

TOM LOGAN

Industrial and Operations Engineering, University of Michigan, Ann Arbor, USA
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EDUCATION

University of Michigan , Ann Arbor, USA	
PhD in Industrial and Operations Engineering (expected)	Expected
<i>Advisor: Dr. Seth Guikema</i>	2019
Johns Hopkins University , Baltimore, USA	
Master of Science in Geography and Environmental Engineering	2015
University of Canterbury , New Zealand	
Bachelor of Science in Mathematics	2014
Bachelor of Engineering in Natural Resources Engineering with First Class Honours	2013

SELECTED AWARDS

Santa Fe Institute alum, Complex Systems Summer School	2017
Poster prize: 1st Industrial & Operations Engineering. Michigan Student Symposium for Interdisciplinary Statistical Sciences .	2016
Poster prize: 4 th 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

PEER-REVIEWED PUBLICATIONS

Logan, T. M., Bricker, J. D., and Guikema, S. D. (<i>in progress</i>). "Examining a coastal community's evolution and change in vulnerability subject to alternative natural hazard defenses."	
Bordley, R. F., Logan, T. M., and Pollock, S. (<i>under review</i>). "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. (accepted). "Evaluating urban accessibility: Leveraging open-source data and analytics to overcome previous limitations." <i>Environment and Planning B: Urban Analytics and City Science</i> .	2017
Logan, T. M., McLeod, S., and Guikema, S. " Predictive models in horticulture: A case study with Royal Gala apples ." <i>Scientia Horticulturae</i> , 209, 201-213	2016

CONFERENCE PRESENTATIONS

Logan, T. M. and Guikema, S. D. (2017). "Urban development alongside ¿man-made? disasters." <i>Michigan University-Wide Sustainability and Environment (MUSE) Conference</i> .	2017
Logan, T. M., Williams, T. G.*, Nisbet, A. J., Liberman, K. D., Zuo, C. T., and Guikema, S. D. (2017). "Assessing parcel-resolution multi-modal accessibility to core services." <i>Michigan University-Wide Sustainability and Environment (MUSE) Conference</i> .	2017
Logan, T. M., Guikema, S., O'Meara, K., Zaitchik, B.F., Liberman, K., Zuo, C., and Nichols, R. "Turning up the heat on urban temperature data." <i>Society of Risk Analysis Annual Meeting</i> , San Diego.	2016
Logan, T. M., Bricker, J., and Guikema, S. "Tsunamis, seawalls, and memory: urban development alongside natural hazards." <i>INFORMS Annual Conference</i> , Nashville.	2016
Logan, T. M., McLeod, S., and Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." <i>Joint Statistical Meeting</i> , Chicago.	2016
Logan, T. M., McLeod, S., and Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." <i>INFORMS Annual Conference</i> , Philadelphia.	2015
Zaitchik, B.F.*, O'Meara, K.*, Guikema, S.D., Scott, A., Bessho, A., and Logan, T.M. " <i>Visualizing and Understanding Socio-Environmental Dynamics in Baltimore</i> ." 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**, *Lecturer of Record*, University of Michigan 2017
- 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

- Michigan University-wide Sustainability and Environment (MUSE) Workshop**, *Co-convenor* 2017 -
- Michigan University-wide Sustainability and Environment (MUSE) Conference**, *Organising Committee, Logistics and marketing* 2017 -
- 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 , <i>Technical Assistant</i> , Christchurch	2011
I wrote Python code to process NZ transport survey data and conducted traffic surveys.	
Student Bookshelf Ltd. , <i>Director</i> , 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

Honourable mention, Industrial and Operations Engineering Bonder Fellowship , University of Michigan	2017
Conference Travel Grant, Rackham Graduate School, University of Michigan	2017
Professional Development Grant, Rackham Graduate School, University of Michigan	2017
Gordon Croft Fellowship from JHU Environment, Energy, Sustainability, Health Institute	2014
Dean Robert H. Roy Fellowship for graduate study at Johns Hopkins University	2014
John R Templin Trust 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

PROFESSIONAL SERVICE

Reviewer , <i>Journal of Risk Analysis</i>	2016 - present
Reviewer , <i>Journal of Infrastructure Systems</i>	2016 - present