

C. Bryan Young

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Civil, Environmental, and Architectural Engineering
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Education:

Ph.D. in Civil and Environmental Engineering, University of Iowa (2000).
M.S. in Water Resources Engineering, University of Kansas (1996).
B.S. in Civil and Environmental Engineering, University of Kansas (1995).

Work Experience:

University of Kansas, Associate Professor, August 2006 – present.
University of Kansas, Assistant Professor, January 2000 – August 2006.
University of Iowa, National Science Foundation Graduate Research Fellow, 1996 – 1999.

Honors and Awards:

University of Kansas School of Engineering, Miller Scholar Award, 2005.
ASCE, *Journal of Hydrologic Engineering* Best Technical Note Award, 2005.
University of Kansas, nominated for Kemper Fellowship for Teaching Excellence, 2005.
University of Kansas, Center for Teaching Excellence Award, 2004.
National Science Foundation Graduate Research Fellow, 1996-1999.

Papers:

- Brunsell, N. A. and C. B. Young (2007). "Land Surface Response to Precipitation Events using MODIS and NEXRAD Data," accepted for publication in *International Journal of Remote Sensing*.
- Kim, I.-J., S. L. Hutchinson, C. B. Young, and J. M. S. Hutchinsons (2007). "Riparian Ecosystem Management Model (REMM): Sensitivity to Soil, Vegetation, and Weather Input Parameters," accepted for publication in *Journal of the American Water Resources Association*.
- Young, C. B. and B. M. McEnroe (2006). "Updated Precipitation Frequency Estimates for Kansas City: A Comparison with TP-40 and Hydro-35," *Journal of Hydrologic Engineering*, 11(3), 206-213.
- Parsons, R. L., C. B. Young, and E. R. Kneebone (2006). "Structuring a Comprehensive Georeferenced Subgrade Database". *Pavement Mechanics and*

- Performance*. ASCE Geotechnical Special Publication 154. ASCE, Reston, Virginia. 173-179.
- Medina, M. A., and C. B. Young (2006). "A Perspective on the Effect of Climate and Local Environmental Variables on the Performance of Attic Radiant Barriers in the United States," *Building and Environment – The International Journal of Building Science and Its Applications*, 41(12), 1767-1778.
- Kucera, P. A., W. F. Krajewski, and C. B. Young (2004). "Radar Beam Occultation Studies using GIS and DEM Technology: An Example Study of Guam," *Journal of Atmospheric and Oceanic Technology*, 21(7), p. 995–1006.
- Young, C. B. and B. M. McEnroe (2003). "Sampling Adjustment Factors for Rainfall Recorded at Fixed Time Intervals," *Journal of Hydrologic Engineering*, 8(5), p. 294-296.
- Bradley, A. A., C. D. Peters-Lidard, B. R. Nelson, J. A. Smith, and C. B. Young (2002). "Raingage Network Design using NEXRAD Precipitation Estimates," *Journal of the American Water Resources Association*, 38(5), p. 1393-1407.
- Young, C. B., A. A. Bradley, W. F. Krajewski, A. Kruger, and M. L. Morrissey (2000). "Evaluating NEXRAD Multisensor Precipitation Estimates for Operational Hydrologic Forecasting," *Journal of Hydrometeorology*, 1(3), p. 241-254.
- Holman-Dodds, J. K., C. B. Young, and B. R. Nelson (2000). "Computational-Reach Length for Prismatic Channels," *Journal of Hydraulic Engineering*, 126(6), p. 467-469.
- Young, C. B., B. R. Nelson, A. A. Bradley, J. A. Smith, C. D. Peters-Lidard, A. Kruger, and M. L. Baeck (1999). "An Evaluation of NEXRAD Precipitation Estimates in Complex Terrain," *Journal of Geophysical Research*, 104(D16), p. 19,691-19,703.

Conference Papers

- Parsons, R. L., C. B. Young, and E. R. Kneebone (2006). "Storage and Analysis of Georeferenced Geotechnical and Pavements Data." Geotechnical Engineering in the Information Technology Age. Proceedings of GeoCongress 2006, February 26-March 1, 2006. CD-ROM.
- Ebihara, T., C. B. Young, V. Tiwari, and L. M. Agee (2005). "Field Evaluation of Vegetated Highway Embankments for the Retention of PAH, Metals, and Particulates in Stormwater Runoff," *Proceedings of the Water Environment Federation 78th Annual Technical Exhibition and Conference*. Washington, D.C., 2005.

Young, C. B., B. M. McEnroe, and R. J. Quinn (1998). "GIS-Based Processing of NEXRAD Rainfall Estimates," *Water Resources and the Urban Environment*, E.D. Loucks, Ed., ASCE, Reston, Virginia, p. 165-170.

Published Reports:

- Young, C. B. (2006). "Mapping the Design Rainfall Event for Stormwater Quality Control," K-TRAN Report No. KU-03-1, Kansas Department of Transportation, 17 pp.
- Young, C.B., and B.M. McEnroe (2002). "Precipitation Frequency Estimates for the Kansas City Metropolitan Area," published by the Kansas City Chapter of the American Public Works Association, 60 pp.
- Young, C.B., B.M. McEnroe, and R.J. Quinn (1998). "Utilization of Precipitation Estimates Derived from Composite Radar", Report No. K-TRAN: KU-96-7, Kansas Department of Transportation, 188 pp.
- McEnroe, B.M., C.B. Young, and G. Athey (1995). "Hydraulic Characteristics of KDOT Flume Inlets", Report No. K-TRAN: KU-95-1, Kansas Department of Transportation, 59 pp.

Presentations:

- "Which is Better: NEXRAD or Gage?" 2006 Fall Meeting of the American Geophysical Union, San Francisco, December 11-15, 2006.
- "Evaluation of NEXRAD Operational Estimates of Intense Rainfall using a Dense Network of ALERT Raingages," 2006 Spring Meeting of the American Geophysical Union, Baltimore, Maryland, May 23-26, 2006.
- "Storage and Analysis of Georeferenced Geotechnical and Pavements Data," Presented at the Geocongress 2006, Atlanta, Georgia, February 26 -March 1, 2006. Co-author with R. L. Parsons and E. R. Kneebone.
- "Structuring a Comprehensive Georeferenced Subgrade Database," Presented at GeoShanghai International Conference, Shanghai, China, June 2-4, 2006. Co-author with R. L. Parsons and E. R. Kneebone.
- "Evaluation of NEXRAD Precipitation Estimates for the Missouri River Basin using Daily Raingage Data (1998-2003)," *2005 Fall Meeting of the American Geophysical Union*, San Francisco, December 4-9.
- "Assessing Spatial-Temporal Variability of Vegetation-Precipitation Interactions with Combined NEXRAD and MODIS Data," *2005 Spring Meeting of the American Geophysical Union*, New Orleans, May 23-27, 2005. Co-author with N. A. Brunsell.
- "Concentrated Flow through a Riparian Buffer: A Case Study," *2005 Spring Meeting of the American Geophysical Union*, New Orleans, May 23-27, 2005.

- “Monitoring Playa Hydrology using LANDSAT Imagery,” 2004 *Fall Meeting of the American Geophysical Union*, San Francisco, December 13-17, 2004.
- “Doppler Radar and Hydrology,” KU GIS Day, November 17, 2004. Invited.
- “Water Quality Modeling: Basic Concepts,” presented as part of the Department of Civil, Environmental, and Architectural Engineering’s Professional Development Series, Kansas City, Missouri, February 23, 2004. Invited.
- “October 4th, 1998 – The Kansas City Flood,” presented to the ASCE Hydraulics Group, Topeka, Kansas, September 26, 2002. Invited.
- “Comparing NEXRAD Operational Precipitation Estimates and Raingage Observations of Intense Precipitation in the Missouri River Basin,” 2002 *Spring Meeting of the American Geophysical Union*, Washington, D.C., May 28-31, 2002.
- “October 4th, 1998 – The Kansas City Flood,” presented as part of the Department of Civil, Environmental, and Architectural Engineering’s Professional Development Series, Kansas City, Missouri, April 15, 2002. Invited.
- “Using NEXRAD Precipitation Estimates for Hydrologic Analysis,” presented to a national meeting of the AASHTO Task Force on Hydrology and Hydraulics, Topeka, Kansas, May 3, 2001. Invited.
- “GIS: Basic Tools for Hydrologic Analysis,” presented as part of the Department of Civil, Environmental, and Architectural Engineering’s Professional Development Series, Kansas City, Missouri, February 5, 2001. Invited.
- “Revised Precipitation Frequency Estimates for the Kansas City Metropolitan Area,” presented to the Kansas City Chapter of the American Public Works Association, Kansas City, Kansas, December 14, 2000. Invited.
- “Evaluating NEXRAD Estimates for use with Nonpoint Source Models,” 2000 *Spring Meeting of the American Geophysical Union*, Washington, D.C., May 30 – June 3, 2000.
- “Uncertainty in Watershed Water-Quality Modeling due to Precipitation Measurement Error,” 1999 *Spring Meeting of the American Geophysical Union*, Boston, MA, May 31 – June 4, 1999.
- “An Evaluation of NEXRAD Precipitation Estimates in Complex Terrain,” 1998 *Fall Meeting of the American Geophysical Union*, San Francisco, CA, December 6-10, 1998.
- “GIS-Based Processing of NEXRAD Rainfall Estimates,” American Society of Civil Engineers, 25th Conference on Water Resources Planning and Management, Chicago, IL, June, 1998.

“Water Resources I: PE Review,” presented as part of the Department of Civil, Environmental, and Architectural Engineering’s PE Review Course. Presented on seven occasions since October 2002.

Grants (principal investigator unless noted otherwise):

“Minimizing Contaminant Impact from Road and Parking Lot Runoff,” August 2006—August 2007, \$51,487, Co-investigator with E. Peltier.

“Development and Implementation of Procedures for Maintaining Johnson County Flood Studies,” July 2005 – December 2005, \$45,384, Co-investigator with A. David Parr.

“A Calibrated Rational Method for Larger Watersheds,” August 2005 – October 2006, Kansas Department of Transportation, \$40,000.

“Developing an Analysis Procedure for Severe Storms,” June 2005 – May 2006, Johnson County Stormwater Management Program, \$22,000.

“Development of a System for the Retrieval and Analysis of Historical Subgrade Information,” August 2003 – January 2005, Kansas Department of Transportation, \$46,000, Co-investigator with Robert L. Parsons.

“Treatment of Contaminated Roadway Runoff using Vegetated Buffer Zones,” September 2002 – November 2004, Kansas Department of Transportation, \$52,000.

“Mapping the Design Rainfall Event for Stormwater Quality Control,” August 2002 – August 2003, Kansas Department of Transportation, \$10,000.

“Developing Automated Assessment Tools for Playa Lakes,” February 2002 – December 2003, KU New Faculty GRF, \$9,600.

“Evaluation of Riparian Zones for Controlling Non-Point Source Pollution in NE Kansas,” October 2001 – September 2004, EPA EPSCoR, \$72,000.

“Evaluating NEXRAD Radar-Based Estimates of Intense Precipitation,” June 2001 – October 2002, Kansas Department of Transportation, \$40,000.

“Revised Precipitation Frequency Estimates for the Kansas City Metropolitan Area,” October 2000 – January 2002, Kansas City Chapter of the American Public Works Association, \$50,000.

Courses Taught at University of Kansas:

CE 390, Civil Engineering Graphics, Spring 2004, 2005.
CE 455, Hydrology, Spring 2000, 2001, 2003, 2004 and Fall 2005.
CE 625, Applied Probability and Statistics, Fall 2003.
CE 751, Watershed Hydrology, Fall 2001, 2003, 2004, 2005 and Spring 2002, 2003.
CE 759, Water Quality Modeling, Fall 2000, 2002 and Spring 2005.
CE 895, Engineering Applications of GIS, Spring 2006

Short Courses Taught:

“Introduction to GIS for Transportation Applications”, 2-day short course taught twice in 2006.
“Introduction to GIS”, 2-day short course taught once in 2007.

Professional Organizations:

American Society of Civil Engineers.
American Geophysical Union.

University Service:

Department of Civil, Environmental, and Architectural Engineering:

Undergraduate Scholarship Coordinator, Spring 2003 – present.
Graduate Scholarship Committee
Infrastructure Research Institute Financial Oversight Committee.

School of Engineering:

Scholarship Committee, Spring 2003 – present.
Project Discovery, assisted in 2001.
Project Discovery, 2004 and 2005.

University:

Faculty Fellow, University Honors Program
University Honors Council.
University Honors Council Subcommittee on Academic and Graduation Standards.
Fulbright and Graduate Direct Exchange Selection Committee, 2002-present.
University Scholars Steering Committee (includes interview process for program), 2000-2003.
Provost’s Task Force on Honors Courses, Spring 2001.
HNRS 191, taught honors tutorials in 2000, 2001, 2002, and 2007.

Professional Service:

AGU Precipitation Committee, Spring 2005 – present.