offset estimation in dynamic cooperative relay networks. *IEEE Transactions on Wireless Communications*, 13(12), pp.6570-6579.
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- 77. Nevat, I., **Peters, G.W.** and Collings, I.B., 2013. Random field reconstruction with quantization in wireless sensor networks. *IEEE Transactions on Signal Processing*, 61(23), pp.6020-6033.
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- 88. **Peters, G.W.**, Fan, Y. and Sisson, S.A., 2012. On sequential Monte Carlo, partial rejection control and approximate Bayesian computation. *Statistics and Computing*, 22(6), pp.1209-1222.
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- 3. Desai, B.A., Divakaran, D.M., Nevat, I., **Peter, G.W.** and Gurusamy, M., 2019, January. A feature-ranking framework for IoT device classification. In 2019 11th International Conference on Communication Systems & Networks (COMSNETS) (pp. 64-71). IEEE.
- 4. Nevat, I., Septier, F., Avnit, K., **Peters, G.W.** and Clavier, L., 2018, September. Joint localization and clock offset estimation via time-of-arrival with ranging offset. In 2018 26th European Signal Processing Conference (EUSIPCO) (pp. 672-676). IEEE.
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- 43. **Peters G.W.**, Azzaoui N. and Macrina A. *Information-Based Approach to Generalised Momentum and Reversal*. Springer Briefs in Quantitative Finance. (120 pages)
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- 1. Edward Antonian, **Gareth W. Peters**, Mike Chantler and Hongxuan Yan, "GLS Kernel Regression for Network-Structured Data"
- 2. W.T.M. Dunsmuir, K.A. Richards & G.W. Peters "Score Test for Marks in Hawkes Processes"
- 3. Ames M., Bagnarosa G., Gao S., Matsui T. and **Peters G.W.** "A Harvested Acreage Weighted Spatio-Temporal Model for Country Crop Yields"
- 4. Danielsson J., Panayi S., Peters G.W. and Zigrand J.P. "Liquidity Resilience"
- 5. C. Zheng, M. Egan, L. Clavier, **G.W. Peters** & J-M Gorce, "Statistical Characterization and Estimation for Interference Random Vectors in Poisson Spatial Fields of Interferers"
- 6. Yan H., Chan J. and **Peters G.W.** "Long Memory Models for Financial Time Series of Counts and Evidence of Systematic Market Participant Trading Behaviour Patterns in Futures on USTreasuries"
- 7. Zaremba A., **Peters G.W.**, Aste T. "Statistical Causality for Multivariate Non-Linear Time Series via Gaussian Process Models."
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- 10. **Peters G.W.**, Matsui T., Septier F. and Tamamori A. "Estimation and Calibration in Gaussian Process State Space Models: MCDC Tool".
- 11. **Peters G.W.**, Hayes K., Hossack G. "Ecological non-linear state space model selection via adaptive particle Markov chain Monte Carlo (AdPMCMC)".
- 12. **Peters G.W.**, Nevat I., Septier F. and Clavier L. "Generalized Interference Models in Doubly Stochastic Poisson Random Fields for Wideband Communications: the PNSC(a) model".

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- 14. S. A. Sisson, **G. W. Peters**, M. Briers and Y. Fan 2010 "A Note on Target Distribution Ambiguity for Likelihood-Free Samplers (ABC)" [arXiv: 1005.5201]
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- 16. **Peters G.W.** and Terauds V. (2007) Quantifying Operational Risk, part of report by Sisson S.A. and Franklin J. Low Probability Large Consequence Events, Australian Center for Excellence in Risk Analysis, project no. 06/02.

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