

MARISA L. HENRY | MPhil, MSE

 marisaLyn.com

Interdisciplinary researcher & analyst with experience in evidence-based program design and evaluation.

EDUCATION

MSE Applied Mathematics & Statistics, Johns Hopkins University	2018
MPhil Engineering for Sustainable Development, Gates Scholar, University of Cambridge	2017
BS Environmental & Ecological Engineering, Minor in Economics, Purdue University	2015

SELECTED EXPERIENCE

Research Assistant October 2018 – Present
Johns Hopkins University

Collaborating with economists (PI: Dr. Paul Ferraro) on the design and analysis of two field experiments to estimate the effect of social comparisons on compliance behavior of U.S. wastewater dischargers.

- Developed Monte Carlo simulations in R to estimate statistical power; replication packet to be posted on GitHub
- Built R Shiny application for power simulations using user-uploaded data
- Used panel data econometrics models in Stata to estimate causal effects of first experiment on compliance
- Designing, conducting, and analyzing semi-structured interviews of wastewater engineers to improve intervention design and inform hypotheses about mechanisms

Project Advisor October 2017 – Present
Engineers Without Borders, Johns Hopkins University Chapter

Advising team of 19 undergraduate engineering students on project management and international development as they work on the design and implementation of a bridge in San Pablo de Amali, Ecuador.

- Leading sub-team of 5 students in designing and conducting semi-structured interviews to identify community needs and priorities with respect to the bridge design
- Created and presented 5 lectures on international development, project management, and participatory methods

Teaching Assistant August 2014 – December 2015
Purdue University

Created course materials, delivered lectures, and facilitated discussions on food, water, energy, and urban sustainability issues for Engineering Environmental Sustainability (CE/EEE 355) (lead instructor: Dr. Loring Nies).

- Created 3 new lectures to creatively communicate sustainability issues to students
- Presented 8 lectures to 300 students over 3 semesters
- Facilitated 12 small group discussions to engage students in critical thinking on sustainability topics

Project Manager August 2014 – December 2015
WATER Tanzania Global Development Team, Purdue University

Coordinated an interdisciplinary team of 7 anthropologists, engineers, and hydrologists from the U.S. and Tanzania to improve community-scale water access in Endallah, Tanzania.

- Aligned each team member's skills and interests with project needs through empathic leadership to maximize project success and encourage individual growth
- Authored grant funded for 10,000 USD grant to conduct surveys of 25 households in Endallah
- Estimated community water needs and identified optimal locations for the siting of a hydram pump and sand dam by interpreting qualitative survey results, rainfall data, spatial data, and HEC-RAS inundation models

PUBLICATIONS

Henry, M. L., Ferraro, P. J., & Kontoleon, A. (*under review*). The Behavioural Effect of Electronic Home Energy Reports: Evidence from a Randomised Field Trial in the United States.

Hutchins, M. J, Richter, J. S, **Henry, M. L.**, & Sutherland, J. W. (2019). Development of indicators for the social dimension of sustainability in a U.S. business context. *Journal of Cleaner Production*, 212, 687-697. doi: 10.1016/j.jclepro.2018.11.199

Henry, M. L., Baldwin, G, & Quathamer, G. (2015). Designing a Community-based Water Harvesting System: Understanding Water Use in Endallah, Tanzania. *The Journal of Purdue Undergraduate Research: Vol. 5, Article 6.* doi: 10.5703/jpur.05.1.05

POSTERS & PRESENTATIONS

Invited Plenary Speaker at Engineering Sustainability. (2019). Sustainability: Where Engineering Meets Behavioral Science Panel with Leidy Klotz, Ines Azevedo, and Erin MacDonald.

Henry, M. L., Diaz, B. Williams, K. Checkley, W. Harvey, S. A (2018). Piloting a Thermal Cooker Prototype in Peru. Poster presented at Global Noncommunicable Disease Symposium. Baltimore, MD.

Encarnacion, M., **Henry, M. L.**, Diaz, B. Williams, K. Checkley, W. Harvey, S. A (2018). Piloting a Thermal Cooker Prototype in Peru. Poster presented at Global Noncommunicable Disease Symposium. Baltimore, MD.

Henry, M. L. (2017). Behavioral Interventions in Massachusetts Electricity Provision. Poster presented at Engineering for Sustainable Development annual conference. Cambridge, U.K.

Henry, M. L. (2015). Designing a Community-Based Water Harvesting System: Water Access in Endallah, Tanzania. Poster presented at Engineering Education Festival, Daegu, South Korea.

Henry, M. L., Baldwin, G., Lee, C. (2015). Designing a Community-Based Water Harvesting System. Poster presented at Innovation for International Development (I2D) Lab exposition, West Lafayette, IN.

HONORS & AWARDS

Behavior, Energy, and Climate Change Conference Precourt Fellow (2018). Natalie M. Lorenz Givans Fellow (2017 & 2018). Lee and Albert H. Halff Doctoral Student Award (2017). Gates Cambridge Scholar (2016). Unanimous winner of Purdue University "Dawn or Doom 2" writing contest (2015).

RELEVANT COURSEWORK

Sustainability: Systems Thinking. Sustainability Methods & Metrics. Driving Change Towards Sustainability.

Analytics: Applied Statistics. Causal Inference. Data Mining. Machine Learning.

Economics: Environmental Economics. Advanced Microeconomics. International Trade. Game Theory.

Policy: Intro to Technology Policy. Energy Policy & Planning Models. Intro to Environmental Policy.

Development: International Development. Business, Government, and Technology in Emerging Markets.

TECHNICAL SKILLS

Expert: R (tidyverse, Shiny, R-Markdown). TeX. Stata.

Intermediate: Python (pandas, scikit-learn). Git. MATLAB.

Previous experience: C/C++. ArcGIS. Spanish.