## ROBIN M. CROSS

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SHORT BIO My research helps us understand the models we use and how to apply them towards better ecological, economic, and social policy.

My current research topics are honey bee health, energy policy, econometric theory, and machine learning theory.

EDUCATION Oregon State University, Corvallis, OR

2004 PhD, Agricultural and Resource Economics

1997 BS, Agricultural and Resource Economics

#### **EMPLOYMENT**

2000-Current Oregon State University, Applied Economics, Corvallis, OR GRA, Postdoc., Snr. Researcher & Assist. Professor
2008-2021 DemandLink Inc., Salem, OR Co-Founder & CFO

#### JOURNAL ARTICLES

Overturf, K.A., N. Steinhauer, R. Molinari, M.E. Wilson, A.C. Watt, R.M. Cross, D. vanEngelsdorp, G.R. Williams, and S.R. Rogers. Winter Weather Predicts Honey Bee Colony Loss at the National Scale, *Science of the Total Environment*. Forthcoming.

Cross, L.J., R.M. Cross, and F. Stormshak. **Optimal PG600 When Given to Progestogen Synchronized Ewes During Anestrus as Affected by Day of the Year and Temperature**, *Translational Animal Science*. 3(1), 2019, 172-180. doi.org/10.1093/tas/txy092.

Cross, R.M., A.J. Plantinga, and R. Stavins. **Terroir in the New World Hedonic Estimation of Vineyard Sale Prices in California** *Journal of Wine Economics*, 12(3), 2017, 282-301. doi:10.1017/jwe.2017.27.

Cross, R.M. and R. Färe. **Value Data and the Fisher Index**. *Theoretical Economics Letters*, 5, 2015, 262-267. doi:10.4236/tel.2015.52031.

Austin, D., R.M. Cross, T. Hayes, and J. Kaye. **Regularity and Predictability of Human Mobility in Personal Space**. *PLoS ONE*, 9(2), 2014: e90256. doi:10.1371/journal.pone.0090256.

Cross, R.M., R. Färe, S. Grosskopf, and W.L. Weber. **Valuing Vineyards: A Directional Distance Function Approach**. *Journal of Wine Economics*, 8(1), 2013, 69-82.

Cross, R.M., A.J. Plantinga, and R. Stavins. **The Value of Terroir: Hedonic Estimation of Vineyard Sale Prices**. *Journal of Wine Economics*, 6(1), 2011, 1-14.

Cross, R.M., A.J. Plantinga, and R. Stavins. **What Is the Value of Terroir?** *American Economic Review: Papers and Proceedings*, 101(3), 2011, 152-156. doi:10.1257/aer.101.3.152.

Cross, R.M., S.T. Buccola, and E.A. Thomann. **Cooperative Liquidation under Competitive Stress**. *European Review of Agricultural Economics*, 36, 2009, 369-393, https://doi.org/10.1093/erae/jbp027.

Cross, R.M. and R. Färe. **Value Data and the Bennet Price and Quantity Indicators**. *Economics Letters*, 102(29), 2009, 19-21, https://doi.org/10.1016/j.econlet.2008.10.003.

Cross, R.M. and R. Färe. **Farrell Efficiency under Value and Quantity Data**. *Journal of Productivity Analysis*, 29(3), 2008, 193-199, https://doi.org/10.1007/s11123-007-0080-4.

Cross, R.M. and S.T. Buccola. **Adapting Cooperative Structure to the New Global Environment**. *American Journal of Agricultural Economics*, 86(5), 2004, 1254-1261, www.jstor.org/stable/3697938.

### WORKING PAPERS

Mounts, D., and R.M. Cross. **Cancelled: An Incentive for Grid Reliability in the Texas Energy Market**. Dept. of Applied Economics, Oregon State University, Corvallis, OR.

Cross, R.M., and D. SeWell. **Closed-form Solutions to Deep-Learning Neural Networks**. DemandLink Inc., Salem, OR.

Cross, R.M., and D. SeWell. **Concat2Vec - Solving the Analogy Problem with Neural Network Word Embeddings**. DemandLink Inc., Salem, OR.

Cross, R.M. and C. Hill. **Voting to Control Population Parameters in Genetic Programming**. DemandLink Inc., Salem, OR.

Watt, A.C., and R.M. Cross. **Total Effects of Climate, Transportation, and Disease on Honey Bee Disappearance**. Dept. of Applied Economics, Oregon State University, Corvallis, OR.

Beasley, W.J., and R.M. Cross. **Are Buyers Warming Up to Cooler Locations? An Empirical Review of Vineyard Pricing, Climate Forecasts, and the Media**. Dept. of Applied Economics, Oregon State University, Corvallis, OR.

Siegel, R.W., and R.M. Cross. A New Closed-Form Solution to Samuelson's Multiconstraint Equilibrium. Dept. of Applied Economics, Oregon State University, Corvallis, OR.

Siegel, R.W., and R.M. Cross. **Consumer Welfare under Time Constraints**. Dept. of Applied Economics, Oregon State University, Corvallis, OR.

Siegel, R.W., and R.M. Cross. **Temperature's Tipping Point and the Effect of Climate Change on Consumer Demand**. Dept. of Applied Economics, Oregon State University, Corvallis, OR.

#### CONFERENCE PAPERS

A Home Monitoring Approach to Mild Cognitive Impairment Severity for Improved Clinical Trials. *Alzheimer's & Dementia*, 11(7), 2015, 289-290. doi:10.1016/j.jalz.2015.07.393. With Austin, D., H.H. Dodge, and J. Kaye.

Predicting Transitions to Higher Levels of Care among Elderly: A Behavioral Approach. *Gerontologist*, 52(2), 2014, 9-10. With Austin, D., P. Jacobs, N.C. Mattek, J. Peterson, K. Wild, and J. Kaye.

**Value Data and the Consumer Price Index**. *XXI European Workshop on Efficiency and Productivity Analysis*, Verona, Italy, 2011. With Färe, R.

Measuring and Comparing the Effects of Demand Constraints on Welfare. XXI European Workshop on Efficiency and Productivity Analysis, Verona, Italy, 2011. With Siegel, R.W.

**Cooperation and Cheating**. *American Agricultural Economics Association Annual Meetings*, Long Beach, California, 2006. With Buccola, S.T. and E.A. Thomann.

Contrasting Structures: Cooperative Advantage in Illiquid Markets. *Agricultural and Food Cooperatives in Rural Development: Implications of Business Dynamics for Public Policy*, ERS, USDA, Washington, DC, 2004. With Buccola, S.T.

Adapting Cooperative Structure to the New Global Environment. *American Agricultural Economics Association Annual Meetings*, Denver, Colorado, 2004. With S.T. Buccola.

**DEA and the Law of One Price**. *VIII European Workshop on Efficiency and Productivity*, Oviedo, Spain, 2003. With Färe, R.

**Food Manufacturing Cooperatives under Stress: Licit and Illicit Behavior.** *American Agricultural Economics Association Annual Meetings*, Montreal, Quebec, 2003. With Buccola, S.T.

## BOOK CHAPTERS AND OTHER PUBLICATIONS

Cross, R.M., A.J. Plantinga, and R. Stavins. **The Value of Terroir: Hedonic Estimation of Vineyard Sale Prices**. *Handbook of Wine Economics [Volume 1]*. Ashenfelter, O., O. Gergaud, K. Storchmann, and W. Ziemba, eds. World Scientific, 2018.

Jaeger, B., R.M. Cross, and T. Egelkraut. **Biofuel Potential in Oregon: Background and Evaluation of Options**. *Special Report 1078, Oregon State University Extension Service*, 2007.

Vega, E.H., R.M. Cross, and C. Durham. **Wine Production Costs and Returns**. *Oregon Viticulture*. Hellman, E., ed. Corvallis, Oregon State University Press. June 2003.

Burgess, L., R.M. Cross, M. Davis, D. Marousek, and R.E. Sogge. *Wine Atlas of Oregon*. Loy, W. G., S. Allan, A.R. Buckley, J.E. Meacham, eds. Eugene, University of Oregon Press, October 2001.

## PATENTS AND PATENT APPLICATIONS

Austin, D., R.M. Cross, T. Hayes, and J. Kaye. **Methods and Systems Used in Tracking Mobility in a Dwelling**. US Patent Application Number 20160249178, August 25, 2016.

# ADVISING Oregon State University, Corvallis, OR

PhD **Darren Marotta**, 2024 (est.)

Major Professor, Applied Economics.

Jason Beasley, 2019.

Advisor, Applied Economics.

Ryan Siegel, 2012.

Major Professor, Applied Economics.

MS **Devon Mounts**, 2024 (est.)

Major Professor, Applied Economics.

Aaron Watt, 2020.

Major Professor, Applied Economics.

#### **GRANTS AND AWARDS**

- 2021 Honey bee satellite census national census of apiaries, colonies, colony losses, and loss prevention suggestions. *USDA*, *APHIS*. Cross, R.M., PI.
- 2020 Honey bee colony loss prediction and prevention national forecast and treatment suggestions for beekeepers. *USDA*, *APHIS*. Cross, R.M., PI.
- 2018 Optimal sampling protocols for apiary level disease load diagnostics using drone images and machine learning image processing. *USDA*, *APHIS*. Cross, R.M., PI.
- 2015 **Demand and supply in the Oregon wine industry**. *Oregon Wine Advisory Board*. Capalbo, S., R.M. Cross, C. Durham, J. Sterns, Co-PIs.
- 2014 Pervasive computing for predicting individuals' wellness from behavioral measures. *NIH*. Austin, D. and R.M. Cross, Co-PIs.
- 2008 **Oregon nursery economics project**. *Green Market Systems Inc*. Cross, R.M., PI.