

TOM LOGAN

Industrial and Operations Engineering, University of Michigan, Ann Arbor, USA
tomlogan@umich.edu www.tomlogan.co.nz adaptingcities.org

EDUCATION

University of Michigan , Ann Arbor, USA	
PhD in Industrial and Operations Engineering (expected)	Expected
Advisor: Dr. Seth Guikema	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. "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

NON-PEER-REVIEWED PUBLICATIONS

Logan, T. M., and Arnott, J. "You've got the power." <i>Nature</i> . doi: 10.1038/d41586-017-07261-1	2017
--	------

CONFERENCE PRESENTATIONS

Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness of adaptive measures in reducing long-term vulnerability to natural hazards." <i>Society of Risk Analysis Annual Meeting</i> , Arlington, VA	2017
Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness of adaptive measures in reducing long-term vulnerability to natural hazards." <i>Research Symposium 2017: Urban Environment. Environmental Science and Policy Program</i> . Michigan State University.	2017
Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness of adaptive measures in reducing long-term vulnerability to natural hazards." <i>INFORMS Annual Conference</i> , Houston.	2017
Williams, T. G., Logan, T. M., Liberman, K., Zuo, C., and Guikema, S. "How accessible are our cities? A cross-sectional analysis of access to green space." <i>INFORMS Annual Conference</i> , Houston.	2017
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. "Visualizing and Understanding Socio-Environmental Dynamics in Baltimore." <i>Proc., American Geophysical Union Fall Meeting</i>	2015

* indicates presenting author, when not first

POSTER PRESENTATIONS

Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness of adaptive measures in reducing long-term vulnerability to natural hazards." <i>University of Michigan Engineering Graduate Symposium</i> , Ann Arbor.	2017
Williams, T. G., Logan, T. M., Liberman, K., Zuo, C., and Guikema, S. "How accessible are our cities? A cross-sectional analysis of access to green space." <i>University of Michigan Engineering Graduate Symposium</i> , Ann Arbor.	2017
Williams, T. G., Logan, T. M., Liberman, K., Zuo, C., and Guikema, S. "How accessible are our cities? A cross-sectional analysis of access to green space." <i>Research Symposium 2017: Urban Environment. Environmental Science and Policy Program</i> . Michigan State University.	2017
Logan, T. M., Bricker, J., and Guikema, S. "Tsunamis, seawalls, and memory: urban development alongside natural hazards." <i>University of Michigan Engineering Graduate Symposium</i> , Ann Arbor.	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>Michigan Student Symposium for Interdisciplinary Statistical Sciences</i> , Ann Arbor.	2015

TEACHING EXPERIENCE

IOE 460: Decision Analysis , <i>Lecturer</i> , University of Michigan	2017
IOE 460: Decision Analysis , <i>Graduate Student Instructor</i> , University of Michigan	2016
IOE 460: Decision Analysis , <i>Substitute Lecturer</i> , University of Michigan Lectured introduction to probability	2015
570.210: Computational, Mathematical Modelling , <i>Guest Lecturer</i> , Johns Hopkins University Lectured statistical inference	2015
ENCN304: Deterministic Mathematical Methods , <i>Guest Lecturer</i> , University of Canterbury Lectured vector spaces, systems of differential equations and surface integrals	2014
ENCN304: Deterministic Mathematical Methods , <i>TA Coordinator</i> , University of Canterbury Prepared homework assignments, managed TA hours and grading, held tutorial sessions	2014
ENCN305: Stoch. Modelling and Programming , <i>Teaching Assistant</i> , University of Canterbury Held review sessions, MATLAB computer tutorials, graded assignments	2014
EMTH171: Math Modelling and Computation , <i>Teaching Assistant</i> , University of Canterbury Held weekly MATLAB tutorials	2013
EMTH210: Engineering Mathematics 2 , <i>Teaching Assistant</i> , University of Canterbury Graded, and held tutorials on multivariable integral and differential calculus, linear algebra, and statistics with engineering applications.	2011-2014

AFFILIATIONS

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

EXPERIENCE

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

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