

CURRICULUM VITA

BENJAMIN KENT KOOSTRA, PE

Limestone & Cooper, LLC
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PROFESSIONAL POSITIONS

March 2007 - Present

Consultant

Limestone & Cooper, LLC - Lexington, Kentucky

Provides geospatial and agricultural consulting and contract services. Expertise includes Geographic Information Systems (GIS) implementation, GIS application design and development, Global Navigation Satellite Systems (GNSS) technologies, agricultural nutrient management planning, environmental regulatory compliance, and technology implementation.

August 2012 - December 2012 (Part-time - 4 months)

Instructor

Biosystems and Agricultural Engineering, University of Kentucky - Lexington, Kentucky

Taught GIS Applications in Water Resources course.

March 2007 - August 2008 (Part-time - 1 year, 5 months)

March 2002 - March 2007 (Full-time - 5 years)

Engineer Associate

Biosystems and Agricultural Engineering, University of Kentucky - Lexington, Kentucky

Managed research and development projects with multidisciplinary teams involved in natural resource management, crop production, and animal production. Coordinated the Geospatial Science and Technology Group, a professional network of faculty, staff, and students involved in teaching, research, and outreach.

May 1998 - March 2002 (3 years, 10 months)

Staff Engineer and Project Engineer

LAW Engineering and Environmental Services, Inc. - Lexington, Kentucky

Executed projects with a team of engineers, geologists, scientists, and support staff in a branch office of a leading engineering, environmental, and design consulting services company. Experience includes environmental assessment of commercial and industrial property, geotechnical explorations, construction quality control testing and inspection, and construction materials laboratory testing.

EDUCATION

B.S. in Agricultural Engineering, Environmental Engineering Certificate, May 1998
University of Kentucky, Lexington, Kentucky

REGISTRATIONS / CERTIFICATIONS

NRCS Technical Service Provider, 2014
Professional Engineer, Kentucky, 2003
Private Pilot, Federal Aviation Administration, 1993

PROFESSIONAL AFFILIATIONS

Kentucky Association of Mapping Professionals
Member (2009-), Secretary (2012-2013, 2013-2014), Director (2009-2010)

Kentucky Society of Professional Engineers
Member (2014-)

PROFESSIONAL INTERNATIONAL EXPERIENCE

Indonesia. February 1 – 21, 2008. Bandar Lampung – GIS seminar and workshops for university faculty, staff, and government officials. Banda Aceh – GIS seminar and workshops for university faculty, staff, and students. Funding provided by US Agency for International Development.

REFEREED PUBLICATIONS

Stombaugh, T.S., B.K. Koostra, C.R. Dillon, T.G. Mueller, and A.C. Pike. 2007. Implications of Topography on Field Coverage When Using GPS-Based Guidance. Proceedings for the 6th European Conference on Precision Agriculture. Wageningen Academic Publishers. Wageningen, The Netherlands.

Dillon, C.R., T.S. Stombaugh, B. Kayrouz, J. Salim and B.K. Koostra. 2007. An Educational Workshop on the Use of Precision Agriculture as a Risk Management Tool. In Precision Agriculture '07: Proceedings of the 6th European Conference on Precision Agriculture. J. Stafford, ed. Wageningen Academic Publishers. Skiathos, Greece. June 3-6, 2007. 861-867.

Pike, A.C., T.G. Mueller, B. Mijatovic, B.K. Koostra, M.M. Poulette, R.M. Prewitt, S.A. Shearer. 2006. Topographic Indices: Impact of Data Source. Soil Science. 171(10):800-809.

Barbari, M., L. Conti, B.K. Koostra, G. Masi, F. Sorbetti Guerri, and S.R. Workman. 2006. The Use of Global Positioning and Geographical Information Systems in the Management of Extensive Cattle Grazing. J. Biosystems Eng. 95(2): 271-280.

Flynn, E.S., C.T. Dougherty, and B.K. Koostra. 2006. GPS-enabled rising plate meter with data logging capability. Online. Forage and Grazinglands doi:10.1094/FG-2006-0825-01-BR.

Stombaugh, T.S., J. Cole, S.A. Shearer, and B.K. Koostra. 2005. A test facility for evaluating GPS dynamic accuracy. In Proc. of the Fifth European Conference on Precision Agriculture, pp. 605-612. Uppsala, Sweden, 8-10 June.

Agouridis, C.T., D.R. Edwards, S.R. Workman, J.R. Bicudo, B.K. Koostra, E.S. Vanzant, and J.L. Taraba. 2005. Streambank Erosion Associated with Grazing Practices in the Humid Region. Trans. ASAE 48(1): 181-190.

Agouridis, C.T., T.S. Stombaugh, S.R. Workman, B.K. Koostra, D.R. Edwards, and E.S. Vanzant. 2004. Suitability of a GPS Collar for Grazing Studies. Trans. ASAE 47(4): 1321-1329.

NON-REFEREED PAPERS

Stombaugh, T.S., M.P. Sama, B.K. Koostra, R.S. Zandonadi, and S.A. Shearer. 2008. Standardized evaluation of dynamic GPS performance. ASABE Paper No. 084728, St. Joseph, MI:ASABE.

Stombaugh, T.S., M.P. Sama, R.S. Zandonadi, S.A. Shearer, and B.K. Koostra. 2008. Implications of standardized GNSS accuracy testing. In Proc 9th International conference on Precision Agriculture. Denver, CO, July 20-23.

Mahnken, C., C.R. Dillon, J. Gandonou, B.K. Koostra, T. Stombaugh and T. Mueller. 2007. Economic Loss from Plainimetric versus Actual Surface Area in Production. Poster presented at the 6th European Conference on Precision Agriculture. Skiathos, Greece. June 3-6.

Sama, M.P., T.S. Stombaugh, S.A. Shearer, S. Flynn, and B.K. Koostra. 2007. Using low-cost tools to measure spatial variations in pastures. ASABE Paper No. 071053, St. Joseph, MI:ASABE.

Vieira, L.B., T.S. Stombaugh, M.P. Sama, R.S. Zandonadi, and B.K. Koostra. 2007. Using remote sensing to measure soil roughness. ASABE Paper No. 071057, St. Joseph, MI:ASABE.

Zandonadi, R.S., T.S. Stombaugh, M.P. Sama, and B.K. Koostra. 2006. Mission planning and guidance for UAV aerial imaging. ASABE Paper No. 061175, St. Joseph, MI:ASAE.

Sama M.P., T.S. Stombaugh, and B.K. Koostra. 2006. Calibration and Verification of Low-Cost Image Tools for Remote Sensing. Paper Number 061166. St. Joseph, Mich.: ASAE.

Dillon C., J. Gandonou, B. Koostra, T. Stombaugh, T. Mueller. 2006. Evaluating the Economic Impact of Field Area Measurements. Poster presented at the 8th International Conference on Precision Agriculture, Minneapolis, Minnesota, July 23-26, 2006.

Veal, M.W., S.A. Shearer, T.S. Stombaugh, and B.K. Koostra. 2005. Assessment of GPS Guidance System Accuracy Using Multiple RTK-GPS Receivers. ASAE Paper No. 051089. St. Joseph, Mich.: ASAE.

Koostra, B.K., T.S. Stombaugh, S.A. Shearer, and M.W. Veal. 2005. GIS Analysis of Dynamic GPS Test Data. ASABE Paper No. 051084. St. Joseph, Mich.,: ASAE.

Stombaugh, T.S., J. Cole, B.K. Koostra, S.A. Shearer, and M.W. Veal. 2005. Comparison of GPS Receiver Dynamic Performance Using a Test Fixture. ASABE Paper No. 051086. St. Joseph, Mich.: ASAE.

Hancock, D.W., T.S. Stombaugh, and B.K. Koostra. 2004. Precision agriculture extension: The Kentucky approach. ASA-CSSA-SSSA Annual Meeting. Nov. 1-4, 2004. Seattle, WA.

Hancock, D.W., T.S. Stombaugh, B.K. Koostra. 2004. Tools for training precision agriculturalists. 7th International Conference on Precision Agriculture. Minneapolis, MN. July 25-28, 2004.

Agouridis, C.T., D.R. Edwards, E.S. Vanzant, S.R. Workman, J.R. Bicudo, B.K. Koostra, J.L. Taraba, and R.S. Gates. 2004. Influence of BMPs on Cattle Position Preference. ASAE Paper No. 042182. St. Joseph, Mich.: ASAE.

Agouridis, C.T., T.S. Stombaugh, S.R. Workman, D.R. Edwards, and B.K. Koostra. 2003. Examination of GPS Collar Capabilities and Limitations for Tracking Animal Movement in Grazed Watershed Studies. ASAE Paper No. 032001. St. Joseph, Mich.: ASAE.

Koostra, B.K., C.T. Agouridis, and S.R. Workman. 2003. Analysis of GPS Position Data of Beef Cattle. ESRI Paper No. 0487. Redlands, California: ESRI.

Koostra, B.K., and T.S. Stombaugh. 2003. Development and Evaluation of a Sensor to Continuously Measure Air Permeability of Soil. ASAE Paper No. 031072. St. Joseph, Mich.: ASAE.

Koostra, B.K., T.S. Stombaugh, and T.C. Dowdy. 2003. Development of a Precision Agriculture Tool Suite Using ArcPad. ESRI Paper No. 0477. Redlands, California: ESRI.

Stombaugh, T.S., B.K. Koostra, and S.A. Shearer. 2003. Using Low-Cost GPS Receivers for Boundary Mapping. ASAE Paper No. 031010. St. Joseph, Mich.: ASAE.

OTHER PUBLICATIONS

Stombaugh, T.S., D. McLaren, and B.K. Koostra. 2005. The Global Positioning System. Extension Fact Sheet AEN-88. University of Kentucky Cooperative Extension Service.

Stombaugh, T.S. and B.K. Koostra. 2005. Implementing Precision Agriculture: Connecting a GPS to Other Devices. Extension Fact Sheet PA-7. University of Kentucky Cooperative

Extension Service.

PEER REVIEWS FOR JOURNALS

Journal of Irrigation and Drainage Engineering. American Society of Civil Engineers. 2006.

Transactions of the ASAE. American Society of Agricultural and Biological Engineers. 2006, 2007, 2008.

SEMINARS AND PRESENTATIONS CONDUCTED

Introduction to Web and Mobile GIS for Small Utilities. Kentucky Engineering Center Lexington One Day Seminar. Lexington, Kentucky. December 15, 2017.

Introduction to Web and Mobile GIS for Small Utilities. Kentucky Engineering Center Madisonville One Day Seminar. Madisonville, Kentucky. November 8, 2017.

Agricultural Nutrient Management Planning using ArcGIS Online. Kentucky Association of Mapping Professionals Exploratorium Workshop. Lexington, Kentucky. May 10, 2016.

Agricultural Nutrient Management Planning using ArcGIS Online. Kentucky Association of Mapping Professionals Workshop. Frankfort, Kentucky. May 13, 2015.

Introduction to Cloud-Based GIS Using ArcGIS Online. Kentucky Engineering Center Lexington Seminar Day. Lexington, Kentucky. December 10, 2014.

GIS at RJ Corman Railroad Group. Esri Rail GIS Summit. Nicholasville, Kentucky. October 20, 2014.

Introduction to Cloud-Based GIS Using ArcGIS Online. Kentucky Engineering Center Bowling Green Seminar Day. Bowling Green, Kentucky. October 3, 2014.

GIS and Mapping Applications at RJ Corman Railroad Group. Kentucky Association of Mapping Professionals. Richmond, Kentucky. January 30, 2014.

Using ArcGIS with SharePoint for Asset Management. Kentucky Transportation Cabinet TransGIS Conference. Frankfort, Kentucky. April 9, 2013.

Asset Management with ArcGIS Server and SharePoint. ESRI GIS Rail Summit. Ft. Worth, Texas. November 15, 2012.

Web Mapping in the Cloud Using ArcGIS Workshop. 4 class hours. Kentucky GIS Conference. Louisville, Kentucky. September 26, 2012.

Physical Asset Management with ArcGIS Server and SharePoint. Kentucky GIS Conference. Frankfort, Kentucky. October 12, 2011.

Introduction to GIS Web Mapping Applications Workshop. 4 class hours. Kentucky GIS Conference. Frankfort, Kentucky. October 11, 2011.

GIS in Practice at R.J. Corman Railroad Group. RailTech09. Topeka, Kansas. November 12, 2009.

Mapping Support for the 2010 Alltech FEI World Equestrian Games. Kentucky Geospatial Summit. Frankfort, Kentucky. September 10, 2009.

Geospatial Technologies – Kentucky’s Next Economic Cluster? Kentucky Geospatial Summit. Frankfort, Kentucky. September 10, 2009.

Implementing GIS at R.J. Corman Railroad Group. ESRI GIS Rail Summit. Jacksonville, Florida. May 15, 2009.

Putting Your Railroad on the Map. American Shortline and Regional Railroad Association Convention. Las Vegas, Nevada. April 28, 2009.

Geospatial Technologies for Agriculture and Natural Resources. Mapping and Monitoring Land Use Change Conference. University of Kentucky. Lexington, Kentucky. May 20, 2008.

GIS Implementation. Kentucky Association of Mapping Professionals. Louisville, Kentucky. February 28, 2008.

Implementing Enterprise GIS at R.J. Corman Railroad Group. Kentucky GIS Conference. Louisville, Kentucky. August 1, 2007.

Enterprise GIS Implementation - Migrating Geospatial Data from the Desktop to the Web. Geospatial Tools for Natural Resource Management Seminar. Soil and Water Conservation Society. Lexington, Kentucky. May 24, 2007.

GIS Decision Support System for Planned Expansion of Animal Enterprises. ESRI User Conference. San Diego, California. August 10, 2006.

GIS Applications at UK’s Biosystems and Agricultural Engineering Department. Kentucky GIS Conference. Ft. Mitchell, Kentucky. July 19, 2006.

Evaluating the Effect of Terrain on Area Measurements. ASABE International Annual Meeting. Portland, Oregon. July 10, 2006.

Kentucky 4-H Senior Conference GPS / GIS Track. Lexington Kentucky. June 13-14, 2006.

GPS / GIS Program. Kammerer Middle School. Louisville, Kentucky. June 12, 2006.

Evaluating Dynamic GPS Accuracy. Tennessee Geographic Information Council Conference. Franklin, Tennessee. March 20, 2006.

Technology for Precision Agriculture. Calloway County Young Farmers. Murray, Kentucky. March 13, 2006.

Technology for Precision Agriculture. Lyon County Farm Bureau. Eddyville, Kentucky. January 13, 2006.

Remote Sensing for Site-Specific Crop and Pasture Management. Visualize Kentucky 2005 Workshop. University of Kentucky. Lexington, Kentucky. September 22, 2005.

GIS Analysis of Dynamic GPS Test Data. ESRI User Conference. San Diego, California. July 26, 2005.

GIS Analysis of Dynamic GPS Test Data. ASAE Annual International Meeting. Tampa, Florida. July 19, 2005.

Kentucky 4-H Senior Conference GPS / GIS Track. Lexington Kentucky. June 14-15, 2005.

GPS / GIS Program. Kammerer Middle School. Louisville, Kentucky. June 7, 2005.

GPS / GIS Program. Jefferson County Public Schools Middle School Technology Program. Louisville, Kentucky. May 31, 2005.

4-H / Youth GIS Training. Devers Youth Center. Ft. Knox, Kentucky. March 9, 2005.

Accuracy of GPS Receivers. Precision Agriculture School. National Farm Machinery Show. Louisville, Kentucky. February 17, 2005.

Precision Agriculture Training for Producers – Introduction to GIS. National Guard Armory. Hickman, Kentucky. January 18, 2005.

Introduction to Precision Agriculture for Producers. Green County Cooperative Extension Service. Greenville, Kentucky. October 18-19, 2004.

Demonstrating GIS Capabilities and Applications to Kentucky's Agricultural Stakeholders. ESRI User Conference. San Diego, CA. August 10, 2004.

Customizing ArcPad. Seventh International Conference on Precision Agriculture. Minneapolis, Minnesota. July 27, 2004.

GPS and GIS Training. McLean County Farm Bureau. Calhoun, Kentucky. January 7, 2004.

Basics of GIS. Extension Agent Training Seminar. Princeton Research Station. University of Kentucky. Princeton, Kentucky. October 22, 2003.

Basics of GIS. Extension Agent Training Seminar. Biosystems and Agricultural Engineering Department. University of Kentucky. Lexington, Kentucky. October 16, 2003.

Development of a Precision Agriculture Tool Suite Using ArcPad. Kentucky GIS Conference. Louisville, Kentucky. August 19, 2003.

Customizing ArcPad for Precision Agriculture. InfoAg 2003. Indianapolis, Indiana. August 1, 2003.

Development and Evaluation of a Sensor to Continuously Measure Air Permeability of Soil. Paper Presentation. ASAE Annual International Meeting. Las Vegas, Nevada. July 29, 2003.

Analysis of GPS Position Data of Beef Cattle. Paper Presentation. ESRI User Conference. San Diego, California. July 9, 2003.

Development of a Precision Agriculture Tool Suite Using ArcPad. Paper Presentation. ESRI User Conference. San Diego, California. July 8, 2003.

Software for Spatial Crop Management. Extension Agent Training Seminar. Princeton Research Station. University of Kentucky. Princeton, Kentucky. October 23, 2002.

Software for Spatial Crop Management. Extension Agent Training Seminar. Biosystems and Agricultural Engineering Department. University of Kentucky. Lexington, Kentucky. October 16, 2002.

PROFESSIONAL DEVELOPMENT AND TRAINING ATTENDED

An Overview of Open Source GIS Software. 8 class hours. Fort Mitchell, Kentucky. October 17, 2016.

Internet of Things / Microsoft Azure Workshop. 6 class hours. Louisville, Kentucky. June 8, 2016.

UAV/UAS Workshop. 5 class hours. National Geospatial Technology Center of Excellence. Louisville, Kentucky. August 28, 2015.

Conservation Planning, Part II. 28 class hours. USDA NRCS. Morehead, Kentucky. September 16-19, 2013.

Conservation Planning, Part II. 32 class hours. USDA NRCS. Denison, Iowa. November 7-10, 2011.

URISA GIS Project Management. 8 class hours. Frankfort, Kentucky. September 11, 2009.

ArcGIS Server Enterprise Configuration and Tuning for SQL Server. 16 class hours. ESRI Authorized Course. Murfreesboro, Tennessee. June 12-13, 2008.

Developing Applications with ArcGIS Server Using the Microsoft .NET Framework. 24 class hours. ESRI Authorized Course. Murfreesboro, Tennessee. July 25-27, 2007.

Introduction to ArcGIS Server. 16 class hours. ESRI Authorized Course. Kentucky State University. Frankfort, Kentucky. May 30-31, 2007.

VentureQuest Business Idea Development Workshop. University of Kentucky. Lexington, Kentucky. March 4-5, April 1-2, April 15-16, 2005.

Creating, Editing, and Managing Geodatabases for ArcGIS 8.3. ESRI Virtual Campus. Online Course. completed September 12, 2003.

Introduction to VBA Using ArcObjects. 6 class hours. Pre-Conference Seminar. ESRI User Conference. San Diego, California. July 6, 2003.

Introduction to ArcGIS I (for ArcView 8, ArcEditor 8, and ArcInfo 8). 16 class hours. ESRI Authorized Course. Biosystems and Agricultural Engineering Department. University of Kentucky. Lexington, Kentucky. May 29-30, 2002.

Learning ArcGIS II: Presenting Information (for ArcView 8, ArcEditor 8, and ArcInfo 8). ESRI Virtual Campus. Online Course. completed May 1, 2002.

Learning ArcGIS I (for Arcview 8, ArcEditor 8, and ArcInfo 8). ESRI Virtual Campus. Online Course. completed April 15, 2002.

Stormwater Management. 16 class hours. LAW Engineering and Environmental Services, Inc. Alpharetta, Georgia. January 11-13, 2001.

Basic Risk Management. 0.8 CEUs. LAW Corporate Training Program. LAW Engineering and Environmental Services, Inc. Houston, Texas. March 24-25, 2000.

OSHA 40-Hour Hazardous Waste Site Worker. 40 class hours. Center for Continuing and Professional Education. University of Louisville. Louisville, Kentucky. February 4-8, 1999.

Becoming a Project Manager. 0.8 CEUs. LAW Corporate Training Program. LAW Engineering and Environmental Services, Inc. Louisville, Kentucky. October 3, 1998.

Radiation Safety and Use of Nuclear Gauges. 8 class hours. Cline's Technical Services. Amanda, Ohio. July 8, 1998.

GPS: Theory & Applications Workshop. 4 PHDs. Kentucky GIS Conference. Somerset, Kentucky. May 17, 1998.

PROFESSIONAL MEETINGS AND CONFERENCES ATTENDED

Esri Rail GIS Summit. Omaha, Nebraska. 2017.

Kentucky GIS Conference. Louisville, Kentucky. 2017.

InfoAg Conference. St. Louis, Missouri. 2017

Esri Rail GIS Summit. Kansas City, Missouri. 2016.

Kentucky GIS Conference. Covington, Kentucky. 2016.

Esri Rail GIS Summit. Atlanta, Georgia. 2015.

Kentucky GIS Conference. Owensboro, Kentucky. 2015.

Esri Rail GIS Summit. Nicholasville, Kentucky. 2014.

Kentucky GIS Conference. Louisville, Kentucky. 2014.

Kentucky Society of Professional Engineers Convention. Lexington, Kentucky. 2014.

ESRI GIS Rail Summit. Jacksonville, Florida. 2013.

Kentucky GIS Conference. Louisville, Kentucky. 2013.

Kentucky Transportation Cabinet TransGIS Conference. Frankfort, Kentucky. 2013.

ESRI Rail GIS Summit. Fort Worth, Texas. 2012.

Kentucky GIS Conference. Louisville, Kentucky. 2012.

American Short Line and Regional Railroad Association Convention. Indianapolis, Indiana. 2012.

Kentucky GIS Conference. Frankfort, Kentucky. 2011.

Kentucky Transportation Cabinet Partnering Conference. Louisville, Kentucky. 2011.

Kentucky GIS Conference. Frankfort, Kentucky. 2010.

RailTech09. Topeka, Kansas. 2009.

Kentucky Geospatial Summit. Frankfort, Kentucky. 2009.

ESRI Rail GIS Summit. Jacksonville, Florida. 2009.

American Short Line and Regional Railroad Association Convention. Las Vegas, Nevada. 2009.

RailTech08. Topeka, Kansas. 2008.

ESRI User Conference. San Diego, California. 2008.

Kentucky GIS Conference. Lexington, Kentucky. 2008.

American Short Line and Regional Railroad Association Convention. San Antonio, Texas. 2008.

Kentucky GIS Conference. Louisville, Kentucky. 2007.

ESRI Southeast Region Users Group. Jacksonville, Florida. 2007.

ESRI User Conference. San Diego, California. 2006.

Kentucky GIS Conference. Ft. Mitchell, Kentucky. 2006.

ASABE International Annual Meeting. Portland, Oregon. 2006.

National SBIR Conference. Louisville, Kentucky. 2006.

Tennessee Geographic Information Council Conference. Franklin, Tennessee. 2006.

Kentucky GIS Conference. Bowling Green, Kentucky. 2005.

ESRI User Conference. San Diego, California. 2005.

ASAE International Annual Meeting. Tampa, Florida. 2005.

Kentucky GIS Conference. Lexington, Kentucky. 2004.

ESRI User Conference. San Diego, California. 2004.

International Conference on Precision Agriculture. Minneapolis, Minnesota. 2004.

Kentucky GIS Conference. Louisville, Kentucky. 2003.

InfoAg Conference. Indianapolis, Indiana. 2003.

ASAE International Annual Meeting. Las Vegas, Nevada. 2003.

ESRI User Conference. San Diego, California. 2003.

ASAE International Annual Meeting. Chicago, Illinois. 2002.

Kentucky GIS Conference. Somerset, Kentucky. 1998.