Publication List
(Research Group Members Shown in Italics)

Submitted Articles


64. Angevaare, Feng & Deardon “Pathogen.jl: Infectious disease transmission network modelling with Julia” submitted to the Journal of Statistical Software.

63. Angevaare, Feng & Deardon “Inference of latent event times and transmission network in individual level infectious disease models” submitted to Spatial and Spatiotemporal Epidemiology.


60. Jafari & Deardon “Bias and Bias-correction in individual-level models of infectious disease” submitted to Spatial and Spatiotemporal Epidemiology.

59. Almutiry & Deardon “Spatial contact network uncertainty in individual level models of infectious disease transmission” submitted to Statistical Communications in Infectious Diseases (revision requested).


57. Ogilvy, Collins, Tuokko, Hilt, Deardon, Hare & Jirasek “Optimization of solid tank design for fan-beam optical CT based 3D radiation dosimetry” submitted to Physics in Medicine & Biology (revision requested).

Accepted/In Press


52. G.P.S. Kwong, R. Deardon, S. Hunt & M. Guerin “Bayesian optimal design of agricultural infectious disease transmission experiments” available online in Statistical Communications in Infectious Diseases. DOI: https://doi.org/10.1515/scid-2018-0005


Published Articles


16. J. Gallienne, C. Gregg, E. LeBlanc, N. Yaakob, D. Wu, K. Davies, N. Rawlings, Pierson, **R. Deardon**, & Bartleewski “Correlations between ultrasonographic characteristics of corpora lutea (CL) and systemic concentrations of progesterone (P4) during the discrete stages of CL lifespan and secretory activity in cyclic ewes” in *Experimental Biology and Medicine*, 237, 505 – 515.


Conference Proceedings


Published Letters


Technical Reports


Software

  - CRAN Webpage: https://cran.r-project.org/web/packages/EpiILMCT/index.html
  - Github Repository: https://waleedalmutiry.github.io/EpiILMCT/

  - Github repository (Julia): https://github.com/jangevaare/PhyloTrees.jl

  – CRAN Webpage: https://CRAN.R-project.org/package=EpiILM

  – Github repository (Julia): https://github.com/jangevaa/Pathogen.jl

  – Github repository (Julia): https://github.com/jangevaa/ilmtools

**Theses**


Selected Invited Presentations

- Statistical Society of Canada Biostatistics Section Annual Workshop (June 2020), Ottawa, Canada (Online) “Introduction to Epidemic Modelling”

- Invited talk at the Department of Mathematics & Statistics, York University, Canada (March 2020) “Parameterization via emulation: Spatial models of infectious disease transmission”

- Plenary talk at the Annual Meeting of Alberta Statisticians, University of Calgary, Calgary, Canada (Sept. 2019) “Approximate Bayesian computation for epidemic models with uncertain underlying contact networks”


- Invited talk at the International Conference on Econometrics and Statistics (EcoSta), Taichung, Taiwan (June 2019) “Parameterization via emulation: Spatial models of infectious disease transmission”

- Invited talk at the Canadian Student Statistical Conference, University of Calgary, Calgary, Canada (May 2019) “The O’Brien Institute for Public Health (OIPH) & The University of Calgary Biostatistics Centre (UCBC)”

- Invited talk at the Statistical Society of Canada Annual Meeting, University of Calgary, Calgary, Canada (May 2019) “NSERC Discovery Grant Workshop” (co-presented with Michelle Payne, NSERC Program Officer)

- Invited discussant for the “Rocky Mountain and Atlantic Collaborations in the Health Sciences” session at the Statistical Society of Canada Annual Meeting, University of Calgary, Calgary, Canada (May 2019)

- Invited talk at the Department of Biostatistics, University of Iowa, Iowa City, USA (December 2018) “Parameterization via emulation: spatial models of infectious disease transmission”

- Invited talk at BIRS workshop on Mathematical and Statistical Challenges in Bridging Model Development, Parameter Identification and Model Selection in the Biological Sciences, Banff, Canada (November 2018) “Emulation-based methods for parameterizing spatial infectious disease models”


- Invited talk at the International Environmentrics Society Meeting, Guanajuato, Mexico (July 2018) “Spatial infectious disease models incorporating aggregate-level spatial structure.”

- Plenary talk at the Medical Physics & Data Analytics Workshop, University of British Columbia-Okanagan, Canada (July 2018) “Bayesian optimal design for nonlinear systems: case studies from infectious disease epidemiology.”

- Invited talk at the Western North American Region of The International Biometric Society (WNAR-IBS) /Institute of Mathematical Statistics (IMS) Joint Conference, University of Alberta, Edmonton, Canada (June 2018) “Approximating the spatio-temporal dynamics of infectious disease via emulation”
• Short course at the Western North American Region of The International Biometric Society (WNAR-IBS) /Institute of Mathematical Statistics (IMS) Joint Conference, University of Alberta, Edmonton, Canada (June 2018) “Individual-level Transmission Process Modelling: Epidemics, Invasive Species and Beyond.”

• Invited talk at the Workshop for Causal Adjustment in the Presence of Spatial Dependence, Centre de Recherches Mathématiques, Montréal, Canada (June 2018) “Spatial models of infectious disease transmission: data and computation.”

• Invited talk at the University of Calgary Veterinary Medicine Research Festival, Calgary, Canada (May 2018) “R Software for individual-level transmission modelling.”

• Invited talk at MacDATA Institute, McMaster University (Nov. 2017) “Approximating the spatio-temporal dynamics of infectious disease via emulation.”

• Invited talk at GEOMED Conference, Porto, Portugal (Sept. 2017) “Individual-level infectious disease models incorporating aggregate level spatial structure”

• Invited talk at the Joint Statistical Meetings, Baltimore, USA (Aug. 2017) “Individual-level infectious disease models incorporating aggregate level spatial structure”

• Two-day post-conference workshop at the Canadian Veterinary Epidemiological and Preventive Medicine (CAVEPM) Conference (June 2017), University of Calgary, Calgary, Canada “Bayesian Infectious disease modeling”

• Keynote talk at the Calgary Applied and Industrial Mathematical Sciences Conference, Calgary, Canada (May 2017) “An introduction to Bayesian individual-level infectious disease modelling”

• Plenary talk at the Alberta Mathematics Dialogue Conference, MacEwen University, Edmonton, Canada (April 2017) “An introduction to individual-level infectious disease modelling within a Bayesian statistical framework”

• Invited talk at the Department of Epidemiology, Biostatistics & Occupational Health, McGill University, Montréal, Canada (Jan. 2017) “Inferring the spatial dynamics of infectious disease via Gaussian process emulation”

• Invited talk at BIRS Workshop on Mathematical Biology for Understanding Emerging Infectious Diseases at the Human-Animal-Environment Interface: a One Health Approach, Banff, Canada (Nov 2016) “Real Time Modelling of Epidemics (A Statistician’s Perspective)”

• Invited talk at Joint Statistical Meetings, Chicago, USA (July 2016) “Gaussian process emulation for spatial infectious disease models”

• Invited talk at International Workshop on Applied Probability (IWAP), Toronto, Canada (June 2016) “Approximate Bayesian computation for epidemic models with uncertain underlying contact networks”

• Invited talk at the Statistical Society of Canada Annual Meeting, Brock University, St. Catharines, Canada (May 2016) “Infectious disease modelling in the presence of underlying contact network uncertainty”

• Invited talk at the Pacific Institute of Mathematical Sciences (PIMS), Calgary, Canada (May 2016) “Bayesian study design for non-linear systems: a disease transmission experiment case study”

• Invited talk at National University of Singapore, Singapore (April 2016) “Emulator-based inference for models of large-scale infectious disease systems.”
• Invited talk at School of Public Health, University of Hong Kong, Hong Kong (March 2016) “Optimal experimental and study design for infectious disease systems of animals.”

• Invited talk at Simon Fraser University, Canada (Feb. 2016) “Approximate Bayesian inference for large-scale epidemic models.”


• Invited talk at GEOMED Conference, University of Florence, Italy (Sept. 2015) “Approximate inference for spatial epidemic models.”

• Invited talk at Bioinformatics Symposium, University of Calgary, Canada (May 2015) “Computational statistics, disease modelling and design.”

• Invited talk at Descriptive and Predictive Methods in the Study of Communicable Diseases: Biomathematics & Biostatistics Workshop, University of Guelph/Fields Institute, Guelph, Canada (May 2015) “Emulator based inference for models of large-scale infectious disease systems.”

• Invited talk at Evidence-based Decision Support for Food Security Workshop, University of Warwick, Coventry, UK (April 2015) “Emulator based inference for models of large-scale infectious disease systems.”

• Invited talk at Harvard School of Public Health, Boston, USA (March 2015) “Bayesian optimal design methods for infectious disease transmission studies.”

• Invited talk at University of Calgary (Community Health Sciences), Canada (Feb. 2015) “A Bayesian approach to infectious disease transmission modelling – dealing with uncertainty.”

• Invited talk at University of Victoria, Canada (Jan. 2015) “Sampling-based approximate inference for large-scale infectious disease transmission models.”

• Invited talk at OMAFRA Emergency Management Expo, Guelph, Canada (Dec. 2014) “Using experimental design to better understand infectious disease spread in the livestock industries.”

• Invited talk at University of Calgary (SAGE/Biostatistics, Mathematics & Statistics), Canada (Nov 2014) “The ABCs of infectious disease modelling.”

• Invited talk at 36th Annual Meeting of Alberta Statisticians, Edmonton, Canada (Oct 2014) “Bayesian optimal design of disease transmission experiments (and other issues in disease modelling).”

• Invited talk at Statistical Society of Canada Annual Meeting, Toronto, Canada (May 2014) “Optimal experimental design for infectious disease systems of animals.”

• Invited talk at Simulation Models of Infectious Diseases (SIMID) Workshop, Hasselt, Belgium (April 2014) “Optimal experimental design for infectious disease systems of animals.”

• Invited talk at University of Calgary, Canada (April 2014) “Optimal experimental design for infectious disease systems of animals.”

• Invited talk at University of Prince Edward Island, Canada (Dec 2013) “Data uncertainty in herd-level infectious disease transmission modelling.”

• Invited talk at the Statistical Science in Society Conference, University of Waterloo, Canada (August 2013) “Approximate methods of parameter estimation for spatial epidemic models.”
• Invited talk at the International Environmetrics Society Meeting, Anchorage, Alaska, USA (June 2013) “Parameterizing individual-level models of infectious disease spread using sampling-based likelihood approximations.”

• Invited talk at University of Windsor, Canada (Oct 2012) “Efficient forms of individual-level models for large-scale spatial infectious disease.”

• Invited talk at Statistical Society of Canada Annual Meeting, Guelph, Canada (June 2012) “Efficient forms of individual-level models for large-scale spatial infectious disease.”

• Invited talk at Fields Institute (IDEA Seminar), Toronto, Canada (April 2012) “A Bayesian approach to dealing with uncertainty in infectious disease modelling.”

• Invited talk at McMaster University, Canada (Feb 2012) “Efficient forms of individual-level models for large-scale spatial infectious disease.”

• Invited talk at University of Manitoba (Jan 2012) “Computationally efficient forms of spatial infectious disease models for large populations.”

• Invited talk at University of Warwick, UK (Nov 2011) “Latent conditional individual level models for infectious disease modelling.”

• Invited talk at University of Toronto, Canada (Oct 2011) “Efficient forms of individual-level models for large-scale spatial infectious disease.”

• Invited talk at OMAFRA Emergency Management Expo, Guelph, Canada (Sept 2011) “A statistical approach to modelling infectious diseases.”

• Invited talk at University of Saskatoon, Canada (Aug 2011) “Individual-level models of infectious disease.”

• Invited talk at BIRS Workshop on Front propagation in heterogeneous media: mathematical, numerical, and statistical issues in modelling a forest fire front, Banff, Canada (Oct 2010) “Modelling the spatio-temporal dynamics of fire spread.”

• Invited talk at NICDS workshop, University of Montréal, Canada (March 2010) “Finite mixtures of infectious disease models.”

• Invited talks at University of McGill, Canada (Dec 2009) “Likelihood-free inference for epidemic models” & “Individual-level modelling of infectious diseases.”

• Invited talk at Statistical Society of Canada conference, Vancouver, Canada (June 2009) “Likelihood-free inference for epidemic models.”

• Invited talk at University of Toronto, Canada (Jan 2009) “Likelihood-free inference for epidemic models.”


• Invited talk at University of Waterloo, Canada (Sept 2007) “Modelling the spatio-temporal dynamics of the UK 2001 foot-and-mouth epidemic.”

• Invited talk at Public Health Agency of Canada, Guelph, Canada (May 2007) “The statistical modelling of infectious diseases in time and space.”
• Invited talk at the SSC Southern Ontario New Investigator Workshop, University of Waterloo, Canada (February 2007) “The statistical modelling of infectious diseases in time and space”

• Invited talk at the Department of Population Medicine, Ontario Veterinary College, University of Guelph, Canada (November 2006) “Modelling infectious diseases over time and space”

• Invited talk at the European Meeting of Statisticians, Torun, Poland (July 2006) “Modelling the UK 2001 foot-and-mouth epidemic” (as part of MCMC Applications session).


• Invited talk at Lund University, Sweden (March 2005) “The UK 2001 Foot-and-mouth Disease Epidemic (A Case Study in Individual Level Spatial Epidemiology).”

• Invited talk at the Imperial College London, UK (June 2004) “Modelling the UK 2001 Foot-and-Mouth Epidemic: A Bayesian MCMC Approach”

• Invited talk at the MRC-Biostatistics Unit, University of Cambridge, UK (March 2004) “The UK 2001 Foot-and-mouth Disease Epidemic (A Case Study in Individual Level Spatial Epidemiology)”


• Invited talk at the Department of Mathematics & Statistics, Queen Mary, University of London (May 2000) “The use of an airborne plant disease dispersal simulation in designing agricultural experiments which minimise representation bias”