TANYA PHILIPPSEN

Department of Mathematics & Statistics | University of Victoria

EDUCATION

Master of Science, Applied Mathematics   **Jan 2021 – present**

University of Victoria, Victoria, British Columbia

- *Supervisors: Dr. Junling Ma & Dr. Pauline van den Driessche*

Master of Public Health   **Sep 2013 – Aug 2015**

University of Waterloo, Waterloo, Ontario

- *MPH CAPSTONE: Developed a strategic communication plan with policy recommendations for Health Canada to address the risks of e-cigarette use in youth*

Bachelor of Science, Microbiology   **Sep 2005 – Apr 2008**

University of Victoria, Victoria, British Columbia

RESEARCH & WORK EXPERIENCE

Research Assistant   **Jan 2021 – present**

University of Victoria, Victoria, British Columbia

- Developing, extending, and analyzing a mathematical model for contact tracing of COVID-19 in British Columbia (MSFHR funded)
- Collaborating on publications related to early warning systems for emerging diseases

Teaching Assistant (Marker-Mathematics & Statistics)   **Sep 2021 – Apr 2022**

University of Victoria, Victoria, British Columbia

Epidemic Data Analyst   **Jul 2016 – Aug 2020**

Metabiota, Nanaimo, BC/San Francisco, California

- Collected, coded, reviewed, and cleaned historic and near real-time open-source disease outbreak surveillance data for inclusion in Metabiota's epidemic modeling platform
- Led the ongoing development and initial evaluation of an automated near real-time emerging outbreak event detection system
- Developed RStudio software coding skills to effectively clean, extract and analyze relevant data from large quantitative and unstructured text-based data sets
- Supported the data science team with literature searches and data collection
- Completed a literature review on emerging respiratory pathogens

Independent Research Contractor   **Jul 2015 – Aug 2015**

Rural and Remote Division of Family Practice, British Columbia

- Researched and wrote a comprehensive literature review to provide evidence and best practices for implementing adult day services in rural and remote communities

MPH Practicum Student   **Jan 2015 – Apr 2015**

Island Health, Courtenay, British Columbia

- Researched and wrote a comprehensive literature review to inform the implementation of a culturally safe and patient-centred health delivery model on Northern Vancouver Island

PUBLICATIONS

- Bednarski S, Cowen LLE, Ma J, **Philippsen T**, van den Driessche, P & Wang M. (2022). A Network SIR Contact Tracing Model for Randomly Mixed Populations. *Journal of Biological Dynamics, 16*(1), 859-879. https://doi.org/10.1080/17513758.2022.2153938

- Badker R, Miller K, Pardee C, Oppenheim B, Stephenson N, Ash B, **Philippsen T,** Ngoon C, Savage P, Lam C & Madhav N. (2021). Challenges in reported COVID-19 data: best practices and recommendations for future epidemics. *BMJ Global Health, 6*(5), e005542. https://doi.org/10.1136/bmjgh-2021-005542

PRESENTATIONS & POSTERS

Computational and Mathematical Population Dynamics 6 (CMPD6)　　　**May 24, 2023**
University of Manitoba, Winnipeg, MB
- Talk Title: "A retrospective modelling analysis of the effect of control measures on the transmission of SARS-CoV-2 in Canada"

Applied Math Seminar　　　**November 8, 2022**
University of Victoria, Victoria, BC
- Talk Title: "A Contact Tracing SIR Model for Randomly Mixed Populations"
- Co-presenter: Manting Wang

MfPHest (Mathematics for Public Health Fest) – Poster Session　　　**October 26, 2022**
Fields Institute, Toronto, ON
- Poster Title: "A multi-group multi-patch SEIR model with control measures and health behaviours"

Workshop on Mathematical Ecology – Poster Session　　　**Aug 10, 2022**
Queen's University, Kingston, ON
- Poster Title: "A Network SIR Model for Contact Tracing in a Randomly Mixed Population"

CIHR COVID-19 Task Force Showcase　　　**Apr 7, 2022**
The Fields Institute for Research in Mathematical Sciences (Online)
- Talk Title: "A Network SIR Model for Contact Tracing in a Randomly Mixed Population"
  - Co-presenter: Manting Wang

PROFESSIONAL TRAINING

Workshop on Early Warning Systems for Emerging and Re-emerging Diseases　　　**January 2023**
Fields Institute, Toronto, ON

MfPHest (Mathematics for Public Health Fest)　　　**October 2022**
Fields Institute, Toronto, ON

Workshop on Mathematical Ecology　　　**Aug 2022**
Queen's University, Kingston, ON

Summer School in Nonlinear Dynamics for the Life Sciences　　　**May-Jun 2022**
The Centre for Applied Mathematics in Bioscience and Medicine (CAMBAM)

PIMS Western Canada Math Biology Spring Workshop　　　**May 2022**
Pacific Institute for the Mathematical Sciences/UBC-Okanagan

Summer Institutes in Statistics and Modeling in Infectious Diseases　　　**Jul 2019/Jul 2021**
University of Washington, Seattle, Washington

VOLUNTEER EXPERIENCE

Women in Science Peer Mentorship Program (Mentor)　　　**Sep 2022 – ongoing**
University of Victoria, Victoria, BC

MEMBERSHIPS

Canadian Society for Epidemiology and Biostatistics　　　**As of: Jun 2022**
- Student Member

The Fields Institute for Research in Mathematical Sciences　　　**As of: Mar 2022**
- Mathematics for Public Health (MfPH) Next Generation Member