Research Group

Current Members

Mark Lowerison (PhD candidate, Biostatistics) (Sept. 2015 –)

Modelling cattle movement networks
Co-supervised with Herman Barkema, University of Calgary

Kamso Mohammed Mujaab (PhD candidate, Biostatistics) (Sept. 2018 –)

Bayesian clinical trials & network meta-analyses
Co-supervised with Glen Hazelwood, University of Calgary

Tahmina Akter (PhD Candidate, Biostatistics) (Sept. 2019 –)

Variable selection in infectious disease models

Chinmoy Rahul Roy (PhD student, Biostatistics) (Sept. 2019 –)

Non-parametric spatial infectious disease models

Madeline Ward (PhD student, Biostatistics) (Sept 2020 –)

Behavioural-change individual-level models of disease transmission
Co-supervised with Lorna Deeth, University of Guelph

Ruoyu Li (PhD student, Biostatistics) (Jan 2022 –)

Hospital-acquired antimicrobial resistant infections
Co-supervised with Jenine Leal, University of Calgary

Mili Roy (PhD student, Biostatistics) (March 2022 –)

Joint Modelling of Correlated Data
Co-supervised with Tolu Sajobi, University of Calgary

Yirao Zhang (PhD student, Biostatistics) (Sept 2022 –)

Composite spatial individual-level models of disease transmission
Co-supervised with Lorna Deeth, University of Guelph

Haysn Hornbeck (PhD candidate, Computer Science) (Sept. 2022 –)

Curve-fitting approaches to COVID-19 forecasting
Co-supervised with Usman Alim, University of Calgary

Jeffrey Peitsch (MSc student, Biostatistics) (Sept 2023 –)

TBD
Co-supervised with Gyanendra Pokharel, University of Winnipeg

Evans Mensah (MSc student, Biostatistics) (Sept 2023 –)

TBD

Salha Qahl (MSc student, Biostatistics) (Sept 2022 –)

Classification-based inference for infectious disease systems

Matthew Baxter (MSc student, Artificial Intelligence) (Sept 2021 –)

Machine learning-based inference for epidemic models
Co-supervised with Lorna Deeth, University of Guelph

Past Members

Raja Ben Hajria (Postdoctoral Research Fellow) (Fall 2021 – Fall 2023)

Hidden Markov Individual-level Models of Disease Transmission
Co-supervised with Alex Schmidt, McGill University

Caitlin Ward (Postdoctoral Research Fellow) (Fall 2021 – Fall 2022)

Behavioural-change individual-level models of disease transmission
Co-supervised with Alex Schmidt, McGill University

David Vickers (Postdoctoral Research Fellow) (Fall 2021 – Fall 2022)

Modelling COVID-19 pandemic spread
Co-supervised with Tyler Williamson, UCalgary

Leila Amiri (Postdoctoral Research Fellow) (Fall 2019 – Fall 2021)

Spatial models for infectious disease transmission in hetereogeneous systems
Co-supervised with Mahmoud Torabi, University of Manitoba

Mojtaba Pasha (Postdoctoral Research Fellow) (Summer 2019 – Summer 2021)

Optimal design of control charts

(Grace) Pui Sze Kwong (Postdoctoral Research Fellow) (Fall 2009 – Fall 2014)

Spatio-temporal analysis of porcine respiratory and reproductive syndrome in Ontario /
Efficient forms of individual level models for infectious disease spread

Gyanendra Pokharel (Postdoctoral research fellow) (May 2015 – July 2018)

Approximate methods of inference for spatial infectious disease models /
Bayesian clinical trials and patient centred medicine

Vineetha Warriyar (Postdoctoral research fellow) (May 2016 – Aug 2018)

Democratizing complex infectious disease data analysis

Lorna Deeth (PhD, Statistics) (Fall 2007 – Winter 2013)

Latent-conditional models of infectious disease and related topics

Lin Zhang (PhD, Statistics) (Fall 2009 – Fall 2013)

Time-varying individual-level infectious disease models

Jourdan Gold (PhD, Statistics) (Fall 2008 – Winter 2015)

Computational inference for network-based individual-level models of disease transmission
Co-supervised with Zeny Feng, University of Guelph

Rajat Malik (PhD, Statistics) (Fall 2010 – Winter 2015)

Sampling-based likelihood approximations for infectious disease models and related topics

Nadia Bifolchi (PhD, Statistics) (Fall 2010 – Winter 2015)

Individual-level models for use with incomplete infectious disease data and related topics
Co-supervised with Zeny Feng, University of Guelph

Gyanendra Pokharel (PhD, Statistics) (Fall 2011 – Winter 2015)

Back-calculation, classification & emulation-based inference for spatial disease models

Razvan Romanescu (PhD, Statistics) (Fall 2012 – Summer 2016)

Modelling heterogeneity in infectious disease systems for inference and monitoring

Waleed Almutiry (PhD, Statistics) (Jan 2014 – Aug 2018)

Network uncertainty in infectious disease systems

Justin Angevaare (PhD, Statistics) (Fall 2014 – Fall 2020)

Infectious disease models incorporating pathogen genomic sequence data
Co-supervised with Zeny Feng, University of Guelph

Carolyn Augusta (PhD, Statistics) (Fall 2014 – Fall 2020)

Deep learning of infectious disease systems
Co-supervised with Graham Taylor, University of Guelph

Syed Ali Naqvi (PhD, Biostatistics) (Sept. 2017 – Dec. 2021)

Machine learning tools for understanding mastitis epidemiology
Co-supervised with Herman Barkema, University of Calgary

Md. Mahsin (PhD candidate, Statistics) (Sept. 2015 – June 2022)

Modelling spatial heterogeneity in infectious disease data

Babak Habibzadeh (MSc, Statistics & URA) (Fall 2009)

Misspecification of latent and infectious periods in space-time infectious disease models

Hau Yi (Helen) Chung (MSc, Statistics) (Winter 2009)

Individual-level models applied to an equine-influenza outbreak

Sanjeena Dang (née Subedi) (MSc, Statistics & URA) (Summer 2009)

SNP selection methods: modelling the expected breeding value of Holstein Cattle

Abbie Gardener (MSc, Statistics & URA) (Summer 2010)

Goodness-of-fit measures for individual-level infectious disease models in a Bayesian framework

Irene Vrbik (MSc, Statistics) (Summer 2010)

Modelling the spatio-temporal dynamics of combustion

Daria (Dasha) Martchenko (MSc, Statistics) (Winter 2011)

Designing experiments to assess the spatio-temporal dynamics of crop disease.

Mingying Fang (MSc, Statistics) (Summer 2011)

Generalizing individual-level models of infectious disease spread

Xuan Fang (MSc, Statistics) (Winter 2012)

Computational gains via a discretization of the parameter space in individual-level models of infectious disease

Angie Dobbs (MSc, Statistics) (Winter 2012)

On computational efficiency and model approximation for spatial individual-level infectious disease models

Longyao (Chloe) Cai (MSc, Statistics) (Fall 2011 – Winter 2013)

Logistic growth models for estimating vaccination effects in transmission experiments

Carolyn Augusta (MSc, Statistics) (Sept 2012 – Summer 2014)

Fast inference for spatial infectious disease models

Lea Enns (MSc, Statistics) (Fall 2014 – Fall 2015)

Individual level models of infectious disease transmission for animal experiments

Susannah Ripley (USRA) (Summer 2014)

Random forest-based insect species identification

Anu Stanley (MSc, Statistics & URA) (Fall 2013 – Winter 2015)

Early prediction of seasonal influenza using school absenteeism data

Tahsin Ferdous (MSc, Biostatistics) (Sept. 2017 – Sept 2019)

On the effect of ignoring within-unit infectious disease dynamics when modelling spatial transmission

Behnaz Jafari (MSc, Statistics) (Sept. 2017 – Jan 2020)

Bias in individual-level infectious disease models

Thet Nyein (MSc student, Statistics) (Sept 2021 – June 2023)

Data subset-based methods of inference for spatial epidemic models
Co-supervised with Lorna Deeth, University of Guelph

Danika Lipman (MSc student, Statistics) (Sept 2022 – August 2023)

A Bayesian variable selection model for semi-continuous responses using Gaussian process
Main supervisor: Thierry Chekouo, University of Minnesota

William Lee (URA) (May 2016 – Dec. 2016)

Analysis of infectious disease surveillance data

Madeline Ward (URA) (May 2018 – Aug 2018)

Approaches to disease surveillance using predictive covariates
Co-supervised with Lorna Deeth, University of Guelph

Arthur Novaes de Amorim (RA) (May 2019 – April 2020)

Predicting magnitude, timing, peak and duration of influenza at ER level
Co-supervised with Vineet Saini, Alberta Health Services

Zeyi Liu (RA) (March 2020 – Nov. 2020)

Spatial metapopulation models of Covid-19

Emil Hodzic-Santor (URA) (May 2022 – Aug 2022 & May 2023 – Aug 2023)

Edge effects in spatial epidemic models

Scott Hunt (PhD student – withdrew) (Fall 2012 – Spring 2014)

Bayesian optimal design of animal transmission experiments

Tulsi Paudel (PhD student – withdrew) (Fall 2012 – Jan 2016)

Identifying super-spreaders in spatial infectious disease systems