

Timothy R. Johnson

Curriculum Vitae

Department of Statistical Science

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Current as of May 23, 2016

Education

- 2001 **Ph.D., Quantitative Psychology**, *University of Illinois at Urbana-Champaign*.
Dissertation: *On the use of mixed-effects models for the analysis of probability judgments*.
Advisor: David V. Budescu.
- 1999 **M.S., Statistics**, *University of Illinois at Urbana-Champaign*.
- 1994 **M.S., Psychology**, *Western Washington University*.
Thesis: *An evaluation of the performance of the parallel analysis and minimum average partial number-of-factors decision rules with empirical data*.
Advisor: Robert M. Thorndike.
- 1993 **B.A., Psychology**, *Western Washington University*.

Experience

- 2014–present **Professor of Statistics**, *University of Idaho*, Moscow, Idaho.
- 2014–present **Adjunct Professor**, *Washington State University*, Pullman, Washington.
- 2007–present **Affiliate Professor of Psychology**, *University of Idaho*, Moscow, Idaho.
- 2006–2014 **Associate Professor of Statistics**, *University of Idaho*, Moscow, Idaho.
- 2000–2006 **Assistant Professor of Statistics**, *University of Idaho*, Moscow, Idaho.

Publications

Peer Reviewed Articles

- forthcoming Woodruff, S. P., Johnson, T. R., Christianson, D., & Waits, L. P. (forthcoming). Examining the use of fecal pellet morphometry to differentiate age classes and sex in Sonoran pronghorn. Accepted for publication *Wildlife Biology*.
- 2016 Crowell, M. M., Shipley, L. A., Camp, M. J., Rachlow, J. L., Forbey, J. S., & Johnson, T. R. (2016). Selection of food patches by sympatric herbivores in response to concealment and distance from a refuge. *Ecology and Evolution*, DOI:10.1002/ece3.1940.
- DeMay, S. M., Becker, P. A., Waits, L. P., Johnson, T. R., & Rachlow, J. L. (2016). Consequences for conservation: Population density and genetic effects on reproduction of an endangered lagomorph. *Ecological Applications*, 26, 784–795.
- Losinger, R. C., Gese, E. M., Knight, R. N., Johnson, T. R., & Waits, L. P. (2016). Quantifying and correcting for scat removal in noninvasive carnivore scat surveys. *Wildlife Biology*, 22, 45–54.
- Parsons, M. A., Barkley, T., Rachlow, J. L., Johnson-Maynard, J., Johnson, T. R., Milling, C., Hammel, J., Leslie, I. (2016). Cumulative effects of an herbivorous ecosystem engineer in a heterogeneous landscape. *Ecosphere*, 7(3), DOI:10.1002/ecs2.1334.
- 2015 Camp, M. J., Shipley, L. A., Johnson, T. R., Forbey, J. S., Rachlow, J. L., & Crowell, M. M. (2015). Modeling tradeoffs between plant fiber and toxins: A framework for quantifying risks perceived by foraging herbivores. *Ecology*, 96, 3292–3302.

- Johnson, T. R. & Kuhn, K. M. (2015). Simulation-based Bayesian inference for latent traits of item response models: Introduction to the ltbayes package for R. *Behavior Research Methods*, *47*, 1309–1327.
- Lorenz, T. J., Vierling, K. T., Johnson, T. R., & Fischer, P. C. (2015). The role of wood hardness in limiting nest site selection in avian cavity excavators. *Ecological Applications*, *25*, 1016–1033.
- Losinger, R., Gese, E., Dempsey, S., Kluever, B., Johnson, T., & Waits, L. (2015). Balancing sample accumulation and DNA degradation rates to optimize noninvasive genetic sampling of sympatric carnivores. *Molecular Ecology Resources*, *15*, 831–842.
- Woodruff, S. P., Johnson, T. R., & Waits, L. P. (2015). Evaluating the interaction of faecal pellet deposition rates and DNA degradation rates to optimize sampling design for DNA-based mark-recapture analysis of Sonoran pronghorn. *Molecular Ecology Resources*, *15*, 843–854.
- 2014 Camp, M. J., Rachlow, J. L., Shipley, L. A., Johnson, T. R., & Bockting, K. D. (2014). Grazing in sagebrush rangelands in western North America: Implications for habitat quality for a sagebrush specialist, the pygmy rabbit. *The Rangeland Journal*, *36*, 151–159.
- Johnson, T. R. (2014). A note on conditional and quasi-conditional maximum likelihood estimation for polytomous item response models: Robust inference in the presence of individual differences in response scale use. *Applied Psychological Measurement*, *38*, 599–614.
- Johnson, T. R. & Wiest, M. M. (2014). Generalized linear models with coarsened covariates: A practical Bayesian approach. *Psychological Methods*, *19*, 281–299.
- Rachlow, J. L., Peter, R. M., Shipley, L. A., & Johnson, T. R. (2014). Sublethal effects of capture and collaring on wildlife: Experimental and field evidence. *Wildlife Society Bulletin*, *38*, 458–465.
- Woodruff, S. P., Adams, J. R., Johnson, T. R., & Waits, L. P. (2014). Rapid species identification of Sonoran pronghorn (*Antilocapra americana sonoriensis*) from fecal pellet DNA. *Wildlife Society Bulletin*, *38*, 842–848.
- 2013 Camp, M. J., Rachlow, J. L., Woods, B. A., Johnson, T. R., & Shipley, L. A. (2013). Examining the functional components of cover: Concealment and visibility in shrub-steppe habitat. *Ecosphere*, *4*. <http://dx.doi.org/10.1890/ES12-00114.1>
- DeMay, S., Becker, P., Edison, C., Rachlow, J., Johnson, T., & Waits, L. (2013). Evaluating DNA degradation rates in faecal pellets of the endangered pygmy rabbit. *Molecular Ecology Resources*, *13*, 654–662.
- Elias, B. A., Shipley, L. A., McCusker, S., Saylor, R. D., & Johnson, T. R. (2013). Effects of genetic management on reproduction, growth, and survival in captive endangered pygmy rabbits (*Brachylagus idahoensis*). *Journal of Mammalogy*, *94*, 1282–1292.
- Johnson, T. R. (2013). Item response modeling with sum scores. *Applied Psychological Measurement*, *37*, 638–652.
- Johnson, T. R. & Bodner, T. E. (2013). Posterior predictive checks of tetrad subsets for covariance structures of measurement models. *Psychological Methods*, *18*, 494–513.
- Johnson, T. R. & Kuhn, K. M. (2013). Bayesian Thurstonian models for ranking data using JAGS. *Behavior Research Methods*, *45*, 857–872.

- Kuhn, K. M., Johnson, T. R., & Miller, D. (2013). Applicant desirability influences reactions to discovered résumé embellishments. *International Journal of Selection and Assessment*, *21*, 111–120.
- Woods, B. A., Rachlow, J. L., Bunting, S. C., Johnson, T. R. (2013). Managing high-elevation sagebrush steppe: Do conifer encroachment and prescribed fire affect habitat for pygmy rabbits? *Journal of Rangeland Ecology and Management*, *66*, 462–471.
- 2012 Camp, M. J., Rachlow, J. L., Woods, B. A., Johnson, T. R., & Shipley, L. A. (2012). When to run and when to hide: The influence of cover and distance to refugia on perceptions of predation risk. *Ethology*, *118*, 1010–1017.
- Watson, P. & Johnson, T. (2012). Federal fishery policy and the geographic distribution of commercial U.S. West Coast fish landings: Insights from the 2003 federal ground-fish permit buyback. *Marine Resource Economics*, *27*, 289–301.
- 2011 Budescu, D. V. & Johnson, T. R. (2011). A model-based approach for the analysis of the calibration of probability judgments. *Judgment and Decision Making*, *6*, 857–869.
- 2010 Johnson, T. R. & Bolt, D. M. (2010). On the use of factor-analytic multinomial logit item response models to account for individual differences in response style. *Journal of Educational and Behavioral Statistics*, *35*, 92–114.
- 2009 Bolt, D. M. & Johnson, T. R. (2009). Addressing score bias and differential item functioning due to individual differences in response style. *Applied Psychological Measurement*, *33*, 335–352.
- Sanchez, D. M., Rachlow, J. L., Robinson, A. P., & Johnson, T. R. (2009). Survey indicators of pygmy rabbits: Temporal trends of burrow systems and pellets. *Western North American Naturalist*, *69*, 426–436.
- 2007 Johnson, T. R. (2007). Discrete choice models for ordinal response variables: A generalization of the stereotype model. *Psychometrika*, *72*, 489–504.
- Johnson, T. R. & Bodner, T. E. (2007). A note on the use of bootstrap tetrad tests for covariance structures. *Structural Equation Modeling*, *14*, 113–124.
- 2006 Johnson, T. R. (2006). Generalised linear models with ordinally-observed covariates. *British Journal of Mathematical and Statistical Psychology*, *59*, 275–300.
- 2004 Johnson, T. R. & Kim, J. (2004). A generalized estimating equations approach to mixed-effects ordinal probit models. *British Journal of Mathematical and Statistical Psychology*, *57*, 295–310.
- 2003 Johnson, T. R. (2003). On the use of heterogeneous thresholds ordinal regression models to account for individual differences in response style. *Psychometrika*, *68*, 563–583.
- 2002 Budescu, D. V., Kuhn, K. M., Kramer, K. M., & Johnson, T. R. (2002). Modeling certainty equivalents for imprecise gambles. *Organizational Behavior and Human Decision Processes*, *88*, 748–768.
- 2001 Johnson, T. R., Budescu, D. V., & Wallsten, T. S. (2001). Averaging probability judgments: Monte Carlo analyses of asymptotic diagnostic value. *Journal of Behavioral Decision Making*, *14*, 123–140.
- [Book Reviews](#)
- 2012 Johnson, T. R. (2012). Review of the book *Negative binomial regression*, by J. M. Hilbe. *Psychometrika*, *77*, 611–612.

- 2008 Johnson, T. R. (2008). Review of the book *Handbook of multilevel analysis*, by J. de Leeuw & E. Meijer (Editors). *Psychometrika*, 73, 523–525.
- 2007 Johnson, T. R. (2007). Review of the book *Applied choice analysis: A Primer*, by D. A. Hensher, J. M. Rose, & W. H. Greene. *Psychometrika*, 72, 449–450.

Software

- 2014 Johnson, T. R. (2014). ltbayes: Simulation-based Bayesian inference for latent traits of item response models. R package version 0.3. <http://CRAN.R-project.org/package=ltbayes>

Proceedings

- 2015 Martinez, V., McGrath, R., Vaarstra, M., Brown, A., Start, A., Johnson, T. (2015). Assessing the state of undergraduate students declaring a health-related major. *International Journal of Exercise Science: Conference Proceedings*, 8(3), Article 77.
- 2012 Wiest, M. M. & Johnson, T. R. (2012). A Bayesian probability model for coarsened covariates: Application in epidemiology. In *Proceedings of the 44th Journées de Statistique, 2012*.
- 2005 Thomas, D., Boisen, M., Thomas, C., Johnson, T., Li, Z., & Windley, A. (2005). Gateway to mathematics. In *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2005* (pp. 2424–2429). Chesapeake, VA: AACE.

Under Review & In Preparation

Johnson, T. R. Unmatched longitudinal data for respondent anonymity: A missing data approach.

Johnson, T. R. Multilevel item response models for univariate margins: A Bayesian approach to grouped item responses.

Johnson, T. R. Regression models for response variables subjected to random permutations for statistical disclosure control.

Johnson, T. R. Thurstonian unidimensional probabilistic unfolding models for rankings.

Woodruff, S. P., Jimenez, M. D., & Johnson, T. R. Got elk? Got wolves. Habitat characteristics of wolf kill sites in the southern Yellowstone ecosystem.

Professional Meeting Papers & Posters

- 2016 Camp, M. J., Shipley, L. A., Forbey, J. S., & Johnson, T. R. (February, 2016). *Evaluating tradeoffs in risks perceived by foraging herbivores*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Coeur d'Alene, ID.
- Lorenz, T. J., Vierling, K. T., Johnson, T. R., & Fischer, P. C. (2016, February). *Why are most snags never used by woodpeckers for nesting? Wood hardness can limit snag use by cavity-dependent wildlife*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Coeur d'Alene, ID.
- McMahon, L. A., Rachlow, J. L., Johnson, T. R., Forbey, J. S., & Shipley, L. A. (2016, February). *Understanding factors influencing fine-scale habitat use by pygmy rabbits*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Coeur d'Alene, ID.

- Milling, C., Rachlow, J. L., Johnson, T. R., Forbey, J. S., & Shipley, L. A. (2016, February). *Underlying mechanisms of seasonal variation in activity patterns of the pygmy rabbit (Brachylagus idahoensis)*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Coeur d'Alene, ID.
- 2015 Camp, M. J., Shipley, L. A., Crowell, M. M., Forbey, J., Johnson, T. R. (2015, March). *Fear or fiber: Tradeoffs in habitat use by sagebrush steppe mammals*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Pocatello, ID.
- DeMay, S., Becker, P. A., Johnson, T. R., Waits, L. P., & Rachlow, J. L. (2015, March). *Breeding like rabbits: Reproductive output, multiple paternity, and juvenile breeding in pygmy rabbits*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Pocatello, ID.
- Martinez, Z., McGrath, R., Vaarstra, M., Brown, A., Start, A., Johnson, T. (2015, October). *Assessing the state of undergraduate students declaring a health-related major*. Paper presented at the Annual Meeting of the Northwest Regional Chapter of the American College of Sports Medicine, Bend, OR.
- Milling, C., Rachlow, J., Johnson, T., Chappell, M., Forbey, J., & Shipley, L. (2015, March). *Resting in a hot and risky environment: Habitat selection by pygmy rabbits during summer*. Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Pocatello, ID.
- Parsons, M., Rachlow, J., Milling, C., & Johnson, T. (2015, March). *Sagebrush structure and reproduction: How do pygmy rabbits alter their habitats?* Paper presented at the Annual Meeting of the Idaho Chapter of the Wildlife Society, Pocatello, ID.
- 2014 Camp, M. J., Shipley, L. A., Crowell, M. M., Forbey, J. S., Rachlow, J. L., & Johnson, T. R. (2014, March). *Evaluating tradeoffs in risks by specialist and generalist herbivores*. Paper presented at the Joint Meeting of the Idaho Chapter and Northwest Section of the Wildlife Society, Boise, ID.
- Lorenz, T. J., Vierling, K. T., Johnson, T. R., Fischer, P. C. (2014, September). *Choice or constraint? The role of wood hardness in limiting nest site selection in North American woodpeckers*. Paper presented at the Annual Joint Meeting of the American Ornithologists' Union, the Cooper Ornithological Society, and the Society of Canadian Ornithologists, East Park, CO.
- Woodruff, S., Johnson, T., Lukacs, P., & Waits, L. (2014, July). *Simultaneous demographic monitoring of predator and prey population sizes using fecal DNA sampling*. Paper presented at the North American Congress for Conservation Biology, Missoula, MT.
- Woodruff, S., Johnson, T., & Waits, L. (2014, March). *Preliminary results of non-invasive genetic sampling for mark-recapture studies of endangered Sonoran pronghorn*. Paper presented at the Joint Meeting of the Idaho Chapter and Northwest Section of the Wildlife Society, Boise, ID.
- 2013 Wiest, M. M. & Johnson, T. R. (2013, August). *A Bayesian missing data approach for interval-censored and truncated covariates*. Paper presented at the Annual Conference of the International Society for Clinical Biostatistics, Munich, Germany.
- Rachlow, J., Camp, M., Woods, B., Shipley, J., Forbey, T., Johnson, T. (2013, March). *Evaluating habitat in a functional framework: What is "cover"?* Paper presented at the annual meeting of the Idaho Chapter of the Wildlife Society, Coeur d'Alene, ID.

- DeMay S., Becker, P., Eidson, C., Rachlow, J., Johnson, T., & Waits, L. (2013, March). *Evaluating DNA degradation rates in faecal pellets of the endangered pygmy rabbit*. Paper presented at the annual meeting of the Idaho Chapter of the Wildlife Society, Coeur d'Alene, ID.
- 2012 DeMay, S. M., Becker, P. A., Eidson, C. A., Rachlow, J. L., Johnson, T. R., Waits, L. P. (2012, October). Non-invasive genetic monitoring of the Columbia Basin pygmy rabbit: evaluation of fecal DNA degradation. Paper presented at the Wildlife Society 19th Annual Conference, Portland, OR, US.
- Johnson, T. R. (2012, December). *Item response modeling with sum scores*. Paper presented at the Applied Statistics in Agriculture Seminar Series, Moscow, ID.
- Rachlow, J. L., Camp, M. J., Woods, B. A., Shipley, L. A., & Johnson, T. R. (2012, June). *Functional habitat relationships: what is cover and how do we measure it?*. Paper presented at the annual meeting of the American Society of Mammalogists, Reno, NV.
- Camp, M. J., Woods, B. A., Rachlow, J. L., Johnson, T. R., & Shipley, L. A. (2012, March). *When to run and when to hide: the influence of vegetation structure and distance to a refuge on the predation risk of pygmy rabbits*. Paper presented at the Idaho Chapter of the Wildlife Society, Boise, Idaho.
- Camp, M. J., Rachlow, J. L., Johnson, T. R., & Shipley, L. A. (2012, October). *Grazing in sagebrush ecosystems: implications for forage resources and predation risk for pygmy rabbits*. Paper presented at the annual meeting of the Wildlife Society, Portland, Oregon.
- Wiest, M. & Johnson, T. (2012, May). *A Bayesian probability model for coarsened covariates: Application in epidemiology*. Paper presented at the 44th Journées de Statistique, Brussels, Belgium.
- 2011 Camp, M. J., Rachlow, J. L., Woods, B. A., Johnson, T. R., Shipley, L. A. (2011, November). *Influence of vegetation structure and distance to burrows on predation risk of pygmy rabbits (*Brachylagus idahohensis*)*. Poster presented at the annual meeting of the Wildlife Society, Waikoloa, Hawaii.
- Camp, M. J., Woods, B. A., Rachlow, J. L., Johnson, T. R., Shipley, L. A., & Forbey, J. S. (2011, March). *Examining the functional Components of cover: the relationship between concealment and visibility in shrub steppe habitat*. Poster presented at the annual meeting of the Idaho Chapter of the Wildlife Society, Boise, Idaho.
- Camp, M. J., Woods, B. A., Rachlow, J. L., Johnson, T. R., & Shipley, L. A. (2011, June). *I can see you but you can't see me: The relationship between visibility and concealment in sagebrush habitat and potential tradeoffs*. Paper presented at the annual meeting of the American Society of Mammalogists, Portland, Oregon.
- Woods, B. A., Camp, M. J., Rachlow, J. L., Johnson, T. R., Shipley, L. A., & Forbe, J. S. (2011, March). *Giving up densities as a metric of risk for investigating habitat tradeoffs by pygmy rabbits*. Poster presented at the annual meeting of the Idaho Chapter of the Wildlife Society, Boise, Idaho.
- Woods, B. A., Camp, M. J., Rachlow, J. L., Johnson, T. R., Shipley, L. A., & Forbey, J. S. (2011, June). *Using giving up densities as a metric of predation risk in free-ranging mammals: evaluating habitat tradeoffs by pygmy rabbits in the field*. Poster presented at the annual meeting of The American Society of Mammalogists, Portland, Oregon.

- 2010 Kuhn, K. M., Johnson, T. R., & Miller, D. R. (2010, August). *Motivated reasoning and the impact of discovered résumé embellishment*. Paper presented at the annual meeting of The Academy of Management, Montreal, Canada.
- 2006 Johnson, T. R. (2006, June). *Multinomial logit and probit models for ordinal response variables: A reexamination and generalization of the stereotype model*. Paper presented at the International Meeting of the Psychometric Society, Montreal, Canada.
- 2005 Bodner, T. E. & Johnson, T. R. (2005, July). *Some properties of likelihood ratio and nested tetrad tests comparing factor models with different numbers of factors*. Paper presented at the International Meeting of the Psychometric Society, Tilburg, The Netherlands.
- Bolt, D. M. & Johnson, T. R. (2005, July). *Multidimensional extensions of the nominal response model for distractor analysis*. Paper presented at the International Meeting of the Psychometric Society, Tilburg, The Netherlands.
- 2004 Johnson, T. R. (2004, June). *Generalized linear models with ordinally-observed covariates*. Paper presented at the International Meeting of the Psychometric Society, Pacific Grove, California.
- Johnson, T. R. (2004, April). *Generalized linear models with ordinally-observed covariates*. Paper presented at the Applied Statistics in Agriculture Seminar Series, Moscow, ID.
- 2001 Johnson, T. R. (2001, April). *On the use of mixed-effects models for analyzing probability judgments*. Paper presented at the Applied Statistics in Agriculture Seminar Series, Moscow, ID.
- 2000 Johnson, T. R. & Budescu, D. V. (2000, May). *Nonmetric ratio scaling*. Paper presented at The International Conference on Measurement and Multivariate Analysis, Banff, Alberta, Canada.
- 1999 Budescu, D. V., Johnson, T. R., & Wallsten, T. S. (1999). Averaging independent and dependent probability judgments. Paper presented at the 40th annual meeting of the Psychonomic Society, Los Angeles, November 1999.
- 1998 Budescu, D. V., Johnson, T. R., & Wallsten, T. S. (1998). Averaging probability judgments: Simulation tests of the independence assumption. Paper presented at the Institute for Operations Research and the Management Sciences (INFORMS) International Conference, Tel-Aviv, Israel.
- 1997 Budescu, D. V. & Johnson, T. R. (1997, July-August). On the use of item response theory in the study of probability judgments. Paper presented at the 30th annual meeting of the Society for Mathematical Psychology, Bloomington, Indiana.
- Johnson, T. R. (1997, November). On the (nonlinear) multivariate analysis and representation of subjective probability judgments. Poster presented at the meeting of the Society for Judgment and Decision Making, Philadelphia, November 1997.
- 1996 Budescu, D. V. & Johnson, T. R. (1996, May). A new approach to calibration. Paper presented to the Distinguished Fellows Panel, American Psychological Society Annual Convention, Washington DC.
- 1994 Johnson, T. R. & Thorndike, R. M. (1994, October). Three decision rules for number of factors explored for multiple samples of various sizes drawn from real data. Paper presented at the Annual Meeting of the Society for Multivariate Experimental Psychology, Princeton, New Jersey.

Grants and Contracts

Funded

- S05-F08 Co-Principal Investigator with David A. Thomas (PI), Cynthia Thomas (Co-PI), and Monte Boisen (Co-PI). *Gateway to Calculus Project*. FIE Earmark Grant, June 2005 to August 2008, \$ 694,344.
- F04-F07 Co-Principal Investigator with David A. Thomas (PI). *Coeur d'Alene Mathematics Project*. Idaho Department of Education, \$193,069.

Not Funded

Co-Principal Investigator with E. N. Chapman (PI) and M. M. Wiest (Co-PI). *Obtaining and Measuring Sexual Behavior and Health Knowledge in College Students*. Clinical and Translational Research Infrastructure Network (CTR-IN) Pilot Grant Program, submitted 2014, not funded.

Co-Principal Investigator with M. Wiest (PI) and S. Kane (Co-Pi). *Bayesian Models for Coarsened Covariates: Estimation and Prior Elicitation*. National Science Foundation, submitted 2012, not funded.

Co-Principal Investigator with M. Wiest (PI), S. Kane (Co-PI), and J. Wulforth (Co-PI). *Preserving Pledges of Confidentiality, Coarsening Covariates, and Maximizing Data Utility*. National Science Foundation, submitted 2011, not funded.

Co-Principal Investigator with Erik R. Coats (PI) and Andrzej J. Paszczynski (Co-PI). *Optimizing the Use of Complex Mixed Microbial Systems for the Production of Polyhydroxyalkanoates on Fermented Dairy Manure*. National Science Foundation, submitted 2010, not funded.

Co-Principal Investigator with David A. Thomas (PI) and Monte Boisen (Co-PI). *Assessing Student Knowledge of Calculus: ASK Calculus*. National Science Foundation (Undergraduate Education, CCLI Program), submitted 2002, not funded.

Co-Principal Investigator with David A. Thomas (PI) and Michael R. Odell (Co-PI). *Science and Mathematics Assessment in Research and Teaching (SMART)*. National Science Foundation (Division of Undergraduate Education), submitted 2002, not funded.

Teaching Accomplishments

Courses Taught

Introduction to Statistics (Stat 150): S01, S02.

Statistical Methods (Stat 251): F00-F01, F02-F08, S09, F09, F10, S11, S12-S16.

Probability and Statistics (Stat 301): F00.

Survey Sampling Methods (Stat 422): F14, F15.

Statistical Analysis (Stat 431): F09, S10, F10.

Seminar (Stat 501): F07-F08.

Applied Regression Modeling (Stat 516): S10-S16 (spring only).

Regression (Stat 550): S07, S08, S09.

Computer Intensive Methods (Stat 565): F04.

Courses Developed

Applied Regression Modeling (Stat 516).

Graduate Students Advised (Major Professor)

- 2008 Guarino, J. *Modeling response styles: Neutral-inflated ordinal regression*. MS in Statistics. Spring, 2008
- 2002 Zhu, J. *A multinomial probit mixture model for choice-based conjoint analysis*. M.S. in Statistics. Spring, 2002.

Graduate Students Advised (Committee Member)

- 2015 Aziz, H. *Estimating the impact of cultural variation on epidemic behavior*. MS in Statistics. Fall, 2105.
- DeMay, S. M. *Genetic monitoring of the endangered Columbia Basin pygmy rabbit recovery*. PhD in Environmental Science. Fall, 2015.
- Ng, E. *Population dynamics and trophic ecology of nonnative lake trout in Priest Lake, Idaho*. MS in Natural Resources. Spring, 2015.
- Woodruff, S. P. *Developing and evaluating genetic monitoring tools for Sonoran pronghorn (*Antilocapra americana sonoriensis*)*. PhD in Natural Resources. Fall, 2015.
- 2013 Maxwell, J. *Groups, goals, and incentives in poverty alleviation*. MS in Applied Economics. Spring, 2013.
- 2012 Camp, M. J. *Grazing by cattle in pygmy rabbit habitat: Implications for forage and cover resources*. MS in Wildlife Resources. Spring, 2012.
- Woods, B. A. *Fire in the sagebrush shrub-steppe: Potential influence on pygmy rabbit habitat*. MS in Wildlife Resources. Spring, 2012.
- 2010 Ammann, T. *Examination and application of the a-b signal detection theory model to pedestrian gap selection*. MS in Psychology. Spring, 2010.
- Castelin, K. *The invisible men: Estimating foreign born labor and their impacts on Idaho's economy*. Spring, 2010.
- 2009 Leites, L. *Differences of Douglas-fir (*Pseudotsuga menziesii* (Mirb.) Franco) populations in height growth, water use efficiency, and carbon partitioning responses to changes in climate and water availability*. Ph.D. in Natural Resources. Fall, 2009.
- 2008 Sarepalli, S. S. *Effects of upstream signalized intersections on two-lane highway operations*. M.S. in Engineering. Spring, 2008.
- 2007 Buzbas, E. O. *Bayesian inference in population in genetic models under weak selection*. M.S. in Statistics. Spring, 2007.
- Langfield, G. A. *A comparative study of violent and non-violent batterers in the Inland Northwest using the MCMI-III*. Ph.D. in Education. Spring, 2007.
- 2002 Lu, L. *A comparison of lasso and Bayesian methods for linear models*. M.S. in Statistics. Spring, 2002.
- 2001 Xu, M. *Mixture models with longitudinal data for the study of clearance rates of *E. coli* O157:H7 in bovines*. M.S. in Statistics. Spring, 2001.

Service

Committee Assignments

- F15–present Promotion and Tenure Committee, College of Science
- F15 Judge, College of Science Student Research Exposition
- F14 Promotion and Tenure Committee, Department of Psychology

- F13-S14 Faculty Search Committee, Department of Statistical Science
- F13 Judge, College of Science Student Research Exposition
- F13 Graduate Committee (Chair), Department of Statistical Science
- F13 Promotion and Tenure Committee, Department of Statistical Science
- F13 Promotion and Tenure Committee, College of Agricultural & Life Sciences
- F12–present Graduate Committee, Department of Statistical Science
- S12–F12 Dean Search Advisory Committee, College of Science
- S10 Judge, College of Science Student Research Exposition
- F09–S15 University Curriculum Committee
- F07–S08 Dean Search Advisory Committee, College of Science
- F07–S08 Faculty Search Committee, Department of Statistics
- S07–present Awards Committee, College of Science
- S06–present Curriculum Committee, College of Science
- F06–F10 Graduate Committee (Chair), Division of Statistics
- F04–present Computer Committee, College of Science
- F03–S06 Graduate Committee, Division of Statistics
- S04 Director Search Committee, Division of Statistics
- S02 Visiting Professor Search Committee, Division of Statistics

Professional and Scholarly Organizations

- S13–present Associate Editor, *British Journal of Mathematical and Statistical Psychology*.
- undisclosed Advisory Panel, National Science Foundation (MMS Program).
 Manuscript reviewer for *Applied Psychological Measurement*, *Behavior Research Methods*, *British Journal of Mathematical and Statistical Psychology*, *Decision*, *Field Methods*, *Journal of Behavioral Decision Making*, *Journal of Educational and Behavioral Statistics*, *Journal of the Royal Statistical Society: Series C*, *Psychological Methods*, *Psychometrika*, *Structural Equation Modeling*.
 Grant reviewer for the *National Science Foundation* and the *Netherlands Organisation for Scientific Research*.
 Book draft reviewer for CRC Press, Oxford University Press, and Springer.
 Member of the *Psychometric Society*.
 Member of the *American Statistical Association*.