

ANTHONY C. ROBINSON

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EDUCATION

Doctor of Philosophy, Geography (2008)

The Pennsylvania State University
Dissertation: Design for Synthesis in Geovisualization
Advisor: Alan M. MacEachren

Master of Science, Geography (2005)

The Pennsylvania State University
Thesis: Assessing Geovisualization Tools in Cancer Epidemiology: A Design Framework for an Exploratory Toolkit
Advisor: Alan M. MacEachren

Bachelor of Science in Applied Geography (2002)

East Carolina University
Minor: Urban and Regional Planning
Certificate in GIS Studies
Cumulative GPA: 3.96

POSITIONS HELD

Research Associate, GeoVISTA Center and John A. Dutton e-Education Institute (2008 – present)

Supervised by: Alan M. MacEachren and David DiBiase
Leads interface and interaction design research for geovisual analytics tool development at the GeoVISTA Center on a wide range of externally-funded research projects. Creates course content and teaches Planning GIS for Emergency Management (GEOG 588) for the Dutton e-Education Institute MGIS program. Instructs Cartographic Design (GEOG 361) and Advanced Cartographic Design (GEOG 467) courses in the resident Geography program. Named Dutton Institute e-Education Fellow for 2008-2009.

Research Assistant, GeoVISTA Center (2003-2008)

Supervised by: Alan M. MacEachren
Conducted interface design studies for new geovisualization tools to support cancer epidemiology, crisis management, and homeland security domains. Responsible for designing and executing usability/design evaluation studies for the following externally funded research projects: Geovisualization and Spatial Analysis of Cancer Data (NIH R01 CA95949-01), North East Visual Analytics Center (DHS 22193), GeoCollaborative Crisis Management (NSF EIA-0306845), Geovisual Explication Portal (NIH Supplement to R01 CA95949-01), Exploratory Spatio-Temporal Analysis Toolkit (NCI SRAB Contract), STNexus: An Integrated Database and Visualization Environment for Space-Time Information Exploitation (ARDA-GI2Vis).

Instructor, Geography 361 – Cartographic Design (2007 - 2008)

Taught upper-level undergraduate students fundamentals of Cartographic Design in both lecture and lab settings. Created complete set of lectures and course materials. Supervised a TA who handled lab sections.

RESEARCH

Journal Articles

- **Robinson, A.C.** (Submitted) Supporting Synthesis in Geovisualization. *International Journal of Geographical Information Science*.
- Hardisty, F., and **Robinson, A.C.** (Accepted) The GeoViz Toolkit: Using Component-Oriented Coordination Methods to Aid Geovisualization Application Construction. *International Journal of Geographical Information Science*.
- Bhowmick, T., **Robinson, A.C.**, Gruver, A., E. Lengerich, and A.M. MacEachren. (2008) Distributed evaluation of the Pennsylvania cancer atlas. *International Journal of Health Geographics*. 7(36).
- **Robinson, A.C.** (2007) A Design Framework for Exploratory Geovisualization in Epidemiology. *Information Visualization*. 6(3): 197-214.
- Weaver, C., Fyfe, D., **Robinson, A.C.**, Holdsworth, D., Peuquet, D., and A.M. MacEachren (2007) Visual analysis of historic hotel visits. *Information Visualization* 6(1): 89-103.
- MacEachren, A. M., **Robinson, A. C.**, Hopper, S., Gardner, S., Murray, R., and M. Gahegan. (2005) Visualizing geospatial uncertainty: What we know and what we need to know. *Cartography and Geographic Information Science* 32: 139-60.
- **Robinson, A. C.**, J. Chen, G. Lengerich, H. Meyer, and A. M. MacEachren. (2005) Combining usability techniques to design geovisualization tools for epidemiology. *Cartography and Geographic Information Science*. 32: 243-255.

Refereed Conference Papers

- **Robinson, A.C.** (Submitted) Visual Highlighting Methods for Geovisualization. *24th International Cartographic Conference*. Santiago, Chile, November 15th – 21st.
- **Robinson, A.C.** (2009) Needs Assessment for the Design of Information Synthesis Visual Analytics Tools. *IEEE International Conference on Information Visualization*. Barcelona, Spain, July 15th - 17th.
- **Robinson, A.C.** (2008) Collaborative synthesis of visual analytic results. *IEEE Visual Analytics Science and Technology Conference*. Columbus, OH, October 19th-24th.
- **Robinson, A.C.** (2007) Synthesizing Results in Geovisualization. *Proceedings of the 23rd International Cartographic Conference*. Moscow, Russia, August 4-10.
- Tomaszewski, B., **Robinson, A.C.**, Stryker, M., and A.M. MacEachren. (2007) Geovisual analytics and crisis management. *Proceedings of the 4th International Conference on Intelligent Human*

Computer Systems for Crisis Response and Management (ISCRAM 2007). Delft, Netherlands, May 13 – 16.

- Weaver, C., Fyfe, D., **Robinson, A.C.**, Holdsworth, D., Peuquet, D., and A.M. MacEachren. (2006) Visual analysis of historic hotel visitation patterns. *Proceedings of the IEEE Symposium on Visual Analytics Science and Technology 2006*. Baltimore, MD, October 31 – November 2.
- Bhowmick, T., Gruver, A., **Robinson, A.C.**, E. Lengerich, and A.M. MacEachren. (2006) Using E-Delphi to evaluate the Pennsylvania cancer atlas. *Proceedings of the Auto-Carto Conference*, Portland, OR, June 25-28.
- **Robinson, A. C.** (2005) Geovisualization and epidemiology: A general design framework. *Proceedings of the 22nd International Cartographic Conference*, A Coruña, Spain, July 9-16.
- **Robinson, A. C.**, J. Chen, G. Lengerich, H. Meyer, and A. M. MacEachren. (2005) Combining usability techniques to design geovisualization tools for epidemiology. *Proceedings of the Auto-Carto Conference*, Las Vegas, NV, March 18-23.

Other Refereed Publications

- Pellegrino, D., Pan, C., **Robinson, A.C.**, Stryker, M., Luo, J., Weaver, C., Mitra, P., Chen, C., Turton, I., and A.M. MacEachren. (2008) Grand challenge award: data integration visualization and collaboration in the VAST 2008 Challenge. *IEEE Visual Analytics Science and Technology Conference*. Columbus, OH, October 19th – 24th.
- **Robinson, A.C.** (2007) Synthesizing Geovisual Analytic Results. *Proceedings of the IEEE Visual Analytics Science and Technology Conference Doctoral Colloquium*. Sacramento, CA, October 29 – November 1.
- **Robinson, A.C.**, Koua, E., Hardisty, F., and Alan M. MacEachren. (2007) The G-EX Portal: Web-Based Dissemination of Geovisual Analytic Results. *Proceedings of the ICA Commission on Visualization and Virtual Environments Workshop “From Geovisualization Toward Geovisual Analytics”*, Helsinki, Finland, August 2–3.
- **Robinson, A.C.**, Weaver, C. (2006) Re-Visualization: Interactive Visualization of the Process of Visual Analysis. *Proceedings of GIScience 2006 Workshop on Visualization, Analytics, and Spatial Decision Support*. Muenster, Germany, September 20.
- **Robinson, A.C.** (2006) Highlighting techniques to support geovisualization. *Proceedings of the ICA Workshop on Geovisualization and Visual Analytics*, Portland, OR, June 24.

Grants & Contracts

- Co-PI – “Symbology Standardization for Information Sharing” contract with the U.S. Department of Homeland Security (March 2009 – March 2010)
- Co-PI – “Software for Geovisualization and Spatial Analysis of Health Data: The Geographic-Explication (G-EX) Tool Suite” proposal to the U.S. National Institutes of Health (Pending)
- Co-PI – “Are Google and Web 2.0 making us stupid? Geospatial information synthesis in a data-rich age” proposal to the Australian Research Council (Pending)

- Contributor - "VACCINE: Visual Analytics for Command, Control, Interoperability, National Security, and Emergencies" proposal to the U.S. Department of Homeland Security (Pending)
- Consultant - "Planning the Infrastructure for a Web-based Childhood Obesity Prevention Geographic Information System" proposal to the Robert Wood Johnson Foundation (Declined)

Presentations / Posters / Extended Abstracts

- **Robinson, A.C.**, Lengerich, E. "Disparities and Geography: Communicating Risk and Allocating Limited Resources" 1 Day Workshop at the National Association of Chronic Disease Directors Chronic Disease Academy in Seattle, WA. March 25, 2009.
- **Robinson, A.C.**, Hardisty, F. "Highlighting Methods for Geovisualization" Presentation at the annual meeting of the North American Cartographic Information Society in Missoula, MT. October 8-10, 2008.
- **Robinson, A.C.** "Geo-Collaborative Information Synthesis" Invited presentation for the US & China Geo-Collaborative Crisis Management Workshop in Lanzhou, China. September 17-18, 2008.
- **Robinson, A.C.** "Supporting Synthesis in Geovisualization" Extended abstract for presentation at the 2008 GIScience conference in Park City, UT. September 23-26, 2008.
- Roth, R.E., **Robinson, A.C.**, Stryker, M., MacEachren, Alan M., Lengerich, Eugene J., and E. Koua. "Web-based Geovisualization and Geocollaboration: Applications to Public Health" Extended abstract and presentation at the 2008 Joint Statistical Meetings in Denver, CO. August 3-7, 2008.
- **Robinson, A.C.** "Exploring Analyst Information Synthesis" Presentation at the Spring 2008 meeting of the National Visualization and Analytics Centers consortium in Columbia, MD. May 21-22, 2008.
- **Robinson, A.C.** "Synthesizing Information from Geovisualization" Presentation at the annual meeting of the Association of American Geographers in Boston, MA. April 15-19, 2008.
- **Robinson, A.C.**, Crawford, S., Lengerich, E., and Alan M. MacEachren. "The Pennsylvania Cancer Atlas" Poster presented at the URISA Public Health and GIS Conference in New Orleans, LA. May 20-23, 2007.
- **Robinson, A.C.**, Weaver, C. "Atlas Layouts for Geovisualization." Presentation at the annual meeting of the North American Cartographic Information Society in Madison, WI. October 18-21, 2006.
- **Robinson, A.C.** "Geographic Visualization to Support Epidemiology in Bulgaria" Presentation to the Department of Epidemiology and Social Medicine at the Sofia Medical University in Sofia, Bulgaria. March 9, 2006.
- **Robinson, A.C.** and A.M. MacEachren. "Geovisualization Design for Unreachable Users." Presentation at the annual meeting of the North American Cartographic Information Society in Salt Lake City, UT. October 12-15, 2005.

- **Robinson, A.C.** “Interaction Design Techniques for Geovisualization: Designing and Assessing Tools for Cancer Epidemiology” Presentation at the annual meeting of the Association of American Geographers in Denver, CO. April 5-9, 2005.
- **Robinson, A.C.**, Chen, J., Meyer, H. and MacEachren, A.M. “Human-Centered Design of Geovisualization Tools for Cancer Epidemiology” Poster presented at the 2004 GIScience Conference. College Park, MD. October 20-23, 2004.
- **Robinson, A.C.** “Visualizing Health: Designing Usable Tools for Epidemiology” Invited presentation for the Penn State Science, Medicine, Technology, and Culture Coffee Hour Series. December 16, 2004.
- **Robinson, A.C.** “Web-Based Collaborative Tools for Geospatial Data Exploration.” Demonstration given at the 2004 Conference on Digital Government Research. Seattle, WA. May 24-26, 2004

COURSES TAUGHT

- Geography 588: **Planning GIS for Emergency Management** (Spring 2009)
- Geography 467: **Applied Cartographic Design** (Spring 2009)
- Geography 361: **Maps and Map Construction** (Spring / Fall 2007, Fall 2008)

PROFESSIONAL SERVICE

Reviewer For

- National Science Foundation
- Professional Geographer
- International Journal of Geographic Information Science
- IEEE INFOVIS, VAST, IV, and PacificVIS Conferences
- ACM Computer-Human Interaction (CHI) Conference
- International Community on Information Systems for Crisis Management (ISCRAM) Conference
- Cartographica
- Kartographische Nachrichten
- The Applied Geography Conference

Conference Committees

- Program Committee Member for 2009 SPIE Visual Analytics for Homeland Defense and Security Workshop

- Program Committee Member for 2008 International Workshop on Geo-Collaborative Crisis Management

AWARDS

- 2008-2009 College of Earth and Mineral Sciences e-Education Fellowship. \$5000
- 2008 Outstanding Research Assistant award from the Department of Geography at Penn State. \$500
- 2007 Young scholar travel grant to attend the 23rd annual meeting of the International Cartographic Association in Moscow, Russia. Grant provided by the United States National Committee of the ICA. \$1800
- 2005 College of Earth and Mineral Sciences Photo Contest – 1st place, Graduate Student
- 2005 United States Geospatial Intelligence Foundation Scholarship. \$5000
- 2005 Young scholar travel grant to attend the 22nd annual meeting of the International Cartographic Association in A Coruña, Spain. Grant provided by the United States National Committee of the ICA. \$1750
- 2005 E. Willard Miller Award (M.S. level) paper competition in the Department of Geography at Penn State. \$1000
- 2005 Penn State College of Earth and Mineral Sciences Centennial Travel Award. \$500
- 2002 South East Division of the Association of American Geographers Merle Prunty Award for outstanding scholarship in Geography. \$500
- 2002 National Geographic Society Cartography Award for the map, “Afghanistan: An Overview.” \$1200