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) 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

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

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*). "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. (*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. (*resubmitted*). "Evaluating urban accessibility: Leveraging open-source data and analytics to overcome previous limitations." 2017

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." *Michigan University-Wide Sustainability and Environment (MUSE) Conference.* 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." *Michigan University-Wide Sustainability and Environment (MUSE) Conference.* 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." *Society of Risk Analysis Annual Meeting*, San Diego. 2016

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, *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
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

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