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**Publication List**  
(*Research Group Members Shown in Italics*)

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**Submitted Articles**

103. **C. Ward, R. Deardon** & A. Schmidt “Multivariable behavioural change modelling of epidemics in the presence of undetected infections” submitted to *Statistics in Medicine*. <https://arxiv.org/abs/2503.00982>
  102. **Y. Mao, R. Deardon** & L. Deeth “Identifying memory mechanisms in Bayesian models of behavioural change during epidemics” submitted to *Annals of Applied Statistics*
  101. **Y. Mao, R. Deardon** & L. Deeth “Memory mechanisms for behavioural change in Bayesian individual level spatial epidemic models” submitted to *Infectious Disease Modelling*
  100. **Y. Zhang, R. Deardon** & L. Deeth “Behavioural change model choice in spatial epidemic models” submitted to *Canadian Journal of Statistics*.
  99. **Y. Zhang, R. Deardon** & L. Deeth “Composite method for fast computation of individual level spatial epidemic models” submitted to *Spatial Statistics* (revision requested). <https://arxiv.org/pdf/2509.04660>
  98. **J. Peitsch**, G. Pokharel & **R. Deardon** “Directionally-dependent spatial epidemic models” submitted to *Spatial Statistics* (revision requested).
  97. V. Callier, **R. Deardon** & C. Viboud “Spatio-temporal spread of COVID-19 over three waves in the continental United States” submitted to *Proceedings of the Royal Society B* (revision requested).
  96. **M. Mahsin**, W. Almutiry & **R. Deardon** “Spatial modeling of infectious disease transmission using continuous time geographically-dependent individual-level models” submitted to *Statistics in Medicine* (revision requested).
  95. **J. MacLean** & **R. Deardon** “Behavioural change in Canadian disease outbreaks” submitted to the *Canadian Journal of Statistics*.
  94. **R. Li, R. Deardon**, N. Li, J. Conly & J. Leal “Bayesian compartmental modelling of the transmission dynamics of methicillin-resistant *Staphylococcus aureus* (MRSA) within hospitals in Edmonton, Canada” submitted to the *Canadian Journal of Statistics*. <http://arxiv.org/abs/2511.07353>
  93. **R. Li, R. Deardon**, N. Li, J. Conly & J. Leal “Modelling the effect of interventions to prevent the transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) within hospitals in Edmonton, Canada” submitted to *Infectious Disease Modelling*.
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**Accepted/In Press**

92. **M. Kamso**, S. Whittle, J. Pardo Pardo, R. Buchbinder, G. Wells, **R. Deardon**, T. Sajobi, G. Tomlinson, E. Jesse, J. Thomas, S. Kelly, G. Hazlewood “A semi-automated approach facilitated the assessment of the certainty of evidence for direct comparisons in network meta-analyses” to appear in the *Journal of Clinical Epidemiology*. <http://ssrn.com/abstract=5205661>.
91. **M. Kamso**, S. Whittle, J. Pardo Pardo, R. Buchbinder, G. Wells, **R. Deardon**, T. Sajobi, G. Tomlinson, E. Jesse, J. Thomas, S. Kelly, G. Hazlewood “A semi-automated approach facilitated the assessment of the certainty of evidence for indirect and mixed comparisons in network meta-analyses” to appear in the *Journal of Clinical Epidemiology*. <http://ssrn.com/abstract=5205660>.

90. H. Qureshi, T. Hughes, E. Franco, K. Fiest, J. Gratrix, P. Smyczek, R. Read, A. Afzal, **R. Deardon**, A. Kassam & M. Fidler-Benaoudia (2026) “Risk of cancer among individuals with a history of bacterial sexually transmitted infections: a population-based study in Alberta, Canada” available online in *International Journal of Cancer*. <http://doi.org/10.1002/ijc.70215>

### Published Articles

89. **M. Ward**, **R. Deardon** & L. Deeth (2025) “A framework for incorporating behavioural change into individual-level spatial epidemic models” in the *Canadian Journal of Statistics*, 53(1), e11828. <https://doi.org/10.1002/cjs.11828>
  88. **T. Akter** & **R. Deardon** (2025) “Conditional logistic individual-level models of spatial infectious disease dynamics” in *Infectious Disease Modelling*, 10(1), 268-286. <https://doi.org/10.1016/j.idm.2024.10.008>
  87. **C. Rahul** & **R. Deardon** (2025) “Behavioural change piecewise constant spatial epidemic models” in *Infectious Disease Modelling*, 10(1), 302-324. <https://doi.org/10.1016/j.idm.2024.10.006>
  86. **T. Akter** & **R. Deardon** (2025) “Variable screening methods in conditional logistic individual level models of disease spread” in *Spatial & Spatiotemporal Epidemiology*, 54, 100742. <https://doi.org/10.1016/j.sste.2025.100742>
  85. M. Lewis, P. Brown, C. Colijn, L. Cowen, C. Cotton, T. Day, **R. Deardon**, D. Earn, D. Haskell, J. Heffernan, P. Leighton, K. Murty, S. Otto, E. Rafferty, C. Hughes Tuohy, J. Wu & H. Zhu “Charting a future for emerging infectious disease modelling in Canada” (2025) in *Lasting Disruption: Economic and Social Impacts of COVID-19 in Canada*, McGill-Queen’s University Press. (Ed: Christopher Cotton). <http://hdl.handle.net/1828/15042>.
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84. **C. Rahul** & **R. Deardon** (2024) “Individual-level models of disease transmission incorporating non-parametric spatial risk” in *Spatial & Spatiotemporal Epidemiology*, 50, 100664. <https://doi.org/10.1016/j.sste.2024.100664>
  83. **E. Hodzic-Santor** & **R. Deardon** (2024) “Edge effects in spatial infectious disease models” in *Spatial & Spatiotemporal Epidemiology*, 50, 100673. <https://doi.org/10.1016/j.sste.2024.100673>
  82. M. Biesheuvel, **C. Ward**, P. Penterman, E. van Engelen, G. Schaik, **R. Deardon** & H. Barkema (2024) “Within-herd transmission of *Mycoplasma bovis* infection in 20 Dutch dairy herds” in *Journal of Dairy Science*, 107(1), 503-516. <https://doi.org/10.3168/jds.2023-23407>
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81. **C. Ward**, **R. Deardon** & A. Schmidt (2023) “Bayesian modelling of dynamic behavioural change during an epidemic” *Infectious Disease Modelling*, 8(4), 947-963. <https://doi.org/10.1016/j.idm.2023.08.002>
  80. **L. Amiri**, M. Torabi & **R. Deardon** (2023) “Spatial modelling of infectious diseases with covariate measurement error” in *Journal of the Royal Statistical Society: Series C*, 73(2), 460-477. <https://doi.org/10.1093/jrssc/qlad104>
  79. **L. Amiri**, M. Torabi & **R. Deardon** (2023) “Analyzing COVID-19 data in the Canadian Province of Manitoba: A new approach” in *Spatial Statistics*, 55:100729. doi: 10.1016/j.spasta.2023.100729.
  78. **T. Akter** & **R. Deardon** (2023) “Comparison of variable screening methods in infectious disease transmission models” in *Spatial and Spatiotemporal Epidemiology*, 47, 100622.

77. **M. Kamso**, J. Pardo, S. Whittle, R. Buchbinder, G. Wells, V. Glennon, P. Tugwell, **R. Deardon**, T. Sajobi, G. Tomlinson, J. Elliot, S. Kelly & G. Hazlewood (2023). "Crowdsourcing and automation facilitated the identification and classification of randomized controlled trials in a living review" in *Journal of Clinical Epidemiology*, 164, 1-8. <https://doi.org/10.1016/j.jclinepi.2023.10.007>
  76. **M. Pasha**, **R. Deardon** & A. Rahim (2023) "A study on inspection schemes in optimal design of control charts for deteriorating processes" in *Quality and Reliability Engineering International*, 39(3), 732-751. <https://doi.org/10.1002/qre.3253>
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  74. **J. Angevaere**, Z. Feng & **R. Deardon** (2022) "Pathogen.jl: Infectious disease transmission network modelling with Julia" in *Journal of Statistical Software*, 104(4), 1730.
  73. **G. Pokharel** & **R. Deardon** (2022) "Emulation-based inference for spatial infectious disease transmission models incorporating event time uncertainty" in the *Scandinavian Journal of Statistics*, 49(1), 455-479. <http://doi.org/10.1111/sjos.12523>
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  71. **S. A. Naqvi**, M. King, T. DeVries, H. Barkema & **R. Deardon** (2022) "Data considerations for developing deep learning models for dairy applications" in *Computers and Electronics in Agriculture*, 196: 106895. <https://doi.org/10.1016/j.compag.2022.106895>
  70. **S. A. Naqvi**, M. King, R. Matson, T. DeVries, **R. Deardon** & H. Barkema (2022) "Mastitis detection with recurrent neural networks in farms using automated milking systems" in *Computers and Electronics in Agriculture*, 192: 106618. <https://doi.org/10.1016/j.compag.2021.106618>
  69. **B. Jafari** & **R. Deardon** (2022) "Bias and Bias-Correction for Individual-Level Models of Infectious Disease" in *Spatial & Spatiotemporal Epidemiology*, 43, 100524.
  68. J. Di Francesco, G.P.S. Kwong, **R. Deardon**, S. L. Checkley, G. F. Mastromonaco, F. Mavrot, L. Leclerc & S. Kutz (2022) "Intrinsic and extrinsic factors associated with increased qiviut cortisol in wild muskoxen (*Ovibos moschatus*)" in *Conservation Physiology*, 10(1), coab103. <https://doi.org/10.1093/conphys/coab103>
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63. **Z. Liu, R. Deardon, Y. Fu, T. Ferdous, T. Ware & Q. Cheng** (2021) “Estimating parameters of two-level individual-level models of the COVID-19 epidemic using ensemble learning classifiers” in *Frontiers in Physics*, 8(11), Article 602722. doi: 10.3389/fphy.2020.602722
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  58. B. Singh, M. Ward, **M. Lowerison**, R. Lewinson, I. Vallerand, **R. Deardon**, J. Gill, B. Singh & H. Barkema (2021) “Meta-analysis and adjusted estimation of COVID-19 case fatality risk in India and its association with the underlying comorbidities” in *One Health*, 13:100283. <https://doi.org/10.1016/j.onehlt.2021.100283>.
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  54. G. Hazlewood, S. Whittle, **M. Kamso**, E. Akl, G. Wells, P. Tugwell, M. Thomas, C. Lee, M. Ejaredar, D. Choudhary, D. Neuen, J. New-Tolley, M. Powell, A. Quinlivan, A. Qaddoura, **R. Deardon**, L. Maxwell, J. Pardo Pardo, S. Kelly, R. Buchbinder (2020) “Disease-modifying anti-rheumatic drugs for rheumatoid arthritis: a systematic review and network meta-analysis” in *Cochrane Database of Systematic Reviews*, 2020 (3), CD013562
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41. T. Petukhova, D. Ojkic, B. McEwen, **R. Deardon** & Z. Poljak (2018) “Assessment of ARIMA, GLARMA and random forest models for predicting Influenza A virus frequency in swine in Ontario, Canada” in *PLoS One*, 13(6): e0198313.
  40. **G. Pokharel** & **R. Deardon** (2018) “Spatially informed back-calculation for spatio-temporal infectious disease models” in *Statistical Communications in Infectious Diseases*, Vol. 10(1), Article 2.
  39. M. Lipson, **R. Deardon**, N. Switzer, C. DeGara, C. Ball & S. Grondin (2018) “Practice and attitudes regarding double gloving among staff surgeons and surgical trainees” in the *Canadian Journal of Surgery*, 61(4), 244-250.
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38. D. Toms, **R. Deardon** & M. Ungrin (2017) “Climbing the mountain: Experimental design for efficient optimization of stem cell bioprocessing” in the *Journal of Biological Engineering*, Vol. 11, No. 1

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34. **L. Deeth & R. Deardon** (2016) “Spatial data aggregation for spatio-temporal individual-level models of infectious disease transmission” in *Spatial & Spatio-temporal Epidemiology*, 17, 95-104.
33. **R. Malik, R. Deardon & G.P.S. Kwong** (2016) “Parameterizing spatial models of infectious disease spread using sampling-based likelihood approximations” in *PLoS One*, 11(1): e0146253. doi: 10.1371/journal.pone.0146253.

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26. **S. Subedi**, Z. Feng, **R. Deardon** & F. Schenkel (2013) “SNP selection for predicting a quantitative trait” in the *Journal of Applied Statistics*, 40(3), 600-613.
25. **N. Bifulchi, R. Deardon & Z. Feng** (2013) “Spatial approximations of network-based individual level infectious disease models” in *Spatial & Spatio-temporal Epidemiology*, 6, 59-70.
24. T. Agvar, **R. Deardon** & J. Fryxell (2013) “An empirically parameterized individual based model of animal movement, perception and memory” in *Ecological Modelling*, 251: 158-172.
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11. **B. Habibzadeh** & **R. Deardon** (2010), “The effect of misspecifying latent and infectious periods in space-time epidemic models” in *Statistical Communications in Infectious Diseases*, Vol. 2: Issue 1, Article 7. (Funded by: NSERC).

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10. T. J. McKinley, A. Cook & **R. Deardon** (2009) “Inference in epidemic models without likelihoods” in *The International Journal of Biostatistics*, 5(1), Article 24. (Funded by: NSERC).
9. P.E. Caines, **R. Deardon** & H. P. Wynn (2009) “Bayes’ nets of time series: stochastic realizations and projections” in *Optimal Experimental Design and Related Areas* (Ed: L Pronzato and A Zhiglavsky), 155-166, Springer.

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