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: S. 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

Honourable mention, Industrial & Operations Engineering Bonder Fellowship, University of Michigan — 2017

Poster prize: 1st Industrial & Operations Engineering. Michigan Student Symposium for Interdisciplinary Statistical Sciences. — 2016

Poster prize: 4th Civil & Environmental Engineering. Michigan Engineering Graduate Symposium. — 2016

Fulbright New Zealand Science and Innovation Graduate Award — 2013

PEER-REVIEWED PUBLICATIONS

Logan, T., Guikema, S., Bricker, J. "The role of behavior in undermining the effectiveness of adaptive measures in reducing long-term vulnerability to natural hazards." — *submitted*

Bordley, R., Logan, T., Pollock, S. "Reducing the Underestimation Bias in PERT/CPM's Calculation of Schedule Risk." Submitted to *Operations Research* — *submitted*

Logan, T., Williams, T., Nisbet, A., Liberman, K., Zuo, C. T., Guikema, S. D. "Evaluating urban accessibility: Leveraging open-source data and analytics to overcome previous limitations." *Environment and Planning B: Urban Analytics and City Science.* — 2017

Logan, T., McLeod, S., Guikema, S. "Predictive models in horticulture: A case study with Royal Gala apples." *Scientia Horticulturae*, 209, 201-213 — 2016

NON-PEER-REVIEWED PUBLICATIONS

Logan, T. M., and Arnott, J. "You've got the power." *Nature* — 2017

SKILLS

Programming

Experienced: Python • R

Familiar: Bash • SQL • HTML • Git

Tools/Applications

MATLAB • Adobe CS • MS Office • ArcGIS

INDUSTRY EXPERIENCE

First Quartile Consulting, *Data Consultant* — 2016

Predictive modelling and data compilation.

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

Surveying, quality assurance, labouring, and other jobs as required.

Abley Transportation Consultants, *Technical Assistant*, Christchurch — 2011

Python data analysis and traffic surveying.

Student Bookshelf Ltd., *Director*, New Zealand — 2011 - 2013
  Co-founder of the online textbook store. Jointly responsible for inventory management, accounting, deliveries.

TEACHING EXPERIENCE

IOE 316: Intro. to Markov Processes, *Graduate Student Instructor*, University of Michigan	2018
IOE 460: Decision Analysis, *Lecturer*, 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
570.210: Computational, Mathematical Modelling, *Guest Lecturer*, Johns Hopkins University	2015
ENCN304: Deterministic Mathematical Methods, *Guest Lecturer,* University of Canterbury	2014
ENCN304: Deterministic Mathematical Methods, *TA Coordinator,* University of Canterbury	2014
ENCN305: Stoch. Modelling and Programming, *Teaching Assistant,* University of Canterbury	2014
EMTH171: Math Modelling and Computation, *Teaching Assistant,* University of Canterbury	2013
EMTH210: Engineering Mathematics 2, *Teaching Assistant,* University of Canterbury	2011-2014

UNIVERSITY SERVICE

Industrial and Operations Engineering Department, *PhD mentor program co-coordinator*	2017 - 2019
Michigan University-wide Sustainability and Environment (MUSE) Workshop, Rackham Interdisciplinary Workshop, University of Michigan, *Co-convenor*	2017 – 2018
Michigan University-wide Sustainability and Environment (MUSE) Conference, *Organising Committee, Logistics*	2017 - 2018
Adventure Racing, Rogaining, and Orienteering Team, University of Michigan, *Founder and secretary*	2017 -
Institute for Operations Research and Management Science, Student Chapter at the University of Michigan, *Secretary*	2017
Michigan Student Symposium for Interdisciplinary Statistical Sciences, *Organising Committee*	2016 -2017
Epsilon Eta, Professional Environmental Fraternity, University of Michigan, *Graduate Advisor*	2015 -2017

PROFESSIONAL SERVICE

Reviewer, *Journal of Risk Analysis*	2016 - present
Reviewer, *Journal of Infrastructure Systems*	2016 - present
Project mentor, *Seattle City for All hackathon*, Seattle	2017

OTHER AWARDS

Conference Travel Grant, Rackham Graduate School, University of Michigan	2017
Professional Development Grant, Rackham Graduate School, University of Michigan	2017
Graduate Student Community Grant Program, College of Engineering, University of Michigan (x3)	2016- 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

University of Canterbury's Emerging Leaders' Scholarship   2010

OTHER CERTIFICATIONS AND TRAINING
Santa Fe Institute, Complex Systems Summer School   2017
New England Complex Systems Institute, Winter School   2015

AFFILIATIONS
Society for Risk Analysis (SRA)   2015 –
   Foundations of Risk Analysis Specialty Group
   Engineering and Infrastructure Specialty Group

Institute for Operations Research and Management Sciences (INFORMS)   2015 –
   Secretary, Student Chapter at the University of Michigan (2017)

American Statistical Association (ASA)   2016 –2017

American Society of Civil Engineers (ASCE)   2015 – 2017

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)

CONFERENCE PRESENTATIONS
Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness   2017
   of adaptive measures in reducing long-term vulnerability to natural hazards." *Society of
   Risk Analysis Annual Meeting*, Arlington, VA

Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness   2017
   of adaptive measures in reducing long-term vulnerability to natural hazards." *Research
   Symposium 2017: Urban Environment. Environmental Science and Policy Program.* Michigan
   State University.

Logan, T. M., Bricker, J., and Guikema, S. "The role of behavior in undermining the effectiveness   2017
   of adaptive measures in reducing long-term vulnerability to natural hazards." *INFORMS
   Annual Conference*, Houston.

Williams, T. G., Logan, T. M., Liberman, K., Zuo, C., and Guikema, S. "How accessible are our   2017
   cities? A cross-sectional analysis of access to green space." *INFORMS Annual Conference*,
   Houston.

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   2016
   alongside natural hazards." *INFORMS Annual Conference*, Nashville.

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

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

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

<div align="right">* indicates presenting author, when not first</div>

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." *University of Michigan Engineering Graduate Symposium*, 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." *University of Michigan Engineering Graduate Symposium*, 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." *Research Symposium 2017: Urban Environment. Environmental Science and Policy Program.* Michigan State University. — 2017

Logan, T. M., Bricker, J., and Guikema, S. "Tsunamis, seawalls, and memory: urban development alongside natural hazards." *University of 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

WORKING PAPERS

	Anticipated submission:
Aldarondo, F.J., Guikema, S.D., Logan, T.M. "Travel Time Prediction during Hurricane Evacuation: Jacksonville, Florida and Hurricanes Matthew and Irma." Intended for *International Journal of Digital Earth*'s Special Issue on "Social Sensing and Big Data Computing for Disaster Management"	March 2018
Guikema, S.D, Quiring, S.M., Buckstaff, K., Beck, M., McRoberts, B., Nateghi, R., Logan, T.M. "Storm Damage and Restoration Labor Estimation: An All-Weather Model." Intended for *IEEE Access*	January 2018
Flage, R., Guikema, S., Logan, T., Johnson, C., Kabir, E., Schell, K. "Conceptualizing and handling uncertainty in predictive data models for risk analysis." Intended for *Risk Analysis*	May 2018
Logan, T.M, Goodspeed, R., Guikema, S. "Perspective: Opportunities for risk analysts in urban planning." Intended for *Risk Analysis*	February 2018
Logan, T.M, Zaitchik, B., Guikema, S. "Drivers of urban land surface temperature: diurnal and nocturnal." Intended for *Remote Sensing of Environment*	July 2018
Logan, T. M., J. D. Bricker, and S. Guikema. "Black swans and maladaptation: when data can be dangerous." Intended for *Risk Analysis*	April 2018
White, A., Guikema, S., Logan, T.M., "Discriminatory Housing Practices and their Lasting Effects: A Spatial Analysis." Intended for *Environment and Planning B: Urban Analytics and City Science.*	June 2018
Williams, T.G., Logan, T. M., Zuo, C., Liberman, K., Guikema, S., "How accessible are our cities? A cross-sectional analysis of access to greenspace."	September 2018