

# Eric Alan Vance

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## EDUCATION

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- Ph.D. Duke University**, Statistical Science 2008  
*Statistical Analysis of Dynamic Network Data*  
Advisor: Dr. David L. Banks
- M.S. Duke University**, Statistics and Decision Sciences 2005  
*Quantifying Elephant Social Structure: Using a Bayesian Bilinear Mixed Effects Model to Elicit Qualities of Elephant Behavior*  
Advisor: Dr. Michael L. Lavine
- A.B. University of California, Berkeley** 1997  
*Graduated with distinction as a triple major in Mathematics; Economics; and Statistics*

## HONORS AND AWARDS

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- Google Faculty Research Award 2014  
Co-author on Best Contributed Paper, ASA Section on Statistical Consulting 2014  
Google Faculty Research Award 2013  
Elected Member of the International Statistical Institute 2013  
Commencement speaker, Department of Statistics, Virginia Tech 2009, 2011, and 2012  
Honorary Member of Iota Delta Rho (Interdisciplinary Research Honor Society) 2012  
Member of Sigma Xi (Scientific Honor Society) 2012  
Member of Mu Sigma Rho Statistics Honor Society 2008  
Conference Travel Fellowship (Duke University) 2005 - 2007  
James B. Duke Fellowship (Duke University) 2002 - 2006  
Triple major in Mathematics, Economics, and Statistics (UC Berkeley) 1997  
TRW Winner Award 1996  
National Merit Scholar 1993

## ACADEMIC APPOINTMENTS

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- Director** 2016 - present  
Laboratory for Interdisciplinary Statistical Analysis (LISA) Boulder, CO  
University of Colorado Boulder
- Associate Professor** 2016 - present  
University of Colorado Boulder, Department of Applied Mathematics Boulder, CO
- Director** 2008 - 2016  
Virginia Tech, Laboratory for Interdisciplinary Statistical Analysis (LISA) Blacksburg, VA  
As director of LISA, I supervised graduate students, faculty & staff in fulfilling LISA's mission to train statisticians to become interdisciplinary collaborators, provide research infrastructure to enable and accelerate high impact research, and engage with the community in outreach

activities to improve statistical skills and literacy. I trained 225 statisticians to become interdisciplinary statistical collaborators and have personally collaborated on more than 450 projects. Under my direction LISA assisted a total of 9429 clients to apply statistics to advance their research, including collaborating on 2719 research projects, providing statistical advice for 2962 visitors to LISA Walk-in Consulting, and teaching 3748 short course attendees via 196 short courses how to apply statistics in their research.

<b>Associate Research Professor</b> Virginia Tech, Department of Statistics	2015 – 2016 Blacksburg, VA
<b>Assistant Research Professor</b> Virginia Tech, Department of Statistics	2008 - 2014 Blacksburg, VA
<b>Graduate Teaching Assistant</b> Duke University, Department of Statistical Science Duke University, Institute for Statistics and Decision Sciences (ISDS)	2004 - 2005, 2007 - 2008 Durham, NC Durham, NC
<b>Research Assistant</b> Statistical and Applied Mathematical Sciences Institute (SAMSI)	2003 - 2006 Durham, NC
<b>Instructor</b> Duke University	2003, 2004 Durham, NC

**PUBLICATIONS** ResearcherID: J-6597-2014

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**Publication Metrics**

Citations (Google Scholar): 241; h-index: 8

**Published in peer-reviewed journals or peer-reviewed conference proceedings**

1. Hall, R.P., **Vance, E.A.**, Van Houweling, E.A., Huang, W. (2015) Willingness to Pay for VIP Latrines in Rural Senegal. *Journal of Water, Sanitation and Hygiene for Development* 5(4) 586-593.
2. Simmons, D.R., Tendhar, C., Yu, R., **Vance, E.A.**, Amelink, C. T. (2015) Developing the Postsecondary Student Engagement Survey (PosSES) to Measure Undergraduate Engineering Students' Out-of-Class Involvement. *2015 ASEE Annual Conference and Exposition, Seattle, Washington*. 10.18260/p.23845
3. Hall, R.P., **Vance, E.A.**, Van Houweling, E. (2015) Upgrading domestic-plus systems in rural Senegal: An incremental Income-Cost (I-C) analysis. *Water Alternatives* 8(3), 317-336.
4. **Vance, E.A.** (2015) Recent Developments and Their Implications for the Future of Academic Statistical Consulting Centers. *The American Statistician* 69(2), 127-137.
5. Gazel, E., Hayes, J., Hoernle, K., Kelemen, P., Everson, E., Holbrook, W.S., Hauff, F., van den Bogaard, P., **Vance, E.A.**, Chu, S., Calvert, A., Carr, M.J., Yagodzinski, G.M. (2015) Continental Crust in Oceanic Arcs. *Nature Geoscience* 8(4), 321-327.
6. Hall, R.P., Van Houweling, E.A., **Vance, E.A.** (2014) The Productive Use of Rural Piped Water in Senegal. *Water Alternatives*, 7(3), 480-498.
7. Seiss, M., **Vance, E.A.**, Hall, R.P. (2014) The Importance of Cleaning Data During Fieldwork: Evidence from Mozambique. *Survey Practice*, (7)4.

8. Sharma, A., Marchant, M.A, **Vance, E.A.**, Smith, E.P., Richardson, W.W., Hightower, L.S. (2014). National Survey of Study Abroad Programs Conducted in Asia Using the Food and Agriculture Education Information System (FAEIS) Database, *NACTA Journal*, 58(2), 140-147.
9. Monaco, T.A., Taylor, J.A., Langenbach, A., **Vance, E.** (2014). Intra- and inter-observer reliability of combined segmental measurement techniques for predicting immediate post-deployment intraluminal tracheal stent length in dogs, *Canadian Veterinary Journal*, 55(5), 435-441.
10. Stallings, J., **Vance, E.**, Yang, J.S., Vannier, M.W., Liang, J.M., Pang, L.J., Dai, L., Ye, I., Wang, G. (2013). Determining scientific impact using a collaboration index, *Proceedings of the National Academy of Sciences*, 110(24), 9680-9685.
11. **Vance, E.A.**, Xie, X., Henry, A., Wernz, C., Slonim, A.D. (2013). Computed tomography scan use variation: patient, hospital, and geographic factors, *The American Journal of Managed Care*, 19(3), e93-e99.
12. Alexander, K.A., Carzolio, M., Goodin, D., **Vance, E.** (2013). Climate change is likely to worsen the public health threat of diarrheal disease in Botswana, *International Journal of Environmental Research and Public Health*, 10(4), 1202-1230.
13. Simin Hall, S., McQuay, W., **Vance, E.** (2011). Features of a trust model for a complex system, *Proceedings of the ASME 2011 International Mechanical Engineering Congress & Exposition*.
14. Smith, E.K., Resler, L.M., **Vance, E.A.**, Carstensen, L.W., Kolivras, K.N. (2011). Blister rust incidence in treeline whitebark pine, Glacier National Park, U.S.A: environmental and topographic influences, *Arctic, Antarctic and Alpine Research*, 43(1), 107-117.
15. Hall, T.S. and **Vance, E.A.** (2010). Improving self-efficacy in statistics: role of self-explanation & feedback, *Journal of Statistics Education*, 18(3).
16. **Vance, E.A.**, Archie, E.A., Moss, C.J. (2009). Social networks in African elephants, *Computational and Mathematical Organization Theory*, 15(4), 273-293.
17. Hollister-Smith, J.A., Poole, J.H., Archie, E.A., **Vance, E.A.**, Georgiadis, N.J., Moss, C.J., Alberts, S.C. (2007). Age, musth and paternity success in wild male African elephants, *Loxodonta africana*, *Animal Behaviour*, 74(2), 287-296.
18. Dinwoodie, I.H. and **Vance, E.A.** (2007). Moment estimation in delay tomography with spatial dependence, *Performance Evaluation*, 64(7-8), Pages 613-628.

#### **Other publications**

19. **Vance, E.** (2016). Interview with Doug Zahn. *Amstat News*, Issue 471, 6-7.
20. **Vance, E.** and Pruitt, T. LISA: Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis Annual Report 2015-16. Submitted August 8, 2016, 22 pages. <http://hdl.handle.net/10919/72099>
21. **Vance, E.** and Pruitt, T. LISA: Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis Annual Report 2014-15. Submitted August 5, 2016, 28 pages. <http://hdl.handle.net/10919/72097>
22. Vance, E. (2016). "My Experience at the IISA Conference." *IISA Newsletter*, Spring 2016, 11-12.
23. **Vance, E.A.** (2016). "The LISA 2020 Program to Build Statistics Capacity and Research Infrastructure in Developing Countries." *Proceedings of the 60<sup>th</sup> International Statistical Institute's World Statistics Congress*, Rio de Janeiro, Brazil, 2015.

24. Msemo, E. and **Vance, E.A.** (2016). "LISA 2020: Impacting Agricultural Productivity in Tanzania Through the Wheels of Statistics." *Proceedings of the 60<sup>th</sup> International Statistical Institute's World Statistics Congress*, Rio de Janeiro, Brazil, 2015.
25. Awe, O.O, Crandell, I. and **Vance, E.A.** (2016). "Building Statistics Capacity in Nigeria Through the LISA 2020 Program." *Proceedings of the 60<sup>th</sup> International Statistical Institute's World Statistics Congress*, Rio de Janeiro, Brazil, 2015.
26. **Vance, E.** (2015). Chair's Column – Goals for 2015, *The Statistical Consultant*, 31(1), 4-5.
27. **Vance, E.**, Franck, C. and Pruitt, T. LISA: Virginia Tech's Laboratory for Interdisciplinary Statistical Analysis Annual Report 2013-14. Submitted January 14, 2015, 37 pages. <http://hdl.handle.net/10919/51692>
28. **Vance, E.** (2014). An interview with W.J. Dixon Award Winner Dallas Johnson, *The Statistical Consultant*, 30(3), 7-12.
29. **Vance, E.** (2014). A conference on statistical practice!, *The Statistical Consultant*, 30(2), 4-5.
30. Hall, R.P., Davis, J., van Houweling, E., **Vance, E.A.**, Carzolio, M., Seiss, M., Russel, K. (2014). Impact evaluation of the Mozambique rural water supply activity under a cooperative agreement between MCC and Stanford University. Submitted to the Millennium Challenge Corporation, April 15, 2014, 111 pages.
31. Awe, O.O. and **Vance, E.A.** (2014). Statistics education, collaborative research, and LISA 2020: a view from Nigeria, *Proceedings of the Ninth International Conference on Teaching Statistics (ICOTS9, July, 2014)*, Flagstaff, Arizona, USA, 4 pages.
32. Hall, R.P., van Houweling, E., **Vance, E.**, Carzolio, M., Davis, J. (2014). Evaluation of eight small-scale solar systems in Cabo Delgado, Mozambique. Submitted to the Millennium Challenge Corporation, April 15, 2014, 51 pages.
33. **Vance, E.** (2014). An interview with Doug Zahn, *The Statistical Consultant*, 30(1), 4-7.
34. **Vance, E.**, Franck, C. and Pruitt, T. LISA: Laboratory for Interdisciplinary Statistical Analysis Annual Report. Submitted November 4, 2013, 41 pages. <http://hdl.handle.net/10919/50507>
35. **Vance, E.** (2013). Conference on statistical practice mentoring program to help promote statistics. *Amstat News*, Issue 437.
36. Hall, R.P., Davis, J., **Vance, E.**, van Houweling, E., Carzolio, M., Russel, K. (2013). Impact evaluation design and implementation report. Impact evaluation of the rural water activity in Nampula, Mozambique. Submitted to the Millennium Challenge Corporation, April 30, 2013, 35 pages.
37. **Vance, E.**, Franck, C., Pruitt, T. LISA: Laboratory for Interdisciplinary Statistical Analysis Annual Report. Submitted December 12, 2012, 30 pages. <http://hdl.handle.net/10919/50506>
38. **Vance, E.** (2012). International Experiences in Statistics, *Amstat News*, Issue 420, 17-19.
39. Hall, R.P. Davis, J., van Houweling, E., **Vance, E.A.**, Seiss, M., Russel, K. (2012). Impact evaluation of the Millennium Challenge Corporation-supported Rural Water Supply Activity (RWSA) in Nampula, Mozambique. Mid-Term Report. Submitted to the Millennium Challenge Corporation, June 30, 2012, 94 pages.
40. **Vance, E.**, Franck, C., Pruitt, T. LISA Annual Report 2010-2011. Submitted November 11, 2011, 28 pages. <http://hdl.handle.net/10919/19012>

41. Hall, R. P., van Houweling, E., **Vance, E.**, Hope, R., Davis, J. (2011). Assessing the Link between Productive use of Domestic Water, Poverty Reduction, and Sustainability. Senegal Country Report. Submitted to the Water and Sanitation Program, World Bank, September 9, 2011, 95 pages.
42. Marchant, M.A., Richardson, W., Smith, E., **Vance, E.**, Mack, T., Hamm, J., Shen, Y., Griffin, K., Hightower, L., Bell, A. (2011) FAEIS Statistics Expert Panel Workbook. Submitted to the FAEIS Statistics Expert Panel, Washington, D.C., April 8, 2011, 200 pages.
43. Marchant, M.A., Richardson, W., Hamm, J., Mack, T., Smith, E., **Vance, E.**, Hightower, L., Bell, A., Shen, Y., Griffin, K. (2010) FAEIS Peer Panel Workbook. Submitted to the FAEIS Peer Panel of the APLU, Dallas, TX, November 17, 2010, 200 pages.
44. **Vance, E.** and Pruitt, T. LISA: Laboratory for Interdisciplinary Statistical Analysis Annual Report 2009-2010. Submitted November 14, 2010, 22 pages. <http://hdl.handle.net/10919/50505>
45. **Vance, E.** LISA: Laboratory for Interdisciplinary Statistical Analysis Annual Report 2008-2009. Submitted October 6, 2009, 19 pages. <http://hdl.handle.net/10919/50504>

#### **Selected newsletters co-edited**

46. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Baccalaureate enrollment for minorities in Natural Resources and Conservation (NRC) disciplines, *FAEIS Newsletter*, June 2013.
47. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Forecasting the Supply of Graduates in the Educational Pipeline, *FAEIS Newsletter*, April 2013.
48. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Trends in Graduate Enrollment at Public and Land-Grant Institutions, *FAEIS Newsletter*, February 2013.
49. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Trends Occurring in the Number of Baccalaureate Degrees Awarded in Different U.S. Regions, *FAEIS Newsletter*, December 2012.
50. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Minorities are Sustaining the Growth in Undergraduate Student Enrollment in Family and Human Sciences, *FAEIS Newsletter*, October 2012.
51. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Trends for Minority Students Enrolled in Colleges and Departments of Agriculture and Natural Resources at 98 Higher Education Institutions Across the United States, *FAEIS Newsletter*, September 2012.
52. Hightower, L.S., Marchant, M.A., Richardson, W.W., **Vance, E.A.**, Smith, E.P., Mack, T. Trends in Gender for Undergraduates in Programs in Natural Resources and Conservation at Institutions Affiliated with NAUFRP - National Association of University Forest Resources Programs, *FAEIS Newsletter*, August 2012.
53. Hightower, L., Griffin, K., Smith, E., Marchant, M.A., Richardson, W., **Vance, E.**, Bell, A., Mack, T., Shen, Y. and Hamm, J. Changes to Degree Programs in 2010, *FAEIS Newsletter*, February 2011.
54. Hightower, L., Mack, T., Richardson, W., Marchant, M.A., Hamm, J., Smith, E., **Vance, E.**, Bell, A., Griffin, K. and Shen, Y. Using FAEIS Reports to Create Grant Proposals, *FAEIS Newsletter*, December 2010.
55. Hightower, L., Bell, A., Marchant, M.A., Richardson, W., Smith, E., **Vance, E.**, Hamm, J., Mack, T., Griffin, K. and Shen, Y. FAEIS Peer Panel Convenes at APLU Meeting, *FAEIS Newsletter*, October 2010.

56. Hightower, L., Richardson, W., Marchant, M.A., Smith, E., **Vance, E.**, Mack, T., Bell, A., Griffin, K., Shen, Y. and Hamm, J. Special Edition: Hispanic-Serving Institutions, *FAEIS Newsletter*, September 2010.
57. Hightower, L., Richardson, W., Marchant, M.A., Hamm, J., Smith, E., **Vance, E.**, Mack, T., Bell, A., Griffin, K. and Shen, Y. 2010 Surveys Begin Soon, *FAEIS Newsletter*, September 2010.
58. Hightower, L., Richardson, W., Hamm, J., Marchant, M.A., Smith, E., **Vance, E.**, Mack, T., Bell, A., Griffin, K. and Shen, Y. A Look at Bachelors Degrees Awarded by Program Area and Region, *FAEIS Newsletter*, August 2010.
59. Hightower, L., Richardson, W., Hamm, J., Marchant, M.A., Smith, E., **Vance, E.**, Mack, T., Bell, A., Griffin, K. and Shen, Y. Exploring Agriculture Enrollment by Race and Institution Type, *FAEIS Newsletter*, July 2010.

#### **Selected manuscripts submitted or in preparation**

60. Van Houweling, E.A., Carzolio, M., Hall, R.P, **Vance, E.A.** "My Neighbor Drinks Clean Water, While I Continue to Suffer;" an analysis of the intra-community impacts of a rural water supply project in Mozambique." (To appear in *Journal of Development Studies*).
61. Seiss, M. and **Vance, E.A.** "Improved Matrix Sampling Designs Using A Bayesian Variable Selection Approach." (Under review in *Survey Methodology*.)
62. Simmons, D.R., Young, G., Adams, A., Martin, J.P., Cheng, J., **Vance, E.A.** "Non-curricular Involvement Promotes Development of Engineer of 2020 Traits for African American Engineers." (Under review in the *Journal of Women and Minorities in Science and Engineering*.)
63. **Vance, E.A.** "The LISA 2020 Program to Build Statistics Capacity and Research Infrastructure in Developing Countries." (Submitted to the *International Statistical Review*).
64. **Vance, E.A.**, LaLonde, D.L., Zhang L. "The Big Tent for Statistics: Mentoring Required," (To appear in *The American Statistician*.)
65. Love, K., **Vance, E.A.**, Harrell, Jr., F.A., Johnson, D.E., Kutner, M.H., Snee, R.D., Zahn D. "Developing a Career in the Practice of Statistics: The Mentor's Perspective," (To appear in *The American Statistician*.)
66. **Vance, E.A.**, Tanenbaum, E., Kaur, A., Otto, M.C., and Morris, R. "An Eight-Step Guide to Creating and Sustaining a Mentoring Program," (To appear in *The American Statistician*.)

#### **SELECTED CONFERENCE PRESENTATIONS AND WORKSHOPS**

(presenter[s] shown in **bold**)

#### **Invited paper presentations**

1. **Vance, E.** "The Extraordinary Potential of Statistical Collaboration Laboratories." Joint Statistical Meetings (JSM), Chicago, IL, 2016.
2. **Vance, E.** and **Shapiro, G.** "How Statisticians Can Lead Global Engagement in Science." AAAS Annual Meeting, Washington, D.C., 2016.
3. **Goshu, A.T.** and **Vance, E.** "Statistical Collaboration Center and Its Services at Hawassa University, Ethiopia." AAAS Annual Meeting, Washington, D.C., 2016.
4. **Vance, E.** "LISA 2020: Growing a Network of Statistical Collaboration Laboratories to Impact the World." International Indian Statistical Association conference, Pune, India, 2015.

5. **Vance, E.** "Preparing Students to Become Collaborative Statisticians." Joint Statistical Meetings (JSM), Seattle, WA, 2015.
6. **Vance, E.A.** "The LISA 2020 Program to Build Statistics Capacity and Research Infrastructure in Developing Countries." 60<sup>th</sup> International Statistical Institute's World Statistics Congress, Rio de Janeiro, Brazil, 2015.
7. **Msemo, E.** and Vance, E.A. "LISA 2020: Impacting Agricultural Productivity in Tanzania Through the Wheels of Statistics." 60<sup>th</sup> International Statistical Institute's World Statistics Congress, Rio de Janeiro, Brazil, 2015.
8. **Awe, O.O,** Crandell, I. and Vance, E.A. "Building Statistics Capacity in Nigeria Through the LISA 2020 Program." 60<sup>th</sup> International Statistical Institute's World Statistics Congress, Rio de Janeiro, Brazil, 2015.
9. **Vance, E.** "LISA 2020: How Stat Labs Can Make an Impact Now and in the Future." Joint Statistical Meetings (JSM), Boston, MA, 2014.
10. **Awe, O.O.** and Vance, E.A. "Statistics Education, Collaborative Research, and LISA 2020: A View From Nigeria." ICOTS9, Flagstaff, AZ, 2014.
11. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Keynote address at the Virginia Academy of Sciences Statistics Meeting, Richmond, VA, 2014.
12. **Vance, E.** "Building statistics capacity in developing countries by training statisticians to communicate and collaborate with non-statisticians." JSM, Montreal, Canada, 2013.
13. **Vance, E.** "Fostering the Culture of Collaboration at Virginia Tech." JSM, San Diego, CA, 2012.
14. **Vance, E.** "LISA On-the-ground Statisticians in Mozambique: a new paradigm for interdisciplinary collaboration." IDR Symposium, Virginia Tech, Blacksburg, VA, 2011.
15. **Vance, E.** "Training Statisticians to Become Interdisciplinary Collaborators." JSM, Miami Beach, FL, 2011.
16. **Vance, E.** "Social Networks within Calling Networks." Army Conference on Applied Statistics, Durham, NC, 2006.

#### **Invited panel discussions**

17. **Tritter, B.** (moderator), **Hall, R., Homann, J., Sturdy, J.** and **Vance, E.** "(Some of) the Data's Out There, Now What?" Open Data: Big Impact, Millennium Challenge Corporation, Washington, D.C., 2016.
18. **Kaur, A.** (organizer and chair), **Bhattacharya, A., Sathe, A., Koul, H.** and **Vance, E.** "Professional Development Skills for an Effective Statistician." International Indian Statistical Association conference, Pune, India, 2015.
19. Love-Myers, K. (organizer), **Vance, E.** (chair), **Zahn, D., Johnson, D., Kutner, M., Snee, R.** and **Harrell, F.** "Stepping Stones from Consulting to Collaboration to Leadership: Increasing the Impact of Statistical Practice." JSM, Seattle, WA, 2015.
20. **Vance, E.** "LISA 2020: Building Statistical Collaboration Capacity in Developing Countries." Part of a panel discussion on "Statistical Capacity Building: Recent Experiences, Needs, and Challenges" at the 60<sup>th</sup> International Statistical Institute's World Statistics Congress, Rio de Janeiro, Brazil, 2015.

#### **Invited poster presentation**

21. **Vance, E.** "Seeking Partners for LISA 2020: Creating a network of statistical collaboration laboratories in developing countries." JSM, Montreal, Canada, 2013.

#### **Invited Workshops**

22. **Vance, E., Smith, H. and Zahn, D.** "Effective Collaboration." Continuing Education Personal Skills Development Workshop, JSM, Chicago, IL, 2016.
23. **Vance, E.** and Hall, R. "Data Anonymization: Lessons Learned from a Millennium Challenge Corporation Impact Evaluation." Transparency + Reproducibility Workshop, Berkeley Initiative for Transparency in the Social Sciences, University of California, Berkeley, 2016.
24. **Vance, E.** "Effective Collaboration." Workshop at International Indian Statistical Association conference, Pune, India, 2015.
25. **Vance, E., Smith, H. and Zahn, D.** "Non-technical Skills to Become a More Effective Collaborator." Continuing Education Personal Skills Development Workshop, JSM, Seattle, WA, 2015.
26. **Vance, E., Smith, H. and Zahn, D.** "Learning and Improving Skills to Become a More Effective Collaborator." Continuing Education Personal Skills Development Workshop, JSM, Boston, MA, 2014.
27. **Vance, E.** "Learning and Improving Skills to Become an Effective Statistical Collaborator." Tutorial, ASA Conference on Statistical Practice, Tampa, FL, 2014.

#### **Paper presentations**

28. **Ngaya, R.** and Vance, E. "LISA 2020: Improving Agricultural Research in Tanzania Through Statistical Collaboration." Joint Statistical Meetings, Chicago, IL, 2016.
29. **Vance, E.** and **Smith, H.** "Using Video to Improve Your Practice of Statistics." ASA Conference on Statistical Practice, San Diego, CA, 2016.
30. **Smith, H.** and **Vance, E.** "Explaining Statistics to Nonstatisticians." ASA Conference on Statistical Practice, San Diego, CA, 2016.
31. **Crandell, I., Awe, O.** and Vance, E. "LISA 2020: Developing Statistical Collaboration Capacity in Nigeria." Joint Statistical Meetings, Seattle, WA, 2015.
32. **Vance, E.** and **Smith, H.** "Structuring Effective Statistical Collaborations and Consultations." ASA Conference on Statistical Practice, New Orleans, LA, 2015.
33. **Smith, H.** and **Vance, E.** "Communicating Effectively in Statistical Collaborations and Consultations." ASA Conference on Statistical Practice, New Orleans, LA, 2015.
34. **Vance, E.** "Training Statistical Consultants to Become Collaborative Statisticians." International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC, 2014.
35. **Kazuzuru, B.** and Vance, E. "The Challenges of Statistical Collaboration For Developing Countries." International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC, 2014.
36. **Vance, E.** "LISA 2020: Building Statistics Capacity for In-Country Impact Evaluations." Making Impact Evaluation Matter, Manila, Philippines, 2014.
37. **Hall, R., Van Houweling, E., Vance, E., Carzolio, M., and Davis, J.** "Impact Evaluation of the MCC-Funded Rural Water Supply Program in Nampula, Mozambique." Making Impact Evaluation Matter, Manila, Philippines, 2014.



38. **Carzolio, M.\***, Vance, E., Hall, R. "Introducing the Field Statistician: How integrating a statistics expert into the evaluation process improves results." Making Impact Evaluation Matter, Manila, Philippines, 2014.  
\* Winner, 2<sup>nd</sup> Place Presentation by a Young Researcher
39. **Msemo, E.\*** and Vance, E. "Impacting Agricultural Productivity in Tanzania Through the Wheels of Statistics." JSM, Boston, MA, 2014.  
\* Winner, Best Contributed Paper Award from the ASA Section on Statistical Consulting
40. **Awe, O.O.\*** and Vance, E.A. "LISA 2020: A Vision Towards Research Development in Nigeria." JSM, Boston, MA, 2014.  
\* Honorable Mention, Best Contributed Paper Award from the Section on Statistical Consulting
41. **Vance, E.** and **Magayane, F.** "Strengthening the capacity of agricultural researchers through a network of statistical collaboration laboratories." The 4<sup>th</sup> RUFORUM Biennial Conference, Maputo, Mozambique, 2014.
42. **Msemo, E.** and Vance, E. "LISA 2020: A Spark for Global Development." Virginia Academy of Sciences Statistics Meeting, Richmond, VA, 2014.
43. **Vance, E.** and Pruitt, T. "LISA 2020: Creating a network of statistical collaboration laboratories in developing countries." Virginia Tech Deans' Forum on Global Engagement, Blacksburg, VA, 2014.
44. **Hall, R.** and **Vance, E.** "Impact Evaluation of the MCC's Rural Water Supply Project in Mozambique: Enhancing Local Partner Capacity through Collaboration." Virginia Tech Deans' Forum on Global Engagement, Blacksburg, VA, 2014.
45. **Vance, E.** and **Hall, R.** "Designing Impact Evaluations in Developing Countries: Leveraging Technology to Collect High-quality Data." 27<sup>th</sup> Annual Conference of the American Evaluation Association, Washington, D.C., 2013.
46. Hightower, L., Lu, H., Marchant, M.A., Vance, E., **Richardson, W.**, Smith, E., Mack, T. "Exploring Educational Attainment of Undergraduate Minority Students in Land-Grant Institutions." North American Colleges and Teachers of Agriculture (NACTA) Annual Conference, Blacksburg, VA, 2013.
47. **Vance, E.** "Teaching Statistical Collaboration." ASA Conference on Statistical Practice, New Orleans, LA, 2013.
48. **Agozino, O.**, Vance, E. and Fang, Z. "Race, Ethnicity, Age and Gender Articulation in Existing Databases on Alcohol-Related Arrests." American Society of Criminology, 2011.
49. **Hall, R.** and **Vance, E.** "Assessing the Link between Productive Use of Domestic Water, Poverty Reduction and Sustainability." CAUS Symposium, Virginia Tech, Blacksburg, VA, 2011.
50. **Vance, E.** "The History of Statistical Consulting and the Future of Statistical Collaboration at Virginia Tech." JSM, Vancouver, Canada, 2010.
51. **Vance, E.**, Leman, S. and House, L. "What Scientists Really Want to Know." JSM, Washington, D.C., 2009.
52. **Vance, E.**, Banks, D. and Dasu, T. "Statistical Approaches to Mining Multivariate Data Streams." JSM, Salt Lake City, UT, 2007.
53. **Vance, E.** and Banks, D. "Agent-Based Methods for Dynamic Social Networks." JSM, Seattle, WA, 2006.

54. **Vance, E.** "Quantifying Elephant Social Structure: Using a Bayesian Bilinear Mixed Effects Model to Elicit Qualities of Elephant Behavior." JSM, Minneapolis, MN, 2005.

#### **Poster presentations**

55. Vance, E., Metzger, T., Pruitt, T. and Goshu, A.T. "The Educational Impact of Working in a Statistical Collaboration Laboratory." 8<sup>th</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2016.
56. **Hanlon, A.L.** and **Vance, E.** "Writing a Scientific Paper for Peer Reviewed Publication." ASA Conference on Statistical Practice, New Orleans, LA, 2015.
57. **Vance, E.**, Casement, C. and Pruitt, T. "Using Survey Feedback to Improve the Effectiveness of Statistical Collaborators, Walk-in Consultants, and Short Course Instructors." 7<sup>th</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2015.
58. **Awe, O.O.** and Vance, E. "LISA 2020: Improving Global Research Quality Through Creation of Statistical Collaboration Laboratories." 2014 Annual International Conference of the Faculty of Science, Obafemi Awolowo Univeristy, Ile-Ife, Nigeria, 2014.
59. **Hall, R.P.**, Davis, J., **Van Houweling, E.**, Vance, E.A., Carzolio, M., Seiss, M. and Russel, K. "Impact Evaluation of the MCC-Funded Rural Water Supply Activity in Nampula, Mozambique." Experience Virginia Tech: Learn, Explore, Engage, Blacksburg, VA, 2014.
60. **Msemo, E.**, **Awe, O.** and **Vance, E.** "LISA 2020: A Spark for Global Research Development." Virginia Tech Deans' Forum on Global Engagement, Blacksburg, VA, 2014.
61. **Sharma, A.**, Xie, C., Marchant, M.A, Vance, E.A., Richardson, W.W., and Hightower, L.S., "The Scholarship of Study Abroad Programs: Engaging Students Through International Experiences." Virginia Tech Deans' Forum on Global Engagement, Blacksburg, VA, 2014.
62. **Awe, O.O.** and Vance, E.A. "Comparing Statistical Consulting and Collaboration Practices between Nigeria and the United States." ASA Conference on Statistical Practice, Tampa, FL, 2014.
63. **Vance, E.** "LISA 2020: A vision to create a network of 20 statistical collaboration laboratories in developing countries by 2020." VT Engage Showcase, Blacksburg, VA, 2013.
64. **Vance, E.** "Using Team-Based Learning to Teach Effective Communication and Collaboration." 5<sup>th</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2013.
65. **Hightower, L.**, Lu, H., Marchant, M.A., Vance, E., Richardson, W., Smith, E. and Mack, T. "Exploring Educational Attainment of Undergraduate Minority Students in Land-Grant Institutions." 5<sup>th</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2013.
66. **Vance, E.** "LISA 2020: A vision to create a network of 20 statistical collaboration laboratories in developing countries by 2020." Department of Statistical Science 25<sup>th</sup> Anniversary Conference, Duke University, Durham, NC, 2012.
67. **Vance, E.** "Communication in Statistical Collaborations: Teaching Statisticians How to Be Effective Interdisciplinary Collaborators." Inaugural ASA Conference on Statistical Practice, Orlando, FL, 2012.
68. **Marchant, M.A.**, Hightower, L., Griffin, K., Richardson, W., Smith, E., Vance, E. and Sharma, A. "The Scholarship of Study Abroad Programs: Engaging Students through International Experiences." 4<sup>th</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2012.

69. **Vance, E.** "Communication in Statistical Collaborations: Teaching Statisticians How to Be Effective Interdisciplinary Collaborators." 4<sup>th</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2012.
70. Vance, E.A. and **Johnson, N.G.** "Educating Statisticians to Become Interdisciplinary Collaborators." United States Conference On Teaching Statistics (USCOTS), Raleigh, NC, 2011.
71. **Hightower, L.**, Hamm, J., Shen, Y., Bell, A., Marchant, M., Mack, T., Smith, E. and Vance, E. "Studying Agriculture Internationally: Tracking International Study Abroad Projects," 3<sup>rd</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2011.
72. **Vance, E.** "Educating Statisticians to Become Interdisciplinary Collaborators," 3<sup>rd</sup> Annual Conference on Higher Education Pedagogy, Blacksburg, VA, 2011.
73. Hightower, L., Griffin, K., Shen, Y., Marchant, M.A., Smith, E., Vance, E., **Richardson, W.**, Bell, A., Hamm, J. and Mack, T. "Engaging Students Through International Experiences to Expand Diverse Perspectives." North American Colleges and Teachers of Agriculture (NACTA) Annual Conference, Edmonton, Canada, 2011.
74. **Vance, E.** "Using a Bayesian Bilinear Mixed Effects Model to Elicit Qualities of Elephant Social Behavior." ISBA Valencia 8, Benidorm, Spain, 2006.
75. **Vance, E.** "Social Networks in African Elephants." National Academy of Sciences, Washington, D.C., 2006.

#### **Panel and Roundtable discussions**

76. **Vance, E.** (host) "Teaching Statistical Collaboration." Roundtable discussion at JSM, Chicago, IL, 2016.
77. **Vance, E.** (chair), **Shulman, H.**, **Kincaid, C.**, **Otto, M.**, and **Mogg, R.** "A Roadmap for Promoting Statistical Collaboration." Panel discussion at JSM, Chicago, IL, 2016.
78. **Vance, E.** (host) "Creating Research Infrastructure in Developing Countries." Roundtable discussion at JSM, Seattle, WA, 2015.
79. **Rutherford, J.** (chair), **Kim, M.**, **Adams, J.** and **Vance, E.** "Closing General Session." Panel discussion at the ASA Conference on Statistical Practice, New Orleans, LA, 2015.
80. **Vance, E.** (organizer and chair), **Kaur, A.**, **Kalicin, S.**, **Stork, L.**, **Kline, D.** and **Morganstein, D.** "How Mentoring Can Help with the Practice of Statistics: A Panel Discussion." Panel discussion at the ASA Conference on Statistical Practice, New Orleans, LA, 2015.
81. **Vance, E.** (host) "Building the LISA 2020 Mentoring Network to Support Newly Created Stat Labs in Developing Countries." Roundtable discussion at JSM, Boston, MA, 2014.
82. **Gauvin, J.** (chair), **Vance, E.**, **Morganstein, D.**, **Chowdhury, D.**, **Awe, O.**, **Lin, L.** and **Hardnett, F.** "Program Reflections and a Panel Discussion on Mentoring" ASA Conference on Statistical Practice, Tampa, FL, 2014.
83. **Love-Myers, K.** and **Vance, E.** (co-host) "Starting and growing a successful academic statistical consulting center." Roundtable discussion at JSM, Montreal, Canada, 2013.
84. **Vance, E.** (host) "How You Can Help with the LISA 2020 Initiative to Build Statistics Capacity in Developing Countries." Roundtable discussion at JSM, Montreal, Canada, 2013.
85. **Zahn, D.**, **Smith, H.**, **Stallings, J.**, **Stinnett, S.** and **Vance, E.** (chair) "Understanding and Improving the Client-Consultant Interaction." Panel discussion at JSM, Montreal, Canada, 2013.

## CONFERENCE SESSIONS ORGANIZED

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### Invited sessions

86. Vance, E. "How Statistical Collaboration Laboratories Enhance Statistical Education." 61<sup>st</sup> International Statistical Institute's World Statistics Congress, Marrakech, Morocco, 2017.
87. Vance, E. "Collaborations with Business and Industry Through the LISA 2020 Program." 61<sup>st</sup> International Statistical Institute's World Statistics Congress, Marrakech, Morocco, 2017.
88. Vance, E. "The Extraordinary Power of Statistical Collaboration." JSM, Chicago, IL, 2016.
89. Trachtenberg, R. and Vance, E. "Statisticians Building Global Science Capacity and Infrastructure." AAAS Annual Meeting, Washington, D.C., 2016.
90. Vance, E. "The LISA 2020 Program to Build Statistical Capacity and Research Infrastructure in Developing Countries." 60<sup>th</sup> International Statistical Institute's World Statistics Congress, Rio de Janeiro, Brazil, 2015.
91. Vance, E. "The Impact of Statistical Consulting Centers: Past, Present, and Future." JSM, Boston, MA, 2014.
92. Vance, E. "International Statistical Consulting: Current Initiatives to Build Statistics Capacity in Developing Countries." JSM, Montreal, Canada, 2013.
93. Vance, E. "Fostering interdisciplinary collaboration through statistical consulting." JSM, San Diego, CA, 2012.
94. Holloman, C. and Vance, E. "Innovative Strategies for Incorporating Consulting into Graduate Education." JSM, Miami Beach, FL, 2011.

### Contributed sessions

95. Vance, E. "Effective Collaboration." ASA Conference on Statistical Practice, New Orleans, LA, 2015.
96. Vance, E. "How Mentoring Can Help with the Practice of Statistics: A Panel Discussion." ASA Conference on Statistical Practice, New Orleans, LA, 2015.
97. Chun, Y. and Vance, E. "The Global Impact of Statistics Without Borders and StatCom: Can We Make It Enduring?" JSM, Boston, MA, 2014.
98. Vance, E. "Program Reflections and a Panel Discussion on Mentoring" ASA Conference on Statistical Practice, Tampa, FL, 2014.
99. Zahn, D. and Vance, E. "Understanding and Improving the Client-Consultant Interaction." JSM, Montreal, Canada, 2013.

## INVITED SEMINARS AND COLLOQUIA

(presenters shown in **bold**)

1. **Vance, E.** "Creating a Network of Statistical Collaboration Laboratories." Department of Statistics Seminar, Kansas State University, Manhattan, KS, 2016.
2. **Vance, E.** "The Extraordinary Potential of Statistical Collaboration Laboratories." Language and Culture Institute Humphrey Fellows Seminar, Virginia Tech, Blacksburg, VA, 2016.
3. **Vance, E.** "The Potential of Statistical Collaboration Laboratories." Department of Biostatistics, Virginia Commonwealth University, Richmond, VA, 2016.

4. **Vance, E.** "The Extraordinary Potential of Statistical Collaboration Laboratories." Department of Applied Mathematics Seminar, University of Colorado Boulder, 2016.
5. **Hall, R. and Vance, E.** "Data Anonymization: Lessons Learned from a Millennium Challenge Corporation Impact Evaluation." Virginia Tech Library Open Data Week, Blacksburg, VA, 2016.
6. **Vance, E.** "The Extraordinary Power of Statistical Collaboration." Department of Industrial Engineering and Management Science Seminar, University of Central Florida, Orlando, FL, 2016.
7. **Vance, E.** "Creating Statistical Collaboration Laboratories to Advance the Missions of 21<sup>st</sup> Century Global Land Grant Universities." Department of Statistics Seminar, University of Nebraska-Lincoln, 2015.
8. **Vance, E.** "Envisioning the 21<sup>st</sup> Century Global Land Grant University to Build Research Capacity in Developing Countries." Keynote address at World Statistics Day Symposium, Virginia Tech, Blacksburg, VA, 2015.
9. **Vance, E.** "Envisioning the 21<sup>st</sup> Century Global Land Grant University to Build Research Capacity in Developing Countries." INFORMS, Virginia Tech, Blacksburg, VA, 2015.
10. **Vance, E.** "Creating a Network of Statistical Collaboration Laboratories to Raise the Profile and Impact of Statistics." Department of Statistics Seminar, University of Dar es Salaam, Tanzania, 2015.
11. **Vance, E.** "LISA 2020: Sharing the Experiences of Virginia Tech with the University of Ibadan." Department of Statistics Seminar, University of Ibadan, Nigeria, 2015.
12. **Vance, E.** "Promoting Statistical Collaboration: The LISA 2020 Program." Department of Statistics Seminar, University of Ibadan, Nigeria, 2015.
13. **Vance, E.** "LISA 2020: Creating a network of statistical collaboration laboratories to contribute to science." School of Mathematical and Statistical Sciences Seminar, Hawassa University, Hawassa, Ethiopia, 2015.
14. **Vance, E.** "LISA 2020: Building a Network of Statistical Collaboration Laboratories." Department of Statistics Seminar, Boston University, Boston, MA, 2015.
15. **Vance, E.** "LISA 2020: How Statistical Collaboration Increases the Impact of Research." Language and Culture Institute Humphrey Fellows Seminar, Virginia Tech, Blacksburg, VA, 2015.
16. **Vance, E.** "LISA 2020: Graduate Students Building Research Capacity in Developing Countries." Graduate Education Week, Virginia Tech, Blacksburg, VA, 2015.
17. **Vance, E.** "LISA 2020: Sustaining a Statistical Collaboration Laboratory at OAU." Faculty of Sciences Seminar, Obafemi Awolowo University, Ile-Ife, Nigeria, 2015.
18. **Vance, E.** "LISA 2020: Building a Statistical Collaboration Laboratory at OAU." Department of Mathematics Seminar, Obafemi Awolowo University, Ile-Ife, Nigeria, 2015.
19. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Afe Babalola University (ABUAD) Seminar, Ado-Ekiti, Nigeria, 2015.
20. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." University Council on International Affairs, Virginia Tech, Blacksburg, VA, 2014.
21. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Center for Open Science, Charlottesville, VA, 2014.

22. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Division of Biostatistics Grand Rounds, Oregon Health & Science University, Portland, OR, 2014.
23. **Vance, E.** "Research Opportunities in Statistical Collaboration and International Impact Evaluations." Department of Statistics Student Outreach Seminar, Virginia Tech, Blacksburg, VA, 2014.
24. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Department of Statistics, Texas A&M, College Station, TX, 2014.
25. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." School of Statistics, University of the Philippines, Diliman, Manila, Philippines, 2014.
26. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Google, Mountain View, CA, 2014.
27. **Vance, E., Awe, O. and Msemo, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories in Africa and Beyond." Africa Coalition Brownbag Series, Virginia Tech, Blacksburg, VA, 2014.
28. **Hall, R. and Vance, E.** "Impact Evaluation of the RWSA in Mozambique." Webinar presented at the invitation of the Millennium Challenge Corporation for more than 30 interested parties around the world, 2014.
29. **Vance, E.** "LISA 2020: Building Research Capacity in Developing Countries." Graduate Education Week, Virginia Tech, Blacksburg, VA, 2014.
30. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Departments of Biostatistics and Statistics, University of Minnesota, Twin Cities, Minneapolis, MN, 2014.
31. **Hall, R., Davis, J., Vance, E. and Van Houweling, E.** "Impact Evaluation of the MCC-Funded Rural Water Supply Activity (RWSA) in Nampula, Mozambique." Millennium Challenge Corporation's 2014 Monitoring and Evaluation (M&E) and Economic Analysis (EA) College, Millennium Challenge Corporation, Washington, D.C., 2014.
32. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." Department of Statistics, Colorado State University, Fort Collins, CO, 2014.
33. **Vance, E.** "LISA 2020: Creating a network of statistical collaboration laboratories." International Year of Statistics Colloquium presented at Sokoine University of Agriculture (SUA), Morogoro, Tanzania, 2013.
34. **Vance, E.** "LISA 2020: Criando uma Rede de Laboratorios de Colaboracao Estatistica." International Year of Statistics Colloquium presented at Department of Statistics, Federal University of Rio Grande do Norte (UFRN), Natal, Brazil, 2013.
35. **Vance, E.** "LISA 2020: Training statisticians and data scientists to communicate and collaborate with non-statisticians." INFORMS, Virginia Tech, Blacksburg, VA, 2013.
36. **Vance, E.** "LISA 2020: Creating a network of statistical collaboration laboratories." International Year of Statistics Colloquium presented at Department of Statistics, The Pennsylvania State University, State College, PA, 2013.
37. **Vance, E.** "LISA 2020: Creating a network of statistical collaboration laboratories." International Year of Statistics Colloquium presented at Department of Statistics, University of Georgia, Athens, GA, 2013.

38. **Vance, E.** "LISA 2020 and Ut Prosim: Building statistics capacity in developing countries." International Year of Statistics Colloquium presented at Department of Statistics, Virginia Tech, Blacksburg, VA, 2013.
39. **Vance, E.** and **Hall, R.** "Best practices for cultural competency." VT Engage Symposium, Blacksburg, VA, April 2013.
40. **Vance, E.** "On-the-ground Statisticians in Mozambique." Department of Mathematics, Wake Forest University, Winston-Salem, NC, 2012.
41. **Hall, R., Vance, E., Van Houweling, E., Seiss, M., Hoegh, A. and Carzolio, M.** "An Interdisciplinary Approach to Evaluating the Impact of a Rural Water Improvement Project in Mozambique." Africa Regional Strategy Coalition, Blacksburg, VA, 2012.
42. **Vance, E.** and **Ryan, A.** "LISA Walk-in Consulting Kick-off Seminar." Institute for Critical Technology and Applied Sciences, Virginia Tech, Blacksburg, VA, 2012.
43. **Hall, R., Davis, J., Russel, K., Vance, E. and Seiss, M.** "Results from the Baseline Study of the MCC-Funded Rural Water Supply Activity in Nampula." Millennium Challenge Corporation, Washington, D.C., 2011.
44. **Vance, E.** and **Seiss, M.** "On-the-ground Statisticians in Mozambique." Department of Statistics, Virginia Tech, Blacksburg, VA, 2011.
45. **Vance, E.** "Social Networks in African Elephants." CESCA, Virginia Tech, Blacksburg, VA, 2011.
46. **Vance, E.** "Social Networks in African Elephants." Department of Biological Sciences, Virginia Tech, Blacksburg, VA, 2011.
47. **Vance, E.** "LISA and Statistical Thinking." McNair Scholars Program, Virginia Tech, Blacksburg, VA, 2010.
48. **Vance, E.** "Statistical Collaboration at Virginia Tech." Department of Mathematics and Statistics, James Madison University, Harrisonburg, VA, 2010.
49. **Vance, E.** "Social Networks in African Elephants." INFORMS, Blacksburg, VA, 2009.
50. **Vance, E.** "Social Networks in African Elephants." Department of Statistics, Virginia Tech, Blacksburg, VA, 2008.
51. **Vance, E.** "Social Networks in African Elephants." School of Statistics, University of Minnesota, Twin Cities, Minneapolis, MN, 2008.

#### **INVITED LECTURES, PANELS, AND WORKSHOPS**

(presenter shown in **bold**)

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52. **Vance, E.** "Special Lecture on Statistical Consulting and Collaboration." Workshop at Kansas State University, Manhattan, Kansas, 2016.
  53. **Vance, E.** "The Extraordinary Power of Statistical Collaboration: LISA 2020." University of Minnesota's Summer Institute in Biostatistics (SIBS) Seminar, remote via Skype, 2016.
  54. **Vance, E.** "Best Practices for Statistical Collaboration." Department of Statistics Graduate Statistical Consulting Course, University of Nebraska-Lincoln, 2015.
  55. **Vance, E.** "Envisioning the 21<sup>st</sup> Century Global Land Grant University to Build Research Capacity in Developing Countries." Department of Statistics First Year Experience Course, Virginia Tech, Blacksburg, VA, 2015.

56. **Vance, E.** "LISA 2020: Creating a Network of Statistical Collaboration Laboratories." University of Minnesota's Summer Institute in Biostatistics (SIBS) Seminar, remote via Skype, 2015.
57. **Vance, E.** "How Statistics Can Enable and Accelerate Research." Panel discussion at The Polytechnic, Ibadan, Nigeria, 2015.
58. **Vance, E.** "The Power and Impact of Statistical Collaboration." Panel discussion at the Federal School of Statistics, Ibadan, Nigeria, 2015.
59. **Vance, E.** "LISA 2020: How Stat Labs Can Make an Impact Now and in the Future." Department of Statistics First Year Experience Course, Virginia Tech, Blacksburg, VA, 2014.
60. **Vance, E.** "Seminar on Statistical Collaboration at Texas A&M." Department of Statistics Professional Internship Course, Texas A&M, College Station, TX, 2014.
61. **Vance, E.** "Using Video and the POWER Process to Improve Statistical Collaboration." School of Statistics Consulting Course, University of Minnesota, Twin Cities, Minneapolis, MN, 2014.
62. **Vance, E.** "The Importance of effective communication, LISA, and LISA 2020." Department of Statistics First Year Experience Course, Virginia Tech, Blacksburg, VA, 2013.
63. **Vance, E.** "Using Video and the POWER Process to Improve Statistical Collaboration." Department of Statistics Consulting Course, The Pennsylvania State University, State College, PA, 2013.
64. **Vance, E.** "Using Video and the POWER Process to Improve Statistical Collaboration." Department of Statistics Consulting Course, University of Georgia, Athens, GA, 2013.
65. **Vance, E.** "Statistics for the Humanities." Department of English graduate course 'Research Design in Rhetoric and Writing,' Virginia Tech, Blacksburg, VA, 2010.
66. **Vance, E.** "Thoughts on Statistical Collaboration." Department of Mathematics and Statistics Consulting Course, James Madison University, Harrisonburg, VA, 2010.

## TEACHING EXPERIENCE

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**Associate Professor** 2016  
 University of Colorado Boulder, Department of Applied Mathematics Boulder, CO  
 I developed APPM 4720/5720, "Statistical Collaboration," to teach undergraduate and graduate applied mathematics students professional skills essential for their success as interdisciplinary collaborators. Based on the pedagogical structure of *Team-based Learning*, students learn to communicate and collaborate based on course readings, in-class exercises, homework, and projects. Students work on three LISA projects each semester.

**Associate Research Professor** 2015 - 2016  
 Virginia Tech, Department of Statistics Blacksburg, VA  
 I taught STA 5024, "Communication in Statistical Collaborations," which I developed to teach graduate statistics students non-technical skills essential for their success as collaborative statisticians. Based on the pedagogical structure of *Team-based Learning*, students learn to communicate and collaborate based on course readings, in-class exercises, homework, and projects.

**Assistant Research Professor** 2008 - 2014  
 Virginia Tech, Department of Statistics Blacksburg, VA



I have taught STA 4024, STA 4984, STA 5024, and STA 5984 eleven times. These are various versions of the course “Communication in Statistical Collaborations,” which I developed to teach undergraduate and graduate statistics students essential non-technical skills. I developed the courses to use the pedagogical methods of *Team-based Learning* to “flip” the classroom so students will communicate and collaborate with each other during in-class exercises.

**Head Teaching Assistant** 2007 - 2008  
Duke University, Department of Statistical Science Durham, NC  
As Head TA I managed 12 TAs for “Introductory Statistics.” I was the organizer and TA for “Statistical Science First Year Experience,” and a TA for “Generalized Linear Models” and “Probability/Measure Theory.”

**Teaching Assistant** 2004 - 2005  
Duke University, Institute of Statistics and Decision Sciences Durham, NC  
I was a teaching assistant for “Generalized Linear Models,” “Probability/Stat Models,” “Statistics for Engineers,” and “Introductory Statistics.”

**Instructor** 2003, 2004  
Duke University, Institute of Statistics and Decision Sciences Durham, NC  
As instructor for “Introductory Statistics” twice, I was solely responsible for all lectures, laboratories, homeworks, quizzes, and exams.

**SHORT COURSES AND NON-CONFERENCE WORKSHOPS** (presenters shown in **bold**)

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67. **Vance, E.** “Statistical Collaboration Workshop.” Obafemi Awolowo University Laboratory for Interdisciplinary Statistical Analysis and Collaboration (LISAC), Ile-Ife, Nigeria, 2015.
68. **Vance, E.** “Statistical Collaboration Workshop.” School of Statistics and Mathematical Sciences, Hawassa University, Hawassa, Ethiopia, 2015.
69. **Vance, E.** “Statistical Collaboration Workshop.” Sokoine University of Agriculture Laboratory for Interdisciplinary Statistical Analysis (SUALISA), Morogoro, Tanzania, 2015.
70. **Vance, E.** “A Discussion and Workshop on Statistical Collaboration.” Department of Statistics, University of Ibadan, Ibadan, Nigeria, 2015.
71. **Vance, E.** “The Basics of Effective Statistical Collaboration.” Department of Mathematics, Obafemi Awolowo University, Ile-Ife, Nigeria, 2015.
72. **Vance, E.** “Oficina (Workshop) Statistical Collaboration.” University of Rio Grande do Norte (UFRN), Natal, Brazil, 2014.
73. **Vance, E.** “Designing Surveys.” LISA Short Course, Virginia Tech, Blacksburg, VA, 2012.
74. **Vance, E.** “Designing Surveys and Interpreting the Results.” LISA Short Course, Virginia Tech, Blacksburg, VA, 2012.
75. **Vance, E.** “Designing Surveys and Reporting the Results.” AAAS Scientific Responsibility, Human Rights and Law Program, Washington, D.C., 2012.
76. **Vance, E.** “Analyzing Real Data.” LISA Short Course, Virginia Tech, Blacksburg, VA, 2010.
77. **Vance, E.,** Seiss, M., Kensler, J. and Maiti, D. “An Introduction to Data Collection and Statistical Analysis”. LEPDN Statistics Workshop, Virginia Tech, Blacksburg, VA, 2009.

## GRADUATE STUDENTS, POST-DOCS, AND PRE-DOCS ADVISED

Name	Degree	Date	Dissertation/thesis/project title
Imran Khan	Post-doc	2016-17	TBD
Richard Ngaya	M.S.	2016	LISA 2020: Improving Agricultural Research in Tanzania Through Statistical Collaboration
Jingli Xing	Pre-doc	2015	NA
Ayele Goshu	Visiting Scholar	2014	The Impacts of LISA on its Student Statistical Collaborators
Benedicto Kazuzuru	Post-doc	2014	The Challenges of Statistical Collaboration For Developing Countries
O. Olawale Awe	Pre-doc	2014	LISA 2020: A Vision Towards Research Development in Nigeria
Emanuel Msemo	M.S.	2014	Impacting Agricultural Productivity in Tanzania Through the Wheels of Statistics
Mark Seiss	Ph.D.	2014	Improving Survey Methodology Through Matrix Sampling Design, Integrating Statistical Review Into Data Collection, and Synthetic Estimation Evaluation
John Mulheren	M.S.	2014	Modeling and Assigning Behaviors in Simulated Individuals
Mahafuzer Md. Chy	M.S.	2010	Modeling Mean and Volatility Information Content of Equity Index, Option Implied Volatility and Equity Implied Volatility Index for Credit Default Swap Spread Changes Prior to Financial Market Crisis: Evidence from S&P Indices

## FUNDED RESEARCH

### Grants as Principal Investigator or Co-Principal Investigator

1. Co-Principal Investigator (other Co-PIs: Leanna House, Leigh Harrell) – Academic Assessment Grant. *Office of Academic Assessment, Virginia Tech*, \$1800 (33% credit), 06/2009.
2. Co-Principal Investigator (PI: Jennifer Davis; other Co-PIs: Ralph Hall and Emily Van Houweling) – Impact Evaluation for the Millennium Challenge Corporation-supported Rural Water Investment in Nampula, Mozambique. *Millennium Challenge Corporation*, \$814,235 (12.4% credit), 09/2010 – 05/2014.
3. Co Principal Investigator (PI: Mary Marchant; other co-PI: Eric Smith) – Improvement and Marketing of the Food and Agricultural Education Information System (FAIES). *USDA/NIFA*, \$247,000 (15% credit), 10/2011 – 09/2012.
4. Co-Principal Investigator (PI: Keith Moore; other co-PI: Jeff Birch) – *Innovative Agricultural Research Initiative, USAID*, \$122,869 (100% credit), 08/2012 – 08/2014. This grant supports travel for Eric Vance and education and training for Emanuel Msemo related to the LISA 2020 program.
5. Co Principal Investigator (PI: Mary Marchant; other co-PI: Eric Smith) – Improvement and Marketing of the Food and Agricultural Education Information System (FAIES). *USDA/NIFA*, \$210,000 (20% credit), 10/2012 – 09/2013.

6. Principal Investigator – Building Statistics Capacity in Developing Countries by Educating and Training Statisticians to Communicate and Collaborate with Non-statisticians. *Google Faculty Research Awards*, \$40,000 (100% credit), 05/2013 – 12/2014.
7. Co Principal Investigator (PI: Mary Marchant; other co-PI: Eric Smith) – Improvement and Marketing of the Food and Agricultural Education Information System (FAIES). *USDA/NIFA*, \$220,000 (10% credit), 10/2013 – 09/2014.
8. Principal Investigator – Growing Research Capacity at SUA by Creating a Statistical Collaboration Laboratory. *Innovative Agricultural Research Initiative, USAID*, \$72,094 (100% credit), 11/2013 – 09/2015. This grant supports Eric Vance, Benedicto Kazuzuru, and a future statistics graduate student related to the LISA 2020 program.
9. Co-Principal Investigator (PI: Kathy Alexander) The Epidemiology of Mycobacterium Mungi – how can we control this emerging disease? *Morris Animal Foundation*, \$68,036 (20% credit), 05/2014 – 04/2016.
10. Principal Investigator – LISA 2020 Year 2: Building Statistics Capacity in Developing Countries to Solve Real-World Problems. *Google Faculty Research Awards*, \$20,000 (100% credit), 09/2014 – 12/2015.
11. Co-Principal Investigator (PI: Mary Marchant; other co-PI: Eric Smith) – Improvement and Marketing of the Food and Agricultural Education Information System (FAIES). *USDA/NIFA*, \$220,000 (10% credit), 10/2014 – 09/2015.
12. Principal Investigator – Growing Research Capacity at SUA by Creating a Statistical Collaboration Laboratory *Innovative Agricultural Research Initiative, USAID*, \$150,000 (100% credit), 10/2013 – 09/2016.
13. Co-Principal Investigator (PI: Kathleen Alexander; other co-PIs: Jeffrey Walters, Stephen Eubank, Bryan Lewis) – EEID: Can group living and the influence of the Allee effects explain infectious disease vulnerability in social species? *National Science Foundation*, \$1,830,594 (5% credit), 06/2015– 05/2019.
14. Co-Principal Investigator (PI: Peter Ziegler) – Improvement and Marketing of the Food and Agricultural Education Information System (FAIES). *USDA/NIFA*, \$220,000 (10% credit), 10/2015 – 09/2016.
15. Co-Principal Investigator (PI: Kathleen Alexander; other co-PIs: Monica Ponder, Stephen Eubank, Bryan Lewis) – CNH: The Coupled Dynamics of Human-Dryland River Systems: Linkages and Feedbacks Between Human and Environmental Drivers of Water Quality and Human and Animal Health *National Science Foundation*, \$1,799,999 (5% credit), 07/2015– 06/2019.
16. Principle Investigator – Building the LISA 2020 Team to Train Statisticians from Developing Countries to Create a Network of Statistical Collaboration Laboratories. *American Statistical Association*, \$9000 (100% credit), 04/2015 – 03/2016.

#### **Grants and Dollars Earned for LISA as Key Personnel or Statistician**

17. Statistician (PI: Amy Bell) – A Discovery-Based First Year Electrical and Computer Engineering Course Emphasizing Real-World Projects that Benefit Society. *National Science Foundation*, 10/2008 – 12/2008. This grant provided LISA with \$7500 for statistical collaboration.
18. Statistician (PI: Feng Guo) – Transportation, 10/2008 – 12/2008. This grant provided LISA with \$800 for statistical collaboration.

19. Statistician (Co-PIs: Jennifer Davis, Ralph Hall) – Assessing the Link between Productive Use of Domestic Water, Poverty Reduction and Sustainability. *Water and Sanitation Program, World Bank*, \$700,000, 09/2009 – 03/2010. Virginia Tech received \$173,729, of which \$6,500 was provided to LISA for statistical collaboration.
20. Key Personnel (PI: Anthony D. Slonim; Co-PI: Christian Wernz) – Assessing Regional Differences in Healthcare Technology Use and Quality. *Research Acceleration Program, Carilion Clinic*, \$25,000, 11/2009 – 04/2010. This grant provided LISA with \$1,000 for statistical collaboration.
21. Statistician (PI: Elizabeth Lanter) – Analyzing Emergent Literacy Skills. *Radford University Research Seed Grant*, 11/2009 – 06/2010. This grant provided LISA with \$700 for statistical collaboration.
22. Key Personnel (PI: Mary Marchant) – Improvement and Marketing of the Food and Agricultural Education Information System (FAIES). *USDA/NIFA*, 10/2010 – 09/2011. This grant provided LISA with \$47,354 for statistical collaboration.
23. Statistician (PI: Tom Campbell) – A Carbon Nanotube Metrology System for Counterfeit Detection. *ADA Technologies*, 11/2010 – 10/2011. This contract provided LISA with \$2,290 for statistical collaboration.
24. Statistician (PI: Laurie Fox) – 2011 Sustainable Landscape Survey. 02/2011 – 06/2011. This grant provided LISA with \$1,000 for statistical collaboration.
25. Key Personnel (PI: Dan Kauffman) – A Grocery Store Test Market for Farmer Grown Shrimp that Utilizes Consumer Education. *USDA*, \$20,909, 07/2013 – 06/2014. This grant provided LISA with \$2,000 for statistical collaboration.

**Funding Earned from Virginia Tech for LISA as LISA Director**

26. Director – Laboratory for Interdisciplinary Statistical Analysis, *Virginia Tech*, 1/2011 – 6/2013. \$600,000.
27. Director – Laboratory for Interdisciplinary Statistical Analysis, *Virginia Tech*, 7/2013 – 6/2014. \$299,308.
28. Director – Laboratory for Interdisciplinary Statistical Analysis, *Virginia Tech*, 7/2014 – 6/2015. \$299,308.
29. Director – Laboratory for Interdisciplinary Statistical Analysis, *Virginia Tech*, 7/2015 – 5/2016. \$299,308.

**SELECTED PROFESSIONAL LEADERSHIP AND ACADEMIC SERVICE**

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**Manuscript reviewer**

*Technometrics; Annals of Applied Statistics; Statistics, Politics, and Policy; Statistical Methodology; Journal of Statistical Theory and Practice; Journal of Educational and Behavioral Statistics; PLOS ONE; The American Statistician; The American Journal of Managed Care*

**Proposal reviewer**

National Science Foundation

**American Statistical Association (ASA) Leadership**

Past-Chair, Section on Statistical Consulting	2016
Chair, Section on Statistical Consulting	2015
Chair-elect, Section on Statistical Consulting	2014

Leader, ASA President's Initiative on Mentoring	2014 - 2015
<ul style="list-style-type: none"> <li>• Leader of the 2015 JSM Mentoring program that matched 56 mentees with mentors</li> <li>• Leader of the 2015 ASA Conference on Statistical Practice Mentoring program that matched 18 mentees with mentors</li> <li>• Creator of the 2014 JSM Mentoring program that matched 53 mentees with mentors</li> <li>• Creator of the 2014 ASA Conference on Statistical Practice Mentoring program that matched 28 mentees with mentors</li> <li>• Co-creator of the 2013 and 2014 Committee on Applied Statisticians Mentoring programs that matched 16 and 12 mentees with mentors</li> </ul>	
Member, Committee on Applied Statisticians	2013 - present
Member, ASA Conference on Statistical Practice Steering Committee	2013 - present
<ul style="list-style-type: none"> <li>• Chair of the Communication, Impact, and Career Development subcommittee</li> </ul>	2015
Associate Editor, <i>The American Statistician</i>	2015 - present
Faculty Advisor, International StatCom Network	2012 - 2015
Representative, Council of Sections	2012 - 2014
Vice-chair, Statistics Without Borders	2013 - 2014
Member, Council of Sections nominations committee	2013

#### **Department of Applied Mathematics, University of Colorado Boulder Leadership**

Member, Graduate Committee	2016 - present
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#### **Virginia Tech Leadership**

Vice-chair, Commission on Outreach and International Affairs	2015 - 2016
Chair, Alumni Outreach Excellence Award Committee	2016
Member, Alumni Outreach Excellence Award Committee	2015
Member, International Alumni Education, Outreach, and Research Awards Committee	2015
First research faculty member to become a member of the Faculty Senate	2008 - 2015
Member, Commission on Outreach and International Affairs	2014 - 2015
Member, University Council on International Affairs	2014 - 2016
Member, (Library) Dean's Advisory Council	2014 - 2016
Member, Academy of Faculty Service Review Committee	2014
Member, Commission on Faculty Affairs	2011 - 2014
Faculty Advisor, Brazilian Students Association	2011 - 2013
Member, Africa Regional Strategy Committee	2011 - 2012
Member, University Council	2010 - 2012
Member, IGEP Review Committee and Board	2010 - 2012

#### **Department of Statistics, Virginia Tech Leadership**

Member, Policies Committee	2014 - 2016
Member, Recruiting Committee	2013 - 2016
Speaker at Graduate Student Orientation	2011 - 2016
Member, Corporate Partners Advisory Board	2008 - 2016
Faculty Advisor, StatCom Chapter at Virginia Tech	2008 - 2016
Chair, Consulting and Collaboration Committee	2008 - 2016
Member, Renovations Committee	2011 - 2014
Chair, Hiring Committee for the Assistant Director of LISA	2010
Chair, Hiring Committee for the LISA Administrative Specialist	2009
Member, Hiring Committee for the LISA Secretary and Departmental Support position	2008

Organizer and co-creator of several social events including the First Year Float 2008 - 2016

### **Duke University Leadership**

Member, Board of Trustees Undergraduate Affairs Committee 2006 - 2008  
Member, Academic Council Student Affairs Committee 2006 - 2008  
Member, Student Health Insurance Advisory Committee 2005 - 2008  
Member and Chair, Young Trustee Screening Committee 2004 - 2007  
Co-chair, Basketball Committee Grounds and Lottery 2004 - 2007  
Representative, Graduate and Professional Student Council (GPSC) 2003 - 2007  
Member, Student Services Committee 2005 - 2006  
Member and President, Graduate Consultative Committee, Statistics 2002 - 2004, 2005 - 2006  
Member, GPSC Social Committee 2003 - 2005  
Lobbyist, NAGPS Legislative Action Day 2004

### **Other Leadership**

Member, Advisory Committee for Center for Open Science Africa Initiative 2015 - present  
Invited participant, NSF Mathematical Sciences Internship Workshop 2015

### **PROFESSIONAL MEMBERSHIPS**

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International Statistical Institute (ISI) 2013 - present  
American Association for the Advancement of Science (AAAS) 2013 - present  
Sigma Xi 2012 - present  
Iota Delta Rho (IDR), Interdisciplinary Research Honor Society (honorary member) 2012 - present  
Team-Based Learning Collaborative (TBLC) 2011 - present  
Mu Sigma Rho, Statistics Honor Society (honorary member) 2008 - present  
American Statistical Association (ASA) 2005 - present  
American Association for Agricultural Education (AAAE) 2014 - 2015  
American Evaluation Association (AEA) 2013 - 2014