Tim G Williams

Email: tgw@umich.edu
Website: https://tgwilliams.com/
Blog: https://reckoningrisk.com/

Objectives

My long-term goals are to advance the understanding of how coupled human-natural systems function, and to explore how we can influence these systems in a way that promotes both the betterment of society and the prosperity of the environment.

Education

University of Michigan	PhD in Industrial and Operations Engineering (expected) Advisor: Dr. Seth Guikema	2016-present
University of Canterbury New Zealand	Bachelor of Engineering with 1st class honors Natural Resources Engineering GPA 9.0 / 9.0	2012-2015
University of California, Berkeley	Exchange Program Civil and Environmental Engineering GPA 4.0 / 4.0	2015

Journal Publications

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 existing limitations." *Environment and Planning B – Urban Analytics and City Science*	2017
Zhou, J., Cenedese, C., **Williams, T.,** Ball, M., Venayagamoorthy, S., Nokes, R. "On the propagation of gravity currents over and through a submerged array of cylinders." *Journal of Fluid Mechanics*	2017

Conference Presentations

Williams, T.* "Computation and data science for food security" *Michigan University-Wide Sustainability and Environment (MUSE) Conference*	2019
Williams, T.*, Logan, T, Zuo, C., Liberman, K., and Guikema, S. "Parks and safety: a comparative study of green space access and its inequities in five US cities" *Michigan University-Wide Sustainability and Environment (MUSE) Conference*	2019
Williams, T.*, Guikema, S. "Modeling climate resilience in smallholder agricultural systems: an agent-based approach" *Society for Risk Analysis Annual Meeting*	2018

Williams, T.*, Guikema, S. "Modeling climate resilience in smallholder agricultural systems: an agent-based approach" *Sustainable Development Conference*	2018
Williams, T.*, Logan, T, Zuo, C., Liberman, K., and Guikema, S. "How accessible are our cities? A cross-sectional analysis of access to green space." *INFORMS Annual Meeting*	2017
Logan, T. M., **Williams, T. G.***, Nisbet, A. J., Liberman, K. D., Zuo, C. T., and Guikema, S. D. "Measuring accessibility to core urban services." *Michigan University-Wide Sustainability and Environment (MUSE) Conference.*	2017

* indicates presenting author

Poster Presentations

Williams, T.*, Guikema, S. "Modeling climate resilience in smallholder agricultural systems: an agent-based approach" *University of Michigan Engineering Graduate Symposium*	2018
Williams, T.*, Logan, T, Zuo, C., Liberman, K., and Guikema, S. "How accessible are our cities? A cross-sectional analysis of access to green space." *Michigan University-Wide Sustainability and Environment (MUSE) Conference.*	2018
Williams, T.*, Logan, T, Zuo, C., Liberman, K., and Guikema, S. "How accessible are our cities? A cross-sectional analysis of access to green space." *University of Michigan Engineering Graduate Symposium*	2017
Williams, T.*, Logan, T, Zuo, C., Liberman, K., 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

* indicates presenting author

Journal papers in progress

	Expected submission
Williams T.G., Guikema S.D., Brown D.G, Agrawal A. "Ignoring equifinality can have significant implications in agent-based models" intended for *Environment Modelling & Software*	May 2019
Williams T.G., Guikema S.D., Brown D.G, Agrawal A. "Modeling climate resilience in smallholder agricultural systems: an agent-based approach" intended for *Agricultural Systems*	May 2019
Williams T., Bakhtsiyarava M., Grace K., Guikema S. "Non-parametric analysis provides enhanced insight into food insecurity" intended for *PNAS*	June 2019
Williams T.*, Logan T., Zuo C., Liberman K., and Guikema S. "Parks and safety: a comparative study of green space access and its inequities in five US cities" intended for *Landscape and Urban Planning*	April 2019

Service and Leadership

Michigan University-wide Sustainability and Environment (MUSE) Conference 2019: Agenda management	2018-19
Michigan University-wide Sustainability and Environment (MUSE) Conference 2018: Workshops organizer	2017-18
University of Michigan Adventure Racing, Rogaining, and Orienteering (ARRO) Club president	2017-19
University of Canterbury Meditation Club President	2014-2015
Engineers Without Borders (EWB) Canterbury Students Committee member	2014
EWB Conference Team	2013-2014

Awards

Industrial and Operations Engineering Department Fellowship	2016
John Blackett Prize	2015
University of Canterbury Natural Resources Engineering Prize	2015
Environment Canterbury Natural Resources Engineering Prize	2015
IPENZ Rivers Group UC Prize	2014
Tonkin & Taylor Hydrology and Hydraulic Engineering Prize	2014
Beca Engineering in Society Scholarship	2014
URS Scholarship	2014
MWH New Zealand Ltd Geotechnical Engineering Prize	2014
C S McCully Scholarship	2014
Ian McMillan Prizes	2014
Vice Chancellor's Excellence Award	2014
MWH / Jim McFarlane Memorial Prize	2013
College House Rowley Scholarship	2013
University of Canterbury Emerging Leaders Scholarship	2012
University of Canterbury Undergraduate Entrance Scholarship	2012
NZQA Scholarship Physics	2011

Teaching Experience

IOE460: Decision analysis – *graduate student instructor*	2018
ENCN342: Fluid mechanics – *tutor*	2015
ENGR102: Engineering mechanics - *tutor*	2014
Miscellaneous private tutoring for freshman-level engineering classes	2013-2014

Industry Experience

Beca – *Graduate Environmental Engineer*, Auckland Water Team Water treatment plant design, pipeline routing, landfill leachate tank design	2016
Beca – *Summer Intern*, Auckland Water Team Writing and editing reports, GoldSim modeling	2014-2015

Geotechnics Ltd – *Summer Intern*, Auckland   2013-2014
Calibrating and repairing shear vanes and impact testers

Key Strengths

Gallup Strengths Finder® strengths:
- **Harmony:** I believe that little can be gained from conflict, and aspire to bring people together via their similarities.
- **Achiever:** I have a constant need for attainment.
- **Relator:** I derive pleasure and strength from forming close relationships with people.
- **Includer:** I want to include people and make them feel a part of the group. I am instinctively accepting of others, regardless of race, sex, nationality, personality, or faith.
- **Learner:** I constantly strive to learn and improve. The process of learning is as important as the knowledge I gain.

Other Skills

- Programming in python and R
- Intermediate level German language

Interests

- Running: Dexter-Ann Arbor Half Marathon (2018), RAGNAR del Sol (2015), Shotover Moonlight mountain marathon (2014), Speights West Coaster 21K (2014), Speights West Coaster 30K (2013), Port Hills crater rim 28K (2013)
- Adventure racing, rogaining, and orienteering: Naine Rouge gaine (2018), Flying pig (2017), Python rogaine (2016, 2017, 2018), Sleeping Bear Adventure Race (2016), TWALK (2013, 2014, 2016), Castle hill bouldergaine (2014), Golden Road rogaine (2014), Heights of Winter rogaine (2013)
- Cross country skiing: USCSA Nationals (2017), Michigan cup races (2017)
- Yoga and meditation
- Skiing

References

Available upon request.