

Jackson Cothren

University of Arkansas
Center for Advanced Spatial Technologies
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Professional Experience

University of Arkansas

<i>Director</i> , Center for Advanced Spatial Technologies	Jul 2009 – Present
<i>Interim Co-Director</i> , Arkansas High Performance Computing Center	Aug 2011 – Present
<i>Associate Professor</i> , Department of Geosciences	Jul 2010 – Present
<i>Assistant Professor</i> , Department of Geosciences	Jul 2004 – Jun 2010
<i>Research Assistant</i> , Center for Advanced Spatial Technologies	Nov 2002 – Aug 2004.

United States Air Force

Photogrammetric Engineer, National Air Intelligence Center. Directed photogrammetric and image understanding research for a division of 100+ imagery analysts and engineers. Developed proposals, designed and implemented research in imagery science and photogrammetry. Developed and administered multi-million dollar research and development budget. Dec 1999 – Jun 2001.

Officer/Scientific Analyst, National Air Intelligence Center. Developed proposals for and was technical program manager of multi-million dollar budgets for research into improvement of intelligence collection from multi-source imagery including National Technical Means. Represented the National Air Intelligence Center on national-level technical intelligence working groups. Presented research and production results to national level working groups. Aug 1990 – Dec 1998.

The Ohio State University

Graduate Research Assistant, Center for Mapping. Projects included Rapid Digital Elevation Mapping and Centerline Tracking for Mobile Mapping Platforms. Aug 1999 – Sep 2000

Other Professional Positions and Affiliations

Fulbright Specialist, 2010. Selection funded work with the National and Kapodistrian University at Athens in partnership with the University of Kent, UK, and the Initiative for Heritage Conservancy in Eleusis, Greece to develop training materials and conduct a 5-week class for 3D recordation and analysis at Eleusis.

Director, National Board of Directors, American Society of Photogrammetry and Remote Sensing, 2004-2009

Board Member, Arkansas GIS Board (appointed by Governor Mike Beebe), 2009 -present

Director, Central Region Board of Directors, American Society of Photogrammetry and Remote Sensing, 2009 - present

Consultant, Spatial Integrated Systems, Inc. Silver Springs, MD, July 2001 - July 2004

Consultant, Bohannen Huston, LLC. Albuquerque, NM, April 2007 - present

Education

Ph.D. Geodetic Science and Surveying, The Ohio State University Aug 2004

M.S. Geodetic Science and Surveying, The Ohio State University Jan 2001

B.S. Mathematics, United States Air Force Academy May 1989

Externally Funded Projects

Awards on which I am Principal or Co-Principal Investigator exceed \$12.5M in the period October 2003 to the present. Multi-year projects are listed in the year awarded only. PI listed first followed by CoPIs.

International/National

1. Cothren, Apon, Spearot, Limp, Bellaiche, Ramaswamy. EPSCOR Track II - Cyberinfrastructure for Transformational Scientific Discovery in Arkansas and West Virginia. \$3,337,951. National Science Foundation. Sep 2009 - Aug 2012.
2. Cothren, Culpepper. Arkansas Natural Resource Assessment, Phase II, Natural Resource Conservation Service, USDA, \$50,000. Oct 1, 2011 - Sep 30, 2012.
3. Casana, Cothren. Digital Institute for Archaeology. National Endowment for the Humanities. \$250,000. August 2010 - July 2012.
4. Smith, Cothren. Communities where terrorist lived and their planned attacks. Department of Homeland Security/START Center, University of Maryland. \$70,000. Oct 1, 2010 - Sep 30, 2011
5. Banerjee, Cothren, Parkinson. CSR: Small, self-sustainable Solar-powered Emergency Mesh Design. National Science Foundation (NSF). \$485,000. Sep 1, 2010 - Aug 30, 2013.
6. Apon, Cothren, Pulay, Bellaiche. MRI-R2: Acquisition of an Integrated Computational Instrument for Research and Education. National Science Foundation. \$900,000. Sep 1, 2010 - Aug 31, 2012.
7. Cothren, Culpepper. Arkansas Natural Resource Assessment, Natural Resource Conservation Service, USDA, \$70,000. Oct 18, 2010 - Sep 30, 2011.
8. Cothren, Williamson. Acquisition of LiDAR Data for the Completion of the Bayou Meto Project. Natural Resource Conservation Service, USDA. \$200,000. Oct 1, 2010 - Sep 30, 2012.
9. Cothren, Limp, Apon. CI-TRAIN Matching Funds for the EPSCOR Track II NSF Project. \$69,444. Jan 15, 2010 - Jan 14, 2011.

10. Cothren. Development of a Digital Terrain Model for the Bayou Meto Watershed. United States Geological Survey/Arkansas Natural Resources Commission. \$45,000. Oct 1, 2009 - Sep 30, 2011.
11. Cothren. Visual Impact System for Evaluating Offshore Renewable Energy. Bureau of Ocean Energy Management, Regulation, and Enforcement. \$340,768. Oct 1, 2010 - Sep 30, 2012.
12. Casana, Cothren, Tullis. Settlement Systems for Environmental Change in the Northern Fertile Crescent. National Aeronautical and Space Administration (NASA). \$300,000. Jul 1, 2010 - Jun 30, 2013.
13. Smith, Cothren. Border Crossings and Terrorist Attacks on the U.S: Lessons for Protecting against Terrorist Attacks. DHS/START Center, University of Maryland. \$35,112. Mar 1, 2010 - Feb 28, 2011.
14. Limp, Cothren, Culpepper. Rural Geospatial Applications: FY2010. \$128,000. USDA-Penn State. Oct 1, 2010 - Sep 30, 2011.
15. Cothren, Williamson. Visual Impact Risk Decision Support System Development. \$50,554. Argonne National Laboratory. Jun 17, 2010 - Mar 31, 2011.
16. Cothren, Culpepper. Automated Agricultural Use Extraction Using NAIP. Arkansas Geographic Information Office. \$16,820. Jun 30, 2009 - July 1, 2010.
17. Apon, Cothren. Exploring Parallelization of Nearest Neighbor Search and Clustering in High-Dimensional Space on Emerging Parallel Architectures with Applications in Computer Vision, \$99,736.00 National Science Foundation. Sep 1, 2009 - Aug 31, 2011.
18. Cothren, Thoma, Limp, Diluzio, Veil. Water Management in the Fayetteville Shale, \$636,000. Oct 2009 - Sep 2011. National Energy Technology Laboratory, Department of Energy.
19. Cothren, Thoma, Limp. The Environmentally Friendly Drilling Program - Deployment of Information and Decision Support Website, \$400,000. Jun 2009 - Feb 2012. Research Partnership for Secure Energy in America, Department of Energy.
20. Cox, Cothren. The M8.0 Pisco Peru Earthquake - A Benchmark Ground Failure Event for Remote Sensing and Data Analysis, \$177,064. Jul 2009 - Dec 2010. National Science Foundation.
21. Smith, Cothren. Creation and Analysis of an Integrated U.S. Security Database (IUSSD), \$1,369,758. University of Maryland, Department of Homeland Security. Oct 2008 - Oct 2013.
22. Cothren, Limp. A LIDAR-derived Hydrologically Enforced Digital Elevation Model of the Bayou Meto Watershed Area, \$60,000. Oct 2008 - Jan 2010. Natural Resource Conservation Service, USDA.
23. Casana, Cothren. CORONA Archaeological Atlas of the Near East, \$348,111. Aug 2008 - Jul 2010. National Endowment for the Humanities.
24. Thoma, Cothren, Matlock, Popp, GNutter, Darin, Life Cycle Assessment of the Retail Supply Chain: Dairy Products. \$549,724. Jan 2008 - Dec 2008. Dairy Management, Inc.
25. Jansma, Cothren, Mattioli. Research mentoring in geospatial applications and the development of strategic partnerships to increase diversity in the geosciences, \$98,147. May 2007 - Apr 2008. National Science Foundation.

26. Cothren, Smith. A Data-driven, Decision Aid for Facility and Spatiotemporal Profiling (D3A-FSP), \$20,708. Milcord, LLC (sub-award from US Navy SBIR/STTR). Aug 2007 - Dec 2007.
27. Rollins, Stephenson, Cothren, Smith. Spatial and Temporal Dynamics of Red Spruce Populations in the Central Appalachians. \$1,191. Feb 2007. National Aeronautics & Space Administration (NASA).
28. Limp, Cothren, Johnston, Ernenwein. Streamlining Archaeo-Geophysical Data Processing and Integration for DoD Field Use, \$465,107. Mar 2006 - Mar 2012. U.S. Army Corp of Engineers, Engineer Research and Development Center, Construction Engineering Research Laboratory.
29. Plavcan, Cothren. Postcranial Sexual Dimorphism in Primates, \$109,331. Apr 2007 - Apr 2009. National Science Foundation.
30. Thoma, Cothren, Karim. Probabilistic Risk-based Decision Support for Oil and Gas Exploration and Production Facilities in Sensitive Ecosystems, \$319,583. Sep 2006 - Aug 2008. U.S. Department of Energy.
31. Smith, Cothren. Terrorism in Space and Time: The Inclusion of Spatio-Temporal Data from Federal Terrorism Cases into the ATS Database, \$350,000. Oct 2006 - Sep 2008. National Institute of Justice.
32. Limp, Cothren. National Consortium for Rural Geospatial Innovations in America, \$175,000. Oct 2006 - Sep 2007. United States Department of Agriculture.
33. Dixon, Cothren, Dixon. Digitization and web access of Historic SEASAT, SIR-C and Skylab Imagery, Part II, \$34,288. Jul 2006 - Jun 2007. Arkansas Center for Space and Planetary Science.
34. Cothren, Culpepper. AWRIMS - Wetland Web Data Integration - Phase 1, \$67,958. Oct 2005 - Jun 2006. Arkansas Natural Resource Commission.
35. Cothren. Feasibility of DLT and RPC Modeling of Artificial Stereo-Mates, \$5,061. Jun 05 - Aug 05. Leica GIS and Geospatial Imaging, Inc.
36. Smith, Cothren. Geospatial Analysis of Terrorist Activities: The Identification of Spatial and Temporal Patterns of Preparatory Behavior of International and Environmental Terrorists, \$314,840. Oct 2005 - Sep 2007. National Institute of Justice.
37. Dixon, Cothren, Dixon. Digitization and web access of Historic SEASAT, SIR-C and Skylab Imagery, \$34,288. Jul 05 - Jun 06. Arkansas Center for Space and Planetary Science.
38. Limp, Cothren, National Consortium for Rural Geospatial Innovations in America, \$175,000. Oct 2005 - Sep 2006. United States Department of Agriculture.
39. Limp, Cothren. An Enterprise Geospatial Architecture and Development of Automated Analysis Methodologies for Central American Carbon Sequestration Analysis, \$328,000. National Aeronautics and Space Administration, USAID. Oct 2003 - Sep 2006.

State/Regional

1. Cothren, Williamson. Geospatial and Visualization Support and Training for the EAST Initiative. \$206,000. July 1, 2011 - Jun 30, 2012.
2. Cothren, Culpepper. Terrahawk Camera Process Development - Phase 1, \$17,455. Jul 2008 - Feb 2009. Arkansas Game and Fish Commission.
3. Cothren, Williamson. Geospatial and Visualization Support and Training for the EAST Initiative. \$189,159. Jun 17, 2010 - Jun 30, 2011.
4. Cothren, Williamson. Development of a GIS Level 1 Wetland Assessment Model for the Bayou Meto Watershed, \$128,428. Oct 2008 - Jan 2010. Arkansas Natural Resources Commission.
5. Limp, Cothren, Culpepper. Arkansas Wetlands Resources Information Management System (AWRIMS) - Phase II. \$120,661. Jul 2008 - Jun 2009. Arkansas Natural Resources Commission.
6. Cothren. Color and geometric processing of aerial image tiles: additional processing of the Pictometry Ortho-image product, \$6,403. Aug 2006 - Feb 2007. Northwest Arkansas Regional Planning Commission.
7. Cothren, Culpepper. Tracking Data Analysis and Decision Support System - Phase I, \$29,950. Arkansas Game and Fish Commission. Jul 2007 - Aug 2008.
8. Cothren, Fredrick, de Noble, Limp, Visualizing Ancient Rome, A two-semester course in the UA Honor Program. \$25,000. Fall 2007 - Spring 2008. University of Arkansas Honors College.
9. Cothren, Culpepper. Stream Team Information System Design and Development - Phase I, \$39,107. Arkansas Game and Fish Commission. Aug 2006 - Aug 2008.
10. Cothren. Exploring Methodologies for Large-scale Color and Geometric Processing of Aerial Image Tiles, \$12,591. Mar 2006 - July 2006. Northwest Arkansas Regional Planning Commission.
11. Cothren, Culpepper. Evaluation of Proposed AGFC Internet Mapping, \$19,997. Jul 05 - Jun 06. Arkansas Game and Fish Commission.
12. Cothren. Aligning City, State, and Federal Geospatial Data needs, \$6,044. Arkansas Geographic Information Office. Jul 2004 - Jun 2005.
13. Cothren. Online Animal Tracking and Mapping Information System, \$79,863. Arkansas Game and Fish Commission. Award. Jul 2004 - Jun 2005.
14. Cothren. Load Quickbird High-resolution Satellite Imagery of Pulaski County into GeoStor, \$2,898. Arkansas Geographic Information Office. Jun 2004 - Jun 2005.
15. Cothren. Load Northwest Arkansas ortho-imagery and digital elevation model into GeoStor, \$9,500. Northwest Arkansas Regional Planning Commission and University of Arkansas Library. Jun 2004 - Jan 2004.
16. Cothren. Ortho-Image and Impervious Surface Map Generation from High Resolution Satellite Imagery, \$28,000. City of Fayetteville, Fayetteville Public Schools, PCI Geomatics Inc., Digital Globe LLC. Jan 2003 - Dec 2003.

Teaching

University of Arkansas, Department of Geosciences, Assistant and Associate Professor

GEOS 3543 – Introduction to Geographic Information Science	Fall 2007
GEOS 4593 – Introduction to the Global Positioning System	Fall 2004 - 2009
GEOS 4863 – Quantitative Techniques in Geosciences	Spring 2005, 2007, 2009, 2011
GEOS 5043 – Advanced Vector GIS	Spring 2012
GEOG 8931 – Principles of Digital Photogrammetry	Spring 2005, 2007, 2009
GEOS 3923H – Visualizing the Roman City (UA Honors Curriculum)	Spring 2007, 2008
GEOG 510V – Understanding Uncertainty in Geospatial Data.	Fall 2009

Ohio State University, Geodetic Science and Surveying Program, Graduate Teaching Assistant

GS 450 – Spatial Data Adjustment I	1999
GS 650 – Advanced Adjustment Computations I	1998
GS 651 –Advanced Adjustment Computataions II	1999

Publications

Refereed Articles

1. Warn, S., J. Cothren, A. Apon, 2011. Accelerating SIFT on Hybrid Clusters, Second International Workshop on High Performance and Distributed Geographic Information Systems (HPDGIS 2011), Held in conjunction with ACM SIGSPATIAL GIS 2011. November 1, 2011. Chicago. (accepted for publication).
2. Matlock M., G. Thoma, J. Cothren, E. Cummins, J. Wilson, 2011. Geospatial Analysis of Water Use, Water Stress, and Eutrophication Impacts from US Dairy, Internation Dairy Journal (submitted September 2011).
3. Leh, M., M. Matlock, E. Cummings, G. Thoma, J. Cothren, 2011. Measuring Ecosystem Services - A Case Study from a Northwest Arkansas Dairy Farm, Dairy Ecosystem Services (submitted November 2011).
4. Cox, B.R. , J. Cothren, A. Barnes, J. Wartman, A. Rodriguez-Marek, J. Meneses, 2011. Towards Quantifying Movement of a Massive Lateral Spread Using High-resolution Satellite Image Processing, Proceedings of the 9th U.S. National and 10th Canadian Conference on Earthquake Engineering (in-press).
5. Cothren, J., J. Casana, A. Barnes, T. Kalacyi, 2011. An Efficient Workflow for Photogrammetric Processing and Exploitation of CORONA Images. ISPRS Journal of Photogrammetry and Remote Sensing [submitted with revisions, anticipated 2011 publication].

6. Cothren, J., B. Schaffrin, 2010. Comparison of Error Propagation in Block Orientation: An Analytical Approach. *Archives of the International Society of Photogrammetry and Remote Sensing*. ISSN 1682-1777, Vol. 38. No. 7A. pg. 25-30.
7. Warn, S., W. Emeneker, J. Gauch, J. Cothren, A. Apon, 2010. Accelerating Image Feature Comparisons using CUDA on Commodity Hardware, Symposium on Application Accelerators in High Performance Computing (SAAHGPC'10).
http://saahpc.ncsa.illinois.edu/10/papers/paper_15.pdf
8. Simon, K., A. Payne, K. Cole, S. Smallwood, C. Goodmaster, W.F. Limp and J. Cothren, 2010. Close-range 3D Laser Scanning and Virtual Museums: Beyond Wonder Chambers and Cabinets of Curiosity? Frischer, B. (ed.) Proceedings, Making History Interactive, 37th Annual Conference on Computer Applications and Analytical Methods in Archaeology.
[http://www.caa2009.org/articles/Simon_Contribution368_a\(1\).pdf](http://www.caa2009.org/articles/Simon_Contribution368_a(1).pdf)
9. Smallwood, S., A. Payne, K. Simon, C. Goodmaster, W.F. Limp, and J. Cothren, 2010. Lighting Systems in Three Dimensional Non-contact Digitizing: A View from the Virtual Hampson Museum Project, Frischer, B. (ed.) Proceedings, Making History Interactive, 37th Annual Conference on Computer Applications and Analytical Methods in Archaeology.
[http://www.caa2009.org/articles/Smallwood_Contribution292_c%20\(1\).pdf](http://www.caa2009.org/articles/Smallwood_Contribution292_c%20(1).pdf)
10. Vranich, A., J. Cothren, W.F. Limp. 2010. Recreating Cuzco in three dimensions. Melero, F., P. Cano and J. Tevelles (eds) *Fusion of Cultures: 38th Annual Conference on Computer Applications and Analytical Methods in Archaeology: Abstracts*. Page 653. April 8, 2010. Granada, Spain.
11. Limp, W.F., A. Payne, S. Winters, A. Barnes and J. Cothren. 2010. Approaching 3D Digital Heritage Data from a Multi-technology, Lifecycle Perspective. Melero, F., P. Cano and J. Tevelles (eds) *Fusion of Cultures: 38th Annual Conference on Computer Applications and Analytical Methods in Archaeology*. Page 519-522. April 8, 2010. Granada, Spain.
12. Warn, S. Emeneker, W. Cothren, J. Apon, A. Acceleration SIFT on parallel architectures. *IEEE International Conference on Cluster Computing and Workshops, 2009. CLUSTER '09*. ISSN: 1552-5244, Print ISBN: 978-1-4244-5011 doi: 10.1109/CLUSTR.2009.5289155
13. Casana, J. and J. Cothren. 2009. Stereo analysis, DEM extraction, and orthorectification of CORONA satellite imagery: Archaeological applications from the Near East, *Antiquity*, Volume 82, Number 217, pp. 732-749.
14. Cothren, J., B. Smith, K. Dampousse, P. Roberts, 2007, Geospatial and Temporal Patterns of Preparatory Conduct Among American Terrorists, *International Journal of Comparative and Applied Criminal Justice*. Volume 32, Issue 1, pp. 23-41.
15. Tullis, J., J. Cothren, D. Irwin, C. Yeager, W.F. Limp, J. Wilson, B. Gorham, S. Ogle, 2007. Yearly Extraction of Central America's Land Cover for Carbon Flux Monitoring. *GIScience and Remote Sensing*, Vol. 44, No. 4. (December 2007), pp. 334-355.
16. Schaffrin, B., J. Cothren. 2004. Hierarchical data fusion with photogrammetric applications, *Brazilian Journal of Cartography*, No. 55/02, pp. 25-34.
17. Reddy, V., K. Neumeier, J. McFarlane, J. Cothren, C. Thompson, Extending a Natural Language Interface with Geospatial Queries, *IEEE Internet Computing*, vol. 11, no. 6, pp. 82-85, Nov./Dec. 2007, doi:10.1109/MIC.2007.124

18. Cothren, J. 2005. Reliability in Constrained Gauss-Markov Models: An Analytical and Differential Approach with Applications in Photogrammetry. Report #473, Geodetic and GeoInformation Science, Ohio State University. 61 pp.
19. Warn, S., W. Emenecker, J. Cothren, A. Apon, 2009. Accelerating SIFT on Parallel Architectures. IEEE Cluster 2009 Proceedings. New Orleans, LA. Aug 31 - Sep 4.
20. Payne, A., K. Cole, K. Simon, C. Goodmaster, F. Limp, J. Cothren (2009). Designing the Next Generation Virtual Museum: Making 3D Artifacts Available for Viewing and Download. Proceedings of the 37th Annual Conference on Computer Applications and Quantitative methods in Archaeology CAA 2009. Making History Interactive. March. Williamsburg VA.
21. Cothren, J., D. Frederick, W.F. Limp, T. deNoble, A. Barnes, C. Goodmaster, C. Stevens, (2008) Visualizing the Roman City: Viewing the past through multidisciplinary eyes, Proceedings of the 36th Annual Conference on Computer Applications and Quantitative Methods in Archaeology, On the Road to Reconstructing the Past, Budapest, 2-6 April 2008.
22. Cothren, J., C. Goodmaster, A. Barnes, E. Ernenwein, A. Vranich, W.F. Limp, A. Payne, (2008) Fusion of 3-dimensional data at Tiwanaku: An approach to spatial data integration, Proceedings of the 36th Annual Conference on Computer Applications and Quantitative Methods in Archaeology, On the Road to Reconstructing the Past, Budapest, 2 - 6 April 2008.
23. Schaffrin, B., J. Cothren, 1998. Towards optimizing hierarchical data revisions. Proceedings of the 9th Symposium on GIS: Between Vision and Applications, Stuttgart, Germany, pp. 515-521.

Book Chapters

1. Schill, S.R., K. Kvamme, J. Cothren, J.A. Tullis, et al., 2007, In Situ Sensors and Field Methods, in Manual of Remote Sensing: Platforms and Sensors (M.W. Jackson, editor), Silver Springs, MD: American Society of Photogrammetry and Remote Sensing.

Presentations

1. Warn, S., J. Cothren, A. Apon. 2011. Accelerating SIFT on Hybrid Clusters, Second International Workshop on High Performance and Distributed Geographic Information Systems (HPDGIS 2011), Held in conjunction with ACM SIGSPATIAL GIS 2011. Chicago, IL, USA. November 1-4, 2011.
2. Cothren, J., B. Schaffrin. 2010. Comparison of Error Propagation in Block Orientation: An Analytical Approach. Proceedings of the ISPRS Technical Commission VII Symposium, Vienna, Austria, July 5-7.
3. Bobovych, S., W. Emenecker, S. Warn, J. Cothren, A. Apon. 2010. Parallelization of the Scale Invariant Feature Transform (poster). International Conference for High Performance Computing, Networking, Storage, and Analysis.
4. B.R. Cox, J. Cothren, A. Barnes, J. Wartman, A. Rodriguez-Marek, J. Meneses (2009). Towards Quantifying Movement of a Massive Lateral Spread Using High-resolution Satellite Image Processing, 9th U.S. National and 10th Canadian Conference on Earthquake Engineering, Jul 25-29, Toronto, CA.
5. Cothren, J., M. Williamson, G.Thoma. Decision-Support System for Pad-Siting. West Slope Colorado Oil & Gas Association Environmental Summit, Oct 28, 2010.

6. Oluwafemi, M. G. Thoma, J. Cothren. Water Accounting in the Fayetteville Shale Play: an application of the depth-averaged Navier-Stokes equation to Hortonian overland flow. 17th International Petroleum & BioFuels Environmental Conference. San Antonio, TX, Sep 1, 2010.
7. Warn, S., W. Emeneker, J. Gauch, J. Cothren, A. Apon. Accelerating Image Feature Comparisons using CUDA on Commodity Hardware. 2010. Symposium on Application Accelerators in High Performance Computing (SAAHGPC'10). Knoxville, TN. July 13, 2010.
8. Cothren J., G. Thoma, M. Di Luzio. Water Modeling in the Fayetteville Shale. 17th International Petroleum & BioFuels Environmental Conference. San Antonio, TX, Sep 1, 2010.
9. Cothren J., G. Thoma, M. Di Luzio. Geospatial Decision Support for Reducing Environment Impact in Natural Gas Shale Operations. Managing Fayetteville Shale Play Development Workshop. University of Arkansas, Fayetteville, AR. Nov 16, 2010.
10. Williamson M., J. Cothren, P. Smith. Reducing Environmental Impacts in the Fayetteville Shale Play using Geospatial Decision Support. A Spatial Quest: Twenty Years of Mapping the Natural State, Arkansas GIS Users' Forum, Hot Springs, AR. Oct 27, 2010.
11. Vranich, A., J. Cothren, W.F. Limp. 2010. Recreating Cuzco in three dimensions. Fusion of Cultures: 38th Annual Conference on Computer Applications and Analytical Methods in Archaeology. April 8, 2010. Granada, Spain.
12. Payne, A., F. Limp and J. Cothren. 2010. The Evolution of Point Cloud Processing Software and its Affect in Cultural Heritage Applications. Fusion of Cultures: 38th Annual Conference on Computer Applications and Analytical Methods in Archaeology. April 8, 2010. Granada, Spain.
13. Cothren, J., W.F. Limp, J.A. Tullis, S. Winters, M. Wiliamson and A. Payne. 2010. High-performance Computing, Visualization and Large Geospatial Data Sets. CyberInfrastructure Days, Fayetteville, AR. May 10, 2010.
14. Williamson M., J. Cothren. Geospatial Decision Support for Reducing Environment Impact in Natural Gas Shale Operations. Opportunities and Obstacles to Reducing the Environmental Footprint of Natural Gas Development in the Uintah Basin, Vernal, UT. Oct 14, 2010.
15. Cothren, J., J.Nipper, R.Dzur, D. Sandin. Automated Matching and Orientation of Aerial Images using Scale Invariant Descriptors. American Society of Photogrammetry and Remote Sensing 2008 Annual Conference, Portland, OR. May 2008. un-paginated CDROM.
16. Cothren, J., F. Limp. 2006. The Application of Long-range, Large-area, High-density Survey for Heritage Site Analysis. Abstracts of the XI International Seminar Forum UNESCO, University and Heritage, Documentation for Conservation and Development, New Strategies for the Future. September 11-15. pp. 127.
17. S. Malladi, H. Bui, A. Apon, J. Cothren, D. Douglas, C. Thompson, Using System Z and Cell/Be to Accelerate an Image Stitching Application, Conference on Applied Research in Information Technology, Acxiom Laboratory for Applied Research, Conway AR, February 8, 2009.
18. S. Malladi, H. Bui, A. Apon, J. Cothren, D. Douglas, C. Thompson, Using System Z And Cell/BE To Accelerate An Image Stitching Application, Fifth Intl Conference on

- Information Technology in Training and Education (IT@EDU2008), Ho Chi Minh City, Viet Nam, Dec 15–17, 2008.
19. Kalacyi, T., Cothren J., A. Barnes, J. Casana.. 2009. Accuracy of DEM Generation from CORONA Stereo Pair Images. 37th Annual International Conference on Computer Applications and Quantitative Methods in Archeology (CAA) - Making History Interactive, Williamsburg, Virginia, USA, March 22–26, 2009.
 20. Cothren J., A. Barnes, J. Casana, T. Kalacyi. 2009. Effects of Ground Control Point Accuracy on Triangulation and Ortho-rectification of Large Blocks of CORONA Images. 37th Annual International Conference on Computer Applications and Quantitative Methods in Archeology (CAA) - Making History Interactive, Williamsburg, Virginia, USA, March 22 - 26, 2009.
 21. Cothren, J. and Schaffrin, B., 2005. Reliability Design for Imagery from Data, Proceedings of the International Cartographic Conference - Mapping Approaches Into A Changing World, A Coruña, Spain, June 9-16, 2005. un-paginated CDROM.
 22. Cothren, J., A. Payne, F. Limp. 2006. Long Range Archaeological Laser Scanning: High Density Survey and Data Distribution at Tiwanaku, Bolivia and Machu Picchu, Peru. Computer Applications and Quantitative Methods in Archaeology, Fargo, North Dakota. April 18-23.
 23. Leh M.D, S. G. Bajwa, I Chaubey and J. Cothren. 2008. A remote sensing based methodology of delineating stream channel morphology. ASABE Paper No. 08-3734. 2008 Annual Conference of the ASABE. Provident, R.I.
 24. Cothren, J. 2006. Experiments with LIDAR point cloud driven feature extraction in close-range digital photogrammetry applications, American Society of Photogrammetry and Remote Sensing 2006 Annual Conference and Technology Exhibition, May 1-5, Reno, Nevada, USA (American Society for Photogrammetry and Remote Sensing, Bethesda, Maryland).
 25. Burmshik, K., M. Sharif, T. Kresse, J. Fazio, J. Cothren, R. Davis, K. Steele, 2006. Comparison of Potentiometric Maps Produced by Densely Spaced Measurement Points and USGS 7.5' Manual Elevation Picks for the Alluvial Aquifer of Easter Arkansas. The Geographical Society of America Philadelphia Annual Meeting, October 22–25, 2006, Philadelphia, PA.
 26. Dixon, J.B., J. Cothren, J.C. Dixon, C. Calhoun, 2006. Historical Imagery Collections in Spatial Library: Key to Discovery of Past Landscapes. The Geographical Society of America Philadelphia Annual Meeting, October 22–25, 2006, Philadelphia, PA.
 27. Guccione, M., J. Horn, J. Cothren, P. Hays, 2006. Human Occupation in a Tectonically Active Alluvial Valley, The New Madrid Seismic Zone of the Mississippi Valely. The Geographical Society of America Philadelphia Annual Meeting, October 22–25, 2006, Philadelphia, PA.
 28. Cothren, J., F. Limp. 2006. The Application of Long-range, Large-area, High-density Survey for Heritage Site Analysis. Abstracts of the XI International Seminar Forum UNESCO, University and Heritage, Documentation for Conservation and Development, New Strategies for the Future. September 11-15. pp. 127.
 29. Limp, F., J. Cothren, A. Smith, E. Ernenwein, D. Harmon. 2004. Application of Ground-Based LIDAR and Other Innovative Photogrammetric Methods to the Documentation of and Interpretation of Historic Structures and Archeological Sites. 2004

- Partners in Environmental Technology Technical Symposium & Workshop - Meeting DoD Environmental Challenges. Nov 30–Dec 2, 2004. Washington, D.C.]
30. Cothren, J., 2005. Managing Very Large LIDAR Point Clouds in an Enterprise Database. GIS for Local Government Conference, RGIS. Pennsylvania State University. October 19.
 31. Cothren, J. 2005. Accuracy Assessment and Distribution of Northwest Arkansas LIDAR. United States Geologic Survey LIDAR Workshop. Eros Data Center, Sioux Falls, SD. May.
 32. Smith, A., and J. Cothren. 2004. The Narrows in 3D – A Virtual and Educational Experience. Innovmetric International PolyWorks User Meeting, Quebec City, Canada, June 17-18.
 33. Cothren, J., B. Gorham. 2004, Impervious surface delineation using high-resolution satellite imagery and segmentation with contextual constraints. RGIS Regional Conference. Pennsylvania State University, October 28-30.
 34. Cothren, J., 2003. Integrating K-12 education as a technology transfer solution for geospatial technologies in rural communities. RGIS Regional Conference. Pennsylvania State University, October 27-29.
 35. Cothren, J., 2005, Investigating the Utility of Managing LIDAR Point Clouds in an Enterprise Database. Arkansas GIS Users Conference, Hot Springs, AR. October 4.
 36. Cothren, J., J. Tullis and W.F. Limp, 2004, CAST and forest applications: from LIDAR to SDSS, Arkansas Forestry Association, October 13.
 37. Cothren, J., B. Culpepper. 2005. Collection, Processing and Assessment of 1:400 Scale Orthophoto Production in Northwest Arkansas. American Society of Photogrammetry and Remote Sensing Central Region Technical Meeting. University of Arkansas, Fayetteville. January 11.
 38. Cothren, J., 2003. Experiences working with high-resolution satellite imagery over Northwest Arkansas. Arkansas GIS Users Conference, 2003.
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