

# TOM LOGAN

Industrial and Operations Engineering, University of Michigan, Ann Arbor, USA  
tomlogan@umich.edu [www.tomlogan.co.nz](http://www.tomlogan.co.nz)

## EDUCATION

### University of Michigan, Ann Arbor, USA

PhD in Industrial and Operations Engineering (expected) 2015 –

Advisor: Prof. Seth Guikema

Master of Arts in Statistics (expected) 2015 –

### Johns Hopkins University, Baltimore, USA

Master of Science in Geography and Environmental Engineering 2014 – 2015

### University of Canterbury, New Zealand

Bachelor of Science in Mathematics 2013 – 2014

Bachelor of Engineering in Natural Resources Engineering with First Class Honours 2010 – 2013

## SELECTED AWARDS

Santa Fe Institute alum, [Complex Systems Summer School](#) 2017

Technical poster prize 4<sup>th</sup> place Civil & Environmental Engineering. [Michigan Engineering Graduate Symposium](#). 2016

[Fulbright New Zealand](#) Science and Innovation Graduate Award 2013

First Prize in Sophomore Civil & Natural Resource Engineers' Communication Portfolio 2011

University of Canterbury's Emerging Leaders' Scholarship 2010

## JOURNAL PUBLICATIONS

Logan, T. M., Bricker, J. D., and Guikema, S. D. (*in progress*). "Hard-defenses fail to improve urban resilience in the face of natural disasters."

Bordley, R. F., Logan, T. M., and Pollock, S. (*under review*). "Reducing the Underestimation Bias in PERT/CPM's Calculation of Schedule Risk."

Logan, T. M., Williams, T. G., Nisbet, A. J., Liberman, K. D., Zuo, C. T., and Guikema, S. D. (*under review*). "Assessing parcel-resolution multi-modal accessibility to core services."

Logan, T. M., McLeod, S., and Guikema, S. "[Predictive models in horticulture: A case study with Royal Gala apples](#)." *Scientia Horticulturae*, 209, 201-213 2016

## CONFERENCE PRESENTATIONS

Logan, T. M. and Guikema, S. D. (2017). "Urban development alongside ¿man-made? disasters." 2017  
*Michigan University-Wide Sustainability and Environment (MUSE) Conference*.

Logan, T. M., Williams, T. G.\*, Nisbet, A. J., Liberman, K. D., Zuo, C. T., and Guikema, S. D. (2017). 2017  
"Assessing parcel-resolution multi-modal accessibility to core services." *Michigan University-Wide Sustainability and Environment (MUSE) Conference*.

Logan, T. M., Guikema, S., O'Meara, K., Zaitchik, B.F., Liberman, K., Zuo, C., and Nichols, R. 2016  
"Turning up the heat on urban temperature data." *Society of Risk Analysis Annual Meeting*, San Diego.

Logan, T. M., Bricker, J., and Guikema, S. "Tsunamis, seawalls, and memory: urban development alongside natural hazards." *INFORMS Annual Conference*, Nashville. 2016

Logan, T. M., McLeod, S., and Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." *Joint Statistical Meeting*, Chicago. 2016

Logan, T. M., McLeod, S., and Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." *INFORMS Annual Conference*, Philadelphia. 2015

Zaitchik, B.F.\*, O'Meara, K.\*, Guikema, S.D., Scott, A., Bessho, A., and Logan, T.M. "*Visualizing and Understanding Socio-Environmental Dynamics in Baltimore*." Proc., American Geophysical Union Fall Meeting 2015

\* indicates presenting author, when not first

## POSTER PRESENTATIONS

- Logan, T. M., Bricker, J., and Guikema, S. "Tsunamis, seawalls, and memory: urban development alongside natural hazards." *Michigan Engineering Graduate Symposium*, Ann Arbor. 2016
- Logan, T. M., McLeod, S., and Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." *Joint Statistical Meeting*, Chicago. 2016
- Logan, T. M., McLeod, S., and Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." *Michigan Student Symposium for Interdisciplinary Statistical Sciences*, Ann Arbor. 2015

## TEACHING EXPERIENCE

- IOE 460: Decision Analysis**, *Graduate Student Instructor*, University of Michigan 2016
- IOE 460: Decision Analysis**, *Substitute Lecturer*, University of Michigan 2015  
Lectured introduction to probability
- 570.210: Computational, Mathematical Modelling**, *Guest Lecturer*, Johns Hopkins University 2015  
Lectured statistical inference
- ENCN304: Deterministic Mathematical Methods**, *Guest Lecturer*, University of Canterbury 2014  
Lectured vector spaces, systems of differential equations and surface integrals
- ENCN304: Deterministic Mathematical Methods**, *TA Coordinator*, University of Canterbury 2014  
Prepared homework assignments, managed TA hours and grading, held tutorial sessions
- ENCN305: Stoch. Modelling and Programming**, *Teaching Assistant*, University of Canterbury 2014  
Held review sessions, MATLAB computer tutorials, graded assignments
- EMTH171: Math Modelling and Computation**, *Teaching Assistant*, University of Canterbury 2013  
Held weekly MATLAB tutorials
- EMTH210: Engineering Mathematics 2**, *Teaching Assistant*, University of Canterbury 2011-2014  
Graded, and held tutorials on multivariable integral and differential calculus, linear algebra, and statistics with engineering applications.

## AFFILIATIONS

- [American Statistical Association \(AMSTAT\)](#) 2016 –
- [Institute for Operations Research and Management Sciences \(INFORMS\)](#) 2015 –  
Secretary, Student Chapter at the University of Michigan (2017)
- [Society for Risk Analysis \(SRA\)](#) 2015 –
- [American Society of Civil Engineers \(ASCE\)](#) 2015 –
- [Generation Zero](#), New Zealand 2014  
Transportation Team Leader, Christchurch
- [Engineers Without Borders New Zealand \(EWBNZ\)](#) 2012 – 2017  
IT assistant (2012 – 2017)  
Newsletter Editor (2013 – 2015)  
President Canterbury Students' Chapter (2013)

## EXPERIENCE

- First Quartile Consulting**, *Data Consultant* 2016  
Predictive modelling and data compilation.
- Michigan Student Symposium for Interdisciplinary Statistical Sciences**, *Organising Committee* 2016 -2017
- Beca Infrastructure Ltd.**, *Engineering Technician*, Christchurch 2012  
Water team: technical drawing management, winery wastewater regulation, other projects
- Fulton Hogan Christchurch Southern Motorway Project Team**, *Student Engineer* 2011  
Labouring, surveying, quality assurance, and other jobs as required.
- Abley Transportation Consultants**, *Technical Assistant*, Christchurch 2011  
I wrote Python code to process NZ transport survey data and conducted traffic surveys.
- Student Bookshelf Ltd.**, *Director*, New Zealand 2011 - 2013  
Co-founder of the online textbook store. Jointly responsible for inventory management, accounting, deliveries.

## KEY STRENGTHS

### Activator

I like to turn ideas into action. I can motivate and energise myself and others into seeing things happen.

### Relator

I enjoy working with other people, and seeing them realise their goals. I invest a lot of energy in assisting my team mates, colleagues, and students succeed.

### Focus

I can take a direction, follow through, and stay on track. I have a strong work ethic and am organised, often planning weeks ahead. I can happily work independently, and I know where to look for help if I need it.

### Leadership

These strengths make a good leader because I can work with people to identify their strengths, goals, and a direction in which to proceed to succeed.

## SKILLS

### Programming

Experienced: Python • R

Familiar: Bash • SQL • HTML

### Tools/Applications

MATLAB • Adobe CS • MS Office • ArcGIS

## OTHER AWARDS

Conference Travel Grant, Rackham Graduate School, University of Michigan	2017
Professional Development Grant, Rackham Graduate School, University of Michigan	2017
Poster prize for 1st in department. <a href="#">Michigan Student Symposium for Interdisciplinary Statistical Sciences</a> .	2016
<a href="#">Gordon Croft Fellowship</a> from JHU Environment, Energy, Sustainability, Health Institute	2014
Dean Robert H. Roy Fellowship for graduate study at Johns Hopkins University	2014
<a href="#">John R Templin Trust</a> Postgraduate Scholarship	2013
Allan Wilson Centre Research Scholarship	2013
Environment Canterbury Prize in Natural Resources Engineering	2012
Tonkin and Taylor Prize for Hydrology and Hydraulic Engineering	2012
First Prize in Sophomore Civil & Natural Resource Engineers' Communication Portfolio	2011
University of Canterbury's Mathematics Research Scholarship	2010