

VALEN E. JOHNSON

Education:

Ph.D.	Statistics	The University of Chicago	1989
M.A.	Applied Mathematics	University of Texas at Austin	1985
B.S.	Mathematics	Rensselaer Polytechnic Institute	1981

Positions Held:

- 2016–pres University Distinguished Professor, Texas A&M University
- 2014–pres Head, Department of Statistics, Texas A&M University
- 2012–pres Professor, Department of Statistics, Texas A&M University
- 2011-2012 Ad Interim Division Head, Division of Quantitative Sciences & Ad Interim Chair, Department of Biostatistics, University of Texas M.D. Anderson Cancer Center
- 2007-2010 Deputy Chairman, Department of Biostatistics, University of Texas M.D. Anderson Cancer Center
- 2004-2011 Professor, Department of Biostatistics, University of Texas M.D. Anderson Cancer Center
- 2005-2011 Adjunct Professor, Department of Statistics, Rice University
- 2007-2011 Adjunct Professor, Department of Statistics, Texas A&M University
- 2002-2004 Professor, Department of Biostatistics, University of Michigan
- 2001-2002 Technical Staff Member, Los Alamos National Laboratory
- 2000-2003 Professor, Institute of Statistics and Decision Sciences, Duke University
- 1995-1999 Director of Undergraduate Studies, Institute of Statistics and Decision Sciences, Duke University
- 1993-2000 Associate Professor, Institute of Statistics and Decision Sciences, Duke University
- 1999-2002 Adjunct Professor, Department of Statistics, The University of North Carolina at Chapel Hill
- 1989-1992 Assistant Professor, Institute of Statistics and Decision Sciences
- 1988-1989 Research Assistant, Franklin Maclean Memorial Research Institute, Department of Radiology, University of Chicago
- 1981-1985 Intelligence Officer, United States Army

Awards and Professional Service:

Fellow, American Statistical Association
Fellow, Royal Statistical Society
Elected Member, International Statistics Institute
Co-Editor, *Bayesian Analysis*, 2010-2014.
Associate Editor, *Journal of the American Statistical Association*, 2011-present.
Member, Board of Directors, International Society for Bayesian Analysis, 2004-2007
Associate Editor, *Bayesian Analysis*, 2006-2010
Member, Clinical Review Committee, University of Texas M.D. Anderson Cancer Center, 2007-2008
Associate Member, Institutional Review Board, University of Texas M.D. Anderson Cancer Center, 2006-2007
Faculty Senator, University of Texas M.D. Anderson Cancer Center, 2005-2008
Faculty Senator, University of Michigan, 2003-2004
Chair, Lindley Award Committee, 2008
Chair or Member, Savage Thesis Award Committee, 2004-2007
Member, Lindley Award Committee, 2004-2007
Treasurer, International Society for Bayesian Analysis, 1998-2001
Associate Editor, *IEEE Transactions on Medical Imaging*, 1993-2002
Associate Book Editor, *Journal of the American Statistical Association*, 1998-2002
Associate Editor, *Journal of the American Statistical Association*, 1992-1996
President, North Carolina Chapter of the American Statistical Association, 1995
Runner-up, Francois Erbsmann Award for contributions to medical imaging, 1991
Savage Award for Outstanding Thesis in Bayesian Statistics and Econometrics, 1989

Patents:

Image Object Matching Using Core Analysis and Deformable Shape Loci, Patent Number 5,926,568, held jointly with Edward Chaney, Stephen Pizer, Alyson Wilson, Duke University and the University of North Carolina at Chapel Hill.

Methods for Estimating Probe Cell Locations in High Density Synthetic DNA Microarrays, Patent Number 6,993,173, with Harry Zuzan and Duke University.

Books:

Johnson, V.E. and Albert, J. (1999), *Ordinal Data Models*, Springer-Verlag: New York.

Johnson, V.E. (2003), *Grade Inflation: A Crisis in College Education*. Springer-Verlag, New York.

Articles in major statistical and scientific journals:

Johnson, V.E. (1992), "A Technique for Estimating Marginal Posterior Densities in Hierarchical Models Using Mixtures of Conditional Densities," *Journal of the American Statistical Association*, **87**, 852-860.

Johnson, V.E. (1994), "A Model for Segmentation and Analysis of Noisy Images," *Journal of the American Statistical Association*, **89**, 230-241.

Johnson, V.E. (1996), "Studying Convergence of Markov Chain Monte Carlo Algorithms Using Coupled Sampling Paths," *Journal of the American Statistical Association*, **91**, 154-166.

Johnson, V.E. (1996), "On Bayesian Analysis of Multirater Ordinal Data: An Application to Automated Essay Grading," *Journal of the American Statistical Association*, **91**, 42-51.

Johnson, V.E. (1998), "A Coupling-Regeneration Scheme for Diagnosing Convergence in Markov Chain Monte Carlo Algorithms," *Journal of the American Statistical Association*, **93**, 238-248.

Johnson, V.E., Deane, R.O. and van Schaik, C.P. (2002), "Bayesian Analysis of Multi-Study Rank Data with Application to Primate Intelligence Ratings," *Journal of the American Statistical Association*, 8-17.

Johnson, V.E. (2004), "A Bayesian χ^2 Test for Goodness-of-Fit," *Annals of Statistics*, **32**, 2361-2384.

Johnson, V.E. (2005), "Bayes Factors Based on Test Statistics," *Journal of the Royal Statistical Society, Series B*, **67**(5), 689-701.

Johnson, V.E. (2008), "A Statistical Analysis of the NIH Peer Review System," *Proceedings of the National Academy of Sciences*, **105** (32), 11076-11080.

Hu, J. and **Johnson, V.E.** (2009), "Bayesian Model Selection Using Test Statistics," *Journal of the Royal Statistical Society. Series B*, **71**, 143-158.

Hu, J. and **Johnson, V.E.** (2009), “Log-Linear Models for Gene Association,” *Journal of the American Statistical Association*, **104**, 597-607.

Johnson, V.E. and Rossell, D. (2010), “On the use of non-local prior densities for default Bayesian hypothesis tests,” *Journal of the Royal Statistical Society. Series B*, **72**, 143-170.

Johnson, V.E. and Rossell, D. (2012), “Bayesian Variable Selection in High-dimensional Settings,” *Journal of the American Statistical Association*, **107**, 649-660.

Johnson V.E. (2013), “Uniformly most powerful Bayesian tests,” *Annals of Statistics*, **41**, 1716-1741

Johnson, V.E. (2013), “Revised standards for statistical evidence,” *Proceedings of the National Academy of Sciences*, **110**(48), 19313-19317.

Barney B., Amici F., Aureli F., Call J. and **Johnson, V.E.** (2015), “Joint Bayesian Modeling of Binomial and Rank Data for Primate Cognition,” *Journal of the American Statistical Association*, **110**(510), 573-582.

Johnson, V.E., Payne R., Wang T., Asher A., Mandal, S. (2017), “On the Reproducibility of Psychological Science,” *Journal of the American Statistical Association*, **112**:517, 1-10.

Benjamin* D. J., Berger J. O., Johannesson* M., Nosek B. A., Wagenmakers E.-J., Berk R., Bollen K. A., Brembs B., Brown L., Camerer C., Cesarini D., Chambers C. D., Clyde M., Cook T. D., De Boeck P., Dienes Z., Dreber A., Easwaran K., Efferson C., Fehr E., Fidler F., Field A. P., Forster M., George E. I., Gonzalez R., Goodman S., Green E., Green D. P., Greenwald A., Hadfield J. D., Hedges L. V., Held L., Ho T.-H., Hoijtink H., Jones J. H., Hruschka D. J., Imai K., Imbens G., Ioannidis J. P. A., Jeon M., Kirchler M., Laibson D., List J., Little R., Lupia A., Machery E., Maxwell S. E., McCarthy M., Moore D., Morgan S. L., Munafó M., Nakagawa S., Nyhan B., Parker T. H., Pericchi L., Perugini M., Rouder J., Rousseau J., Savalei V., Schönbrodt F. D., Sellke T., Sinclair B., Tingley D., Van Zandt T., Vazire S., Watts D. J., Winship C., Wolpert R. L., Xie Y., Young C., Zinman J., & **Johnson* V. E.** (senior and corresponding* author) (2017), “Redefine Statistical Significance,” *Nature Human Behaviour*, in press.

Other peer-reviewed articles:

Chen, C., **Johnson, V.E.**, Wong, W.H., Hu, X., and Metz, C.E. (1990), “Bayesian Image Reconstruction in Positron Emission Tomography,” *IEEE Transactions on Nuclear Science*, NS-37, 636-641.

Johnson, V.E., Wong, W.H., Hu. X., Chen, C-T., (1991), "Image Restoration Using Gibbs Priors: Boundary Modeling, Treatment of Blurring, and Selection of Hyperparameters," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **13**, 413-425.

Chen, C-T., Ouyang, X., Wong, W.H., Hu, X., **Johnson, V.E.**, Ordonoz, C.E., and Metz, C.E. (1991), "Sensor Fusion in Image Reconstruction," *IEEE Transactions in Nuclear Science*, **38**, 687-692.

Johnson, V.E., Wong, W.H., Hu. X., Chen, C-T., (1991), "Bayesian Restoration of PET Images Using Gibbs Priors," in *Information Processing and Medical Imaging XI*, 15-28, Alan R. Liss: New York.

Hu, X., **Johnson, V.E.**, Wong, W.H., Chen, C-T., (1991), "Bayesian Image Processing for Magnetic Resonance Imaging," *Magnetic Resonance Imaging*, **9**, 611-620.

Lin, W.J., Pizer, S.M., Johnson V.E., (1991), "Boundary Estimation in Ultrasound Images," in *Information Processing in Medical Imaging XII*, 285-299, Springer-Verlag: Heidelberg.

Liang, Z., Jaszczak, R., Coleman, R., **Johnson, V.E.** (1991), "Simultaneous Reconstruction, Segmentation, and Edge Enhancement of Relatively Piecewise Continuous Images with Intensity Level Information," *Medical Physics*, **18**, 394-401.

Soper, J.T., Johnson, P.L., **Johnson, V.E.**, Berchuck, A., Clarke-Pearson, D.L. (1992). "Comprehensive Restaging Laparotomy in Women with Apparent Early Ovarian Carcinoma," *Obstetrics and Gynecology*, 949-953.

Johnson, V.E., Wong, W.H., Hu, X., Chen, C.T. (1992). "Data Augmentation Schemes Applied to Image Restoration," in *Medical Images: Formation, Handling and Evaluation*, 345-360, Springer-Verlag: Berlin-Heidelberg.

Johnson, V.E. (1993), "A Framework for Incorporating Prior Structural Information into the Reconstruction of Medical Images," in *Information Processing in Medical Imaging*, eds. Barrett and Gmitro, 307-321, Springer-Verlag: Heidleberg.

Johnson, V.E. (1994), "A Note on Stopping Rules for EM-ML Reconstructions of ECT Images," *IEEE Transactions on Medical Imaging*, **13**, 569-571.

Ouyang, X., Wong, W.H., **Johnson, V.E.**, Hu, X., and Chen C.T. (1994), "Incorporation of Correlated Structural Images in PET Reconstruction," *IEEE Transactions on Medical Imaging*, **13**, 627-640.

Mirrett, P.L, Riski, J.E., Glascott, J., and **Johnson, V.E.** (1994), "Videofluoroscopic Assessment of Dysphagia in Children with Severe Spastic Cerebral Palsy," *Dysphagia*, **9**, 174-179.

Bowsher, J.E., **Johnson, V.E.**, Turkington, T.G., Jaszczak, R.J., Floyd, C.E., and Coleman, R.E (1996), "Bayesian Reconstruction and Use of Anatomical *A Priori* Information for Emission Tomography," *IEEE Transactions on Medical Imaging*, 673-686.

Wilson, A. and **Johnson, V.E.** (1996), "Models for Shape Deformation," *Bayesian Statistics 5: Proceedings of the Fifth Valencia International Meeting*, edited by J. Berger, J. Bernardo, P. Dawid, and A. Smith, 801-808, Clarendon Press: Oxford.

Higdon, D.M., Bowsher, J.E., **Johnson, V.E.**, Turkington, T.G., Gilland, D.R., and Jaszczak, R.J. (1997), "Fully Bayesian Estimation of Gibbs Hyperparameters for Emission Computed Tomography Data," *IEEE Transactions on Medical Imaging*, 516-526.

Johnson, V.E. (1997), "An Alternative to Traditional GPA for Evaluating Student Performance," *Statistical Science*, 251-278.

Laading, J.L., McCulloch, C., **Johnson, V.E.**, Gilland, D. and Jaszczak, R.J., (1999), "A Hierarchical Feature Based Deformation Model Applied to 4D Cardiac SPECT Data," in *Lecture Notes in Computer Science: Information Processing in Medical Imaging*, 266-279, Springer-Verlag: Berlin.

Pizer, S.M., Fritsch, D.S., Yushkevich, P.A., **Johnson, V.E.**, and Chaney, E.L., (1999), "Segmentation, Registration, and Measurement of Shape Variation via Image Object Shape," *IEEE Transactions on Medical Imaging*, 851-865.

Johnson, V.E. (2002), "Teacher Course Evaluations and Student Grades: An Academic Tango," *Chance*, **15**(3), 9-16.

Johnson, V.E. (2003), "Consumerism in the Classroom: Student Grades and Student Course Selections," *Chance*, **16**(3), 17-20.

Hamada, M., **Johnson, V.E.**, Moore, L., and Wendelberger, J., (2004), "On Bayesian Tolerance Intervals," *Technometrics*, **46**, 430-444.

Hamada, M., Martz, H.F., Reese, C.S., Graves, T., **Johnson, V.E.**, and Wilson, A.G. (2004), "A Fully Bayesian Approach for Combining Multilevel Failure Information in Fault Tree Quantification and Corresponding Optimal Resource Allocation," *Reliability Engineering and System Safety*, **86**, 297-305.

Johnson, V.E., Moosman, A. and Cotter, P. (2005), "A Hierarchical Model for Estimating the Early Reliability of Complex Systems," *IEEE Transactions on Reliability*, bf 54, 224-231.

Deaner, R.O., van Schaik, C.P., and **Johnson, V.E.** (2006), "Do some taxa have better domain-general cognition than others? A meta-analysis of nonhuman primate studies," *Evolutionary Psychology*, **4**, 149-196.

Johnson, T.D. and **Johnson, V.E.** (2006), “A Bayesian Hierarchical Approach to Multirater Correlated ROC Analysis,” *Statistics in Medicine*, **25**, 1858-1871.

Guerrero, T., **Johnson, V.E.**, Hart, J., Pan, T., Khan, M., Luo, D., Liao, Z., Ajani, J., Stevens, C., Komaki, R., (2007), “Radiation Pneumonitis: Local Dose Versus Fluorodeoxyglucose Uptake Response in Irradiated Lung,” *International Journal of Radiation Oncology, Biology, and Physics*, **68**, 1030-1035.

Anderson-Cook, C., Graves, T., Hamada, M., Hengartner, N., **Johnson, V.E.**, Reese, C.S., and Wilson, A.G. (2007), “Bayesian Stockpile Reliability Methodology for Complex Systems,” *Military Operations Research*, **12**, 25-38.

Iyer, R.B., Balchandram, A., Bruzzi, J.F., **Johnson, V.E.**, Macapinlac, H.A., and Munden, R.F. (2007), “PET/CT and Hepatic Radiation Injury in Esophageal Cancer Patients,” *Cancer Imaging*, **7**, 189-194.

Johnson, V.E. (2007), “Bayesian Model Assessment Using Pivotal Quantities,” *Bayesian Analysis*, **2**, 719-734.

Hart, J.P, McCurdy, M.R., Ezhil, M., Wei, W., Khan, M., Luo, D., Munden, R.F., **Johnson, V.E.**, and Guerrero, T. (2008), “Radiation Pneumonitis: Correlation of Toxicity with Pulmonary Metabolic Radiation Response,” *International Journal of Radiation Oncology, Biology, and Physics*, **71**, 967-971.

Johnson, V.E. (2008), “Properties of Bayes Factors Based on Test Statistics,” *Scandinavian Journal of Statistics*, **35**, 354-368.

Yuan, Y. and **Johnson, V.E.** (2008) “Bayesian Hypothesis Tests Using Nonparametric Statistics,” *Statistica Sinica*, **18**(3), 1185-1200.

Castillo, R., Castillo, E., Guerra, R., **Johnson, V.E.**, McPhail, T., Garg, A., Guerrero, T. (2009), “A Framework for Evaluation of Deformable Image Registration Spatial Accuracy Using Large Landmark Point Sets,” *Physics, Medicine, and Biology*, 1849-1870.

Rampurwala, M., Ravoori, M., Wei W., **Johnson, V.E.**, Vikram, R., Kundra, V. (2009), “Visualization and quantification of intraperitoneal tumors by in vivo CT using the negative contrast enhancement strategy in a mouse model of ovarian cancer,” *Translational Oncology*, **2**, 96-106.

Riegel A.C., Chang, J.Y., Vedam, S.S., **Johnson, V.E.**, Chi, P.C., Pan, T. (2009), “Cine Computed Tomography Without Respiratory Surrogate in Planning Stereotactic Radiotherapy for Non-Small-Cell Lung Cancer,” *International Journal of Radiation, Oncology, Biology and Physics*, **73**, 433-441.

Banerjee, K., Chabris, C.F., **Johnson, V.E.**, Lee, J., Tsai, F., Hauser, M.D. (2009), “General Intelligence in Another Primate: Individual Differences across Cognitive Task

Performance in a New World Monkey (*Saguinus oedipus*),” *PLoS ONE*, **4** (6): e5883.doi:10.1371/journal.pone.0005883.

Johnson, V.E. and Cook, J.D. (2009), “Bayesian Design of Single-Arm Phase II Clinical Trials with Continuous Monitoring,” *Clinical Trials*, **6**, 217-226.

Wang, X.S., Shi, Q., Lu, C., Basch, E.M., **Johnson, V.E.**, Mendoza, T.R., Mobley, G., Cleeland, C. (2010), “Prognostic Value of Symptom Burden for Overall Survival in Advanced Non-Small Cell Lung Cancer Patients Receiving Chemotherapy,” *Cancer*, **116**(1):137-145.

McCurdy, M., McAleer, M., Wei W., Ezhil, M., **Johnson, V.E.**, Khan, M., Baker, J., Lou, D., Ajani, J., Guerrero, T. (2010), “Induction and Concurrent Taxanes Enhances both the Pulmonary Metabolic Radiation Response and the Radiation Pneumonitis Response in Patients with Esophagus Cancer,” in *International Journal of Radiation, Oncology, Biology, and Physics*, **76**, 816-823.

Cleeland CS, Sloan JA, ASCPRO Organizing Group, (2010), “Assessing the Symptoms of Cancer Using Patient-Reported Outcomes (ASCPRO): searching for standards,” *Journal of Pain Symptom Management*, **39**(6), 1077-85.

Riegel, A., Bucci, M.C., Kara, M., Malawi, O., **Johnson, V.E.**, Moiz, A., Sun, X., Dershan, L., Chandler, A. (2010), “Target definition of moving lung tumors in positron emission tomography: Correlation of optimal activity concentration thresholds with object size, motion extent, and source-to-background ratio,” *Medical Physics*, **37**(4) 1742-1752.

Cao, J., Moosman, A., and **Johnson, V.E.** (2010), “A Bayesian Chi-Squared Goodness of Fit Test for Censored Data Models,” *Biometrics*, **66**, 426-434.

Wang, X.S., Cleeland, C.S., Mendoza, T.R., Yun, Y.H., Wang, Y., Okuyama, T., **Johnson, V.E.** (2010), “Impact of Cultural and Linguistic Factors on Symptom Reporting by Patients with Cancer,” *Journal of the National Cancer Institute*, **102**, 732-738.

Johnson, V.E. (2010), “Bayesian Aggregation Error?,” *International Journal of Safety and Reliability*, **4**, 359-365.

Reese, C.S, Wilson, A.G., Guo, J., Hamada, M., and **Johnson, V.E.**, (2011), “A Bayesian Model for Integrating Multiple Sources of Lifetime Information in System-Reliability Assessments,” *Journal of Quality Technology*, **43**, 127-141.

Chandler, A., Wei, W., Herron, D.H., Anderson, E.F., **Johnson, V.E.**, Ng, C. (2011) “Semiautomated motion correction of lung tumors in breathhold CT, *Academic Radiology*, **18**(3), 286-293.

Kaur, H., Matin, S.F., Javadi, S., **Johnson, V.E.**, Choi, H., Sandler, C. and Ahar, K., (2011), “Chyluria after radiofrequency ablation of renal tumors,” *Journal of Vascular Interventional Radiology*, **22**, 924-927.

Wright, K.C., Ravoori, M.K., Dixon, K., Han, L., Singh, S., Liu, P., Gupta, S., **Johnson, V.E.**, Kan, Z., Kundra, V. (2011), “Perfusion CT Assessment of Tissue Hemodynamics Following Hepatic Arterial Infusion of Escalating Doses of Angiotensin-II in a Rabbit Liver Tumor Model,” *Radiology*, **260**, 718-726.

Vu, T. Guha, N.T., Harrell, R., Ahmed, S., Kumar, A.J., **Johnson, V.E.**, Perrier, N., Hamberg, L.M., Hunter, G.J., Schellingerhout, D., (2011), “Imaging Characteristics of Hyperfunctioning Parathyroid Adenomas Using Multiphase Multidetector Computed Tomography,” *Journal of Computer Assisted Tomography*, **35**(5), 560-567.

Yuan, Y. and **Johnson, V.E.** (2012), “Goodness-of-fit diagnostics for Bayesian hierarchical models,” *Biometrics*, **68**, 156-164.

Tan, C.H., Wei, W., **Johnson, V.E.**, Kundra, V. (2012), “Diffusion-weighted MRI in detection of prostate cancer: meta-analysis,” *American Journal of Roentgenology*, **4**, 822-829.

Bronstein, Y., Ng, C.S., Rohren, E., Ross, M.I., Lee, J.E., Cormier, J., **Johnson, V.E.**, Hwu, W. (2012), “PET/CT in the Management of Patients with Stage IIIC and IV Metastatic Melanoma Considered Candidates for Surgery: Evaluation of the Additive Value after Conventional Imaging,” *Nuclear Medicine and Molecular Imaging*, 902-908.

Amici, F., Barney, B., **Johnson, V.E.**, Cail, J., and Aurelli, F. (2012), “A Modular Mind? A Test Using Individual Data from Seven Primate Species,” *PLoS ONE*, e51918. doi:10.1371/journal.pone.0051918.

Radvanyi, L.G., Bernatchez, C., Zhang, M., Fox, P.S., Miller, P., Chacon, J., Wu, R., Lizee, G., Mahoney, S., Alvarado, G., Glass, M., **Johnson, V.E.**, McMannis, J.D., Shpall, E., Prieto, V., Papadopoulos, N., Kim, K., Homsy, J., Bedikian, A., Hwu, W.J., Patel, S., Ross, M.I., Lee, J.E., Gershenwald, J.E., Lucci, A., Royal, R., Cormier, J.N., Davies, M.A., Mansaray, R., Fulbright, O.J., Toth, C., Ramachandran, R., Wardell, S., Gonzalez, A., Hwu, P. (2012), “Specific lymphocyte subsets predict response to adoptive cell therapy using expanded autologous tumor-infiltrating lymphocytes in metastatic melanoma patients,” *Clinical Cancer Research*, **18**(24), 6758-70.

Barney, B., Wang, S., Lu, C., Liao, Z., **Johnson, V.E.**, Cleeland, C., and Mendoza, T. (2013), “Prognostic Value of Patient-Reported Symptom Interference in Patients with Late-Stage Lung Cancer,” *Quality of Life Research*, **8**, 2143-2150.

Cai, C., Yuan, Y., and **Johnson, V.E.** (2013), “Bayesian Adaptive Phase II Screening Design for Combination Trials,” *Clinical Trials*, **10**, 353-362.

Rossell, D., Telesca, D., **Johnson, V.E.** (2013), “High-Dimensional Bayesian Classifiers Using Non-Local Priors,” in *Statistical Models for Data Analysis XV*, eds. P. Guidici, S. Ingrassia, and M. Vichy, Springer.

Mueller J.W., Vining D.J., Jones, A.K., Followill, D., **Johnson, V.E.**, Bhosale P., Rong J., Cody D.D., (2013), “In Vivo CT Dosimetry During CT Colonography,” *American Journal of Roentgenology*, in press.

Johnson, V.E. (2013), “On Numerical Aspects of Bayesian Variable Selection in High and Ultrahigh Dimensional Settings,” *Bayesian Analysis*, **7**, 1-18.

Liu S., Yuan Y., Castillo R., Guerrero T., and **Johnson V.E.** (2014), “Evaluation of Image Registration Spatial Accuracy Using a Bayesian Hierarchical Model,” *Biometrics*, **70**(2), 366-377.

Jun M., Katzfuss M., Hu J. and **Johnson V.E.** (2014), “Assessing fit in Bayesian models for spatial processes,” *Environmetrics*, **25**(8), 584-595.

Goddard S. and **Johnson V.E.** (2014), “La Falta de Reproducibilidad de la Investigación. La Estadística Como Legitimación del Resultado” (The Lack of Reproducibility in Research. How Statistics can Endorse Results), *Métode*, **83**, 85-89.

Liu, S. and **Johnson, V.E.** (2015), “A robust Bayesian dose-finding design for phase I/II clinical trials,” *Biostatistics*, **17**(2)m 249-263.

Nikooienejad, A., Wang, W. and **Johnson, V.E.** (2015), “Bayesian variable selection for binary outcomes in high-dimensional genomic studies using non-local priors,” *Bioinformatics*, **32**(9), 1138-1345.

Goddard S.D. and **Johnson, V.E.** (2016), “Restricted Most Powerful Bayesian Tests for Linear Models,” *Scandinavian Journal of Statistics*, doi:10.1111/sjos.12235.

Johnson, V.E. (2016), “Bayes factors,” *Encyclopedia of Life Sciences*, in press, Wiley, New York.

Shin, M., Bhattacharya, A. and **Johnson, V.E.** (2017), “Scalable Bayesian Variable Selection Using Nonlocal Prior Densities in Ultrahigh-Dimensional Settings,” *Statistica Sinica*, to appear.

Selected Citations in National and International Media

“When an A Is Average,” *Newsweek*, p.64, March 3, 1997.

“Duke May Shift Grading Plan to Reward Students in Hard Classes,” Colloquy section, *The Chronicle of Higher Education*, February 14, 1997.

“Duke U. Considers Revised Plan to Curb Grade Inflation,” *Academe Today*, *The Chronicle of Higher Education*, September 26, 1997.

Guest interviewee on plan to adjust GPA's at University of Wisconsin, *Wisconsin Public Radio*, 1997.

"Why Colleges Shower Their Students with A's," p.16, Brent Staples; Editorial section, *New York Times*, March 8, 1998.

"Is College Too Easy?" guest interviewee, *National Public Radio: Talk of the Nation*, December 11, 2001.

"An A is an A is an A...", invited editorial, *New York Times*, April 14, 2002.

"Easy grading makes 'deep learning' more important," John Merrow; Editorial section, *USA Today*, February 4, 2003.

"Tackling peer review bias," A. Gawrylewski, *The Scientist*, July 28, 2008.

"Stringent statistics make better science," C. Pain; Science section and interview, *Australian Broadcasting Corporation*, November 12, 2013.

"Weak statistical standards implicated in scientific irreproducibility," E.C. Hayden; News section, *Nature*, November 11, 2013.

"Is it time to up the statistical standard for scientific results?" J. Timmer, *Ars Technica*, November 12, 2013.

"Science and Scientific Journals Are Flawed. Can Better Statistics Help?" A Berezow; Opinion section, *Forbes*, November 13, 2013.

"Une étude ébranle un pan de la méthode scientifique," P. Barthélémy, *Le Monde*, November 13, 2013.

"In 'significant effect' zegt look niet alles," M. van Calmthout, *De Volkskrant* (Dutch daily paper), November 13, 2013.

"Strenger gegen Irrtümer," interview and article with Pascal Biber, *Schweizer Radio und Fernsehen* (Swiss Radio and TV), November 14 and 15, 2013.

"Taking the Powerball Approach to Funding Medical Research," F. Fang and A. Casadevall; Commentary, *The Wall Street Journal*, April 14, 2014.

"It will be much harder to call new findings 'significant' if this team gets its way," Kelly Servick, *Science Magazine*, July 25, 2017.

Invited, submitted and non-peer reviewed articles:

Chen, C-T., **Johnson, V.E.**, Wong, W.H., Hu, X., and Metz, C. (1989), “Statistical Methods for Image Restoration and Image Reconstruction,” in *Signal Recovery and Synthesis IV*, OSA Technical Digest Series, **15**, 44-47.

Chen, C-T., **Johnson, V.E.**, Wong, W.H., Hu, X., and Metz, C. (1989), “Bayesian Methods for Image Processing and Image Reconstruction,” in *Proceedings of the IEEE International Conference on Image Processing*, 755-759.

Johnson, V.E., Chen, C-T., Hu, X., and Wong, W.H. (1991), “Image Reconstruction Using A Priori Boundary Information,” in *Computing Science and Statistics - Statistics of Many Parameters: Curves, Images, and Spatial Models*, 151-157, Springer-Verlag: New York.

Chen, C-T., **Johnson, V.E.**, Hu, X., Wong, W.H., Metz, C.E., (1991), “Image Processing and Image Reconstruction with the Use of A Priori Information,” *SPIE Medical Imaging IV*, **1233**, 439-442.

Johnson, V.E., Bowsher, J.E., Qian, J., and Jaszczak, R. (1992). “Segmentation and Analysis of ECT Images,” *Neural and Stochastic Neural Methods in Image and Signal Processing*, **1766**, 287-295.

Bowsher, J.E., **Johnson, V.E.**, Turkington, T.G., Floyd, C.E., Jaszczak, R.J., and Coleman, R.E. (1993), “Improved Lesion Detection and Quantification in Emission Tomography Using Anatomical and Physiological Prior Information,” *1993 IEEE Nuclear Science Symposium and Medical Imaging Conference Record*, 1907-1911.

Wilson, A. and **Johnson, V.E.** (1994), “Using Features to Model Prior Structural Information,” in *Proceedings of the Section of Physical and Engineering Sciences, American Statistical Association*.

Wilson, A. and **Johnson, V.E.** (1994), “Priors on Scale-Space Templates,” in *Mathematical Methods in Medical Imaging III, Proceedings of the International Society for Optical Engineering Vol. 2299*, edited by F. Bookstein, J. Duncan, N. Lange, and D. Wilson, 161–168. Bellingham, WA: SPIE.

Johnson, V.E. (1995), “Image Restoration and Reconstruction,” invited contribution for *Encyclopedia of Statistical Sciences* (eds. Kotz, Read, and Banks), John Wiley & Sons: New York.

Johnson, V.E., Bowsher, J.E., Turkington, T.G., and Jaszczak, R.J., (1995), “Analysis and Reconstruction of Medical Images Using Prior Information,” with discussion, in *Case Studies in Applied Bayesian Statistics II*, 149-238, Springer-Verlag: New York.

Wilson, A.G., **Johnson, V.E.**, Yu, L., and Pizer, S. (1995), “Scale-Space Image Models for Shape Deformation,” in *Computing Science and Statistics, Volume 27* (eds. M.M. Meyer and J.L. Rosenberger), 192-201, Interface Foundation of North America.

Laading, J.K., **Johnson, V.E.**, Baydush, A.H., Floyd, C.E. (1996), “A Novel Statistical Analysis of Two Sources of Digital Chest Radiographs,” in *SPIE Medical Imaging 1996: Physics of Medical Imaging*, 2708, 62-71.

Wilson, A.G., **Johnson, V.E.**, Yu, L., Pizer, S., Fritsch, D., Chaney, E. (1996), “Towards a Framework for Automated Image Analysis,” in *Image Fusion and Shape Variability Techniques* (eds. K.V. Mardia, C.A. Gill, I.L. Dryden), 13-20, Leeds University Press.

McCulloch, C.C., Laading, J.K., Wilson, A.G., and **Johnson, V.E.** (1996), “A Shape-Based Framework for Automated Image Segmentation”, in *The American Statistical Association Proceedings of the Section on Bayesian Statistical Science*, 1-6.

McCulloch, C., Laading, J.K., and **Johnson, V.E.** (1997), “Image Feature Identification via Bayesian Hierarchical Models”, in *The American Statistical Association Proceedings of the Section on Bayesian Statistical Science*, 113-117.

Laading, J.K., McCulloch, C. and **Johnson, V.E.** (1997), “A Hierarchical Object Deformation Model Applied to the Digital Chest Radiograph,” in *The American Statistical Association Proceedings of the Section on Bayesian Statistical Science*, 118-123.

McCulloch, C. and **Johnson, V.E.** (1997), “Template Matching Using Facets,” in *The Art and Science of Bayesian Image Analysis*, eds. K. Mardia, C.A. Gill, and R.G. Aykroyd, 63-71, Leeds University Press.

Mardia, K., McCulloch, C., Dryden, I., and **Johnson, V.E.** (1997), “Automatic Scale-Space Method of Landmark Detection,” in *The Art and Science of Bayesian Image Analysis*, 17-29, eds. K. Mardia, C.A. Gill, and R.G. Aykroyd, Leeds University Press.

Johnson, V.E. (1998), Invited discussion of “Functional Magnetic Resonance Imaging and Spatio-temporal Inference” by Christopher Genovese, in *Bayesian Statistics: Proceedings of the Sixth Valencia International Meeting*, 255-274.

Johnson, V.E. (1998), “Edge-Preserving Smoothers for Image Processing,” invited comment in *Journal of the American Statistical Association*, 541-544.

Johnson, V.E. (1998), “Practitioner’s Commentary: The Outstanding Grade Inflation Papers,” *The Journal of Undergraduate Mathematics and Its Applications*, **19**, 329-336.

Johnson, V.E. (1998), Review of *Markov Chain Monte Carlo in Practice* edited by W.R. Gilks, S. Richardson and D.J. Spiegelhalter (1995); *Statistics in Medicine*, **17**, 1301-1302.

Johnson, V.E. (1999), “Posterior Distributions on Normalizing Constants,” Discussion Paper, Institute of Statistics and Decision Sciences, Duke University.

Johnson, V.E., Fitzgerald, M., and Martz, H. (1999), “Discussion: Hierarchical Bayes Analysis for the Random Fatigue-Limit Model,” invited discussion to “Estimating Fatigue Limit Curves with the Random Fatigue-Limit Model” by F.G. Pascual and W.Q. Meeker, to *Technometrics*, 294-296.

Ponisciak, S. and **Johnson, V.E.** (2002), ““Bayesian Analysis of Essay Grading,” *Automated Essay Scoring: A Cross Disciplinary Perspective*, Lawrence Erlbaum: San Francisco, 181–192.

Johnson, V.E. (2002), “An A is an A is an A...,” invited editorial column in the April 14, 2002 *New York Times*.

Johnson, V.E., Graves, T.L., Hamada, M.S., and Reese, C.S. (2002), “A Hierarchical Model for Estimating the Reliability of Complex Systems” (with discussion), *Bayesian Statistics 7*, Clarendon: Oxford, 199-213.

Johnson, V.E. and Albert, J. (2004), “Ordinal Regression Models,” *Handbook of Quantitative Methodology for the Social Sciences*, Sage Publications: Thousand Oaks, CA, 151-174.

Johnson, V.E. and Johnson, T.D. (2005), “Bayesian Analysis of ROC Data,” in *Handbook of Statistics*, edited by DK Dey and CR Rao, **25**, 821-833, Elsevier: Amsterdam.

Johnson, V.E. (2005), “A Note on the Consistency and Interpretation of Bayes Factors Based on Test Statistics,” *Oberwolfach Reports*, 2660-2663.

Johnson, V.E. (2006), “Beyond Grade Inflation: Grading Problems in Higher Education (invited review),” *Review of Higher Education*, **30**, 76-77.

Johnson, V.E. and Yuan, Y. (2007), “An Exploratory Test for an Excess of Significant Findings (invited commentary),” *Clinical Trials*, **4**, 254.

Johnson, V.E. (2007), “Discussion of ‘Bayesian Checking of the Second Levels of Hierarchical Models,” *Statistical Science*, **22**, 353-358.

Rossell, D., Baladandayuthapani, V., and **Johnson, V.E.** (2008), “Bayes Factors Based on Test Statistics Under Order Restrictions,” in *Practical Bayesian Approaches to Testing Behavioral and Social Science Hypotheses* (eds. H. Hoijtink, I. Klugkist, and P. Boelen), 111-130, Springer: New York.

Johnson, V.E. (2009), “A Conservative Property of Bayesian Hypothesis Tests,” in *Frontiers of Statistical Decision Making and Bayesian Analysis—In Honor of James*

O. Berger, eds. M.-H. Chen, D. Dey, P. Mueller, D. Sun, and K. Ye, in press, Springer: New York.

Johnson, V.E. and Mendoza, T. (2010), “Bayesian adaptive design: a novel approach to test the effectiveness of symptom-reducing agents using patient reported outcomes,” in *Cancer Symptom Science: Measurement, Mechanisms, and Management*, eds. C.S. Cleeland, MJ Fisch, AJ Dunn; Cambridge University Press, 293-303.

Johnson, V.E. (2011), “Bayes’ Factors,” in *Encyclopedia of Life Sciences*, John Wiley & Sons: Chichester, <http://www.els.net/> [DOI: 10.1002/9780470015902.a0005851].

Goddard, S. and **Johnson, V.E.** (2014), “Restricted most powerful Bayesian test for linear models,” *Scandinavian Journal of Statistics*, invited for resubmission after revision.

Shin, M., Bhattacharya, A. and **Johnson, V.E.** (2015), “Scalable Bayesian variable selection using nonlocal prior densities in ultrahigh-dimensional settings,” in submission.

Selected Invited Talks, Seminars, and Short Courses (since 1997)

1997 *Medical Image Analysis*, a series of three seminars presented to the Department of Biostatistics at the Medical College of Wisconsin.

1997 Invited guest for one-hour radio talk show on Wisconsin Public Radio concerning a proposal to use adjusted GPA’s (achievement index) at the University of Wisconsin.

1997 *Template Matching Using Facets*, invited seminar at plenary session of the 17th Leeds Annual Statistical Research Conference.

1997 Invited departmental seminar, Department of Mathematics, Bowling Green State University.

1997 *Latent Variable Models for Ordinal Data*, Lucent Technologies, Murray Hills, New Jersey.

1997 Invited departmental seminar, Department of Biostatistics, Rochester Institute of Technology.

1997 *Latent Variable Models for Assessing Student Performance*, keynote address at plenary session of the annual meeting of the Psychometric Society, Gatlinburg, Tennessee.

1997 *A Two-Chain Coupling Diagnostic for Assessing the Convergence of MCMC Algorithms*, presented at the Joint Meeting of the International Statistics Institute and Bernoulli Society, Calcutta, India.

1998 Invited discussion of “Functional Magnetic Resonance Imaging and Spatio-temporal Inference” by Christopher Genovese, Sixth Valencia International Meeting, Valencia, Spain.

- 1998 *Automated Image Analysis*, invited talk at the Joint Statistical Meetings held in Dallas, Texas.
- 1998 *Modeling Ordinal Data*, a short course offered jointly with James Albert at the Joint Statistical Meetings held in Dallas, Texas.
- 1998 Invited departmental seminar, The University of North Carolina at Chapel Hill.
- 1998 Departmental seminar, Duke University
- 1999 *Posterior distributions on normalizing constants of high-dimensional integrals based on Monte Carlo experiments*, Los Alamos National Laboratory.
- 1999 Invited departmental seminar, Department of Electrical and Computer Engineering, North Carolina State University.
- 1999 Invited departmental seminar, Department of Statistics, The University of Michigan.
- 1999 Invited departmental seminar, Department of Statistics, The University of Chicago.
- 2000 *Estimating the Reliability of Complex Systems*, Statistical Sciences Group, Los Alamos National Laboratory.
- 2001 *A Bayesian Analysis of Multi-Study Rank Data*, Statistical Sciences Group, Los Alamos National Laboratory.
- 2001 Invited departmental seminar, Department of Statistics, University of California, Irvine.
- 2001 Invited guest for NPR's *Talk of the Nation* on the topic of college grading practices.
- 2002 Invited departmental seminar, Department of Biostatistics, University of Michigan.
- 2002 Invited departmental seminar, Department of Biostatistics, University of Minnesota.
- 2002 Invited departmental seminar, Department of Statistics, Iowa State University.
- 2002 Invited departmental seminar, Department of Statistics, Marshal School of Business, University of Southern California.
- 2002 *Bayesian Statistics: A Primer*, five-day short course offered to members of NASA, FAA, and 45th Space Wing, USAF; Patrick Air Force Base.
- 2002 Invited departmental seminar, Department of Mathematics and Statistics, Bowling Green University.
- 2002 *College Grading Practices and their Influences on Student Behavior*, faculty forum, Smith College.
- 2002 *Estimating the Reliability of Complex Systems Using a Bayesian Hierarchy*, VII Valencia Conference, Spain.
- 2002 *A hierarchical model for estimating the reliability of complex systems*, The Mathematical Sciences' Role in Homeland Security: Proceedings of a Workshop, National Research Council.
- 2003 Invited departmental seminar, Institute of Statistics and Decision Sciences, Duke

- University.
- 2003 Invited departmental seminar, Department of Statistics, The University of Chicago.
- 2003 Invited departmental seminar, Department of Statistics, Carnegie Mellon University.
- 2003 *Assessing the Reliability of Rockets*, invited talk at the regional meeting of the International Society of Bayesian Analysis, University of California at Santa Cruz.
- 2003 Invited departmental seminar, Department of Biostatistics, Emory University.
- 2003 Invited departmental seminar, Department of Statistics, Rice University.
- 2003 *College Grading: A Crisis in Undergraduate Education*, University Lecture Series, Carnegie Mellon University.
- 2003 *Grade Inflation*, Educational Assessment Summit, Hofstra University.
- 2003 Invited talk at Conference on Grade Inflation and Academic Standards, University of Wisconsin-Madison.
- 2004 *Bayesian image restoration using informative priors*, invited talk, Bioinformatics, Images, and Wavelets, University of Leeds, U.K.
- 2004 Invited departmental seminar, Department of Biostatistics, University of Michigan.
- 2004 *Latent variable models in Bayesian analysis*, session organizer and co-presenter, International Society for Bayesian Analysis, Chile.
- 2005 Invited departmental seminar, Institute of Statistics and Decision Sciences, Duke University.
- 2005 *Deformable templates for imaging matching*, invited talk, Quantitative Biology, Shape Analysis, and Wavelets, University of Leeds, U.K.
- 2005 *Bayes factors based on test statistics*, invited speaker, Objective Bayes 5, Branson.
- 2005 *Issues surrounding grade inflation and undergraduate assessment*, invited address to Faculty Association, University of California at Los Angeles.
- 2005 Invited departmental seminar, Department of Statistics, Rice University.
- 2006 Invited discussant, Workshop on Multiplicity and Reproducibility in Scientific Studies, Statistical and Applied Mathematical Sciences Institute (SAMSI).
- 2007 Invited seminar, Center for Statistics and the Social Sciences, University of Washington.
- 2007 *Bayesian pivotal quantities*, invited talk at Bayesian Inference in Econometrics and Statistics, Washington University.
- 2008 *Bayes factors based on test statistics under order constraints*, invited talk, University of Utrecht, Netherlands.
- 2008 Departmental seminar, M.D. Anderson Cancer Center.
- 2008 Invited departmental seminar, Department of Statistics, University of Illinois Urbana Champagne.

- 2008 Invited departmental seminar, Department of Statistics, Rice University.
- 2008 Invited seminar, School of Public Health, University of Alabama at Birmingham.
- 2009 Invited seminar to computer science and statistics faculty, Virginia Tech.
- 2009 *Nonlocal prior densities for default Bayesian hypothesis tests*, invited talk, Joint Statistical Meeting, Washington D.C.
- 2009 *Nonlocal prior densities for default Bayesian hypothesis tests*, invited talk, Western North American Regional section of the Biometric Society, Portland.
- 2009 Invited departmental seminar, Department of Statistics, Virginia Tech.
- 2009 Invited departmental seminar, Department of Statistics, Ohio State University.
- 2009 Invited seminar, University of Texas at Austin.
- 2009 *Program Organizer: Psychometric Modeling and Statistical Inference*, Statistical and Applied Mathematical Sciences Institute (SAMSI).
- 2009 *An Overview of the NIH peer review system*, invited talk, Statistical and Applied Mathematical Sciences Institute (SAMSI).
- 2010 *A consistency result for Bayesian model selection using non-local priors*, Joint Statistical Meeting, Vancouver.
- 2010 Invited departmental seminar, Department of Statistics, University of Virginia.
- 2010 *Recent Advances in Bayesian Hypothesis Testing and Model Selection*, invited session chair, INFORMS, Austin.
- 2010 *Nonlocal priors for variable selection*, Valencia 9 World Meeting on Bayesian Statistics.
- 2010 Invited departmental seminar, Department of Statistics, Brigham Young University
- 2011 Invited departmental seminar, Department of Biostatistics, Vanderbilt University.
- 2011 Invited seminar, College of Business, University of Texas at San Antonio.
- 2012 *Bayesian variable selection in ultrahigh dimensional settings*, invited presentation, International Society for Bayesian Analysis World Conference, Kyoto, Japan.
- 2012 *Uniformly most powerful Bayesian Tests*, invited presentation, The Impact of Statistical Thinking on Economics and Life Sciences, University of Bocconi, Italy.
- 2012 *Phase II trials based on uniformly most powerful Bayesian tests*, invited presentation, Bayesian Methods in Biostatistics and Bioinformatics, Barcelona, Spain.
- 2014 *Uniformly most powerful Bayesian tests and the reproducibility of scientific research*, invited presentation at ISBA-George Box Research Workshop on Frontiers of Statistics, George Washington University.
- 2014 *Uniformly and restricted most powerful Bayesian tests*, invited seminar for “Conference on Nonparametric Statistics for Big Data: A Conference in Honor of Grace Wahba,” University of Wisconsin.
- 2014 Invited departmental seminar, Department of Statistical Sciences, Duke University.

- 2014 Invited departmental seminar, Department of Biostatistics, Emory University.
- 2014 *Implications of uniformly most powerful Bayesian tests for the reproducibility of scientific research*, invited paper, Joint Statistical Meeting, Boston.
- 2015 *Uniformly most powerful Bayesian tests and the reproducibility of scientific research*, joint seminar between ETH and University of Zurich, Switzerland.
- 2015 *Uniformly most powerful Bayesian tests and standards for statistical evidence*, keynote speaker at “Big Data in Biomedicine: Big Models?” University of Warwick, February 27, 2015.
- 2015 *Bayesian statistics and ordinal data models*, one week invited short course, University of Milan-Bicocca.

Grants and Contracts:

Principal Investigator, NIH FIRST Award “Reconstruction and Analysis of Emission Computed Tomography Data,” 1992-1997.

Collaborating Investigator, NSF grant “Bayesian Computations” (Principal Investigator: Mike West, Duke University), 1992-1995.

Collaborating Investigator, Whittaker Foundation grant “Bayesian Reconstruction of Emission Tomography” (Principal Investigator: James Bowsher, Duke University Medical Center), 1994-1997.

Principal Investigator, NSF grant “Scientific Computing Research Environment for Mathematical Sciences,” 1995.

Collaborating Investigator, NIH grant “Improvement in Pulmonary Nodule Detection by Bayesian Image Processing” (Principal Investigator: Carey Floyd, Duke University Medical Center), 1995-1998.

Collaborating Investigator, NIH grant “In Vivo Radionuclide Quantitation Using Emission CT” (Principal Investigator: Ron Jaszczak, Duke University Medical Center), 1997-1999.

Collaborating Investigator, NIH grant “Atlas-Based Segmentation for Radiotherapy Planning” (Principal Investigator: Stephen Pizer, Department of Computer Science, University of North Carolina at Chapel Hill), 1998-2000.

Principal Investigator, NSF grant “Discrete Models for High-Level Image Analysis,” 1998-2001.

Principal Investigator, Los Alamos National Laboratory Contract “Development of Bayesian Methodology to Address General Bounding Problems,” 2000.

Collaborating Investigator (Biostatistics Core Director), NIH grant “Automatic 3D Registration for Enhanced Cancer Management Statistics Core,” (Principal Investigator: Charles Meyer, UM Department of Radiology), 2002-2007.

Collaborating Investigator, NIH Grant “Vaccine Trials Using Individual and Ecological Units,” (Principal Investigator: James Koopman, UM Department of Epidemiology), 2002-2003.

Principal Investigator, Los Alamos National Laboratory Contract in response to proposal 58947-SOL-02, “Bayesian Methodology for Reliability Analyses,” 2002.

Principal Investigator, NIH Center for Scientific Review Intergovernment Personnel Agreement “Analysis of Scientific Review Group Ratings,” 2005-2006.

Collaborating Investigator, “Experimental Cancer Imaging Research Program,” (Principal Investigator: John D. Hazle), NIH U24 proposal, 2007-2011.

Collaborating Investigator, “Pain and Symptoms for Cancer: Assessment and Treatment,” (Principal Investigator: Charles Cleeland), NIH R01, 2005-2008.

Collaborating Investigator, “Biostatistical Resource of Core Grant,” (Principal Investigator: John Mendelsohn), NIH P30, 2005-2008.

Collaborating Investigator, “Perfluorocarbon Filled Endorectal Magnetic Resonance Spectroscopic Imaging of Prostate Carcinoma,” (Principal Investigator: Haesun Choi), DOD Award, 2007-2009.

Collaborating Investigator, “RADCCORE Pilot Project Grant,” (Principal Investigator: Thomas Guerrero), 2007-2008.

Collaborating Investigator, “A Small Peptide ICAM-1 Imaging Agent for Molecular Guided Radiotherapy of Lung Cancer,” ((Principal Investigator: Thomas Guerrero), NIH R21.

Collaborating Investigator, “Image-Guided Delivery and Image-Guided Evaluation of Target and Non-Target Tissue,” (Principal Investigator: Vikas Kundra), NIH R21, pending.

Collaborating Investigator, “Reducing the Symptom Burden Produced by Aggressive Cancer Therapies,” Principal Investigator: Charles Cleeland), NIH R01, 2008-2011.

Biostatistics Core Director, “Symptom Mechanisms of Multiple Myeloma and Its Therapy,” (Principal Investigator: Charles Cleeland), NIH P01, 2008-2013.

Principal Investigator, “Consistent Model Selection in the $p \gg n$ Setting,” NIH R01, 2011-2015.

Doctoral Dissertations Supervised:

Alyson Wilson, “Statistical Models for Shapes and Deformations,” 1995. This thesis won the Savage Award for the best thesis in Bayesian statistics and econometrics.

Colin McCulloch, “High-level Image Understanding Through Bayesian Hierarchical Models,” 1998. This thesis is one of four finalists for the 1999 Savage Award.

Jacob Laading, “Practical Methodology for Inclusion of Modality-Specific Modifications in a Hierarchical Bayesian Deformation Model,” 1999.

Stephen Ponisciak, “Bayesian Analysis of Teacher Effectiveness,” 2002.

Sining Chen, “On Automated Bayesian Image Analysis,” 2002.

Adarsh Joshi, “Bayesian Model Selection for High-Dimensional High-Throughput Data,” Department of Statistics, Texas A&M University, 2010 (while a faculty member at M.D. Anderson Cancer Center).

Brad Barney, “Bayesian Joint Modeling of Binomial and Rank Response Data,” Department of Statistics, Texas A&M University, 2011 (while a faculty member at M.D. Anderson Cancer Center).

Scott Goddard, “Restricted Most Powerful Bayesian Tests,” Department of Statistics, Texas A&M University, 2015.

Master’s and Doctoral Advisory Committees:

Wei-Jyh Lin, Ph.D., 1991, University of North Carolina at Chapel Hill, advisory committee

Alex Reutter, M.S., 1998, Duke University, advisor.

Scott Lynch, M.S., 1999, Duke University, advisory committee.

John Kern, 2000, Ph.D., Duke University, advisory committee.

Richard Castillo, 2007, M.S., GSBS, UTHSC & MDACC,* advisory committee.

Rebecca Marsh, 2007, Ph.D., GSBS, UTHSC & MDACC,* advisory committee.

Katie Hulme, 2009, S.M.S., GSBS, UTHSC & MDACC,* advisory committee.

David Zamora, 2010, M.S., GSBS, UTHSC & MDACC,* advisory committee.

James Kern, 2010, S.M.S., GSBS, UTHSC & MDACC,* advisory committee.

Adam Springer, 2010, M.S., GSBS, UTHSC & MDACC,* advisory committee.
Dustin Ragan, 2010, Ph.D., GSBS, UTHSC & MDACC,* advisory committee.
Adam Riegel, 2010, Ph.D., GSBS, UTHSC & MDACC,* advisory committee.
Jonathan Mueller, 2011, S.M.S., GSBS, UTHSC & MDACC,* advisory committee.
Chunyan Cai, 2012, Ph.D., GSBS, UTHSC & MDACC,* co-advisor.
Michael Silosky, 2012, S.M.S., GSBS, UTHSC & MDACC,* advisory committee.
Jared Ohrt, 2012, S.M.S., GSBS, UTHSC & MDACC,* advisory committee.
Jennelle Bergene, 2012, S.M.S., GSBS, UTHSC & MDACC,* advisory committee.
Ahmad Moiz, 2012, Ph.D., GSBS, UTHSC & MDACC,* advisory committee.
Jason Matney, 2013, Ph.D., GSBS, UTHSC & MDACC,* advisory committee
Ryan Bosca, 2014, Ph.D., GSBS, UTHSC & MDACC,* advisory committee
Joshua Yung, 2014, Ph.D., GSBS, UTHSC & MDACC,* advisory committee

*Graduate School of Biomedical Sciences, University of Texas Health Sciences Center and M.D. Anderson Cancer Center.