Research Group

Dirk Douwes-Schultz (CANSSI Distinguished PDF) (Sept 2024 –)

Hidden Markov Spatial Epidemic Models
Co-supervised with Alex Schmidt, McGill University

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

Modelling emerging infectious disease epidemics
Co-supervised with Herman Barkema, University of Calgary

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

Variable selection in 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

Sorif Hossein (PhD student, Biostatistics) (Sept 2024 –)

TBD
Co-supervised with Gyanendra Pokharel, University of Winnipeg

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

Directional spatial individual-level models of disease transmission
Co-supervised with Gyanendra Pokharel, University of Winnipeg

Parker Wieck (MSc student, Statistics) (Sept 2024 –)

TBD

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 (CANSSI Distinguished PDF) (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, Statistics) (Sept. 2015 – June 2022)

Modelling spatial heterogeneity in infectious disease data

Kamso Mohammed Mujaab (PhD, Biostatistics) (Sept. 2018 – May 2024)

A novel semi-automated approach for trial identification and evaluation of the certainty of evidence from network meta-analyses
Co-supervised with Glen Hazelwood, University of Calgary

Chinmoy Rahul Roy (PhD student, Biostatistics) (Sept. 2019 – Sept. 2024)

Non-parametric spatial infectious disease models

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 processes

Main supervisor: Thierry Chekouo, University of Minnesota

Matthew Baxter (MSc student, Artificial Intelligence) (Fall 2021 – Winter 2023)

Parameter estimation using random forests for two-stage individual-level models of infectious disease spread

Co-supervised with Lorna Deeth, University of Guelph

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 (GRA) (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 (GRA) (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

Evans Mensah (GRA) (Nov 2023 – June 2024)

Forecasting with behavioural-change population-level epidemic models

Jensen MacLean (URA student) (May 2024 –)

Detecting behavioural-change in historic epidemic data
