Publication Record: Dr. Gareth W. Peters

Publications

Technical reports for most journal papers found here can be obtained from arxiv via an author search on Gareth W. Peters or the paper title. Otherwise, technical reporst are available upon request. (LAST UPDATED: 16 December 2011)

Journal Papers submitted under review:

1. Korotsil I., **Peters G.W.**, Regan D. (2011) "Vaccine paper... ." **[arXiv:]**
2. Korotsil I., **Peters G.W.**, Cornebise J. and Regan D. (2011) "Adaptive Markov Chain Monte Carlo Forward Simulation for Statistical Analysis in Epidemic Modelling of Human Papilloma Virus.." **[arXiv:]**
3. **Peters G.W.**, Nevat I., Yuan J. and Collings I., (2011) "Semi-Blind System Identification in Wireless Relay Networks via Gaussian Process Iterated Conditioning on the Modes Estimation." **[arXiv:1106.3409]**
4. Nevat I., **Peters G.W.**, Collings I. and Yuan J., (2011) "Co-operative Spectrum Sensing with Partial CSI". **[arXiv:1104.2355]**
5. Hayes K., Hossack G.R., Barry S. and **Peters G.W.**, (2011) "Severe uncertainty and information-gap theory: A commentary for ecologists and environmental managers". **[arXiv:]**
6. Dean T., Singh S., Jasra A. and **Peters G.W.** (2010) "Parameter estimation for Hidden Markov Models with intractable likelihoods". **[arXiv:1103.5399]**.
7. **Peters G.W.**, Hayes K., Hossack G. (2010) "Ecological non-linear state space model selection via adaptive particle Markov chain Monte Carlo (AdPMCMC)". **[arXiv:1005.2238v1]**.
8. Nevat I., **Peters G.W.**, Doucet A. and YuanJ. (2011) "Channel Tracking for Relay Networks via Adaptive Particle MCMC." **[arXiv:1006.3151v2]**
9. Nevat I., **Peters G.W.** and Yuan J. (2011) "Blind Spectrum Sensing in Cognitive Radio over Fading Channels and Frequency Offsets" - **[arXiv:1006.3155v1]**
10. Sisson S.A., **Peters G.W.**, Fan Y. and Briers, M. (2010) "Likelihood Free Samplers". *Australian and New Zealand Journal of Statistics.*

Conference Papers submitted under review:

1. Shihao Yan, Malaney Robert, Nevat I. and **Peters G.W.** (2012) "An Information Theoretic Location Verification System for Wireless Networks" - **[arXiv:]** (Globecom US)
2. Gu W.,**Peters G.W.**,Clavier L., Septier F. and Nevat I. (2012) "Receivers for Cooperative Communications in Alpha-Stable Interference plus Gaussian Noise" - **[arXiv:]** (International Symposium on Wireless Communication Systems)
3. Clavier L.,Wei G., Septier F., **Peters G.W.** and Nevat I. (2011) "Interference Modelling and Cooperative Communications" - **[arXiv:]** (Future Networks Conference)

Appeared - Refereed Journal Publications:

Statistical Methodology and Applications

1. Hossack G.R., **Peters G.W.** and Hayes K., (2012) "Estimating nonlinear ecological state space models with flexible observation error". *Methods in Ecology and Evolution* (to appear) **[arXiv:]**

2. Burgman M., Franklin J., Hayes, K., Hossack G.R., **Peters G.W.** and Sisson S.A., (2012) "Modelling extreme risks in Ecology" *Risk Analysis, to appear.*[**arXiv:0912.4729**]

3. **Peters G.W.**, Fan Y. and Sisson S.A. (2012) "On Sequential Monte Carlo, Partial Rejection Control and Approximate Bayesian Computation". *Statistics and Computing, to appear*, [**arXiv:0808.3466v2**].

4. **Peters G.W.**, Sisson S.A. and Fan Y. (2010) "Likelihood-free Bayesian inference for α-stable models".*Computational Statistics and Data Anlaysis, to appear* 38 pages. [**arXiv:0912.4729**]

5. Cornebise J. and **Peters G.W.** (2010) "Comments on 'Particle Markov Chain Monte Carlo'". *Journal of the Royal Statistical Society Series B - comments on read paper*, 72(3),269342. [**arXiv:0911.3866**]

6. Bornn L., Cornebise J. and **Peters G.W.** (2010) "Discussion of 'Riemann manifold Langevin and Hamiltonian Monte Carlo methods' " by M. Girolami and B. Calderhead. *Journal of the Royal Statistical Society Series B - comments on read paper.* [**arXiv:1011.0057**]

7. **Peters G.W.** and Cornebise J. (2010) "Comments on 'Particle Markov Chain Monte Carlo'". *Journal of the Royal Statistical Society Series B - comments on read paper*, 72(3),269342. [**arXiv:0911.3866**]

8. Fan Y., **Peters G.W.** and Sisson S.A (2009) "Automating and Evaluating Reversible Jump MCMC Proposal Distributions". *Statistics and Computing*, 19, 401-429.

9. Sharp Propagation of Chaos Estimates for Feynman-Kac Particle Models. Pierre Del Moral, Arnaud Doucet, Gareth Peters, Teoriya Veroyatnosteri i ee Primeneniya (to be reprinted in SIAM Theory of Probability and Its Applications), vol. 51, no. 3, (2006)

Financial Mathematics, Risk and Insurance

1. **Peters G.W.**, Briers M., Shevchenko P.V. and Doucet A., (2012) "Calibration and filtering for multi factor commodity models with seasonality: incorporating panel data from futures contracts." *Methods in Computing and Applied Probability*, (to appear) [**arXiv:1105.5850**]

2. **Peters G.W.**, Shevchenko P., Young M. and Yip W., (2011) "Analytic Loss Distributional Approach Model for Operational Risk form Alpha-Stable Doubly Stochastic Compound Process and Implications for Capital Allocation". *Insurance: Mathematics and Economics*, (to appear) [**arXiv:1102.3582**].

3. **Peters G.W.**, Balikrishnan K., Lasscock B., Mellon M. and Godsill S. (2011) "Bayesian Cointegrated Vector Autoregression models incorporating alpha-stable noise for inter-day price movements via Approximate Bayesian Computation". *to appear Bayesian Analysis.* [**arXiv:1008.0149v1**]

4. **Peters G.W.**, Byrnes A.D., Shevchenko P.V. (2011) "Impact of Insurance for Operational Risk: Is it worthwhile to insure or be insured for severe losses ?".*Insurance: Mathematics and Economics*, 48, 287-303. [**arXiv:1010.4406**]

5. **Peters G.W.**, Balkrishnan K. and Lasscock B. (2010) “Model selection and Adaptive Markov Chain Monte Carlo for Bayesian Cointegrated VAR Models”.*Bayesian Analysis*,5(3),465-492. **[arXiv:1004.3830]**

6. **Peters G.W.**, Wüthrich M. and Shevchenko P. (2010) “Chain Ladder Method: Bayesian Bootstrap versus Classical Bootstrap”. *Insurance: Mathematics and Economics*, 47(1), 36-51. **[arXiv:1004.2548]**

7. **Peters G.W.**, Shevchenko P. and Wüthrich (2009). “Dynamic Operational Risk: modelling dependence and combining different sources of information”. *Journal of Operational Risk*, 4(2), 69-104. **[arXiv:0904.4074]**

8. **Peters G.W.**, Shevchenko P. and Wüthrich M. (2009) “Model Uncertainty in Claims Reserving within Tweedie’s Compound Poisson Models”. *ASTIN Bulletin* 39(**1**), 1-33. **[arXiv:0904.1483]**

9. **Peters G.W.**, Johansen A. M. and Doucet A. (2007) “Simulation of the Annual Loss Distribution in Operational Risk via Panjer Recursions and Volterra Integral Equations for Value at Risk and Expected Shortfall Estimation”. *Journal of Operational Risk*, 2(3).

10. **Peters G.W.** and Sisson S.A. (2006) “Bayesian Inference, Monte Carlo Sampling and Operational Risk”. *Journal of Operational Risk*, 1(3).

Signal Processing and Communications Engineering

1. **Peters G.W.**, Nevat I., Sisson S.A., Fan Y. and Yuan J. (2010) “Bayesian Symbol Detection in Wireless Relay Networks via Likelihood Free Inference”.*IEEE Transactions on Signal Processing*, 58, 5206-5218. **[arXiv:1007.4603]**

2. Nevat I., **Peters G.W.** and Yuan J. (2010). “Detection of Gaussian Constellations in MIMO Systems Under Imperfect CSI”. *IEEE Transactions of Communications*,58(4),1151-1160.

3. **Peters G.W.**, Nevat I. and Yuan J. (2009). “Channel Estimation in OFDM Systems with Unknown Power Delay Profile using Trans-dimensional MCMC”. *IEEE Transactions on Signal Processing,IEEE Trans. on Signal Processing*, 57(**9**), 3545-3561.

4. Nevat I., **Peters G.W.** and Yuan J. (2008) “A Low Complexity MAP Estimation in Linear Models with a Random Gaussian Mixing Matrix”. *IEEE Transactions on Communications*, *to appear.*

Appeared - Refereed Conference Publications:

1. Nevat I., **Peters G.W.**, Yuan J and Collings I. (2012) “Location-aware Cooperative Spectrum Sensing via Gaussian Processes”. *AusCTW New Zealand* (to appear).

2. Nevat I., **Peters G.W.**, Yuan J and Collings I. (2012) “System Identification in Wireless Relay Networks via Gaussian Process Iterated Conditioning on the Modes Estimation”. *WCNC Paris* (to appear).

3. Nevat I., **Peters G.W.** and Yuan J. (2012) “Blind Spectrum Sensing in Cognitive Radio over Fading Channels and Frequency Offsets”. *WCNC - Paris 2012* (to appear) .

4. **Peters G.W.**, Briers M., Shevchenko P. and Doucet A. (2011) “Adaptive Particle Markov chain Monte Carlo for Multi-factor Commodity Models.”, *Computational and Financial Econometrics, CFE-2011, London School of Economics.*

5. Veerhuis P., **Peters G.W.** and Gerlach R. (2011) “A Timely Analysis of Unconventional Monetary Policy via Dynamic Nelson Seigel Models”, *Computational and Financial Econometrics, CFE-2011, London School of Economics.*

6. Dong A., **Peters G.W.** and Wuethrich M. (2011) “Adaptive Markov chain Monte Carlo for Paid-Incurred Loss Reserving Models”, *Computational and Financial Econometrics, CFE-2011, London School of Economics.*

7. Lasscock B., **Peters G.W.** and Balikrishnan K. (2011) “Rank Estimation in Cointegrated Vector Auto-Regression Models via Automated Trans-Dimensional Markov chain Monte Carlo”. *CAMSAP-Special Session*, [**arXiv:0912.4729**].

8. Nevat I., **Peters G.W.**, Doucet A. and YuanJ. (2011) “Channel Tracking in Relay Systems via Particle MCMC”. *VTC*, Sanfrancisco.

9. Nevat I., Han C., **Peters G.W.** amd Yuan J. (2011) “Spectrum Sensing in Cooperative Cognitive Networks with Partial CSI”. *ICASSP*, Nice, France.

10. Nevat I., Peters G.W. and Yuan J. (2009) “Coherent Detection or Cooperative Networks with Arbitrary Relay Functions using ”Likelihood Free” Inference”. Proc. NEWCOM-ACorn Workshop, Barcelona, Spain.

11. Nevat I., **Peters G.W.** and Yuan J. (2009) “Coherent Detection or Cooperative Networks with Arbitrary Relay Functions using ’Likelihood Free’ Inference”. *Proceedings of NEWCOM-ACorn Workshop*, Barcelona, Spain.

12. Nevat I., **Peters G.W.** and Yuan J. (2009) “Channel Estimation in OFDM Systems with Unknown Power Delay Profile using Trans-dimensional MCMC via Stochastic Approximation”. *in Proc. IEEE Vehicular Technology Conference, VTC09*, Barcelona, Spain.

13. **Peters G.W.**, Shevchenko P. and Wüthrich (2009) “Dynamic Operational Risk: modelling dependence and combining different sources of information”. *15th International Conference on Computing in Economics and Finance.*

14. **Peters G.W.**, Kannan B., Lasscock B. and Mellen C. (2009) “Rank Estimation and Adaptive Markov chain Monte Carlo for Bayesian Cointegrated VAR Models”. *15th International Conference on Computing in Economics and Finance.*

15. **Peters G.W.**, Shevchenko P. and Wüthrich M. (2008) “Model Risk in Claims Reserving within Tweedie’s Compound Poisson Models”. *Astin Colloquium*, UK.

16. Nevat I., **Peters G.W.** and Yuan J. (2008) ”Bayesian Inference in Linear Models With a Random Gaussian Matrix : Algorithms and Complexity”. *PIMRC*, France.

17. Nevat I., **Peters G.W.** and Yuan J. (2008) “Maximum A-Posteriori Estimation in Linear Models With a Random Gaussian Model Matrix: a Bayesian-EM Approach”. *ICASSP*, Las Vegas, USA.

18. Nevat I., **Peters G.W.** and Yuan J. (2008) “OFDM Channel Impulse Response Estimation with Unknown Length using Bayesian Model Order Selection and Model Averaging”. *VTC*, Singapore.

Theses

1. Peters G.W. (2009) *Trans-dimensional Markov Chain Monte Carlo and Likelihood Free Inference.* PhD. Dissertation (in prep.) (supervised by Dr. Sisson S.A., Dr. Fan Y. and Dr. Shevchenko P.), University of New South Wales, Sydney, Australia.

2. Peters G.W. (2005) *Sequential Monte Carlo Samplers.* MSc.(by research) Dissertation (supervised by Dr. Doucet A.), Cambridge University, Cambridge, UK.

Book Reviews

1. Peters G.W. (2008) Review of the book entitled "Markov Chain Monte Carlo: Stochastic Simulation for Bayesian Inference, Second Ed." by Gamerman D. and Lopes H. for Statistics in Medicine.

2. Peters G.W. (2007) Review of the book entitled "Uncertain Judgements Eliciting Experts Probabilities" by OHagan A. et al. for Journal of the Royal Statistical Society A, 4, 861-1198.

White Paper Reports Academic

1. 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.

Industrial, Commercial In Confidence Technical Reports

1. Boronia Capital Pty. Ltd (2008). Vector Auto Regressions and Cointegration Modelling.

2. Operational Risk OpRA System Combining and Aggregation Methodology, (2007). Commonwealth Bank of Australia, Internal Report and Analysis.

3. Operational Risk OpRA System Capital Allocation and Capital Sensitivity Methodology, (2007). Commonwealth Bank of Australia, Internal Report and Analysis.

4. Operational Risk OpRA System Accuracy Testing, (2006). Commonwealth Bank of Australia, Internal Report and Analysis.

5. Operational Risk OpRA System Sensitivity Analysis Report (Convolution, Distribution Choice, Number of Exposures), (2006). Commonwealth Bank of Australia, Internal Report and Analysis.

6. Operational Risk OpRA System Survey Design and Methodology Analysis, (2005). Commonwealth Bank of Australia, Internal Report and Analysis.