

ANTHONY C. ROBINSON

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EDUCATION

Doctor of Philosophy, Geography (2008)	The Pennsylvania State University
Master of Science, Geography (2005)	The Pennsylvania State University
Bachelor of Science in Applied Geography (2002)	East Carolina University

POSITIONS

- Assistant Professor of Geography – Tenure Track, Penn State (2015 –)
- Director of Online Geospatial Education, Department of Geography & John A. Dutton e-Education Institute, Penn State (2014 –)
- Assistant Director, GeoVISTA Center, Penn State (2010 –)
- Lead Faculty for Online Geospatial Education, John A. Dutton e-Education Institute, Penn State (2010 – 2013)
- Visiting Fellow, University of New South Wales, Canberra, Australia (2010 – 2013)
- Research Associate and Member of the Graduate Faculty, Penn State (2008 – 2015)

RESEARCH

* denotes publications with graduate students

Journal Articles

- **Robinson, A.C.**, Demsar, U., Moore, A.B., Buckley, A., Jiang, B., Field, K., Kraak, M-J., Camboim, S., Sluter, C.R. (Submitted) Big Data and Cartography: Research Challenges and Opportunities for Making Maps that Matter. *International Journal of Cartography*.
- Griffin, A.L., **Robinson, A.C.**, Roth, R.E. (In Preparation). Envisioning the Future of Cartographic Research. *International Journal of Cartography*.
- Coltekin, A., Brychtova, A., Griffin, A.L., **Robinson, A.C.**, Imhof, M., Cox, M., Pettit, C. (Submitted) Perceptual complexity of soil-landscape maps: A user evaluation of color organization in legend designs with eye tracking. *International Journal of Digital Earth*.

- **Robinson A.C.**, Peuquet, D.J., Pezanowski, S., Hardisty, F.A., and Swedberg, B.* (2016) Design and Evaluation of a Geovisual Analytics System for Uncovering Spatio-Temporal Patterns in Event Data. *Cartography and Geographic Information Science*.
- **Robinson A.C.**, and Nelson, J.K.* (2015) Evaluating Maps in a Massive Open Online Course. *Cartographic Perspectives*. 80: 6-17.
- Peuquet, D., **Robinson, A.C.**, Stehle, S.*, Hardisty, F.A., and Luo, W.* (2015) A Method for Discovery and Analysis of Temporal Patterns in Complex Event Data. *International Journal of Geographical Information Science*. 29(9): 1588-1611.
- **Robinson, A.C.**, Long, E., Kerski, J., DiBiase, D., Lee, A., and Luo, H. (2015) Maps and the Geospatial Revolution: Teaching a Massive Open Online Course (MOOC) in Geography. *Journal of Geography in Higher Education*. 39 (1): 65-82.
- Griffin, A.L., **Robinson, A.C.** (2015) Comparing Color and Leader Line Highlighting Strategies in Coordinated View Geovisualizations. *IEEE Transactions on Visualization and Computer Graphics*. 21 (3): 339-349.
- Luo, H., **Robinson, A.C.**, Park, J-Y.* (2014) Peer Grading in a MOOC: Reliability, Validity, and Perceived Effects. *Journal of Asynchronous Learning Networks*.18 (2): 1-14.
- Luo, H., **Robinson, A.C.**, Detwiler, J. (2014) The Effect of Geographic Distance on Distance Education: An Empirical Study. *Journal of Educators Online*. 11 (3): 1-26.
- **Robinson, A.C.**, Pezanowski, S., Troedson, S.*, Bianchetti, R.A., Blanford, J., Stevens, J., Guidero, E., Roth, R.E., and A.M. MacEachren (2013) SymbolStore.org: A Web-based Platform for Sharing Map Symbols. *Cartography and Geographic Information Science*.
- McClendon, S.*, and **Robinson, A.C.** (2013) Leveraging Geospatially-Oriented Social Media Communications in Disaster Response. *International Journal of Information Systems for Crisis Response and Management*.5 (1): 1-19.
- **Robinson, A.C.**, Roth, R.E, Blanford, J., Pezanowski, S., and A.M. MacEachren (2012) Developing Map Symbol Standards through an Iterative Collaboration Process. *Environment and Planning B: Planning and Design*. 39(6): 1034-1048.
- Bianchetti, R.A., Wallgrun, J-O., Yang, J., Blanford, J., **Robinson, A.C.**, Klippel, A. (2012) Free Classification of Canadian and American Emergency Management Map Symbol Standards. *The Cartographic Journal*. 49(4): 350-360.
- **Robinson, A.C.** (2011) Highlighting in Geovisualization. *Cartography and Geographic Information Science*. 38(4): 374-384.
- **Robinson, A.C.**, Roth, R.E., and A.M. MacEachren (2011) Understanding User Needs for Map Symbol Standards in Emergency Management. *Journal of Homeland Security and Emergency Management*. 8(1): Article 33.

- **Robinson, A.C.**, Roth, R. E., and A.M. MacEachren. (2011) Designing Web-Delivered Learning Materials for Geographic Visualization in Public Health. *Health Informatics Journal*. 17(3): 191-208.
- Roth, R.E., Finch, B.G., Blanford, J.I., Klippel, A., **Robinson, A.C.**, and A.M. MacEachren (2011) Card Sorting for Cartographic Research and Practice. *Cartography and Geographic Information Science*. 38(2): 89-99.
- Klippel, A., Weaver, C., and **Robinson, A.C.** (2011) Conceptualization and Individual Differences: Towards a Cognitive Grounding of Ontologies. *Cartography and Geographic Information Science*. 38(1): 52-68.
- **Robinson, A.C.** (2011) Supporting Synthesis in Geovisualization. *International Journal of Geographical Information Science*. 25(2): 211-227.
- Hardisty, F., and **Robinson, A.C.** (2010) The GeoViz Toolkit: Using Component-Oriented Coordination Methods to Aid Geovisualization Application Construction. *International Journal of Geographical Information Science*. 25(2): 191-210.
- 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

- Quinn, S.* and **Robinson, A.C.** (2015) Mapping Student Engagement in a Massive Open Online Course (MOOC). *Proceedings of the 27th International Cartographic Conference*. Rio de Janeiro, Brazil, August 23-28.
- Nelson, J.* and **Robinson, A.C.** (2015) Understanding Map Design in the Context of a Massive Open Online Course in Cartography. *Proceedings of the 27th International Cartographic Conference*. Rio de Janeiro, Brazil, August 23-28.

- Luo, H., **Robinson, A.C.**, Park, J.-Y. (2015) Scaling Up Peer-Assessment Online: Empirical Evidence from a Coursera MOOC. Annual Meeting of the American Educational Research Association. Chicago, IL, April 16-20.
- **Robinson, A.C.** (2014) Exploring Class Discussions from a Massive Open Online Course (MOOC) on Cartography. *CartoCon 2014*. Olomouc, Czech Republic, February 25-28.
- **Robinson, A.C.**, Savelyev, A., Pezanowski, S., and A.M. MacEachren (2013) Understanding the Utility of Geospatial Information in Social Media. *10th International Conference on Information Systems for Crisis Response and Management (ISCRAM)*. Baden-Baden, Germany, May 12 -15.
- McClendon, S.*, and **Robinson, A.C.** (2012) Leveraging Geospatially-Oriented Social Media Communications in Disaster Response. *9th International Conference on Information Systems for Crisis Response and Management (ISCRAM)*. Vancouver, BC, April 22 -25.
- MacEachren, A.M., Jaiswal, A., **Robinson, A.C.**, Pezanowski, S., Savelyev, A., Mitra, P., Zhang, X., and Blanford, J. (2011) SensePlace2: GeoTwitter Analytics Support for Situational Awareness. *IEEE Symposium on Visual Analytics Science and Technology*.
- **Robinson, A.C.**, Roth, R.E., Blanford, J., Pezanowski, S., and A.M. MacEachren. (2011) A Collaborative Process for Developing Map Symbol Standards. *Spatial Thinking and Geographic Information Sciences*. Tokyo, Japan, September 14-16.
- Pelman, K.S.*, and **Robinson, A.C.** (2011) An Interactive Mapping Application for Rapid Evacuation Planning. *8th International Conference on Information Systems for Crisis Response and Management (ISCRAM)*. Lisbon, Portugal, May 8-11.
- **Robinson, A.C.**, Roth, R. E., and A.M. MacEachren (2010) Challenges for Map Symbol Standardization in Crisis Management. *7th International Conference on Information Systems for Crisis Response and Management (ISCRAM)*. Seattle, WA, May 2 -5.
- **Robinson, A.C.** (2009) Visual Highlighting Methods for Geovisualization. *24th International Cartographic Conference*. Santiago, Chile, November 15 – 21.
- **Robinson, A.C.** (2009) Needs Assessment for the Design of Information Synthesis Visual Analytics Tools. *IEEE International Conference on Information Visualization*. Barcelona, Spain, July 15 - 17.
- **Robinson, A.C.** (2008) Collaborative synthesis of visual analytic results. *IEEE Visual Analytics Science and Technology Conference*. Columbus, OH, October 19-24.
- **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 Proceedings

- 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 19 – 24.
- **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

- (2015-2016) PI – “Geospatial Visual Analytics for Learning at Scale” Research Initiation Grant from the Penn State Center for Online Innovation in Learning (COIL).

- (2014-2015) PI – “Uncovering the Geography of Learner Engagement in MOOCs” Research Initiation Grant from the Penn State Center for Online Innovation in Learning (COIL).
- (2010 – 2016) Co-PI – “STempo – Space-time pattern discovery and analysis environment” grant from the National Geospatial Intelligence Agency.
- (2009 - 2015) Co-PI - “VACCINE: Visual Analytics for Command, Control, Interoperability, National Security, and Emergencies” Center of Excellence for the U.S. Department of Homeland Security.
- (2011 – 2015) Co-PI – “New Methods for Representing and Interacting with Qualitative Geographic Information” grant from the U.S. Army Corps of Engineers.
- (2009 –2013) Co-PI – “Symbology Standardization for Information Sharing” contract with the U.S. Department of Homeland Security.
- (2013 - 2014) Co-PI – “Enhancing an Innovative Framework of Evolving Best Practices for Effective Online Learning” grant from Penn State Center for Online Innovation in Learning’s Research Innovation Grant Program.
- (2013) Co-PI – “Multi-level organizational governance of geographic information systems for international development” grant from Penn State’s Social Science Research Institute.

Edited Special Issues

- Griffin, A.L., **Robinson, A.C.**, and Roth, R.E. (Forthcoming) Envisioning the Future of Cartographic Research. *International Journal of Cartography*.
- Andrienko, G., Andrienko, N., Dykes, J., Kraak, M-J., **Robinson, A.C.**, Schumann, H. (2016) GeoVisual Analytics: Interactivity, Dynamics, and Scale. *Cartography and Geographic Information Science*. 43(1): 1-2.
- **Robinson, A.C.** and Roth, R.E. (2014) Special Issue on Cognition, Behavior, and Representation. *Cartographic Perspectives*. 77: 3-5.

Book Reviews, Book Chapters, and Invited Commentary

- **Robinson, A.C.** (In Press) Visualization. *International Encyclopedia of Geography*.
- **Robinson, A.C.** (2016) Mapping a MOOC Reveals Global Patterns in Student Engagement. *The Chronicle of Higher Education*, January 11, 2016.
- **Robinson, A.C.** (2015) Cartography and Geographic Information Science at Penn State. *Cartography and Geographic Information Science*. 42 (Supplement 1): 91-92.
- **Robinson, A.C.** (2014) Redesigning Geospatial Education. *ArcNews*.36(1): 4-5.
- **Robinson, A.C.** (2014) Distance, Scale, and Expanding our Reach. *Geospatial World*. 43-45.

- **Robinson, A.C.** (2014) Colorbrewer.org: an online tool for selecting color schemes for maps. *Landmarks in Mapping: 50 Years of the Cartographic Journal*. 201-203.
- **Robinson, A.C.** (2013) What is Geographic Expertise? Does it Matter? (Refereed Position Paper) Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems workshop on Geographic Human-Computer Interaction (GeoHCI). Paris, France, April 27-28.
- Brewer, C.A., and **Robinson, A.C.** (2011) GIScience at Penn State. *Cartography and Geographic Information Science*. 38(3): 332-334.
- **Robinson, A.C.**, (2011) Interacting with Geospatial Technologies. *International Journal of Geographical Information Science*. 25(2): 328-329.
- Harrower, M., **Robinson, A.C.**, Roth, R.E., and B. Sheesley. (2009) Cartography 2.0: for people who make interactive maps. *Cartographic Perspectives*. 64: 1-4.

Invited Presentations

- **Robinson, A.C.** "Challenges for Supporting Geovisual Analytics in Virtual Geographic Environments." Lecture for the 6th Digital Earth Summit, Beijing, China, July 7-8, 2016.
- **Robinson, A.C.** "Emerging Challenges for Geospatial Visual Analytics" Keynote for the Korean Spatial Information Society, Seoul, Korea, September 17, 2015.
- **Robinson, A.C.** "Maps, MOOCs, and Understanding the Geography of Learner Engagement" College of Education, Ewha Womans University, Seoul, Korea, September 16, 2015.
- **Robinson, A.C.** "Online Geospatial Education – An Overview" Department of Geography, Humboldt State University, Arcata, CA, March 5, 2015.
- **Robinson, A.C.** "Exploring Geographic Dimensions of Learning at Scale" Department of Geography, University of Kentucky, Lexington, KY, February 9, 2015.
- **Robinson, A.C.** "Teaching Cartography at Scale in a Massive Open Online Course" University of Hong Kong, Hong Kong, China, January 23, 2015.
- **Robinson, A.C.** "Maps and the Geospatial Revolution: Teaching Cartography at a Massive Scale" Science Pub at the State Theatre, State College, PA, November 7, 2014.
- **Robinson, A.C.** "Teaching Cartography in a Massive Open Online Course." Department of Geography, Kent State University. Kent, OH, August 29, 2014.
- **Robinson, A.C.** "One Professor, 50,000 Students: Teaching a Massive Open Online Course on Cartography." University of Queensland. Brisbane, August 11, 2014.

- **Robinson, A.C.** "Massive Opportunities for Online Geospatial Education." Plenary speaker for Esri Education User Conference. San Diego, CA, July 13, 2014.
- **Robinson, A.C.** "Scale Matters: Challenges and Opportunities in Online Geospatial Education." University Consortium for Geographic Information Science. Pasadena, CA, May 19, 2014.
- **Robinson, A.C.** "Massive Open Online Courses (MOOCs) and the future of Online Geospatial Education" Keynote presentation for the 24th Annual GIS/SIG Conference. Rochester, NY, April 15, 2014.
- **Robinson, A.C.** "Geovisualization for Discovery and Analysis of Patterns in Spatiotemporal Event Data." Presentation for the Centre for Geoinformatics at the University of St Andrews. St Andrews, Scotland, April 3, 2014.
- **Robinson, A.C.** "Maps are Massive: Teaching a MOOC on Mapping" Presentation for the Yi-Fu Tuan Lecture Series, University of Wisconsin-Madison, Madison, WI, November 1, 2013.
- **Robinson, A.C.** "Maps and the Geospatial Revolution: A Massive Open Online Course (MOOC) on Cartography" Presentation for the Department of Geography Coffee Hour, Penn State University, University Park, PA, September 20, 2013.
- **Robinson, A.C.** "Bridging Distance in Cartographic Education" Presentation for Sharing Knowledge: A Joint Symposium of the International Cartographic Association, Dresden, Germany, August 23, 2013.
- **Robinson, A.C.** "Online Geospatial Education at Penn State" Presentation for the Center for Geographic Analysis, Harvard University, Cambridge, MA. February 6, 2013.
- **Robinson, A.C.** "Visualizing Geospatial Social Media for Crisis Management" Presentation for the Department of Geoinformatics, Aalto University, Helsinki, Finland. November 8, 2012.
- **Robinson, A.C.** "Continuing Education for the Geospatial Professional" Presentation at the URISA-GIS Professionals meeting in Portland, OR. October, 2, 2012.
- **Robinson, A.C.** "Visualizing Geospatial Social Media for Crisis Management" Presentation for the Department of Geography, University of Idaho in Moscow, ID. September 18, 2012.
- **Robinson, A.C.** "Geovisual Analytics Research at GeoVISTA" Presentation for the EPA Regional Response Team III meeting in State College, PA. September 12, 2012.
- **Robinson, A.C.** "What's So Great About Online Geospatial Education?" Presentation at the URISA – GIS Professionals meeting in Indianapolis, IN, November 2, 2011.

- **Robinson, A.C.** "Geospatial Social Media: Extracting and Visualizing Geography from Tweets" Presentation at the URISA – GIS Professionals meeting in Indianapolis, IN, November 3, 2011.
- **Robinson, A.C.** "Making Visual Connections: Highlighting in Geovisualization" Presentation for the Department of Geography, Michigan State University in Lansing, MI. October 6, 2011.
- **Robinson, A.C.** "Very Eye Catching: Visual Highlighting Methods for Geovisualization" Presentation for the National Centre for Geocomputation, National University of Ireland in Maynooth, Ireland, June 16, 2011.
- **Robinson, A.C.** "Synthesizing Geographic Information for Disease Surveillance" Presentation for the Centers for Disease Control Analysis-Visualization-Reporting Webinar Series. January 15, 2010.
- **Robinson, A.C.** "Synthesizing Geographic Information" Presentation for the School of Physical, Environmental, and Social Sciences at the Australian Defence Force Academy at University of New South Wales, Canberra, AU. June 26, 2009.
- **Robinson, A.C.** "Geo-Collaborative Information Synthesis" Presentation for the US & China Geo-Collaborative Crisis Management Workshop in Lanzhou, China. September 17-18, 2008.
- **Robinson, A.C.** "Geographic Visualization to Support Epidemiology in Bulgaria" Presentation for the Department of Epidemiology and Social Medicine at the Sofia Medical University in Sofia, Bulgaria. March 9, 2006.

Presentations, Posters, and Extended Abstracts

- Quinn, S., and **Robinson, A.C.**, (Submitted). Visual Analytics with Spatial Facet Combinations. Ninth International Conference on Geographic Information Science (GIScience 2016). Montreal, Canada, September 27-30.
- Raposo, P., and **Robinson, A.C.**, (2016). Representing Spatio-Temporal Events Across Scales. Ninth International Conference on Geographic Information Science (GIScience 2016) Workshop on Understanding Spatial Data (Big and Small) with Visual Analytics (SpatialVA 2016). Montreal, Canada, September 27.
- **Robinson, A.C.**, (2015) "Challenges and Opportunities for Massive Open Online Cartographic Education" 27th International Cartographic Congress. Rio de Janeiro, Brazil, August 23-28.
- **Robinson, A.C.**, Fish, C., and Quinn, S. (2015) "Visualizing Geographic Patterns in MOOC Data" Esri Education User Conference. San Diego, CA, July 18-21.

- **Robinson, A.C.** (2015) "Using MOOCs to Boost Learner Interest in Institutional Programs" Panelist for the Coursera Partners' Conference. Irvine, CA, March 2 – 3.
- **Robinson, A.C.** (2014) "Reflections on Teaching a MOOC about Mapping" Esri Education User Conference. San Diego, CA, July 11-14.
- **Robinson, A.C.** (2014) "Massive Open Geospatial Education: Expanding Student Audiences Through MOOCs" GIForum. Salzburg, Austria, July 1-4.
- **Robinson, A.C.** (2014) "Teaching a Massive Open Online Course (MOOC) on Cartography" Annual meeting of the Association of American Geographers. Tampa, FL, April 8 – 12.
- **Robinson, A.C.** (2014) "Global Audience, Global Challenges: Overcoming Language, Cultural, and Geographic Difference" Panelist for the Coursera Partners' Conference. London, UK, March 31 – April 1.
- Long, E., Millet, A., **Robinson, A.C.**, and S. Wong. (2014) Making and Breaking the Maps and Energy MOOCs at Penn State. Penn State Symposium for Teaching and Learning with Technology (TLT). University Park, PA., March 22.
- **Robinson, A.C.** (2013) "Maps and the Geospatial Revolution: Teaching a MOOC on Mapping" Annual meeting of the North American Cartographic Information Society, Greenville, SC, October 9-11.
- **Robinson, A.C.**, Pezanowski, S., Stevens, J., Mullins, R., Blanford, J., Bianchetti, R., MacEachren, A.M. (2013) "Sharing and Discovering Map Symbols with SymbolStore.org" Refereed extended abstract for presentation at the 26th International Cartographic Conference. Dresden, Germany, August 25-30, 2013.
- **Robinson, A.C.**, Hardisty, F., Stehle, S., and Peuquet, D. (2013) "Visualizing Event Sequences in Geographic Data with STempo" Presentation at the Annual meeting of the Association of American Geographers, Los Angeles, CA, April 9-13.
- **Robinson, A.C.**, Hardisty, F., Stehle, S., Peuquet, D.J. (2013) "Geovisualization of Event Sequences with T-pattern Analysis in STempo" Refereed extended abstract for presentation at GeoViz 2013. Hamburg, Germany, March 6-8.
- Stevens, J., Pezanowski, S., **Robinson, A.C.**, Guidero, E., and A.M. MacEachren (2012) "Map Symbol Design and Event Reporting for Mobile Devices: A Preview of a Mobile Application and Developer API based on an Online Symbol Repository." Annual meeting of the North American Cartographic Information Society, Portland, OR, October 17-19.
- **Robinson, A.C.**, Pezanowski, S., Bianchetti, R., Stevens, J., Guidero, E., Blanford, J., and A.M. MacEachren (2012). "SymbolStore.org – An Open Resource for Map Symbols." Annual meeting of the North American Cartographic Information Society, Portland, OR, October 17-19.

- **Robinson, A.C.**, Pezanowski, S., Bianchetti, R., Guidero, E., Stevens, J., Blanford, J., and A.M. MacEachren. "Sharing Map Symbology for Emergency Management" Extended Abstract for GeoCart 2012 in Auckland, NZ, August 29-31.
- Troedson, S.E., and **Robinson, A.C.** "Using Web-Based Tools to Share Symbology: A Case Study with Mapmakers from the California Department of Water Resources" Presentation at the annual meeting of the North American Cartographic Information Society in Madison, WI. October 12-14, 2011.
- Bianchetti, R., MacEachren, A.M., Klippel, A., **Robinson, A.C.**, Hardisty, F., Blanford, J., Li, R., and Yang, J. "Comparing Cartographic Point Symbol Design with Card Sorting Methods" Presentation at the annual meeting of the North American Cartographic Information Society in Madison, WI. October 12-14, 2011.
- **Robinson, A.C.** "Challenges and Opportunities for Web-Based Evaluation of the Use of Spatial Technologies" refereed extended abstract for presentation at the 25th International Cartographic Conference. Paris, France, July 3-8, 2011.
- Klippel, A.K., **Robinson, A.C.**, and Hardisty, F. "Explorations in Geographic Event Language" Presentation at the annual meeting of the Association of American Geographers in Seattle, WA. April 12-16, 2011.
- Pezanowski, S., **Robinson, A.C.**, Guidero, E., Hardisty, F., Bianchetti, R., Blanford, J., Roth, R.E., and MacEachren, A.M. "An Interactive, Web-Based Tool for Discovering and Sharing Symbols" Presentation at the annual meeting of the Association of American Geographers in Seattle, WA. April 12-16, 2011.
- **Robinson, A.C.**, Pezanowski, S., Hardisty, F., Roth, R.E., Blanford, J., and A.M. MacEachren. "A Web-Based Symbol Store for Sharing Map Symbology" Presentation at the annual meeting of the North American Cartographic Information Society in St. Petersburg, FL. October 13-15, 2010.
- **Robinson, A.C.** and Griffin, A.L. "Eye Tracking for Evaluating Highlighting in Geovisualization" refereed poster for the Emerging Methods for Studying Spatial Technologies workshop at the 2010 GIScience conference in Zurich, Switzerland. September 13, 2010.
- Griffin, A.L. and **Robinson, A.C.** "Comparing Color and Leader Line Approaches for Highlighting in Geovisualization" extended refereed abstract for presentation at the 2010 GIScience conference in Zurich, Switzerland. September 14-17, 2010.
- Griffin, A.L. and **Robinson, A.C.** "Leader Lines: A replacement for Color to Highlight Observations in Geovisualization?" Presentation at the GeoCart meeting in Auckland, New Zealand. September 1-4, 2010.
- **Robinson, A.C.** "Challenges to Standardizing Map Symbology" Presentation at the annual meeting of the Association of American Geographers in Washington, DC. April 14-18, 2010.

- Griffin, A.L. and **Robinson, A.C.** "Eyes on the Prize: Evaluating Highlighting Methods to Support Visual Search" Presentation at the annual meeting of the Association of American Geographers in Washington, DC. April 14-18, 2010.
- MacEachren, A.M., **Robinson, A.C.**, and R.E. Roth. "Standardizing Map Symbology for Critical Incidents" Poster for the Technologies for Critical Incident Preparedness Meeting. Philadelphia, PA, February 2, 2010.
- **Robinson, A.C.**, Roth, R., and Alan M. MacEachren. "Developing Standards for Map Symbology" Presentation at the annual meeting of the North American Cartographic Information Society in Sacramento, CA. October 7-10, 2009.
- MacEachren, A.M., **Robinson, A.C.**, Roth, R.E., and K.A. Cook. "Developing Symbol Standards for Emergency Mapping" Poster for the National Visual Analytics Center Consortium Meeting. Richland, WA. August 18, 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.** "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 for 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.** 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.

Conference, Workshop, and Study Abroad Leadership

- **Robinson, A.C.** (Conference Chair), Kessler, F.C. (Co-Chair) 26th Annual Meeting of the North American Cartographic Information Society. Colorado Springs, Colorado. October 19-22, 2016.
- **Robinson, A.C.**, Demsar, U. "Understanding Spatial Data (Big and Small) with Visual Analytics". Pre-Conference Workshop for the 9th International Conference on Geographic Information Science. Montreal, Canada, September 27, 2016.
- **Robinson, A.C.**, King, E.F., and Kessler, F.C. "Challenges in Global Geospatial Analytics" Study abroad course for MGIS students in collaboration with ITC in the Netherlands. June 17 – July 3, 2016.
- Griffin, A.L, **Robinson, A.C.**, and Ooms, K. (2015) "Envisioning the Future of Cartographic Research" Pre-Conference Workshop for the 27th International Cartographic Congress. Curitiba, Brazil, August 20-21.
- Andrienko, G., Dykes, J., and **Robinson, A.C.** "Geovisual Analytics: Interactivity, Dynamics, and Scale" Workshop for the 2014 GIScience conference, Vienna, Austria, September 23, 2014.
- Pettit, C., Coltekin, A., Griffin, A., and **Robinson, A.C.**, "Geovisual Analytics" Workshop for the 2012 International Society for Photogrammetry and Remote Sensing conference, Melbourne, Australia, August 24, 2012.
- Brewer, C., and **Robinson, A.C.**, "Mapping Around the World – CAUSE 2012" Co-led a three week study abroad experience to national mapping agencies in Germany, UAE, and Japan with 12 undergraduates from the Penn State College of Earth and Mineral Sciences.
- Brewer, C., and **Robinson, A.C.**, "Map Design and Geographic Visualization for Health" 2 Day Workshop at the Centers for Disease Control, Atlanta, GA, February 17-18, 2011.
- **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.

Print & Digital Media Coverage

- How Should Crimea be Shown on Maps? *CBC Radio, Day 6 with Brent Bambury*, March 21, 2014. [Link](#).
- Penn State Opens Up GIS Education to the World, *Esri ArcUser*, Winter 2014. [Link](#).
- Course Connections: A New MOOC Phase of Student Engagement, *University Business Magazine*, January 2014. [Link](#).
- World's First Massive Open Online Course on Geography, *FutureGov Asia*, December 10, 2013. [Link](#).
- Cartography in the Digital Age, *Maclean's Magazine*, October 8, 2013. [Link](#).
- Meet the Man Who Wants to Teach the World to Make Maps, *Wired Magazine MapLab*, July 16, 2013. [Link](#).
- Creators of Maps and the Geospatial Revolution MOOC Talk Rediscovering Geography, *Penn State News*, July 17, 2013. [Link](#).
- Free College Courses Offered Online, *WTAJ News*, July 16, 2013. [Link](#).
- Building the World's First Geo-MOOC, *Directions Media Podcast* (4 part series, 2013). [Link](#).

TEACHING

- Geography 160: **Mapping Our Changing World**
- Geography 583: **Geospatial System Analysis & Design**
- Geography 588: **Planning GIS for Emergency Management**
- Geography 597D: **Geovisual Analytics** (with Alan MacEachren)
- Geography 597G: **Challenges in Global Geospatial Analytics** (with F. Kessler and B. King)
- Geography 467: **Applied Cartographic Design**
- Geography 361: **Maps and Map Construction**
- Coursera: **Maps and the Geospatial Revolution** (MOOC on Coursera)

ADVISING

- Carolyn Fish, PhD Committee (in progress)
- Joshua Stevens, PhD Committee (in progress)
- Peter Koby, PhD Committee (in progress)
- P. William Limpisathian, MS Committee (in progress)
- Elaine Guidero, PhD Committee (2016)
- Sterling Quinn, PhD Committee (2016)
- Carolynne Hultquist, MS Committee (2016)
- Elizabeth Dzwonczyk, MS Committee (2016)

- William Hartnett, MGIS (2016)
- James Cueno, MGIS (2015)
- Eugene Derner, MGIS (2015)
- Joshua DeWees, MGIS (2015)
- Ryan Mullins, MS Committee (2014)
- Richard Hinton, MGIS (2014)
- Brady Scribner, MGIS (2014)
- Joshua Ryan, MGIS (2014)
- Susan Hulsey, MGIS (2013)
- Rebecca Hott, MS Committee (EME, 2012)
- Todd Spangler, MGIS (2012)
- Tiernan Erickson, MGIS (2012)
- Sarah Troedson, MGIS (2011)
- Brian Aldrich, MGIS (2011)
- Susannah McClendon, MGIS (2011)
- Kenneth Pelman, MGIS (2011)
- Andrew Davis, MGIS (2011)
- Benjamin Sher, MGIS (2010)
- Bruce Kinner, MGIS (2009)

SERVICE

Boards and Committees

- Chair, ICA Commission on Visual Analytics (2015-)
- Vice President, North American Cartographic Information Society (2015-)
- Editorial Board, Cartography and Geographic Information Science (CaGIS) Journal (2015-)
- Vice President Elect, North American Cartographic Information Society (2014- 2015)
- Steering Committee, University Consortium for Geographic Information Science GIS & T Body of Knowledge Task Force (2013-)
- Regional Editor for North America, The Cartographic Journal (2014-)
- Editorial Board, The Cartographic Journal (2012-)
- Editorial Board, Cartographic Perspectives (2009-)
- Editorial Board, Journal of Maps (2009 – 2012)
- Board Member, North American Cartographic Information Society, (2010 – 2011, 2014-)
- Editor, Cartotalk.com, North American Cartographic Information Society, (2009 – 2011)
- Program Committee, 2010-2013 and 2015 IEEE Conference on Information Visualization (InfoVis)
- Program Committee, 2011 International Workshop on Visual Analytics (EuroVA)
- Program Committee, 2010 IEEE Visual Analytics Science & Technology (VAST) Conference
- Program Committee, 2010-2012 GeoCart National Cartographic Conference
- Program Committee for 2009 SPIE Visual Analytics for Homeland Defense and Security

University and Department Service

- University Learning Innovation Forum Team (LIFT) (2016-)
- University Council on Engaged Scholarship, Analytics and Metrics Committee (2015-)
- College of EMS e-Learning Council (2012-)

- World Campus Faculty Capacity and Program Management Committee (2012-)
- University MOOC Strategy Committee (2012-2016)
- Hiring Committee, Chair Search for Department of Geography (2014)
- Spreading the Word about EMS, Committee Member (2012)
- Hiring Committee, John A. Dutton e-Education Institute Director (2012)
- Graduate Program and Curriculum Committee, Dept. of Geography (2009-2011)

Reviewing

- ACM Computer-Human Interaction (CHI) Conference
- Applied Geography Conference
- Cartographica
- Cartographic Journal
- Cartographic Perspectives
- Cartography and Geographic Information Science (CaGIS) Journal
- Center for Online Innovation in Learning (COIL)
- GeoCart Conference
- IEEE InfoVis, VAST, IV, EuroVIS, and PacificVIS Conferences
- Information Visualization Journal
- Information Systems for Crisis Management (ISCRAM) Conference
- International Cartographic Conference
- International Journal of Cartography
- International Journal of Geographic Information Science
- ISPRS Conference
- Journal of Geography
- Journal of Maps
- Journal of Spatial Information Science
- Journal of Spatial Science
- Kartographische Nachrichten
- Professional Geographer
- Risk Analysis
- Semantic Web Journal
- Transactions in GIS
- U.S. National Science Foundation

AWARDS

- 2014 College of Earth and Mineral Sciences G. Montgomery and Marion Hall Mitchell Award for Innovative Teaching.
- 2011 Young scholar travel grant to attend the 25th annual meeting of the International Cartographic Association in Paris, France.
- 2009 College of Earth and Mineral Sciences Matthew J. Wilson Travel Grant.
- 2009 Young scholar travel grant to attend the 24th annual meeting of the International Cartographic Association in Santiago, Chile.

- 2008-2009 College of Earth and Mineral Sciences e-Education Fellowship.
- 2008 Outstanding Research Assistant award from the Department of Geography at Penn State.
- 2007 Young scholar travel grant to attend the 23rd annual meeting of the International Cartographic Association in Moscow, Russia.
- 2005 College of Earth and Mineral Sciences Photo Contest – 1st place, Graduate Student
- 2005 United States Geospatial Intelligence Foundation Scholarship.
- 2005 Young scholar travel grant to attend the 22nd annual meeting of the International Cartographic Association in A Coruña, Spain.
- 2005 E. Willard Miller Award (M.S. level), Department of Geography at Penn State.
- 2005 Penn State College of Earth and Mineral Sciences Centennial Travel Award.
- 2002 South East Division of the Association of American Geographers Merle Prunty Award.
- 2002 National Geographic Society Cartography Award.