Publication List

(Research Group Members Shown in Italics)

Submitted Articles

- 93. *C. Ward.* R. Deardon & A. Schmidt "Estimating the relative importance of multiple data sources informing behavioral change in the presence of data uncertainty during the COVID-19 pandemic" submitted to *Biostatistics.* https://arxiv.org/abs/2503.00982
- 92. *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*.
- 91. *Kamso* et al. "A semi-automated approach facilitated the assessment of the certainty of evidence for direct comparisons in network meta-analyses" submitted to the *Journal of Clinical Epidemiology*.
- 90. **Kamso** et al. "A semi-automated approach facilitated the assessment of the certainty of evidence for indirect and mixed comparisons in network meta-analyses" submitted to the *Journal of Clinical Epidemiology*.
- 89. H. Qureshi, T. Hughes, E. Franco, K. Fiest, J. Gratrix, P. Smyczek, R. Read, A. Afzal, **R. Deardon**, A. Kassam & M. Fidler-Benaoudia "Investigating the risk of primary invasive cancer among individuals with a history of bacterial sexually transmitted infections: a population-based study in Alberta, Canada" submitted to *Cancer Epidemiology*, *Biomarkers and Prevention*

Accepted/In Press

88. M. Lewis, P. Brown, C. Colijn, L. Cowen, C. Cotton, T. Day, **R. Deardon**, D. Earn, D. Haskell, J. Hefferman, 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" to appear in *Lasting Disruption: Economic and Social Impacts of COVID-19 in Canada*, McGill-Queen's University Press. http://hdl.handle.net/1828/15042.

Published Articles

- 87. *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
- 86. **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
- 85. *C. Rahul* & R. Deardon (2025) "Behavioural change piecewise constant spatial epidemic models" in *Infectious Disease Modelling*, 10(1), 302-324

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
- 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/jrsssc/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
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- 75. *M. Mahsin*, R. Deardon & P. Brown (2022) "Geographically-dependent individual-level models for infectious diseases transmission" in *Biostatistics*, 23(1), 1-17. https://doi.org/10.1093/biostatistics/kxaa009
- 74. **J. Angevaare**, Z. Feng & **R. Deardon** (2022) "Pathogen.jl: Infectious disease transmission network modelling with Julia" in *Journal of Statistical Software*, 104(4), 1?30.
- 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
- 72. **M. Ward**, L. Deeth & **R. Deardon** (2022) "Cluster-aggretion-disaggregation methods for spatial individual level models of infectious disease transmission" in *Spatial & Spatiotemporal Epidemiology*, 41: 100497. https://doi.org/10.1016/j.sste.2022.100497
- 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
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- 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
- 67. W. Almutiry, V. Warriyar & R. Deardon (2021) "Continuous-time individual-level models of infectious disease: EpiILMCT" in the Journal of Statistical Software, 98(10), 1-44. https://www.jstatsoft.org/article/view/v098i10
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- 55. G. Hazelwood, *G. Pokharel*, R. Deardon, D. Marshall, C. Bombardier, G. Tomlinson, C. Ma, C. Seow, R. Panaccione & G. Kaplan (2020) "Patient preferences for maintenance therapy in Crohn's disease: a discrete-choice experiment" in *PLoS One*, 15(1):e0227635.
- 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
- 53. G.P.S. Kwong, **R. Deardon**, *S. Hunt* & M. Guerin (2020) "Bayesian optimal design of agricultural infectious disease transmission experiments" available online in *Statistical Communications in Infectious Diseases*, 12(1). https://doi.org/10.1515/scid-2018-0005
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- 51. D. Nobrega, *S. A. Naqvi*, S. Dufour, **R. Deardon**, J. Kastelic, J. de Buck & H. Barkema (2020) "Critically important antimicrobials are not needed to treat non-severe clinical mastitis in lactating dairy cows: results from a network meta-analysis" in the *Journal of Dairy Science*, 103(11), 10585-10603. https://doi.org/10.3168/jds.2020-18365
- 50. *G. Pokharel*, R. Deardon, S. Johnson, G. Tomlinson, P. Hull, G. Hazelwood (2020) "Effectiveness of initial methotrexate-based treatment approaches in early rheumatoid arthritis: An elicitation of rheumatologists' beliefs" in *Rheumatology*, keaa803. https://doi.org/10.1093/rheumatology/keaa803
- 49. A. Ogilvy, S. Collins, T. Tuokko, M. Hilts, **R. Deardon**, W. Hare & A. Jirasek (2020) "Optimization of solid tank design for fan-beam optical CT based 3D radiation dosimetry" in *Physics in Medicine & Biology*. 65, 245012. https://doi.org/10.1088/1361-6560/abbf98
- 48. *C. Augusta*, R. Deardon & G. Taylor (2019) "Deep learning for supervised classification of spatial epidemics" in *Spatial & Spatiotemporal Epidemiology*, 29, 187-198.
- 47. *M. Ward*, *A. Stanley*, L. Deeth **R. Deardon**, Z. Feng & L. Trotz-Williams (2019) "Methods for detecting seasonal influenza epidemics using a school absenteeism surveillance system" in *BMC Public Health*, 19, Article: 1232.
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- 44. *M. Lowerison*, C. Josephson, N. Jette, T. Sajobi, S. Patten, T. Williamson, R. Deardon, H. Barkema, & S. Wiebe (2019) "Association of levels of specialized care with risk of premature mortality in patients with epilepsy" in *JAMA Neurology*, 76(11), 1352-1358.

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- 37. **R. Romanescu** & **R. Deardon** (2017) "Fast inference for network models of infectious disease spread" in the *Scandinavian Journal of Statistics*, 44(3), 666-683 (DOI: 10.1111/sjos.12270).
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- 19. **G.P.S. Kwong & R. Deardon** (2012) "Linearized forms of individual-level models for large-scale spatial infectious disease systems" in *Bulletin of Mathematical Biology*, 74(8), 1912 37. (Funded by: NSERC, OMAFRA).
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- 12. **R. Deardon**, S. P. Brooks, B. T. Grenfell, M. J. Keeling, M. J. Tildesley, N. J. Savill, D. J. Shaw & M. E. J. Woolhouse (2010), "Inference for individual-level models of infectious diseases in large populations" in *Statistica Sinica*, 20(1), 239-261. (Funded by: Wellcome Trust, UK).
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- M. Aghajanpoorpasha & R. Deardon (2019) "On Minimum Cost Non-Uniform Sampling Schemes for Optimal Design of Control Charts: Application to \overline{X} and T^2 Control Charts" Fourth North American International Conference on Industrial Engineering and Operations Management (IEOM).
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Technical & Other Reports

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