

**Peter C. Jentsch**  
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*Research Interests:* Mathematical models of ecological and biological systems, dynamical systems, complex networks, scientific and high-performance computing, data visualization.

## Education

PhD, Applied Mathematics 09/2016 - 08/2021 (expected)  
*University of Waterloo*

Dissertation: *Coupled models of structured contagion processes in human-environment systems*

Hons. Bachelors of Mathematics 09/2011 - 08/2016  
*University of Waterloo*

## Journal Articles

**Jentsch PC**, Anand M, Bauch CT. Fire Mitigates Bark Beetle Outbreaks in Serotinous Forests. *Accepted, to appear in Theoretical Ecology*

**Jentsch PC**, Anand M, Bauch CT. Prioritising COVID-19 vaccination in changing social and epidemiological landscapes: a mathematical modelling study.. *The Lancet Infectious Diseases*. 2021 Mar 31.

**Jentsch PC**, Bauch CT, Yemshanov D, Anand M. Go big or go home: A model-based assessment of general strategies to slow the spread of forest pests via infested firewood. *PloS one*. 2020 Sep 15;15(9):e0238979.

**Jentsch PC**, Anand M, Bauch CT. Spatial correlation as an early warning signal of regime shifts in a multiplex disease-behaviour network. *Journal of theoretical biology*. 2018 Jul 7;448:17-25.

Pedro SA, Ndjomatchoua FT, **Jentsch P**, Tchuenche JM, Anand M, Bauch CT. Conditions for a Second Wave of COVID-19 Due to Interactions Between Disease Dynamics and Social Processes. *Frontiers in Physics*. 2020 Oct 9;8.

## Journal Articles (In prep)

Penny M, **Jentsch PC**, Anand M, Bauch CT. Enhancing seasonal influenza vaccinations using Bluetooth Exposure Notification apps. 2021.

## Conference Publications

**Jentsch PC**, Nehaniv CL. Analysis of Tetris as a Transformation Semigroup.  
*Accepted, proceedings of AMMCS2019*

**Jentsch PC**, Boukhtouta A. A Simulation Study Of Military Land Equipment Availability Under Corrective And Preventive Maintenance Regimes. In ECMS 2015 (pp. 373-379).

Boukhtouta A, **Jentsch P**. Support Vector Machine for Demand Forecasting of Canadian Armed Forces Spare Parts. In 2018 6th International Symposium on Computational and Business Intelligence (ISCBI) 2018 Aug 27 (pp. 59-64). IEEE.

## Conference Presentations

### Oral Communicatons

SMB Mathematical Epidemiology 02/2021  
*Prioritizing COVID-19 Vaccination in Changing Social and Epidemiological Landscapes*

Invited speaker, Joint Mathematics Meeting 2021, Washington D.C. 01/2021  
*Prioritizing COVID-19 Vaccination in Changing Social and Epidemiological Landscapes*

The Vth AMMCS International Conference, Wilfred Laurier University 08/2019  
*Tetris As An Introduction to Krohn-Rhodes and Semigroup Theory*

The Vth AMMCS International Conference, Wilfred Laurier University 08/2019  
*Fire Mediates Bark Beetle Outbreaks in Serotinous Forests*

### Poster Presentations

SMB 2019, Université de Montréal 07/2019  
*Fire Mediates Bark Beetle Outbreaks in Serotinous Forests*

CSEE 2018, University of Guelph 07/2018  
*Fire Mediates Bark Beetle Outbreaks in Serotinous Forests*

Interdisciplinary Conference on Resilience in Complex Natural and Human Systems, WICI University of Waterloo 05/2017  
*Spatial correlation as an early warning signal of regime shifts in a multiplex disease-behaviour network (award for best student poster)*

## Teaching

Lecturer, Introductory Calculus for Engineering (Math 116)	09/2020 - 12/2020
Teaching Assistant for introductory calculus, algebra, differential equations, mathematical biology, etc.	09/2016 - Present

## Other Employment

Forestry Geospatial Data Analyst <i>Canadian Forest Service, Natural Resources Canada</i>	06/2018 - 10/2019
NSERC Undergraduate Student Research Award <i>Department Of Applied Mathematics, University Of Waterloo</i>	09/2015 - 12/2015
Research Assistant <i>Defence Research and Development Canada, Toronto, Ontario</i>	05/2015 - 08/2015
Research Internship <i>Institute Of Systems Science, National University of Singapore, Singapore</i>	09/2014 - 12/2014
Time Series Analysis/Operations Research <i>Defence Research and Development Canada, Ottawa, Canada</i>	01/2014 - 04/2014

## Academic service

Reviewer for PLOS One	04/2018
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