

Dr. Richard J. Charnigo, Jr.  
Curriculum Vitae – December 2011

**Basic Information**

***Contact Information***

Mail:	1. College of Public Health 203-B University of Kentucky Lexington, KY 40536-0003	2. Patterson Office Tower 851 University of Kentucky Lexington, KY 40506-0027
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***Employment***

Associate Professor <i>University of Kentucky</i> Department of Biostatistics (College of Public Health) Department of Statistics (College of Arts and Sciences)	July 2009-
Assistant Professor <i>University of Kentucky</i> Department of Biostatistics (College of Public Health) Department of Statistics (College of Arts and Sciences)	July 2004-June 2009
Assistant Professor <i>University of Kentucky</i> Department of Statistics (College of Arts and Sciences) Division of Biostatistics (School of Public Health)	August 2003-June 2004

***Education***

Ph.D. in Statistics <i>Case Western Reserve University</i> <u>Dissertation</u> : “Testing Homogeneity in Finite Mixtures and a Semi-Local Paradigm for Wavelet Denoising” <u>Advisor</u> : Jiayang Sun	1999-2003
M.S. in Mathematics <i>Case Western Reserve University</i>	1997-1999
B.S. in Mathematics <i>Case Western Reserve University</i> Minor fields: Statistics and Economics	1994-1997

**Research Interests, Publications, and Presentations**

***Research Interests***

- Theory and methods for mixture modeling and microarray data analysis
- Theory and methods for nonparametric regression and nanoparticle characterization
- Applications in cardiology, psychology, organizational behavior, and public health

## ***Publications***

1. Smith, Toni; Charnigo, Richard (2002). "On the Nonoptimality of the Compensation System in Major League Baseball." *Compensation and Working Conditions*: Volume 6, pp. 19 – 25.
2. Charnigo, Richard; Sun, Jiayang (2004). "Testing for Homogeneity in Mixture Distributions via the  $L^2$  Distance Between Competing Models." *Journal of the American Statistical Association*: Volume 99, pp. 488 – 498.
3. Steinhubl, Steven; Charnigo, Richard; Moliterno, David (2005). "Resistance to Antiplatelet Resistance: Is It Justified?" *Journal of the American College of Cardiology*: Volume 45, pp. 1757 – 1758.
4. Charnigo, Richard; Sun, Jiayang; Muzic, Raymond (2006). "A Semi-Local Paradigm for Wavelet Denoising." *IEEE Transactions on Image Processing*: Volume 15, pp. 666-677.
5. Steinhubl, Steven; Charnigo, Richard (2006). "Clopidogrel Pretreatment Prior to Percutaneous Coronary Intervention: When Enough Isn't Enough." *Journal of the American Medical Association*: Volume 295, pp. 1581-1582.
6. Barisione, Chiara; Charnigo, Richard; Howatt, Deborah; Moorleghen, Jessica; Rateri, Debra; Daugherty, Alan (2006). "Rapid Dilation of the Abdominal Aorta During Infusion of Angiotensin II Detected by Noninvasive High Frequency Ultrasound." *Journal of Vascular Surgery*: Volume 44, pp. 372-376.
7. Das, Pranab; Moliterno, David; Charnigo, Richard; Mukherjee, Debabrata; Sneed, Darrell; Steinhubl, Steven; Booth, David; Ziada, Khaled (2006). "Impact of Drug-Eluting Stents on Outcomes of Patients with End-Stage Renal Disease Undergoing Percutaneous Coronary Revascularization." *Journal of Invasive Cardiology*: Volume 18, pp. 405-408.
8. Tackett, Julie; Charnigo, Richard; Caldwell, Glyn (2006). "Relating West Nile Virus Case Fatality Rates to Demographic and Surveillance Variables." *Public Health Reports*: Volume 121, pp. 666-673.
9. John, Vijay; Dai, Hongying; Talati, Ajay; Charnigo, Richard; Neuman, Michael; Bada, Henrietta (2007). "Autonomic Alterations in Cocaine-Exposed Neonates following Orthostatic Stress." *Pediatric Research*: Volume 61, pp. 251-256.
10. Charnigo, Richard; Pilla, Ramani S. (2007). "Semiparametric Mixtures of Generalized Exponential Families." *Scandinavian Journal of Statistics*: Volume 34, pp. 535-551.
11. Charnigo, Richard; Francoeur, Mathieu; Mengüç, M. Pinar; Brock, Audrey; Leichter, Matthew; Srinivasan, Cidambi (2007). "Derivatives of Scattering Profiles: Tools for Nanoparticle Characterization." *Journal of the Optical Society of America A*: Volume 24, pp. 2578-2589.  
This was republished as the lead article in the "Structural Properties" section of *Virtual Journal of Nanoscale Science and Technology*: Volume 16, Issue 16, 15 Oct 2007.

12. Dai, Hongying; Charnigo, Richard (2008). "Omnibus Testing and Gene Filtration in Microarray Data Analysis." *Journal of Applied Statistics*: Volume 35, pp. 31-47.
13. Charnigo, Richard; Sun, Jiayang (2008). "Testing Homogeneity in Discrete Mixtures." *Journal of Statistical Planning and Inference*: Volume 138, pp. 1368-1388.
14. Steinhubl, Steven; Oh, Jennifer; Oestreich, Julie; Ferraris, Suellen; Charnigo, Richard; Akers, Wendell (2008). "Transitioning Patients from Cangrelor to Clopidogrel: Pharmacodynamic Evidence of a Competitive Interaction." *Thrombosis Research*: Volume 121, pp. 527-534.
15. Pamuklar, Zehra; Lee, Jin; Cheng, Hsin-Yuan; Pantcharam, Manikandan; Steinhubl, Steven; Morris, Andrew; Charnigo, Richard; Smyth, Susan (2008). "Individual Heterogeneity in Platelet Response to Lysophosphatidic Acid: Evidence for a Novel Inhibitory Pathway." *Arteriosclerosis, Thrombosis, and Vascular Biology*: Volume 28, pp. 555-561.
16. Lu, Hong; Rateri, Debra; Feldman, David; Charnigo, Richard; Fukamizu, Akiyoshi; Ishida, Junji; Oesterling, Elizabeth; Cassis, Lisa; Daugherty, Alan (2008). "Renin Inhibition Reduces Hypercholesterolemia-Induced Atherosclerosis in Mice." *Journal of Clinical Investigation*: Volume 118, pp. 984-993.
17. Simmons, Leigh Ann; Braun, Bonnie; Charnigo, Richard; Havens, Jennifer; Wright, David (2008). "Depression and Poverty among Rural Women: a Relationship of Social Causation or Social Selection?" *Journal of Rural Health*: Volume 24, pp. 292-298.
18. Dai, Hongying; Charnigo, Richard (2008). "Inferences in Contaminated Regression and Density Models." *Sankhya*: Volume 69, pp. 842-869.
19. Crosby, Richard; DiClemente, Ralph; Charnigo, Richard; Snow, Gregory; Troutman, Adewale (2009). "A Brief, Clinic-Based, Safer Sex Intervention for Heterosexual African American Men Newly Diagnosed with an STD: A Randomized Controlled Trial." *American Journal of Public Health*: Volume 99, Supplement 1, pp. 96-103.
20. Huddleston-Casas, Catherine; Charnigo, Richard; Simmons, Leigh Ann (2009). "Food Insecurity and Maternal Depression in Rural, Low-Income Families: A Longitudinal Investigation." *Public Health Nutrition*: Volume 12, pp. 1133-1140.
21. Sekerka, Leslie; Bagozzi, Richard; Charnigo, Richard (2009). "Facing Ethical Challenges in the Workplace: Conceptualizing and Measuring Professional Moral Courage." *Journal of Business Ethics*: Volume 89, pp. 565-579.
- A scale developed in this article has also been included in the PsycTESTS repository: Sekerka, L.E., Bagozzi, R.P., & Charnigo, R. (2011). Professional moral courage scale (revised form, 3/21/11). PsycTESTS. Washington, D.C.: American Psychological Association.
22. Oestreich, Julie; Holt, John; Dunn, Steven; Smyth, Susan; Campbell, Charles; Charnigo, Richard; Akers, Wendell; Steinhubl, Steven (2009). "Considerable Variability in Platelet Activity among Patients with Coronary Artery Disease in Response to an Increased Maintenance Dose of Clopidogrel." *Coronary Artery Disease*: Volume 20, pp. 207-213.
23. Bailey, Ursula; Lorch, Elizabeth; Milich, Richard; Charnigo, Richard (2009). "Developmental Changes in Attention and Comprehension among Children with Attention Deficit Hyperactivity Disorder." *Child Development*: Volume 80, pp. 1842-1855.

24. Cassis, Lisa; Gupte, Manisha; Thayer, Sarah; Zhang, Xuan; Charnigo, Richard; Howatt, Deborah; Rateri, Debra; Daugherty, Alan (2009). "Angiotensin II Infusion Promotes Abdominal Aortic Aneurysms Independent of Increased Blood Pressure in Hypercholesterolemic Mice." *American Journal of Physiology – Heart and Circulatory Physiology*: Volume 296, pp. H1660-H1665.
25. Syed, Mushabbar; Oshinski, John; Kitchen, Charles; Ali, Arshed; Charnigo, Richard; Quyyumi, Arshed (2009). "Variability of Carotid Artery Lumen and Wall Measurements on 3-Tesla MRI: Implications for Sample Size Calculation for Clinical Research." *International Journal of Cardiovascular Imaging*: Volume 25, pp. 581-589.
26. Lynam, Donald; Charnigo, Richard; Caspi, Avshalom; Moffitt, Terrie; Raine, Adrian; Loeber, Rolf; Stouthamer-Loeber, Magda (2009). "The Stability of Psychopathy Across Adolescence." *Development and Psychopathology*: Volume 21, pp. 1133-1153.
27. Police, Sara; Thatcher, Sean; Charnigo, Richard; Daugherty, Alan; Cassis, Lisa (2009). "Obesity Promotes Inflammation in Periaortic Adipose Tissue and Angiotensin II-Induced Abdominal Aortic Aneurysm Formation." *Arteriosclerosis, Thrombosis, and Vascular Biology*: Volume 29, pp. 1458-1464.
28. Rao, Sunil; Eikelboom, John; Steg, Gabriel; Lincoff, A. Michael; Weintraub, William; Bassand, Jean-Pierre; Rao, A. Koneti; Gibson, C. Michael; Petersen, John; Mehran, Roxana; Manoukian, Steven; Charnigo, Richard; Lee, Kerry; Moscucci, Mario; Harrington, Robert (2009). "Standardized Reporting of Bleeding Complications for Clinical Investigations in Acute Coronary Syndrome: A Proposal from the Academic Bleeding Consensus (ABC) Multidisciplinary Working Group." *American Heart Journal*: Volume 158, pp. 881-886.
29. Dosh, Kristofer; Berger, Peter; Marso, Steven; van Lente, Fredrick; Brennan, Danielle; Charnigo, Richard; Topol, Eric; Steinhubl, Steven (2009). "Association of Baseline Inflammatory Markers, Antiplatelet Therapy and Adverse Cardiac Events following Percutaneous Coronary Intervention: An Analysis from the CREDO Trial." *Circulation – Cardiovascular Interventions*: Volume 2, pp. 503-512.
30. Charnigo, Richard; Sun, Jiayang (2010). "Asymptotic Relationships between the D-Test and Likelihood Ratio-Type Tests for Homogeneity." *Statistica Sinica*: Volume 20, pp. 497-512.
31. Bhandari, Michelyn; Scutchfield, F. Douglas; Charnigo, Richard; Riddell, Martha; Mays, Glen (2010). "New Data, Same Story? Revisiting Studies on the Relationship of Local Public Health Systems Characteristics to Public Health Performance." *Journal of Public Health Management and Practice*: Volume 16, pp. 110-117.
32. Jordan, Carol; Pritchard, Adam; Duckett, Danielle; Charnigo, Richard (2010). "Criminal Offending among Respondents to Protective Orders: Crime Types and Patterns that Predict Victim Risk." *Violence Against Women*: Volume 16, pp. 1396-1411.
33. Dai, Hongying; Charnigo, Richard (2010). "Contaminated Normal Modeling with Application to Microarray Data Analysis." *Canadian Journal of Statistics*: Volume 38, pp. 315-332.
34. Charnigo, Richard; Crosby, Richard; Troutman, Adewale (2010). "Psychosocial Constructs Associated with Condom Use among High-Risk African American Men Newly Diagnosed with a Sexually Transmitted Disease." *Annals of Behavioral Medicine*: Volume 39, pp. 303-310.

35. Uchida, Haruhito; Kristo, Fjoralba; Rateri, Debra; Lu, Hong; Charnigo, Richard; Cassis, Lisa; Daugherty, Alan (2010). "Total Lymphocyte Deficiency Attenuates AngII-Induced Atherosclerosis But Not Abdominal Aortic Aneurysms in ApoE Deficient Mice." *Atherosclerosis*: Volume 211, pp. 399-403.
36. Moore, Gregory; Crosby, Richard; Young, April; Charnigo, Richard (2010). "Low Rates of Free Human Papillomavirus Vaccine Uptake Among Young Women." *Sexual Health*: Volume 7, pp. 287-290.
37. Reynolds, Eric; Grider, Debbie; Caldwell, Rhonda; Capillouto, Gilson; Vijaygopal, Pooja; Patwardhan, Abhijit; Charnigo, Richard (2010). "Swallow-Breath Interaction and Phase of Respiration with Swallow during Nonnutritive Suck among Low-Risk Preterm Infants." *American Journal of Perinatology*: Volume 27, pp. 831-840.
38. Charnigo, Richard; Chesnut, Lorie W.; LoBianco, Tony; Kirby, Russell S. (2010). "Thinking Outside the Curve, Part I: Modeling Birthweight Distribution." *Biomedcentral Pregnancy and Childbirth*: Volume 10, Article 37.
39. Charnigo, Richard; Chesnut, Lorie W.; LoBianco, Tony; Kirby, Russell S. (2010). "Thinking Outside the Curve, Part II: Modeling Fetal-Infant Mortality." *Biomedcentral Pregnancy and Childbirth*: Volume 10, Article 44.
40. Wang, Yuehui; Li, Jianing; Tang, Lihua; Wang, Yu; Charnigo, Richard; de Villiers, Willem; Eckhardt, Erik (2010). "T-Lymphocyte Responses to Intestinally Absorbed Antigens Can Contribute to Mesenteric Adipose Tissue Inflammation and Glucose Intolerance During High Fat Feeding." *Public Library of Science One*: Volume 5, Article 13951.
41. Meyer, Chip; Rahman, Shafiqur; Charnigo, Richard; Dwoskin, Linda; Crabbe, John; Bardo, Michael (2010). "Genetics of Novelty Seeking, Amphetamine Self-Administration, and Reinstatement Using Inbred Rats." *Genes, Brain, and Behavior*: Volume 9, pp. 790-798. PMID: PMC2965303.
42. Charnigo, Richard; Srinivasan, Cidambi (2011). "Stein's Phenomenon." *Philosophy of Statistics*, edited by Prasanta S. Bandyopadhyay and Malcolm Forster. Elsevier, Oxford.
43. Charnigo, Richard; Kryscio, Richard; Bardo, Michael; Lynam, Donald; Zimmerman, Rick (2011). "Joint Modeling of Longitudinal Data in Multiple Behavioral Change." *Evaluation and the Health Professions*: Volume 34, pp. 781-800.
44. Ziada, Khaled; Charnigo, Richard; Moliterno, David (2011). "Long-Term Follow-Up of Drug-Eluting Stents Placed in the Setting of ST-Elevation Myocardial Infarction." *Journal of the American College of Cardiology – Cardiovascular Interventions*: Volume 4, pp. 39-41.
45. Charnigo, Richard; Francoeur, Mathieu; Kenkel, Patrick; Mengüç, M. Pinar; Hall, Benjamin; Srinivasan, Cidambi (2011). "Estimating Quantitative Features of Nanoparticles Using Multiple Derivatives of Scattering Profiles." *Journal of Quantitative Spectroscopy and Radiative Transfer*: Volume 112, pp. 1369-1382.
46. Charnigo, Richard; Srinivasan, Cidambi (2011). "Estimating Multiple Derivatives Simultaneously: What Is Optimal?" *Journal of Biometrics and Biostatistics*: Volume 2, Article 102e.

47. Rateri, Debra; Moorleghe, Jessica; Balakrishnan, Anju; Owens, Philip; Howatt, Deborah; Charnigo, Richard; Cassis, Lisa; Daugherty, Alan (2011). "Endothelial Cell-Specific Deficiency of AngII Type 1a Receptors Attenuates AngII-Induced Ascending Aortic Aneurysms in LDL Receptor -/- Mice." *Circulation Research*: Volume 108, pp. 574-581.

48. Charnigo, Richard; Srinivasan, Cidambi (2011). "Self-Consistent Estimation of Mean Response Functions and their Derivatives." *Canadian Journal of Statistics*: Volume 39, pp. 280-299.

49. Marcum, Jennifer; Browning, Steven; Reed, Deborah; Charnigo, Richard (2011). "Determinants of Work Hours Among a Cohort of Male and Female Farmers 50 Years and Older in Kentucky and South Carolina (2002-2005)." *Journal of Agromedicine*: Volume 16, pp. 163-173.

50. Marcum, Jennifer; Browning, Steven; Reed, Deborah; Charnigo, Richard (2011). "Farmwork-Related Injury Among Older Farmers in Kentucky and South Carolina: A Cohort Study 2002-2005." *Journal of Agricultural Safety and Health*: Volume 17, pp. 259-273.

51. Elayi, C.S.; Whitbeck, M.G.; Charnigo, Richard; Shah, J.; Macaulay, T.E.; Morales, G.; Gurley, J.C.; Thal, S.; Ching, C.K.; Khaykin, Y.; Verma, A.; Barrett, C.; Bai, R.; Di Biase, L.; Patwardhan, A.; Moliterno, D.J.; Natale, A. (2011). "Is There An Association Between External Cardioversions and Mortality – Insights From the Affirm Study." *Circulation – Arrhythmia and Electrophysiology*: Volume 4, pp. 465-469.

This article was the subject of editorial comment in the same issue.

52. Marusich, Julie; Darna, Mahesh; Charnigo, Richard; Dwoskin, Linda; Bardo, Michael (2011). "A Multivariate Assessment of Individual Differences in Reward Seeking and Inhibition as Predictors of Amphetamine Self-Administration and Prefrontal Dopamine Function in Rats." *Clinical Psychopharmacology*: Volume 19, pp. 275-284.

53. Rateri, Debra; Howatt, Deborah; Moorleghe, Jessica; Charnigo, Richard; Cassis, Lisa; Daugherty, Alan (2011). "Prolonged Infusion of Angiotensin II Promotes Continued Expansion of Abdominal Aortic Aneurysm Associated with Adventitial Macrophage Recruitment." *American Journal of Physiology*: Volume 179, pp. 1542-1548.

54. Bush, Heather; Charnigo, Richard (2011). "Collecting Health Information: Disease Registry, Product Registry, or Neither ?" *Journal of Biometrics and Biostatistics*: Volume 2, Article 103e.

55. Charnigo, Richard; Hall, Benjamin; Srinivasan, Cidambi (2011). "A Generalized  $C_p$  Criterion for Derivative Estimation." *Technometrics*: Volume 53, pp. 238-253.

56. Selim, Samy; Sunkara, Manjula; Salous, Abdel; Berdyshev, Evgeny; Bailey, Alison; Campbell, Charles; Charnigo, Richard; Morris, Andrew; Smyth, Susan (2011). "Plasma levels of sphingosine 1 phosphate are strongly correlated with hematocrit but variably restored by red blood cell transfusions." *Clinical Science*: Volume 121, pp. 565-572.

57. Deng, Wei; Charnigo, Richard; Dai, Hongying; Kirby, Russell S. (2011). "Characterizing components in a mixture model for birthweight distribution." *Journal of Biometrics and Biostatistics*: Volume 2, Article 118.

58. Leung, Steve; Elayi, Claude; Charnigo, Richard; Syed, Mushabbar (to appear). "Clinical Significance of Right Ventricular Dysfunction in Left Ventricular Non-Compaction Cardiomyopathy Assessed by Magnetic Resonance Imaging." *International Journal of Cardiovascular Imaging*.

59. Wang, Shaoping; Subramanian, Venkateswaran; Lu, Hong; Howatt, Deborah; Moorleghen, Jessica; Charnigo, Richard; Daugherty, Alan (to appear). "Deficiency of Receptor-associated Protein Attenuates Angiotensin II-induced Atherosclerosis in Hypercholesterolemic Mice." *Atherosclerosis*.
60. Migongo, Alice; Charnigo, Richard; Love, Margaret; Kryscio, Richard; Fleming, Steven; Pearce, Kevin (to appear). "Factors Relating to Patient Visit Time with a Physician." *Medical Decision Making*.
61. Yiannikouris, Frederique; Karounos, Michael; Charnigo, Richard; English, Victoria; Rateri, Debra; Daugherty, Alan; Cassis, Lisa (to appear). "Adipocyte-specific deficiency of angiotensinogen decreases plasma angiotensinogen concentration and systolic blood pressure in male mice." *American Journal of Physiology - Regulatory, Integrative and Comparative Physiology*.  
This article will be the subject of editorial comment in the same issue.
62. Ingram, Richard; Scutchfield, F. Douglas; Charnigo, Richard; Riddell, Martha (to appear). "Performance Matters: the Relationship between Local Public Health System Performance and Community Health Outcomes." *American Journal of Preventive Medicine*.
63. Lu, Hong; Balakrishnan, Anju; Howatt, Deborah; Wu, Congqing; Charnigo, Richard; Liao, Gene; Cassis, Lisa; Daugherty, Alan (to appear). "Comparative effects of different modes of renin angiotensin system inhibition on hypercholesterolaemia-induced atherosclerosis." *British Journal of Pharmacology*.
64. Wallace, Eric; Abdel-Latif, Ahmed; Charnigo, Richard; Moliterno, David; Brodie, Bruce; Matnani, Rahul; Ziada, Khaled (to appear). "Meta-Analysis of Long-Term Outcomes for Drug-Eluting Stents versus Bare-Metal Stents in Primary Percutaneous Coronary Interventions for ST-Segment Elevation Myocardial Infarction." *American Journal of Cardiology*.
65. Charnigo, Richard; Noar, Seth; Garnett, Chris; Crosby, Richard; Palmgreen, Philip; Zimmerman, Rick (to appear). "Sensation Seeking and Impulsivity: Combined Associations with Risky Sexual Behavior in a Large Sample of Young Adults." *Journal of Sex Research*.
66. Charnigo, Richard; Francoeur, Mathieu; Kenkel, Patrick; Mengüç, M. Pinar; Hall, Benjamin; Srinivasan, Cidambi (to appear). "Credible Intervals for Nanoparticle Characteristics." *Journal of Quantitative Spectroscopy and Radiative Transfer*.

### ***Works that have been submitted for publication***

67. Adams, Zachary; Kaiser, Alison; Lynam, Donald; Charnigo, Richard; Milich, Richard. "Drinking Motives as Mediators of the Impulsivity - Substance Use Relation: Unique Pathways for Negative Urgency, Lack of Premeditation, and Sensation Seeking."
68. Brechting, Emily; Deckman, Timothy; Charnigo, Richard; Lynam, Donald. "Descriptive and Injunctive Norms as Predictors of Alcohol Consumption."
69. Carter, L.; Lewis, K.; Wilkerson, D.; Tobia, C.; Ngo, S.; Tenlep, P.; Garcia-Cazarin, M.; Wolff, G.; Andrade, F.; Charnigo, Richard; Esser, K.; Egan, J.; de Cabo, R.; Pearson, K. "Exercise during pregnancy improves glucose homeostasis in adult offspring."
70. Charnigo, Richard; Kryscio, Richard; Zimmerman, Rick; Lynam, Donald; Bardo, Michael. "Analyzing Multiple Behavioral Change Data: Concepts and Examples."

71. Charnigo, Richard; Srinivasan, Cidambi. "On Simultaneous Estimation of a Mean Response and its Derivatives."
72. Chesnut, Lorie W.; Charnigo, Richard; LoBianco, Tony; Kirby, Russell S. "Thinking Outside the Curve, Part III: Ideal Birthweights and Pediatric Paradoxes."
73. Crosby, Richard; Charnigo, Richard; Shrier, Lydia. "Condom Use Errors and Problems Among Teens Attending Clinics: Better or Worse Than Young Adults ?"
74. Crosby, Richard; Shrier, Lydia; Charnigo, Richard; Sanders, Stephanie; Graham, Cynthia; Milhausen, Robin; Yarber, William. "A Prospective Event-Level Analysis of Condom Use Experiences Following STI Testing Among Patients in Three US Cities."
75. Crosby, Richard; Shrier, Lydia; Charnigo, Richard; Sanders, Stephanie; Graham, Cynthia; Milhausen, Robin; Yarber, William. "Negative Perceptions About Condom Use in a Clinic Population: Comparisons by Gender, Race, and Age."
76. Dai, Hongying; Charnigo, Richard; Becker, Mara; Leeder, Steve. "Epistasis Enriched Network and Risk Score Modeling of Continuous Multifactor Dimensionality Reduction."
77. Daugherty, Alan; Rateri, Debra; Charnigo, Richard; Inagami, Tadashi; Cassis, Lisa. "PD123319 Augments Atherosclerosis and Abdominal Aortic Aneurysm Formation through AT2 Receptor-Independent Mechanisms."
78. Eisenlohr-Moul, Tory; Walsh, Erin; Baer, Ruth; Charnigo, Richard; Lynam, Donald. "Trait Mindfulness and Substance Use: Does the Quality of Observation Matter ?"
79. Gross, A. Kendall; Dunn, Steven; Feola, David; Martin, Craig; Charnigo, Richard; Li, Zhenyu; Smyth, Susan. "Effects of Clopidogrel Treatment on the Incidence and Severity of Community-Acquired Pneumonia (CAP): Results of a Five-Year Cohort Study."
80. Hall, Benjamin; Charnigo, Richard; Srinivasan, Cidambi. "Simultaneous Confidence Bands for a Mean Response and Its Derivatives."
81. Harris, Torrie; Crosby, Richard; Salazar, Laura; DiClemente, Ralph; Charnigo, Richard; Staples-Horne, Michelle. "Detained Adolescents Reporting Use of Psychotherapeutic Medication Are Less Likely to Test Positive for Chlamydia and Gonorrhea."
82. Hudson, Naomi; Mannino, David; Charnigo, Richard; Browning, Steven; Lile, Allison; Hahn, Ellen. "Changes in Asthma, COPD, Ischemic Heart Disease, and Heart Failure Hospitalizations After Implementation of Smoke-Free Laws in Kentucky Counties."
83. Jahangiri, A.; Wroblewski, J.M.; de Beer, M.C.; Noffsinger, V.; Charnigo, Richard; Webb, N.R.; van der Westhuyzen, D.R.; de Beer, F.C. "Serum Amyloid A Enhances High Density Lipoprotein Remodeling by Cholesterol Ester Transfer Protein."
84. Jordan, Carol; Clark, James; Pritchard, Adam; Charnigo, Richard. "Lethal and Other Serious Assaults: Disentangling Gender and Context."
85. Justice, Todd; Charnigo, Richard; Pate, Gordon. "Epidemiologic Study of Heyde's Syndrome in High Shear Stress Cardiac Lesions."

86. Kaiser, Alison; Milich, Richard; Lynam, Donald; Charnigo, Richard. “Negative Urgency, Distress Tolerance, and Substance Abuse: Examining the Role of Characteristic Responding to Negative Affect.”
87. Lu, Hong; Wu, Congqing; Howatt, Deborah; Balakrishnan, Anju; Ijaz, Talha; Charnigo, Richard; Cassis, Lisa; Daugherty, Alan. “Dietary Sodium Concentrations Have Differential Effects on Blood Pressure and Atherosclerosis in Hypercholesterolemic Mice.”
88. Pilla, Ramani S.; Charnigo, Richard. “Consistent Estimation and Model Selection in Semiparametric Mixtures.”
89. Sekerka, Leslie; Godwin, Lindsey; Charnigo, Richard. “Getting Curious about Ethics: Cultivating Intrinsic Motivation toward Moral Awareness in the Workplace.”
90. Sekerka, Leslie; Godwin, Lindsey; Charnigo, Richard. “Use of Balanced Experiential Inquiry to Build Ethical Strength in the Workplace.”
91. Sithisarn, Thitinart; Bada, Henrietta; Charnigo, Richard; Legan, Sandra; Randall, David. “Effects of Perinatal Oxycodone Exposure on the Cardiovascular Response to Acute Stress in Male Rats at Weaning and in Young Adulthood.”
92. Walsh, Sabrina; Charnigo, Richard. “The National Violent Death Reporting System, County Level Health Status Data and Preventing Suicide.”
93. Wilson, Joel; Charnigo, Richard; Rebel, Annette; Hassan, Zaki-Udin; Syed, Mushabbar. “Routine Evaluation for Ischemic Heart Disease Prior to Liver Transplantation Does Not Add Prognostic Value to Clinical Risk Assessment.”
94. Zhang, Xuan; Rateri, Debra; Ali, Kamilah; Thatcher, Sean; Bruemmer, Dennis; Charnigo, Richard; Daugherty, Alan; Cassis, Lisa. “Exposure of Neonatal Female Mice to Testosterone Confers Sexual Dimorphism of Angiotensin II-Induced Abdominal Aortic Aneurysms.”

### ***Presentations***

- “Flourishing or Floundering? Relief Pitching in Major League Baseball”
  1. Case Western Reserve University: Statistics Department colloquium (November 1999)
  2. Case Western Reserve University: “Statistics in American Daily Life” (March 2000)
  3. American Statistical Association: Cleveland chapter meeting (June 2000)
  4. Society for American Baseball Research: Cleveland chapter meeting (July 2000)
- “Testing for Homogeneity in Mixture Distributions via the  $L^2$  Distance Between Competing Models”
  1. Case Western Reserve University: Workshop on Developments and Challenges in Mixture Models (June 2002 – contributed poster)
  2. Purdue University: International Symposium on Statistics (June 2003 – invited)
  3. American Statistical Association: Joint Statistical Meetings (August 2003 – contributed)
- “A Semi-Local Paradigm for Wavelet Denoising”
  1. University of Kentucky: Statistics Department colloquium (December 2002 – invited)
  2. Johns Hopkins University: Biostatistics Department colloquium (January 2003 – invited)
  3. Iowa State University: Statistics Department colloquium (January 2003 – invited)

4. International Biometric Society: Spring meeting of the Eastern North American Region (April 2003 – contributed)
- “Testing for Homogeneity in Discrete Mixtures”
    - American Statistical Association: Joint Statistical Meetings (August 2004 – contributed)
  - “On a Flexible Information Criterion for Order Selection in Semiparametric Mixture Models”
    1. University of South Alabama: Mathematics and Statistics Department colloquium (November 2004 – invited)
    2. International Biometric Society: Spring meeting of the Eastern North American Region (March 2005 – contributed)
    3. Interface and Classification Society of North America: Joint annual meeting (June 2005 – invited)
    4. American Statistical Association: Joint Statistical Meetings (August 2005 – invited)
  - “Local Analytic Curve Estimation”
    1. American Statistical Association: Joint Statistical Meetings (August 2006 – contributed)
    2. Case Western Reserve University: Statistics Department colloquium (October 2007 – invited)
  - “Thinking Outside the Curve: Revisiting Birthweight Distribution”
    1. American Statistical Association: Kentucky chapter meeting (October 2006 – invited)
    2. American Statistical Association: Joint Statistical Meetings (August 2007 – contributed)
    3. Indiana University: Statistics Department colloquium (April 2008 – invited)
    4. University of Cincinnati: Division of Epidemiology and Biostatistics colloquium (May 2008 – invited)
  - “Inferences in Contaminated Density Models with Applications to Microarray Data Analysis”
    1. University of Alabama at Birmingham: Statistical Genetics Section colloquium (March 2007 – invited)
  - “A Generalized CP Criterion for Evaluating Derivative Estimates”
    1. American Statistical Association: Joint Statistical Meetings (August 2008 – contributed)
  - “On Estimating Quantitative Features of Nanoparticles”
    1. International Chinese Statistical Association: Applied Statistics Symposium (June 2009 – invited)
  - “Nonparametric Derivative Estimation and Posterior Probabilities for Nanoparticle Characteristics”
    1. American Statistical Association: Joint Statistical Meetings (August 2009 – contributed)
    2. Ohio State University: Conference on Nonparametric Statistics and Statistical Learning (May 2010 – contributed)
    3. International Chinese Statistical Association: Applied Statistics Symposium (June 2010 – contributed)
  - “The Doubly Contaminated Normal Model and Its Application to Microarray Data Analysis”
    1. American Statistical Association: Joint Statistical Meetings (August 2011 – contributed)
    2. Cincinnati Children’s Hospital: Division of Biostatistics and Epidemiology seminar (September 2011 - invited)

### **External Funding (active)**

1. CTSA 1U54RR031263-01A1 Kern (PI)      7/1/11 - 6/30/16, \$20 million  
 NIH      (0.9 months FY 2012)

**KENTUCKY CENTER FOR CLINICAL AND TRANSLATIONAL SCIENCE**

The University of Kentucky Center for Clinical and Translational Science is dedicated to growing the clinical and translational science research teams of the future, to providing the infrastructure needed to foster collaborations between basic and clinical scientists to facilitate research translation, and to enhancing outreach pathways to confront chronic health issues in rural Appalachia.

Role: Program Faculty, Biostatistics

2. ISSCRES0043 Smyth (PI) 5/2/11 - 11/30/12, \$100,000  
AstraZeneca Pharmaceuticals (0.7 months FY 2012)  
EARLY USE OF ROSUVASTATIN IN ACUTE CORONARY SYNDROMES: TARGETING PLATELET-LEUKOCYTE INTERACTIONS  
This human clinical study will assess the effects of Crestor, a lipid lowering therapy, on platelet function and inflammatory biomarkers among patients with acute coronary syndromes.  
Role: Co-Investigator
3. 1R21HD068844-01 Swanson (PI) 5/1/11 - 4/30/13, \$190,000  
NIH/CHHD (0.6 months FY 2012)  
COMBATING DISPARITIES IN PRODUCE CONSUMPTION: AN APPALACHIAN FARM TO SCHOOL INTERVENTION  
Located in rural Appalachian Kentucky, a region with low fruit and vegetable intake and high rates of diet related diseases, the proposed project examines the feasibility of using a farm to school program, which provides locally-raised produce to the school cafeteria, as a health intervention.  
Role: Co-Investigator
4. Dearing (PI) 3/01/10 – 2/29/12, \$120,000  
KY Public Health Association (0.3 months FY 2012)  
COMMUNITY OUTREACH AND CHANGE FOR DIABETES MANAGEMENT  
The Kentucky Public Health Research Network will implement a systems-based quality improvement (QI) program, collect pre and post intervention data on the QI process, and analyze data for presentation at regional and national public health meetings.  
Role: Statistical Consultant
5. 1R01MH083621-01 Crosby (PI) 9/30/08 – 5/31/13, \$1.8 million  
NIH/NIMH (0.5 months FY2012)  
A BRIEF, CLINIC-BASED HIV PREVENTION PROGRAM FOR AFRICAN AMERICAN TEEN MALES  
This study will test the efficacy of a brief, clinic-based intervention to reduce STI incidence among African American teens (15 to 20 years old).  
Role: Co-Investigator
6. 1P20RR021954-01A2 Cassis (PI) 9/08/08 – 6/30/13, \$10.5 million  
NIH/NCRR (0.9 months FY 2012)  
CENTER OF RESEARCH IN OBESITY AND CARDIOVASCULAR DISEASE  
The objective of this Center is to identify mechanisms linking the epidemic of obesity to the high incidence of cardiovascular diseases in the obese population and to use this focus as a platform to develop promising junior project investigators.  
Role: Mentor to junior project investigators
7. 5R01AA016166-04 Smith (PI) 3/10/08 – 2/28/13, \$630,000  
NIH/NIAAA (0.0 months FY 2012)  
DEVELOPMENTAL TRANSITIONS AND RISK FOR ALCOHOL USE  
This research will help us understand how the transition into adolescence can leave some children at risk for beginning to engage in risky behaviors. It will highlight the importance of emotion for some adolescents' risky behaviors, and it will suggest mood-based interventions that might reduce risk.  
Role: Statistical Consultant
8. 5P50DA005312-16 Bardo (PI) 9/30/92 – 6/30/12, \$6.8 million for years 16 through 20  
NIH/NIDA (0.9 months FY 2012)  
DRUG ABUSE PREVENTION - A LIFECOURSE PERSPECTIVE  
This project entails evaluations of school-based, curriculum-driven prevention programs with the evaluation of a comprehensive prevention program featuring both universal and selective high sensation value components.  
Role: Methodology and Statistics Core

**External Funding (completed)**

9. DMS-0706857 Charnigo (PI) 8/01/07 – 7/31/11, \$250,000  
NSF/DMS  
ESTIMATION OF ANALYTIC SURFACES WITH APPLICATIONS TO NANOPARTICLE CHARACTERIZATION VIA SURFACE WAVES  
This project advances the statistical field of functional data analysis by rigorously developing a new compound estimation paradigm for simultaneously estimating a mean response and several of its derivatives from noisy data.  
Role: Principal Investigator
10. Charnigo (PI) 6/01/07 – 6/30/07, \$2500  
Naval Postgraduate School  
PROFESSIONAL MORAL COURAGE AND MORAL DECISION MAKING  
This project involves the analysis of organizational behavior data pertaining to the Ethics in Action Research and Education program, with a particular focus on professional moral courage.  
Role: Principal Investigator
11. Charnigo (PI) 7/01/06 – 6/30/07, \$8000  
Naval Postgraduate School  
CONTRACT FOR STATISTICAL CONSULTING  
This project involves the analysis of organizational behavior data pertaining to the Ethics in Action Research and Education program, with a particular focus on curiosity and desired moral approbation.  
Role: Principal Investigator
12. Charnigo (PI) 3/01/05 – 8/31/05, \$5700  
Accumetrics, Inc.  
CONTRACT FOR STATISTICAL CONSULTING  
This project involved the analysis of clinical data to ascertain variability in response to clopidogrel.  
Role: Principal Investigator
13. 1R01HL091924-01A1 Bruemmer (PI) 9/01/09 – 8/31/11, \$830,000  
NIH/AICS  
TELOMERASE IN INFLAMMATION AND ATHEROSCLEROSIS  
This study will test the hypothesis that telomerase promotes inflammatory gene expression in macrophages through epigenetic chromatin modifications and contributes to the development of atherosclerosis.  
Role: Co-Investigator
14. 1 R21 DA023049-01 Martin (PI) 5/10/07 – 6/30/11, \$400,000  
NIH/NIDA  
MODAFINIL AND SMOKING CESSATION  
This project is a Phase II clinical trial exploring the efficacy of modafinil as a smoking cessation aid. If shown to be effective, modafinil could be added to the current pharmacotherapies for smoking cessation and may have particular benefit for female smokers for whom weight gain is a significant deterrent to smoking cessation.  
Role: Co-Investigator
15. Scutchfield (PI) 3/01/07 – 2/29/08, \$110,000  
National Network of Public Health Institutes  
NPHPSP DATA MINING  
This project seeks to identify factors that predict whether a public health department will excel in each of the ten essential public health services.  
Role: Statistical Consultant

16. 1K23HD050581-01A1 Reynolds (PI) 9/27/06 – 8/31/11, \$540,000  
NIH/CHHD

**CERVICAL (NECK) AUSCULTATION AND DEVELOPMENTAL OUTCOMES**

This project is designed to relate cervical auscultation data acquired through digital signal processing technology (in particular, measurements of swallow-associated sounds during early rhythmic suckle feeding) to long-term neurologic and developmental outcomes.

Role: Statistical Consultant

17. 1R01AI068119-01A1 Crosby (PI) 6/15/06 – 5/31/11, \$2.9 million  
NIH/BSPH

**DO CONDOMS PROTECT FROM NON-VIRAL SEXUALLY TRANSMITTED INFECTIONS?**

This project entails assessing condom effectiveness against chlamydia, trichomoniasis, and gonorrhea with particular attention to the moderating effects of gender and the losses in protective value associated with irregular and incorrect usage.

Role: Co-Investigator

18. 1P01HL080100-01A1 Daugherty (PI) 4/08/06 – 3/31/11, \$8.6 million  
NIH/HLBP

**MECHANISMS OF ABDOMINAL AORTIC ANEURYSM FORMATION**

This project is designed to provide mechanistic insight into the mechanisms involved in the initiation and propagation of abdominal aortic aneurysms.

Role: Administrative Core

19. 1R21MH066682-01A1 Crosby (PI) 4/01/03 – 3/31/07, \$450,000  
NIH/NIMH

**PROMOTING HIV RISK REDUCTION IN AFRICAN AMERICAN MEN**

The goal of this study is to determine if a brief, clinic-based, intervention will enhance condom use among African American men diagnosed with an STD.

Role: Statistical Consultant

20. 5R01MH060104-04 Lynam (PI) 9/30/00 – 8/31/05, \$790,000  
NIH/NIMH

**ADULT ANTISOCIAL OUTCOMES OF PSYCHOPATHIC CHILDREN**

The goals of this project included ascertaining the stability of psychopathy across development, the reliability of its assessment, and its value in predicting delinquency.

Role: Statistical Consultant

### **Internal Funding (active)**

Since 8/15/04, I have received support from the Division of Cardiology in the Department of Internal Medicine (currently 30% of twelve-month salary; grant #18 above was subsumed into this support; salary is received during both the academic year and the summer, not necessarily at equal rates). My responsibilities include collaborations and consultations with faculty, fellows, and research staff in Cardiology.

### **Teaching and Advising**

#### ***Teaching at the University of Kentucky***

- CPH 767, Dissertation Residency Credit (Fall 2011)  
Students in the Ph.D. program in Epidemiology and Biostatistics enroll in this course while completing their dissertation research. The instructor of record is the Director of Graduate Studies for the Ph.D. program in Epidemiology and Biostatistics, a role I have fulfilled since 2009.

- BST 675, Biometrics I (Fall 2010, Fall 2011)  
This is a graduate course directed predominantly to students pursuing a Ph.D. in Epidemiology and Biostatistics. Topics include unconditional and conditional probabilities, discrete and continuous random variables, joint and marginal probabilities, and sampling distributions.
- CPH 786, Doctoral Seminar (Spring 2010)  
This is a graduate course directed solely to students pursuing a Ph.D. in Epidemiology and Biostatistics. The course consists of colloquia-style activities that help students develop professionally and expose them to the interface between epidemiologic and biostatistical research.
- BST 676, Biometrics II (Spring 2010, Spring 2011)  
This is a graduate course directed predominantly to students pursuing a Ph.D. in Epidemiology and Biostatistics. Topics include concepts from large sample theory, maximum likelihood and other methods for point estimation, best unbiased point estimation, likelihood ratio and other methods for hypothesis testing, uniformly most powerful hypothesis tests, interval estimation via inversion and pivoting, and uniformly most accurate interval estimation.
- STA 623, Theory of Probability (Fall 2009, Fall 2010, Fall 2011)  
This is a graduate course directed exclusively to students in Statistics. Topics include unconditional and conditional probabilities, random variables, expected values and higher order moments, commonly encountered parametric families, joint and marginal probabilities, and random sampling.
- STA 715, Readings in Statistics: Nonparametric Regression (Spring 2009)  
I supervised Benjamin Hall, a Ph.D. Candidate in Statistics, on work that formed the basis for part of his dissertation on simultaneous confidence bands for mean response functions and their derivatives.
- STA 525, Introduction to Statistical Inference (Spring 2008)  
This is a graduate course directed to students in disciplines other than Statistics. Topics include maximum likelihood estimation, likelihood ratio tests, sufficiency and completeness, best unbiased estimators, uniformly most powerful tests, and applications of quadratic forms.
- CPH 931, Professional Seminar in Biostatistics (Spring 2007 as co-instructor with Richard Kryscio, Fall 2008 and Fall 2009 as sole instructor)  
This advanced course for Dr.P.H. students introduces sophisticated methods (e.g., weighted least squares, robust regression, ridge regression, nonparametric regression, polytomous regression, proportional odds regression, Poisson regression, and negative binomial regression) that can be employed when the methods introduced in CPH 930 do not apply.
- CPH 636, Data Mining in Public Health (Spring 2006, Spring 2008, Spring 2009)  
This is a graduate course whose topics include linear regression, logistic regression, discriminant analysis, regression and classification trees, neural networks, nearest neighbors methodology, factor analysis, and K-means clustering.
- STA 601, Theory of Statistical Inference II (Spring 2006, Spring 2007)  
This is a graduate course directed exclusively to students in Statistics. Topics include best unbiased estimators, uniformly most powerful tests, uniformly most accurate confidence sets, and standard asymptotic results for maximum likelihood estimators and likelihood ratio test statistics.
- STA 503, Introduction to Statistical Methods (Fall 2005, Fall 2006)  
This is a graduate course directed exclusively to students in Statistics. Topics include point and interval estimation, hypothesis testing, linear regression, logistic regression, and proportional hazards regression.

- CPH 739, Independent Study in Biostatistics (Fall 2005)  
I supervised Lorie Chesnut, an M.P.H. candidate concentrating in Epidemiology, on work that led to manuscripts #38, #39, and #72 above.
- STA 624, Applied Stochastic Processes (Spring 2005)  
This is a graduate course in stochastic processes directed primarily to students in Statistics but that draws students from some other departments as well. Topics include Markov chains in discrete time, Poisson processes, Markov chains in continuous time, and renewal processes.
- STA 715, Readings in Statistics: Topics in Mixture Modeling (Spring 2005)  
I supervised Hongying Dai, a Ph.D. Candidate in Statistics, on work that formed the basis for part of her dissertation on inference in contamination models.
- CPH 739, Independent Study in Biostatistics (Summer 2004)  
I supervised Julie Tackett, an M.P.H. candidate concentrating in Epidemiology, on work that led to manuscript #8 above.
- CPH 930, Advanced Biostatistical Methods in Public Health (Spring 2004, Fall 2004, Spring 2005, Fall 2006)  
This introductory course for Dr.P.H. students addresses linear regression, logistic regression, proportional hazards regression, and other topics relevant to students in public health.
- CPH 630/STA 681, Biostatistics II (Spring 2004, Fall 2004, Spring 2005 – taught concurrently with CPH 930)  
This sequel to Biostatistics I addresses linear regression, logistic regression, proportional hazards regression, and other topics relevant to students in public health.
- STA 580, Biostatistics I (Fall 2003, Spring 2004, Fall 2007, Fall 2008, Spring 2009, Spring 2011)  
This is a graduate course that addresses point and interval estimation, hypothesis testing, simple linear regression, and other topics relevant to students in public health.

#### ***Teaching at Case Western Reserve University***

- STAT 312, Statistics for Engineering and Science (Fall 2001, Fall 2002)
- MATH 126, Mathematics II (Spring 1999)
- MATH 121, Calculus for Science and Engineering I (Fall 1997, Spring 1998, Fall 1998)

#### ***Guest lectures on biostatistics given in other courses at the University of Kentucky***

- CPH 778 Section 402, Current Topics in Public Health (Fall 2011)
- HON 121, Honors Seminar on Emerging Technology (twice in Fall 2008)
- OBI 650, Oral Biology for Postgraduate Dental Students (Fall 2004, Fall 2005, Fall 2006)
- MED 825, Introduction to Clinical Research (Spring 2004)

#### ***Course development at the University of Kentucky***

- CPH 636, Data Mining in Public Health (first offered in Spring 2006)  
This course, which Marta Mendiondo and I developed, addresses statistical techniques for and practical issues associated with the exploration of large public health data sets, the development of models from such data sets, and the effective communication of one's findings.
- BST 675, Biometrics I (first offered in Fall 2009)  
This course, which Heather Bush and I developed with input from our colleagues in Biostatistics, introduces probability, discrete random variables, continuous random variables, and sampling distributions.

- BST 676, Biometrics II (first offered in Spring 2010)  
This course, which Heather Bush and I developed with input from our colleagues in Biostatistics, introduces techniques for constructing and evaluating point estimators, hypothesis testing procedures, and interval estimators.
- BST 764, Applied Statistical Modeling for Medicine and Public Health (first offered in Fall 2011)  
This course, which I developed with input from colleagues in Biostatistics, introduces finite mixture models, nonparametric regression models, covariance-based models, and stochastic models.

***Advising at the University of Kentucky: current students***

1. Dissertation advisor for Qian Fan, Ph.D. Candidate (Statistics)
2. Dissertation advisor for Limin Feng, Ph.D. Candidate (Statistics)
3. Dissertation committee member for Alison Kaiser, Ph.D. Candidate (Psychology)
4. Capstone committee member for Angela Carman, Dr.P.H. Candidate (Health Services Management)
5. Capstone committee member for Rachel Vickers, M.P.H. Candidate (Health Services Management)
6. Capstone committee member for Robin Pendley, Dr.P.H. Candidate (Health Services Management)
7. Capstone committee member for April Harris, M.P.H. Candidate (Health Services Management)
8. Dissertation committee member for Alireza Zeinali, Ph.D. Candidate (Civil Engineering)
9. Capstone committee member for David Grimes, M.P.H. Candidate (Health Behavior)
10. Dissertation committee member for Joyce Robl, Ed.D. Candidate (Health Promotion)

***Advising at the University of Kentucky: former students***

11. Capstone advisor for Wei Deng (M.P.H., Biostatistics, August 2011)
12. Dissertation advisor for Benjamin Hall (Ph.D., Statistics, May 2010)  
Mr. Hall won one of the two Statistics Department's 2010 R. L. Anderson Awards for Research.
13. Capstone advisor for Alice Smith (M.P.H., Biostatistics, December 2007)
14. Dissertation co-advisor (with Kert Viele) for Hongying Dai (Ph.D., Statistics, August 2006)  
Ms. Dai won the Statistics Department's 2006 R. L. Anderson Award and the 2006 student paper competition of the American Statistical Association's Biopharmaceutical Section. (The paper was an early version of manuscript #12 above.)
15. Capstone committee member for Zhen Huang (M.P.H., Biostatistics, December 2011)
16. Capstone committee member for Maria Gomez (Dr.P.H., Health Services Management, August 2011)
17. Dissertation committee member for Zack Adams (Ph.D., Psychology, August 2011)
18. Capstone committee member for Paula Arnett (Dr.P.H., Health Services Management, August 2011)
19. Dissertation committee member for Ursula Bailey (Ph.D., Psychology, August 2011)
20. Dissertation committee member for Angela Schoergendorfer (Ph.D., Statistics, August 2011)
21. Capstone committee member for Claude Dadge (M.P.H., Health Services Management, May 2011)
22. Dissertation committee member for Yanling Hu (Ph.D., Statistics, May 2011)
23. Capstone committee member for Charlotte Baker (Dr.P.H., Epidemiology, May 2011)
24. Capstone committee member for Keisha Houston (Dr.P.H., Epidemiology, May 2011)
25. Capstone committee member for Rick Ingram (Dr.P.H., Health Services Management, December 2010)
26. Capstone committee member for Donna Schmutzler (Dr.P.H., Health Services Management, December 2010)
27. Capstone committee member for Nicholas Hines (M.P.H., Health Behavior, August 2010)
28. Capstone committee member for Ariel Langevin (M.P.H., Health Services Management, August 2010)
29. Capstone committee member for Jennifer Marcum (Dr.P.H., Epidemiology, May 2010)
30. Capstone committee member for Patricia Eilerman (M.P.H., Epidemiology, May 2010)
31. Capstone committee member for Naomi Hudson (Dr.P.H., Epidemiology and Environmental Health, May 2010)
32. Capstone committee member for April Young (M.P.H., Health Behavior and Epidemiology, May 2010)
33. Capstone committee member for Alison Glassman (M.P.H., Health Behavior, May 2010)

34. Dissertation committee member for Bill Barton (Ph.D., Statistics, May 2010)
35. Capstone committee member for Radhika Katragunta (M.P.H., Health Services Management, August 2009)
36. Capstone committee member for Ashley Tillman (M.P.H., Health Behavior, August 2009)
37. Outside examiner for David Link (Ph.D., Chemistry, August 2009)
38. Capstone committee member for Jeff Tritle (M.P.H., Epidemiology, May 2009)
39. Capstone committee member for Srishti Shrestha (M.P.H., Epidemiology, May 2009)
40. Outside examiner for Jie Wang (Ph.D., Computer Science, December 2008)
41. Dissertation committee member for Christopher Berger (Ph.D., Exercise Science, August 2008)
42. Capstone committee member for Ashley Brooks (M.P.H., Health Services Management, August 2008)
43. Capstone committee member for Littron Cole (M.P.H., Health Services Management, August 2008)
44. Capstone committee member for Sabrina Walsh (Dr.P.H., Biostatistics, August 2008)
45. Dissertation committee member for Matthew Hersh (Ph.D., Statistics, December 2007)
46. Dissertation committee member for Rhonda VanDyke (Ph.D., Statistics, December 2007)
47. Capstone committee member for Torrie Harris (Dr.P.H., Health Behavior, August 2007)
48. Capstone committee member for Leo Gayheart (M.P.H., Epidemiology, August 2007)
49. Dissertation committee member for Mark Cullum (Ph.D., Exercise Science, August 2007)
50. Outside examiner for Andrea Milam (Ph.D., Instruction and Administration, August 2007)
51. Capstone committee member for Lorie Chesnut (M.P.H., Epidemiology, December 2005)  
Ms. Chesnut won Second Prize in a competition for best abstract at the Twelfth Annual Maternal Child and Health Epidemiology Conference. (The abstract and the talk that she gave were based on work initiated during her independent study with me.)
52. Capstone committee member for Matin Katirai (M.P.H., Epidemiology, August 2005)
53. Capstone committee member for Jenny Olges (M.P.H., Epidemiology, August 2005)
54. Capstone committee member for Judy Stivers (M.P.H., Epidemiology, August 2005)
55. Capstone committee member for Julie Tackett (M.P.H., Epidemiology, August 2005)
56. Capstone committee member for Elizabeth Masterson (M.P.H., Epidemiology, May 2005)
57. Capstone committee member for Sophie Zhang (M.P.H., Epidemiology, May 2005)

### ***Supervision of Research Assistants at the University of Kentucky:***

1. Patrick Kenkel, Undergraduate, supported by NSF grant DMS-0706857 (complete)
2. Leonard Gordon, Ph.D. Student in Epidemiology and Biostatistics, supported by the College of Public Health at UK (complete)
3. Limin Feng, Ph.D. Student in Statistics, supported by the College of Public Health at UK (complete)
4. Benjamin Hall, Ph.D. Student in Statistics, supported by NSF grant DMS-0706857 (complete)
5. Daniel Russell, Undergraduate, supported by NSF grant DMS-0706857 (complete)
6. David Bardach, Ph.D. Student in Epidemiology and Biostatistics, supported by the College of Public Health at UK (current)
7. Lava Timsina, Ph.D. Student in Epidemiology and Biostatistics, supported by the College of Public Health at UK (current)

## **Service**

### ***Professional (Editorial service)***

- Editorial Board, *Journal of Biometrics and Biostatistics* (2010-)

### ***Professional (Collaborative Meetings)***

- Invited Presenter at “Building a Consensus on the Assessment of Bleeding in Patients with Coronary Artery Disease” in April 2008, a Think Tank organized by the Duke Clinical Research Institute.

### ***Professional (Conferences)***

- Chair of “Censored and Missing Data Analysis,” a Contributed Session at the June 2010 ICSCA conference.
- Organizer and Chair of “Statistical Challenges in Measurement Error Models,” an Invited Session at the June 2009 ICSCA conference.
- Chair of “To Mix or Not to Mix,” an Invited Session at the March 2005 ENAR conference.
- Organizer and Chair of “Mixture Modeling: Modern Approaches and Applications,” an Invited Session at the May 2004 Interface conference.

### ***Professional (Refereeing for journals)***

- Referee for *Journal of Quantitative Spectroscopy and Radiative Transfer* (2011)
- Referee for *NeuroImage* (twice in 2011)
- Referee for *Medical Decision Making* (2011)
- Referee for *Evaluation and the Health Professions* (2010)
- Referee for *Molecular Therapy* (2010)
- Referee for *Statistics and Probability Letters* (2009)
- Referee for *Annals of Statistics* (2008)
- Referee for *Statistica Sinica* (twice in 2007)
- Referee for *Canadian Journal of Statistics* (2006, 2007)
- Referee for *IEEE Transactions on Image Processing* (twice in 2006)
- Referee for *Journal of Statistical Planning and Inference* (2005, twice in 2006, 2008, twice in 2011)
- Referee for *Journal of the American Statistical Association* (2004, 2005, 2006, 2009, 2010)
- Referee for *Journal of Statistical Computation and Simulation* (2004)

### ***Professional (Refereeing for institutions)***

- Faculty promotion external reviewer for Cleveland Clinic (2011)
- Faculty promotion external reviewer for Virginia Commonwealth University (2010)

### ***Professional (Written educational and outreach material)***

- Gelman, Andrew; Carlin, John; Stern, Hal; Charnigo, Richard (2000, but since updated). “Solutions to exercises from the book, *Bayesian Data Analysis*.” Available to instructors via <http://www.stat.columbia.edu/~gelman/book/>
- Charnigo, Richard (2001). “Solutions Manual for *Regression Analysis by Example*.” Available to instructors via <http://www.ilr.cornell.edu/~hadi/RABE/>
- Chesnut, Lorie; Charnigo, Richard; LoBianco, Tony (2006). “Perinatal Periods of Risk: Mapping Feto-Infant Mortality in Kentucky.” *Kentucky Epidemiologic News and Reports*: Volume 41, pp. 1 – 4.

### ***Professional (Training and outreach)***

- Talk on generalized linear mixed modeling and group-based trajectory modeling for CDART trainees (2011)
- Talk on group-based trajectory modeling at CDART Research Forum (2011)
- Talk on analyzing narrow population data at the Annual Maternal and Child Health Epidemiology Conference (2010), materials available via <http://www.richardcharnigo.net/RE/index.html>
- Led part of review session for University of Kentucky and other students planning to take Certified in Public Health examination (2009, 2010, 2011)
- Presentation to students of Lafayette and Henry Clay High Schools in Fayette County on statistical thinking and applications (2009)

- Talk on analyzing rare event data at the Annual Meeting of the National Birth Defects Prevention Network (2009), materials available via <http://www.richardcharnigo.net/RE/index.html>
- Talk on analyzing rare event data at the Annual Maternal and Child Health Epidemiology Conference (2008), materials available via <http://www.richardcharnigo.net/RE/index.html>
- Talk on linear mixed modeling at the Workshop on Statistical Methods in Drug Abuse, which was held for a national audience at the University of Kentucky (2008)
- Guest lecture on statistical concepts for Dietetic Interns at the University of Kentucky (2007, 2009)
- Half-day seminar on logistic regression for Kentucky Department for Public Health personnel (2006)

### ***University of Kentucky (University level)***

- Health Care Colleges Student Code of Conduct Committee (2011-)
- University Senate Academic Programs Committee (2011-)
- University Senate (2011-)
- Faculty Associate, Center for Research on Violence Against Women (2010-)
- Advisory Board, Quantitative Initiative for Policy and Social Research (2010-)
- Director of Graduate Studies, Ph.D. in Epidemiology and Biostatistics (2009-)
- Health Care Colleges Council (2009-2011)

### ***University of Kentucky (College level)***

- Ph.D. in Epidemiology and Biostatistics Support Committee, Chair (2011-)
- Ph.D. in Epidemiology and Biostatistics Program Committee, Chair (2010-)
- College of Medicine M.D./Ph.D. Internal Advisory and Admissions Committee (2010-)
- Ph.D. in Epidemiology and Biostatistics Admissions Committee, Chair (2009-)
- College of Public Health Assessment and Evaluation Committee (2008-2011)
- Ph.D. in Epidemiology and Biostatistics Biostatistics Concepts Subexamination Committee, Chair (2010-2011, 2011-)
- College of Public Health Faculty Council (2005-2009), Vice Chair (2005-2006)
- College of Public Health Ad-Hoc Associate Dean Committee (2007)
- College of Public Health Research Committee (2006-2007)
- College of Public Health Ad-Hoc Curriculum Committee (2006)
- College of Public Health (Staff) Employee of the Year Committee (2006)
- College of Public Health Academic Affairs Committee (2004-2006)
- Judge, College of Public Health Research Symposium (2004, 2006)

### ***University of Kentucky (Department level)***

- Statistics Department M.S. Examination in Theory Committee (2010, 2011)
- Biostatistics Department Dr.P.H. Qualifying Examination Committee (2007-2008)
- Statistics Department Ad-Hoc M.S. Program Committee (2007-2008)
- Statistics Department Grants/Contracts Committee (2006-2010)
- Biostatistics Department Ad-Hoc Ph.D. Program Committee (2006-2008)
- Statistics Department M.S. Examination in Data Analysis Committee (2006, 2007)
- Statistics Department M.S. Examination in Probability Committee (2005, 2008, 2009)
- Biostatistics Department Dr.P.H. Core Principles Examination Committee (2004-2008)
- Statistics Department M.S. Examination in Inference Committee (2004, 2006, 2007)
- Statistics Department Meeting Recorder (2004-2005)
- Statistics Department Computing Committee (2003-2009)
- Statistics Department Picnic Committee (2003-2008)

***Case Western Reserve University (Graduate Student Senate)***

- President (2000-2002)
- Recording Secretary (1999-2000)
- Verhosek Fund Appeal Committee (2001-2002, 2003)
- Activities Committee (2000-2001, 2002)
- Senator (1999-2003)

***Case Western Reserve University (University level)***

- Presidential Search Committee (2001-2002)
- Faculty Senate General Assembly (2000-2002)
- Commencement Speaker Committee (2000-2001)
- Faculty Senate Graduate Studies Committee (1999-2001)
- University Circle Incorporated Parking and Security Committee (1999-2000)

**Miscellaneous*****Computing skills***

- Proficient in Windows and Unix environments
- Extensive experience with R, S-plus, SAS, Enterprise Miner, and SPSS
- Familiarity with Fortran, Matlab, Mathematica, Maple, AMOS, and Lisrel

***Other employment***

- Regular keyboardist, St. Ladislav Parish in Westlake, Ohio (Summer 1990 to Fall 2002)
- Substitute keyboardist/vocalist, St. Gregory Parish in South Euclid, Ohio (Spring 2000)
- Professional musician and piano teacher (as opportunities have arisen)
- Proofreader, *The Best Kept Secrets of Parma: The Garden City* (Summer 1997)

***Awards/Honors***

- Inducted into Delta Omega Honorary Society in Public Health (2011)
- Golden Apple Award (2010): teaching excellence, College of Public Health (University of Kentucky)
- 2000 Outstanding Scientists 2008/2009, International Biographical Centre
- Marquis Who's Who in the World (2008, 2009, 2010, 2011, 2012)
- Wethington Award (2008, 2009, 2010, 2011): College of Arts and Sciences (University of Kentucky)
- Nominated for Provost's Award for Outstanding Teaching (2008): University of Kentucky
- Marquis Who's Who in Science and Engineering (2008, 2011-2012)
- Marquis Who's Who in America (2007, 2008, 2009, 2010, 2011, 2012)
- Wethington Award (2006, 2008, 2010, 2011): College of Public Health (University of Kentucky)
- Academic Keys Who's Who in Health Sciences Education (2006)
- John Schoff Millis Award (1997): best academic record, College of Arts and Sciences (Case Western Reserve University)
- Inducted into Phi Beta Kappa (1997)
- Max Morris Prize (1997) and Webster-Godman-Simon Award (1996): excellence in mathematics (Case Western Reserve University)
- National Merit Scholarship (1994-1995)
- Finalist, White House Commission of Presidential Scholars (1994)
- Rensselaer Medal (1993)