

Colin Lewis-Beck

CONTACT INFORMATION	1 Lilly Corporate Center Indianapolis, IN 46285	<i>E-mail:</i> clewisbeck@gmail.com
RESEARCH INTERESTS	Reliability, hierarchical modeling, Bayesian statistics, and public policy	
EDUCATION	PhD, Statistics Iowa State University, 2018 Dual MPP/MA, Public Policy and Applied Statistics University of Michigan, 2010 BA, French Middlebury College, 2005	
EMPLOYMENT	Research Scientist (Statistics) , Eli Lilly, Indianapolis, IN 2021-present Project Statistician in Neuroscience <ul style="list-style-type: none">• Participate on multidisciplinary teams and responsible for the design and analysis of clinical trials• Provide scientific input and author the statistical component of study protocols and reports• Responsible for preparation of statistical tables, figures, and listings, reports or other information for inclusion in study reports, statistical reports, and publications Software Developer , NIMBLE, Berkeley, CA Summer 2017 Interned as part of the Google Summer of Code program <ul style="list-style-type: none">• Wrote and tested an R package to fit ecological statistical models• Collaborated with other programmers using GitHub• Wrote code that went into the main nimble R package Statistical Analyst , STATinMED Research, Ann Arbor, MI 2011-2012 Research Department <ul style="list-style-type: none">• Analyzed large claim databases using advanced statistical techniques (e.g., GLMs, SEMs, propensity score matching, and meta-analysis)• Drafted statistical protocols and wrote final manuscripts analyzing and interpreting study results for client, as well as academic, publication• Worked directly with clients, senior researchers, and programmers to ensure projects were completed correctly and on schedule	
ACADEMIC POSITIONS	Visiting Assistant Professor , University of Iowa Department of Statistics & Actuarial Science	2018-2021
PUBLICATIONS	Tian Q., Lewis-Beck C., Niemi J., & Meeker W.Q. (2022). Specifying Prior Distributions in Reliability Applications. <i>Submitted to Technometrics</i> . Lewis-Beck C., Tian Q., & Meeker W.Q. (2022). Prediction of Future Failures for Heterogeneous Reliability Field Data. <i>Technometrics</i> , 64(1), 125-138. Shiraef, Mary A, Hirst, Cora., [and 17 others, including Lewis-Beck C.] (2021). Border Accountability Project, a hand-coded global database of border closures introduced	

during 2020. *Scientific data*, 8(1), 1-11.

Berg E., Im J., Zhu Z., Lewis-Beck C., & Li, J. (2021). Integration of Statistical and Administrative Agricultural Data from Namibia. *Statistical Journal of the IAOS*, 37(2), 557-578.

Lewis-Beck C., & Martini, N.F. (2020). Economic Perceptions and Voting Behavior in U.S. Presidential Elections. *Research and Politics*, 7(4), 1-6.

Togliatti, K., Lewis-Beck C., Walker, V.A., Hartman, T., VanLoocke, A., Cosh, M.H., & Hornbuckle, B.K. (2020). Quantitative Assessment of Satellite L-Band Vegetation Optical Depth in the US Corn Belt. *IEEE Geoscience and Remote Sensing Letters*.

Lewis-Beck C., Zhu Z., Walker V.A., & Hornbuckle B.K. (2020). Modeling Crop Phenology in the U.S. Corn Belt using Spatially Referenced SMOS Satellite Data. *Journal of Agricultural and Biological Statistics*, 25(4), 657-675.

Lewis-Beck, C., & Lewis-Beck, M.S. (2020). US Presidential Election Forecasting: The Economist Model. *Foresight: The International Journal of Applied Forecasting*, 59, 38-44.

Lewis-Beck, C., Walker, V.A., Niemi, J., Caragea, P., & Hornbuckle, B.K. (2020). Extracting Agronomic Information from SMOS Vegetation Optical Depth in the US Corn Belt Using a Nonlinear Hierarchical Model. *Remote Sensing*, 12(5), 827.

Lewis-Beck C., Zhu Z., Mondal A., Jin Song J., Hobbs, J., Hornbuckle B.K, & Patton J. (2019). A Parametric Approach to Unmixing Remote Sensing Crop Growth Signatures. *Journal of Agricultural and Biological Statistics*, 24(3), 502-516.

Mittman, E., Lewis-Beck, C., & Meeker, W.Q. (2019). A Hierarchical Model for Heterogeneous Reliability Field Data. *Technometrics*, 61(3), 354-368.

A. Alhasan, A. Ali, D. Offenbacher, O. Smadi, & Lewis-Beck C. (2018). Incorporating Spatial Variability of Pavement Foundation Layers Stiffness in Reliability-Based Mechanistic-Empirical Pavement Performance Prediction. *Transportation Geotechnics*, 17, 1-13.

Lewis-Beck, C., & Lewis-Beck, M.S. (2015). Applied Regression: An Introduction, Second Edition. SAGE Publications.

Lewis-Beck, C., Abouzaid, S., Xie, L., Baser, O., & Kim, E. (2013). Analysis of the relationship between psoriasis symptom severity and quality of life, work productivity, and activity impairment among patients with moderate-to-severe psoriasis using structural equation modeling. *Patient Preference and Adherence*, 7, 199-205.

Wang, L., Lewis-Beck, C., Baser, E., Fritschel, E., & Baser, O. (2013). Applied Comparison of Meta-Analysis Techniques. *Value in Health*, 16(7), 14-22.

PRESENTATIONS AND WORKSHOPS “Prediction of Future Failures for Heterogeneous Reliability Field Data.” Invited seminar presented at the Bayesian Seminar Series, Eli Lilly, Virtual, September 2021.

“Social Capital and Shared Leadership in Small Iowa Communities.” Invited talk (with Tom Rice) at the University of Iowa Public Policy Center, Virtual, February 2021.

“Forecasting the 2020 US Elections.” Invited talk (with Michael Lewis-Beck) at the Data Analytics Colloquium, University of Texas at Dallas and the National Chung Hsing University, Virtual, November 2020.

“Prediction of Future Failures for Heterogeneous Reliability Field Data.” Poster presentation at the Joint Statistical Meetings, Virtual, July 2020.

“Using the M-RA Approximation to Integrate Multiple Data Sources on Temperature.” Talk presented at the Joint Statistical Meetings, Denver, CO, July 2019.

“A Hierarchical Model for Heterogeneous Reliability Field Data.” Invited seminar presented at the Department of Statistics and Actuarial Science, University of Iowa, Iowa City, IA, March 2019.

“A Parametric Approach to Unmixing Remote Sensing Crop Growth Signatures.” Talk presented at the Joint Statistical Meetings, Vancouver, BC, August 2018.

“A Nonlinear Hierarchical Approach for Modeling Crop Growth in the US Corn Belt.” Talk presented at the Kansas State University Conference on Applied Statistics in Agriculture, Manhattan, KS, May 2018.

“A Hierarchical Model for Heterogeneous Reliability Field Data.” Poster presentation at the Joint Statistical Meetings, Baltimore, MD, August 2017.

Graduate Workshop on Environmental Data Analytics, National Center for Atmospheric Research, Boulder, CO, June 2017.

“An Introduction to Statistical Thinking for Forensic Practitioners.” Invited talk (with Hal Stern) at the Center for Statistics and Applications in Forensic Evidence, Palm Beach County Sheriff’s Office, Palm Beach, FL, March 2016.

“Regression Questions You Always Wanted to Ask.” Invited Blalock lecturer (with Michael Lewis-Beck) at the Interuniversity Consortium for Political and Social Research, University of Michigan, July 2015.

“Analysis of relationship between psoriasis severity and quality of life, work productivity, and activity impairment among patients with moderate to severe psoriasis using structural equation modeling.” Poster presented at International Society for Pharmacoeconomics and Outcomes Research, Washington, DC, June 2012.

POPULAR PRESS
INTERVIEWS Lynch, James Q. (2020, November 23). Record voter turnout masks Iowa schism. *The Gazette*.

TEACHING
EXPERIENCE **Instructor**, Stonehill College **Spring 2021**
Meehan School of Business
 • *Quantitative Analysis* (Online)

Instructor, University of Iowa **2018-2021**
 • *Econometric Analysis* (Spring 2019)
 • *Elementary Statistics* (Spring 2021)
 • *Mathematical Statistics I* (Fall 2018, 2019, 2020)
 • *Mathematical Statistics II* (Spring 2019, 2020)

	<ul style="list-style-type: none"> • <i>Statistics & Society</i> (Fall and Spring 2018, 2019, 2020, 2021)
	<p>Instructor, University of Michigan 2018-2020 Interuniversity Consortium for Political and Social Research (ICPSR) Summer Program</p> <ul style="list-style-type: none"> • <i>Introduction to Meta-Analysis</i> (Summer 2018) • <i>Introduction to Regression Analysis</i> (Summer 2019, 2020)
	<p>Instructor, Iowa State University 2017-2018</p> <ul style="list-style-type: none"> • <i>Statistical Methods for Research Workers (Graduate Course)</i> (Summer 2018) • <i>Probability and Statistical Inference for Engineers</i> (Spring 2018) • <i>Engineering Statistics</i> (Spring 2017, Fall 2017)
	<p>Teaching Assistant, Iowa State University 2014-2015</p> <ul style="list-style-type: none"> • <i>Applied Statistical Modeling (Graduate Course)</i> (Fall 2015) • <i>Introduction to Statistics</i> (Fall 2014, Spring 2015)
	<p>Graduate Student Instructor, University of Michigan 2007-2010</p> <ul style="list-style-type: none"> • <i>Introduction to Statistical Reasoning</i> (Fall 2009, Spring 2010) • <i>Introduction to Statistics and Data Analysis</i> (Spring 2009) • <i>Statistics for Public Policy (Graduate Course)</i> (Spring 2008, Fall 2008) • <i>Introduction to Microeconomics for Public Policy</i> (Fall 2007)
AWARDS AND GRANTS	<p>University of Iowa Public Policy Center, Summer Scholars Grant, \$3,000 (with Tom Rice) (2020)</p> <p>Teaching Excellence Award, Iowa State University, Dept. of Statistics (2018)</p> <p>SAGE Cornerstone Author Award for publication (with Michael Lewis-Beck) of <u>Applied Regression: An Introduction</u>, Second Edition (2015)</p> <p>Outstanding Teaching Award, University of Michigan, Dept. of Statistics, \$500 (2010)</p>
OTHER EXPERIENCE	<p>Summer Program Computing Consultant Summer (2006, 2013, 2014) ICPSR, University of Michigan</p> <ul style="list-style-type: none"> • Assisted program participants and faculty with a wide range of statistical and programming backgrounds with questions in R, Stata, SPSS, and SAS • Promoted to Team Leader (2013, 2014). Responsible for supervising a staff of 8 Computer Consultants.
COMPUTER SKILLS	<p>Scientific Programming: R, Rcpp, RStan, Stata Markup Languages: L^AT_EX, Markdown Software Development: GitHub</p>
EDITORIAL SERVICE	<p>Reviewer for the following journals: SAGE Publications (2017), Annals of Applied Statistics (2021)</p>
PROFESSIONAL MEMBERSHIPS	<p>American Statistical Association</p>