

Curriculum Vitae
Brian Tomaszewski, Ph.D.
Department of Information Sciences and Technologies
B. Thomas Golisano College of
Computing and Information Sciences

Contact Information

Email: bmtski@rit.edu
Phone: 1-585-259-9678
Office location: GOL 2678
Web: <http://people.rit.edu/~bmtski>

Education

Ph.D., Geography; The Pennsylvania State University, University Park, PA, 2009.
Advisor: Dr. Alan MacEachren. Dissertation: *A Geovisual Analytics Approach for Producing Geo-Historical Context*

M.A., Geography; University at Buffalo, State University of New York, Buffalo, NY, 2005. Advisor: Dr. David Mark. Thesis: *The Reconstruction of Aztec Political Geography in the Toluca Valley of Mexico*

B.A., Anthropology and Mediterranean Archaeology; University at Albany, State University of New York, Albany, New York, 1994.

Academic Employment

- a. July 2016 to Present. Associate Professor in the Department of Information Sciences and Technologies, Rochester Institute of Technology.
- b. June 2010 to June 2016. Assistant Professor in the Department of Information Sciences and Technologies, Rochester Institute of Technology.
- c. January 2009 to May 2010. Assistant Professor in the Center for Multidisciplinary Studies (CMS), Rochester Institute of Technology.

Extended Faculty Member Appointments

- a. September 2013 to Present. Extended Faculty Member, Ph.D. Program, B. Thomas Golisano College of Computing and Information Sciences, Rochester Institute of Technology.
- b. September 2013 to Present. Extended Faculty Member, Golisano Institute for Sustainability, Rochester Institute of Technology.
- c. September 2011 to Present. Extended Faculty Member, Chester F. Carlson Center for Imaging Science, Rochester Institute of Technology.

Non-Academic Employment

- a. May 2001 to May 2005. Senior GIS Analyst/Programmer and Manager. URS Corporation Buffalo NY

- b. January 2000 to April 2001. Web Developer. elementK. Rochester NY

Teaching

Curricular Development

- a. 2016. ISTE 590 – Global Issues and Geographic Innovation, course creator and developer for study abroad field and classroom experience in Rwanda.
- b. 2016. ISTE 484 – Thematic Cartography and Geovisualization, course creator and developer.
- c. 2015. ISTE 782 – Visual Analytics, course creator and developer for MS/IT course.
- d. 2014. M.S. in Geographic Information Science and Technology, author of MS/IT degree concept paper.
- e. 2014. ISTE 151H – Maps, Mapping, and Geographic Experience, course creator and developer for RIT honors and general education course.
- f. 2014. B.S. in Digital Humanities, contributed to degree curriculum design, degree concept paper and degree planning committees.
- g. 2013. Minor in Geographic Information Systems, creator, developer and advisor of a minor program (current).
- h. 2012. ISTE 382/782– Introduction to Geospatial Technologies, creator and developer for RIT general education course.
- i. 2012. ISTE 384/784– Introduction to Geographic Information Systems (GIS) Technologies, course creator and developer for RIT general education course.
- j. 2012. ISTE 605– Scholarship in Information Science and Technology, course creator and developer for core MS/IT course.
- k. 2010. 4002-748-70– Spatial Modeling and Visualization, course creator and developer for core course in NSF Science Master’s Program (SMP).

Ph.D. Dissertation

a. Committee Member

- i. 2015. Basnet, B. Monitoring Cloud-prone Complex Landscapes At Multiple Spatial Scales Using Medium And High Resolution Optical Data: A Case Study In Central Africa. RIT.
- ii. 2014. Goe, M. Sustainability Informed Management of End-of-Life Photovoltaics: Assessing Environmental and Economic Tradeoffs of Collection and Recycling. RIT.

b. External Examiner

- i. 2015. Ahmed Taha Elsergany. Evacuation Trip Generation and Distribution Methods for Riverine Flood Disaster by Combination of Geographic Information System Capabilities and Operations Research Models. University of New South Wales.
- ii. 2011. Pan Wang. Real-Time Data Visualisation in Collaborative Virtual Environment for Emergency Management. University of Melbourne.

M.S. Capstones/Theses

a. Advisor

- i. 2016. Ankita Goel: Social Analysis of Reddit. RIT.
- ii. 2016. Adewale Olisa: Network Design for Improved ICT & Learning in Nigerian Secondary Schools. RIT.
- iii. 2015. Jules Maurice Mupenzi Karasira: Offline Spatial Data Collection: Field Work for Experimental Learning in Rwandan High Schools. RIT.
- iv. 2015. Pavan Saaketh Velamakanni: Image Based Content Management Application - A User Centered Design Approach . RIT.
- v. 2015. Niveditha Prasannakumar: Twitter followers across the Globe. RIT.
- vi. 2014. Dickens, K. Capstone: Social Media and Economic Markets: Do Correlations Exist? RIT.
- vii. 2013. Quang Vo, Minh. Capstone: Visually Representing Vietnam's Geographic Statistical Data. RIT.
- viii. 2012. Khopekar, Talha. Capstone: Context Aware Emergency Weather Alert System. RIT.
- ix. 2012. Shah, Kunal. Capstone: eInvertebrates: A research tool for macro invertebrates. RIT.

b. Committee Member

- i. 2016. Aryal, Anup . Thesis: Developing a prototype web tool for data mining social media for visualization of health related data for hypothesis generation. RIT.
- ii. 2014. Mathews, Alyssa. Thesis: Modeling Atmospheric Emissions and Calculating Mortality Rates Associated with HVHF Transportation. RIT.
- iii. 2014. Stowell, C. Capstone: Mobile Web-based Driving Habit Recognition. RIT.
- iv. 2013. Alnabhan, Ahmed. Capstone: INSAR: Indoor Navigation System using Augmented Reality, prototype Android app. RIT.
- v. 2013. Rathore, Mandvika. Capstone: CareerViz: An Infographics Project. RIT.

Other

- a. 2013. MS Thesis Observer. Ben Kaiser. Thesis: An Interactive Approach to Registration and Refinement of GPS Coordinates within a Navigation System. RIT
- b. 2012 to Present. Research Faculty. MS HCI Program. RIT.

Scholarship

Publications - Peer Reviewed

Journal Articles

- a. Rusatira, J. C., **Tomaszewski, B.**, Dusabejambo, V., Ndayiragije, V., *Gonsalves, S., Savant, A., Amendezo, E., Gasana, G., Mumararungu, A., Haake, A. & Mutesa, L.* Needs Assessment for User-Centered Development of Mobile Medical Educator Apps: Enabling Access to Medical and Health Education in Rwanda Using Mobile Technology. *JMIR Medical Education* 2, 1 (2016):e7.

- b. Goe, M., Gaustad, G. & **Tomaszewski, B.** Tradeoffs in Siting a Solar Photovoltaic Recovery Infrastructure. *Journal of Environmental Management* 110, (2015), 154-166.
- c. **Tomaszewski, B.**, Judex, M., Szarzynski, J., Radestock, C. & Wirkus, L. Geographic Information Systems for Disaster Response: A Review. *Journal of Homeland Security and Emergency Management - Special issue on Information and Communication Technology (ICT) and Crisis, Disaster, and Catastrophe Management* 12, 3 (2015), 571-602.
- d. **Tomaszewski, B.**, Vodacek, A., Parody, R. and Holt, N¹. Spatial Thinking Ability Assessment in Rwandan Secondary Schools: Baseline Results. *Journal of Geography* 114, 2 (2015), 39-48.
- e. **Tomaszewski, B.** and MacEachren, A. Geovisual Analytics to Support Crisis Management: Information Foraging for Geo-Historical Context. *Information Visualization*, 11, 4 (2012), 339-359.
- f. **Tomaszewski, B.** and Smith, M. E. Politics, territory and historical change in Postclassic Matlatzinco (Toluca Valley, central Mexico). *Journal of Historical Geography*, 37, 1 (2011), 22-39.
- g. **Tomaszewski, B.**, Blanford, J., Ross, K., Pezanowski, S. and MacEachren, A. Supporting Geographically-aware Web Document Foraging and Sensemaking. *Computers, Environment and Urban Systems*, 35, 3 (2011), 192-201.
- h. **Tomaszewski, B.** Situation Awareness and Virtual Globes: Applications for Disaster Management. *Computers and Geosciences*, 37 (2011), 86-92.
- i. **Tomaszewski, B.** Producing Geo-historical Context from Implicit Sources: A Geovisual Analytics Approach. *The Cartographic Journal*, 45, 3 (2008), 165-181.

Conference Papers – Proceedings

- a. **Tomaszewski, B.** & Tomaszewski, K. 2016. Refugee Spatial Awareness: Evidence from Za'atari. Ninth International Conference on Geographic Information Science (GIScience 2016). Montreal, Canada.
- b. **Tomaszewski, B.**, Tomaszewski, K. J., Forbes, J.¹, Hartz, J.¹, Heintz, A.¹, Womble, N.¹, Mallik, A.¹ & Bhatia, V.¹ 2016. Displacement and Visual Analytics: Case Studies and Applications. In: DEMSAR, U. & ROBINSON, A. (eds.) *SpatialVA workshop @ GIScience 2016*. Montréal, Canada.
- c. **Tomaszewski, B.**, Schwartz, D. I. & Szarzynski, J. Crisis Response Serious Spatial Thinking Games: Spatial Think Aloud Study Results. 13th International Conference of the International Association For The Study Of Information Systems For Crisis Response And Management (ISCRAM) 2016, 2016 Rio de Janeiro, Brazil. (30% acceptance rate)
- d. **Tomaszewski, B.**, Tibbetts, S.¹, Hamad, Y. & Al-Najdawi, N. 2016. Infrastructure Evolution Analysis via Remote Sensing in an Urban Refugee Camp - Evidence from Za'atari. *Humanitarian Technology: Science, Systems and Global Impact 2016, HumTech2016*. Boston, MA.
- e. Schmitt, P., Iland, D., Belding, E., **Tomaszewski, B.**, Xu, Y. & Maitland, C. 2016. Community-Level Access Divides: A Refugee Camp Case Study. *International*

- Conference on Information and Communication Technologies and Development (ICTD 2016)*. University of Michigan, Ann Arbor, MI.
- f. **Tomaszewski, B.**, Mohamad, F. A. & Hamad, Y. 2015. Refugee Situation Awareness: Camps and Beyond. In *Proceedings of Humanitarian Technology: Science, Systems and Global Impact 2015, HumTech2015*. Boston, MA, (2015). 13 pages.
 - g. **Tomaszewski, B.**, Maurice Mupenzi, J.², Vodacek, A., Vodacek, K. and Holt, N¹. Spatial Thinking for Educational Innovation: The Rwandan Iwacu Project. In *Proceedings of the International Conference on Information and Communication Technologies and Development (ICTD 2015)* (Nanyang Technological University, Singapore), (2015). 4 pages.
 - h. Xu, Y., Maitland, C. and **Tomaszewski, B.** Promoting Participatory Community Building in Refugee Camps with Mapping Technology. In *Proceedings of the International Conference on Information and Communication Technologies and Development (ICTD 2015)* (Nanyang Technological University, Singapore), (2015). 4 pages.
 - i. **Tomaszewski, B.** and Holden, E. The Geographic Information Science and Technology and Information Technology Bodies of Knowledge: An Ontological Alignment. In *Proceedings of the 13th Annual Conference on Information Technology Education*. Calgary, Alberta, Canada, (2012). 6 pages.
 - j. **Tomaszewski, B.** and MacEachren, A. Geo-Historical Context Support for Information Foraging and Sensemaking: Conceptual Model, Implementation, and Assessment. In *Proceedings of the Proceedings of the IEEE Conference on Visual Analytics Science and Technology (IEEE VAST)*. Salt Lake City, Utah, USA, (2010). 8 pages.
 - k. **Tomaszewski, B.** Examining the effects of Global Economic Crisis (GEC) on poverty through natural disasters impacts - An Overview of the UNOOSA RIVAF Project. In *Proceedings of the Fourth United Nations International UN-SPIDER Bonn Workshop on Disaster Management and Space Technology - the 4C-Challenge: Communication - Coordination - Cooperation - Capacity Development*. Bonn, Germany, (2010). 9 pages.
 - l. **Tomaszewski, B.** and Czárán, L. Geographically Visualizing Consolidated Appeal Process (CAP) Information. In *Proceedings of the Proceedings of the 6th International ISCRAM Conference*. Gothenburg, Sweden, (2009). 6 pages.
 - m. **Tomaszewski, B.** Managing Multiple Point-based Data Instances on a Single Coordinate in Mapping Mashups. In *Proceedings of the Proceedings of the 24th International Cartography Conference (ICC)*. Santiago, Chile, (2009). 12 pages.
 - n. Cai, G. and **Tomaszewski, B.** Understanding Government Contexts in GeoCollaborative Crisis Management. In *Proceedings of the 2008 International Conference on Digital Government Research (dg.o2008)*. Montreal, Quebec, Canada, (2008). 441-442.
 - o. **Tomaszewski, B.**, Robinson, A. C., Weaver, C., Stryker, M. and MacEachren, A. M. Geovisual Analytics and Crisis Management. In *Proceedings of the 4th International Information Systems for Crisis Response and Management (ISCRAM) Conference*. Delft, the Netherlands, (2007). 173-179.

- p. **Tomaszewski, B.** Local Model Semantics, Categories, and External Representation: Towards a Model for Geo-historical Context. In *Doctoral Consortium Proceedings, Sixth International and Interdisciplinary Conference on Modeling and Using Context (CONTEXT'07)*. Roskilde University, Denmark, (2007). 89-100.
- q. **Tomaszewski, B.**, MacEachren, A. M., Pezanowski, S., Liu, X. and Turton, I. Supporting Humanitarian Relief Logistics Operations through Online Geocollaborative Knowledge Management. In *Proceedings of the 2006 ACM International Conference on Digital Government Research (dg.o2006)*. San Diego, CA, (2006). 358-359.
- r. **Tomaszewski, B.** and MacEachren, A. M. A Distributed Spatiotemporal Cognition Approach to Visualization in Support of Coordinated Group Activity. In *Proceedings of the 3rd International Information Systems for Crisis Response and Management (ISCRAM) Conference*. Newark, NJ, (2006). 347-351.

Book Chapters

- a. Koua, E. L., MacEachren, A., Turton, I., Pezanowski, S., **Tomaszewski, B.** and Frazier, T. Conceptualizing a User-support Task Structure for Geocollaborative Disaster Management Environments. In *Information Systems for Emergency Management - Advances in Management Information Systems Monograph Series*. ME Sharpe Publisher, New York, (2010). 254-278.
- b. Pezanowski, S., **Tomaszewski, B.** and MacEachren, A. M. An Open GeoSpatial Standards-Enabled Google Earth Application to Support Crisis Management. In *Geomatics Solutions for Disaster Management - Lecture Notes in Geoinformation and Cartography (LNGC)*. Springer, Heidelberg, (2007). 225-238.
- c. Chen, C., Zhu, W., **Tomaszewski, B.** and MacEachren, A. Tracing Conceptual and Geospatial Diffusion of Knowledge. In *Online Communities and Social Computing, HCI 2007 - LNCS 4564*. Springer-Verlag Berlin Heidelberg, (2007). 265-274.

Conference Papers – Workshop Papers and Extended Abstracts

- a. **Tomaszewski, B.**, Szarzynski, J. and Schwartz, D. I. Serious Games for Disaster Risk Reduction Spatial Thinking. *Extended Abstract Selected for Oral Presentation (33% acceptance rate) - Eighth International Conference on Geographic Information Science (GIScience 2014)*. Vienna, Austria, (2014). 5 pages.
- b. **Tomaszewski, B.**, Dickens, K.², Sawant, A.² A., Ogireddy, P. K.², Yu, Q. and Holden, E. Visually Contextualizing Social Media within Spatial, Temporal and Thematic Constraints for Disaster Situation Awareness. *Workshop on GeoVisual Analytics: Interactivity, Dynamics, and Scale @ GIScience 2014*. Vienna, Austria, (2014). 5 pages.
- c. Alnabhan, A.² and **Tomaszewski, B.** INSAR: Indoor Navigation System using Augmented Reality. *6th ACM SIGSPATIAL International Workshop on Indoor Spatial Awareness (ISA)*. Dallas, Texas, (2014). 5 pages.

- d. **Tomaszewski, B.**, Pan, C., Mitra, P. and MacEachren, A. M. Facilitating Situation Assessment through GIR with Multi-scale Open Source Web Documents. In *Proceedings of the Proceedings of the 4th ACM workshop on Geographical Information Retrieval (GIR '07)*. Lisbon, Portugal, (2007). 95-96.
- e. **Tomaszewski, B.** Developing geo-temporal context from implicit sources with Geovisual Analytics. In *Proceedings of the ICA Commission on Visualization and Virtual Environments Workshop*. Helsinki, Finland, (2007) 12 pages.

Posters

- a. Mathews, A. ², **Tomaszewski, B.**, Szarzynski, J. and Vodacek, A. Disaster Risk Reduction Spatial Thinking: A Serious Games Approach. *11th International Conference of the International Association For The Study Of Information Systems For Crisis Response And Management (ISCRAM)*. University Park, PA, (2014).
- b. Bouchard, B. ² and **Tomaszewski, B.** Automated GLIDE Number Resource Consolidation for Rapid Disaster Location Identification. *9th International Conference of the International Association For The Study Of Information Systems For Crisis Response And Management (ISCRAM)*. Vancouver, Canada, (2012).

Publications - Partially Reviewed

Books

- a. **Tomaszewski, B.** *Geographic Information Systems for Disaster Management*. Taylor and Francis (distributed through CRC Press), Boca Raton, FL, 2015.

Journal Articles

- a. Ebner, J. ² and **Tomaszewski, B.** Rochester Institute of Technology's Food Waste Resource Locator. *ArcUser*, 17, 1 (2014), 18-19.
- b. Blochel, K. ², Geniviva, A. ², Miller, Z. ², Nadareski, M. ², Dengos, A. ² Feeney, E. ², Mathews, A. ², Nelson, J. ², Uihlein, J., Floeser, M., Szarzynski, J. and **Tomaszewski, B.** A Serious Game for Measuring Disaster Response Spatial Thinking. *ArcUser*, 16, 3 (2013), 12-15.
- c. Goe, M. ², **Tomaszewski, B.** and Gaustad, G. Infrastructure Planning for Solar Technology Recycling. *ArcUser*, 16, 1 (2013), 20-23.
- d. Arnold, G., Carlock, B., Harris, M., Romney, A., Rosa, M., Zollweg, J., Vodacek, A. and **Tomaszewski, B.** GIS Modeling of Social Vulnerability in Burkina Faso. *ArcUser*, 15, 1 (2012), 20-23.
- e. **Tomaszewski, B.** Gateway, Bridge and Facilitator. *GIM International*, 24, 3 (2010).
- f. **Tomaszewski, B.** A Cost-Effective Approach to GPS/GIS Integration for Archaeological Surveying. *ArcNews*, 28, 3 (2006), 19-20.
- g. **Tomaszewski, B.** Reconstructing Aztec Political Geographies. *ArcUser*, 9, 1 (2006), 24-26.

- h. **Tomaszewski, B.** Emergency Response and Planning Application Performs Plume Modeling. *ArcUser*, 6, 4 (2003), 10-12.

Encyclopedia Articles

- a. **Tomaszewski, B.** Gecollcollaboration. *Encyclopedia of Geography*. Sage Publishers, (2010). 1209-1211.

Conference Papers

- a. **Tomaszewski, B.** Cartographic and Visual Representation of Situational Information Created through Computational Extraction Procedures: Foundations for Awareness. In *Proceedings of the Proceedings of the 23rd International Cartography Conference (ICC)*. Moscow, Russia, (2007). 16 pages.

Conference Presentations

- a. Panel Participant – Coding in Geography/GIS, Association of American Geographers Annual Conference, 2016 San Francisco, California
- b. **Tomaszewski, B.** & Griffin, A. L. Students Learning about Disaster Situation Training using Serious Games for GIS (SerGIS). Association of American Geographers Annual Conference, 2016 San Francisco, California.
- c. Ruggero, T., Kennan, J. & **Tomaszewski, B.** 2016. ArcGIS and Refugees: Practical Lessons Learned from the Rochester Institute of Technology (RIT) Kigeme Refugee camp , Rwanda Humanitarian Field Work Mission. *25th Annual Geographic Information Sharing/Special Interest Group (GIS/SIG) Conference*. Pittsford, New York.
- d. **Tomaszewski, B.** & Vodacek, A. Moving Toward Online Spatial Thinking and Geographic Education in the Developing World - A Rwandan Case Study Association of American Geographers Annual Conference, 2015 Chicago, Illinois.
- e. **Tomaszewski, B.** Crisis Maps, Mapping and Spatial Thinking. *Ignite Talk given at 6th Annual International Conference of Crisis Mappers* (10% acceptance rate). New York, NY, (2014).
- f. **Tomaszewski, B.**, Maurice Mupenzi, J.² and Vodacek, A. Teaching Spatial Thinking in Rwanda with Free and Open Source GIS. *2014 Esri Education GIS Conference*. San Diego, CA, (2014).
- g. **Tomaszewski, B.**, Vodacek, A., Rwanyiziri, G. and Sehene, J. C. Promoting spatial thinking in natural resource management through community mapping: the case of urban and rural secondary schools of Rwanda. *AfricaGIS 2013*. Addis Ababa, Ethiopia, (2013).
- h. Mathews, A.² and **Tomaszewski, B.** A Serious Game for Quantifying Spatial Thinking. *2013 NYS GIS Conference*. Saratoga Springs, NY, (2013).
- i. Feeney, E.², Mathews, A.², Dengos, A.², Floeser, M., Geniviva, A.², Miller, Z.², Nadareski, M.², Nelson, J.², Uihlein, J.² and **Tomaszewski, B.** Serious Gaming and Spatial Thinking – Emergency Response Case Study. *2013 ESRI International User Conference*. San Diego, CA, (2013).

- j. **Tomaszewski, B.** Understanding Global Shock Impacts Through Natural Disasters: An Overview of the United Nations Global Pulse Rapid Impact and Vulnerability Analysis Fund (RIVAF) Project "A Visual Analytics Approach to Understanding Poverty Assessment through Disaster Impacts in Africa. *Association of American Geographers Annual Conference*. New York, New York, (2012).
- k. Adams, M.², Ballard, R.², Bouchard, B.², Giannandrea, A.², Mandel, J.², Pence, E.² and **Tomaszewski, B.** Automated GLIDE number resource extraction for rapid location identification. *2012 ESRI International User Conference*. San Diego, CA, (2012).
- l. **Tomaszewski, B.** Progress on the Visual Globe and Space-Aid Matrix. *Third United Nations International UN-SPIDER Bonn Workshop: "Disaster Management and Space Technology - From Concepts to Application"*. Bonn, Germany, (2009).
- m. Kucinskas, A. & **Tomaszewski, B.** Towards an Interactive Educational Environment for Disaster Management Support. *Third United Nations International UN-SPIDER Bonn Workshop: "Disaster Management and Space Technology - From Concepts to Application"*. Bonn, Germany, (2009).
- n. **Tomaszewski, B.** Beyond our Borders: Contextualizing Humanitarian Crisis Situations. *3rd Annual DHS University Network Summit - Student Research In Visual Analytics for a Safer Nation*. Washington, DC, (2009).
- o. **Tomaszewski, B.** Awareness in Asynchronous Geocollaboration. *Association of American Geographers Annual Conference*. San Francisco CA, (2007).
- p. **Tomaszewski, B.** Interactive Historical Geography: A Non-Linear Exploration Of Space, Time, And Context Through Geocaching. *Association of American Geographers Annual Conference*. Chicago, IL, (2006).

Posters

- a. **Tomaszewski, B.** Mapping Open-Source Information to Support Crisis Management. *First Annual DHS University Network Summit on Research and Education*. Washington, D.C., (2007).

Publications - Not Peer Reviewed

Blog Post

- a. Minh Quang Vo², Bouchard, B.² and **Tomaszewski, B.** *A Practical Approach to Mapping Job Growth in the GIS Industry*.
<http://blogs.esri.com/esri/gisedcom/2012/06/13/a-practical-approach-to-mapping-job-growth-in-the-gis-industry/>, 2012.

Contest Submissions

- a. Chitturi, S.², Davis, J.², Farooqui, S.², Gohel, J.², Gonsalves, S.², Gunda, R.², Raina, A.², Sawant, A.², Sawant, T.², Vijayasekharan, A.², Wasani, J.², and **Tomaszewski, B.** *Visual Analysis on Call Data Records for Improving Disaster Resilience*. Contest Submission to Data for Development Senegal Challenge sponsored by Sonatel and the Orange Group. 2014.

- b. Miller, Ashley ¹, Alyssa Mathews², Joerg Szarzynski, and **Tomaszewski, B.** *Building Disaster Risk Reduction and Resilience Spatial Thinking skills using Serious GIS Games*. Contest Submission to the Esri and UNISDR 2014 Global Disaster Resilience App Challenge.
<https://www.hackerleague.org/hackathons/esri-global-disaster-resilience-app-challenge-2014/hacks/building-disaster-risk-reduction-and-resilience-spatial-thinking-skills-using-serious-gis-games>, 2014.
- c. Dall'Ava, Louis ¹, Mercado, Samuel¹ and **Tomaszewski, B.** *"Hot" Tweets within Statistical Clusters to Protect the Vulnerable*. Contest Submission to the Esri 2014 Climate Change Resilience app Contest.
<https://www.hackerleague.org/hackathons/esri-climate-resilience-app-challenge-2014/hacks/hot-tweets-within-statistical-clusters-to-protect-the-vulnerable>, 2014.

Publications – Manuscripts in development or in review

Tomaszewski, B., Konovitz-Davern, A¹., Schwartz, D. I., Szarzynski, J., Siedentopp, L., Miller, A¹. & Hartz, J. ¹ chapter manuscript in development. GIS and Serious Games. In: Comprehensive Geographic Information Systems, COVA, T. J. & TSOU, M.-H. (eds.): Elsevier.

Tomaszewski, B. chapter manuscript in development. Geographic Information Systems (GIS) and Displacement. In: ICTs for Refugees and Displacement, C. Maitland (ed.) MIT Press,

¹ – undergraduate student

² – graduate student

Published Research Products

- a. 2015. Iwacu Spatial Thinking Android App.
https://play.google.com/store/apps/details?id=gis.iwacu_new.rit.edu.main&hl=en
- b. 2015. ViruWiga Mobile Medical Education Android App.
<https://play.google.com/store/apps/details?id=edu.rit.gis.doctoreducator&hl=en>

Grants and Contracts – Funded

- a. 8/2016-9/2020. co-PI, \$991,926, NSF (Award # 1639391). INFEWS/T3: Managing Energy, Water, and Information Flows for Sustainability across the Advanced Food Ecosystem.
- b. 3/2016-10/2016. Consultant, \$6,800, United Nations High Commissioner for Refugees (UNHCR) and International Relief and Development (IRD): Community Capacities and Assets Mapping – Za’atari Syrian Refugee Camp, Jordan.

- c. 9/2016-8/2019. PI, \$250,000, NSF (Award # 1559450). IRES: Quantifying Disaster Risk Reduction Geographic Information Capacity with United Nations University Institute for Environment and Human Security and University of Bonn Germany.
- d. 7/2016-6/2017. PI, \$1,775, GCCIS Faculty Evaluation and Development (FEAD) Committee. Geographic Information Systems (GIS) Professional Development.
- e. 8/2015 – 11/2016. PI, \$4995, Provost's Learning Innovations Grants (PLIG). Teaching Spatial Thinking Skills with Drones: A Flipped Approach.
- f. 7/2015-6/2016. PI, \$2,005, GCCIS Faculty Evaluation and Development (FEAD) Committee. Geographic Information Systems (GIS) Professional Development.
- g. 1/2015-12/2015. co-PI, \$10,000, GCCIS Seed Funding program. 3-D Game Engine Integration for Improved User Interaction with a GIS-Based Spatial Thinking Disaster Resilience Framework.
- h. 10/2014-9/2015. co-PI, \$26,763 (\$5,205 sub-award to RIT), NSF (Award # 1427873). US-Jordan planning visit: Integrated wireless and geographic information infrastructure for security in a multi-organizational context.
- i. 3/2014-9/2015. PI (for RIT sub-award), \$100,000 (\$29,115 sub-award to RIT), Stars in Global Health Grand Challenge Canada and National University of Rwanda. Needs Assessment and Prototype Software Development-Mobile Medical Education in Rwanda.
- j. 9/2014-9/2015. Funded Participant, \$1,600, RIT International and Global Programs. Malmö - RIT Symposium (held in Malmö, Sweden): User-centered Geographic Information Technology Software Approaches to Enable Spatiotemporal Thinking about Urban - Rural Environments and Sustainability.
- k. 7/2014-6/2015. PI, \$1,807, GCCIS Faculty Evaluation and Development (FEAD) Committee. Geographic Information Systems (GIS) Professional Development.
- l. 3/2014-6/2014. PI, \$5,000, NYS Pollution Prevention Institute. Organic Resource Locator.
- m. 1/2014-12/2014. PI, \$4,500, GCCIS Seed Funding program. Contextualizing Social Media within Space, Time and Thematic Constraints - Proposal Development.
- n. 12/2013-12/2013. Funded Participant, \$1,970, NSF (Award #1343520). NSF-sponsored Workshop on Robust Socio-technical Architectures in Support of Displaced Persons - DPEW '13, Cape Town, South Africa.
- o. 12/2012-2/2013. Technical Advisor, \$3,000, National Endowment for the Humanities. Freedom Trail Web Site Development.
- p. 6/2013-6/2014. PI, \$9,875, RIT OVPR. International Partnership - RIT and the United Nations University Institute for Environment and Human Security.
- q. 2/2013-3/2015. co-PI, \$474,780, UK Department for International Development (DFID). Promoting spatial thinking in natural resource

- management through community mapping: the case of urban and rural secondary schools.
- r. 1/2013-12/2013. PI, \$6,000, GCCIS Seed Funding program. Contextualizing Social Media within Space, Time and Thematic Constraints.
 - s. 7/2012-6/2013. PI, \$3,103, GCCIS Faculty Evaluation and Development (FEAD) Committee. Visiting Scientist with United Nations University Institute for Environment and Human Security (UNU-EHS) – Bonn, Germany.
 - t. 2/2013-3/2015. PI, \$7,976, Oculus, Inc. Geo-Temporal Visual Analytics Prior Art Research.
 - u. 10/2010-11/2010. PI, \$1,800, Oculus, Inc. and US Department of Defense (DOD). Aperture Visualization Framework for Social Science.
 - v. 7/2011-6/2012. PI, \$2,678, GCCIS Faculty Evaluation and Development (FEAD) Committee. Geographic Information Systems (GIS) Professional Development.
 - w. 6/2010-5/2013. Senior Personnel, \$662,816, NSF (Award # DGE-1011458). Science Master's Program: Decision Support Technologies for Environmental Forecasting and Disaster Response.
 - x. 3/2010-2/2011. PI, \$45,000, United Nations Office for Outer Space Affairs (UNOOSA). A Visual Analytics Approach to Understanding Poverty Assessment Through Disaster Impacts in Africa.
 - y. 7/2010-6/2011. PI, \$2,075, College of Applied Science and Technology (CAST) Faculty Evaluation and Development (FEAD) Committee. International Disaster Management Domain Knowledge Development.
 - z. 3/2010-6/2010. Consultant, \$3,000, United Nations Office for Outer Space Affairs (UNOOSA). Web Visualization Expert/Programmer.
 - aa. 7/2009-6/2010. PI, \$2,100, College of Applied Science and Technology (CAST) Faculty Evaluation and Development (FEAD) Committee. Humanitarian Information Management Domain Knowledge Development.
 - bb. 2/2009-4/2009. PI, \$15,693, Pennsylvania State University and DOE-US Department of Energy. Context Discovery Application Software Development and Advisement.
 - cc. 1/2008-6/2008. Consultant, \$20,000, United Nation Office for the Coordination of Humanitarian Affairs (UN-OCHA), ReliefWeb Map Centre. Web GIS Mapping Expert/Programmer.

Awards and Donations

- a. 2015. Digital Globe Foundation Imagery Grant. <http://www.digitalglobefoundation.org/>
- b. 2015. National Socio-Environmental Synthesis Center (SESYNC) travel grant.

Other – Public Scholarship

- a. 2016. Quoted in *Wall Street Journal* print and online editions discussing Pokemon Go. <http://www.wsj.com/articles/pokemon-go-craze-raises-safety-issues-1468365058>

- b. 2015. Answered questions for reddit.com Science AMA (Ask Me Anything) segment on GIS and Disasters.
https://www.reddit.com/r/science/comments/3lf8mm/science_ama_series_im_brian_tomaszewski/
- c. 2015. Appeared as guest on WXXI AM 1370 Radio– Need to Know Connections: Innovation Friday - Solving World Problems Locally.
<http://wxxinews.org/post/connections-innovation-friday-solving-world-problems-locally>
- d. 2015. Appeared as guest on WXXI TV Innovation Trail Program.
<http://innovationtrail.org/post/watch-real-time-data-communication-saves-lives>
- e. 2015. Quoted in MSN/Quartz article discussing the role of social media in the Nepal disaster response. <http://www.msn.com/en-us/news/technology/how-social-media-is-helping-nepal-rebuild-after-two-big-earthquakes/ar-BBjWjAb>
- f. 2014. Appeared on 13WHAM ABC TV discussing 20th Anniversary of Rwandan Genocide. https://www.youtube.com/watch?v=khZumN_CzbQ
- g. 2013. Appeared on 13WHAM ABC TV discussing seizure of a 'Deep Web' site known as The Silk Road. <https://www.youtube.com/watch?v=o5aRtqwJQho>
- h. 2013. Appeared on WHAM 1180 AM radio discussing Rwanda project.
- i. 2010. Quoted in Popular Science article discussing the 2010 Nicaragua/Costa Rica Google Maps boundary issue.
<http://www.popsci.com/technology/article/2010-12/you-are-here-finding-cartographys-place-new-digital-landscape>

Other – Invited Presentations and Talks

- a. 2016. *Crisis Mapping: Old Problems, New Challenges*. Invited presentation given for Georgetown University Emergency and Disaster Management Program, Washington, DC.
- b. 2015. *Geographic Information Systems (GIS) and Remote Sensing: International Research and Collaboration Opportunities*. Invited presentation given for the Prince Abdullah Bin Ghazi Faculty of Information Technology, Al-Balqa Applied University, Jordan.
- c. 2014. *GIS for the GIS: Opportunities and Applications*. Invited presentation given for the Golisano Institute for Sustainability Seminar Series, RIT.
- d. 2013. *Spatial thinking and serious games: a deeper look at geospatial technology practice*. Invited presentation given for the Sustainable Urban Development: International Perspectives on The University as Partner in the Transformation of The Post-Industrial City symposium sponsored by Malmö University, Malmö Sweden and Rochester Institute of Technology, Rochester, NY.
- e. 2013. *Spatial Thinking, Disaster Risk and Visual Analytics: Case studies from Rwanda*. Invited presentation given for the University of Bonn Geography Department, Bonn, Germany

- f. 2013. *Geographically Contextualizing Disasters*. Invited presentation given for the GCCIS Computing and Information Sciences Ph.D. Program Colloquium series, Rochester, NY.
- g. 2013. *"New Humanities" Have Gone Digital.*" Faculty Institute on Teaching and Learning. Rochester Institute of Technology. Rochester, NY.
- h. 2012. *Locally Contextualizing Global Shocks*. Invited presentation given for the Penn State Geography Department Coffee Hour series, State College, PA.
- i. 2012. *The Rochester Institute of Technology: Opportunities for Collaboration*. Invited presentation given for the United Nations University Institute for Environment and Human Security (UNU-EHS), Bonn, Germany.
- j. 2012. *Visualization and modeling using geospatial disaster response products*. Invited presentation given for The Information Products Laboratory for Emergency Response (IPLER) & Center for Geohazards Studies 2012 Joint Workshop on Disaster Response, Rochester, NY.
- k. 2011. *A Visual Analytics Approach to Identifying Vulnerabilities Created by Global Shocks as Revealed by Natural Disaster Impacts*. Invited presentation given for The University of Buffalo Department of Geography Colloquium Series, Buffalo, NY.
- l. 2011. *Using Natural Disaster Impacts to Identify Vulnerabilities Created by Global Shocks – A Visual Analytics Approach*. Invited presentation given for Chester F. Carlson Center for Imaging Science Weekly Seminar Series, Rochester, NY.
- m. 2011. Invited participant for United Nations Global Pulse (<http://www.unglobalpulse.org/>) Rapid Impact and Vulnerability Analysis Fund (RIVAF) Workshop, Manhattan, NY.
- n. 2011. *Geographic Information Science and Technology: An Overview*. Invited presentation given for Data Management Association Rochester/Upstate New York chapter (DAMA/RUNY), East Rochester, NY.
- o. 2010. Invited participant for United Nations Global Pulse (<http://www.unglobalpulse.org/>) Analytical Workshop sponsored by the Rockefeller Brothers Fund, Tarrytown, NY.
- p. 2010. *Geovisual Analytics and Sensemaking: Towards Approaches for Transforming Information into Knowledge*. Presentation given at Department of Geography, University of Heidelberg, Germany.
- q. 2009. Invited participant for Precision Information Environments workshop sponsored by the US Department of Homeland Security, Seattle, WA

Service

RIT Service

- a. 9/2016-present, Chair, GCCIS Governance Committee
- b. 5/2013-present, Advisor, Geographic Information Systems (GIS) Minor
- c. 9/2015-present, Member, IST Facilities Committee
- d. 9/2015-present, Member, IST Online Committee
- e. 10/2014, Member, Imagine RIT 2015 Drone Contest Committee

- f. 9/2013-2015, Chair, IST Curriculum Committee
- g. 1/2013-present, Chair and Founder, Center for Geographic and Spatial Information Science and Technology (CGSIST)
- h. 9/2012-present, Chair, RIT Esri Development Center
- i. 1/2012-present, Member, RIT Digital Humanities Committee
- j. 9/2011-2014, Member, GCCIS Student Scholars Committee
- k. 2/2014-9/2014, Member, GCCIS Ad-hoc Teaching Effectiveness Committee
- l. 11/2013-1/2014, Member, GCCIS Ad-hoc Enhancing Visibility Committee
- m. 1/2012-4/2012, Member, GCCIS Ad-hoc Scholarship Committee

Professional Service

- a. 2014 - 2016. Reviewer. *International Journal of Geographic Information Science*
- b. 2016. Reviewer. *International Journal of Information and Communication Technology*
- c. 2015. Reviewer. *Computers, Environments, and Urban Systems*
- d. 2015. Reviewer. *International Journal of Geo-Information*
- e. 2015. Reviewer. *GeoInformatica*
- f. 2015. Reviewer. *Transaction in GIS*
- g. 2014 – 2015. Reviewer. *Information Visualization*
- h. 2014 – 2015. Reviewer. *Journal of Geography*
- i. 2014 – 2015. Reviewer. *Journal of Homeland Security and Disaster Management*
- j. 2014 – 2015. Reviewer. *Natural Hazards*
- k. 2014. Panelist and Reviewer. National Science Foundation (NSF) Office of International Science and Engineering (OISE)
- l. 2014. Reviewer. *GIScience and Remote Sensing*
- m. 2014. Reviewer. *International Journal of Digital Earth*
- n. 2014. Reviewer and Scientific Committee. *11th International Conference on Information Systems for Crisis Response and Management (ISCRAM)*
- o. 2011–2014. Board member. Geographic Information Sharing/Special Interest Group (GIS/SIG).
- p. 2014–present. Advisory Board Member. Rochester STEM High School.
- q. 2013. Reviewer. *Computers and Graphics*
- r. 2013. Reviewer. *Geoforum*
- s. 2013. Reviewer. *Eurographics Conference on Visualization (EuroVis 2013)*
- t. 2013. co-Organizer and Track Chair. *Geographic Information Science and Technology and Crisis Management Special Paper Session. 10th International Conference on Information Systems for Crisis Response and Management (ISCRAM).*
- u. 2009 – 2013. RIT Delegate. University Consortium for Geographic Information Science (UCGIS)
- v. 2012. Visiting Scientist. United Nations University Institute for Environment and Human Security (UNU-EHS) – Bonn, Germany

- w. 2012. Paper Session Chair. "The United Nations and Ways to Address Climate Vulnerability". Association of American Geographers annual meeting, New York, NY
- x. 2012. Reviewer. *Autonomous Province of Bolzano (Northern Italy) Research Program*
- y. 2012. Reviewer. *Future Internet*
- z. 2012. Guest Editor. *Future Internet* – Special Issue on Geovisual Analytics.
- aa. 2012. co-Organizer and Track Chair. *Geographic Information Science and Technology and Crisis Management Special Paper Session*. 9th International Conference on Information Systems for Crisis Response and Management (ISCRAM).
- bb. 2011. Reviewer. *Computers and Geosciences*
- cc. 2011. Reviewer. *ACM Transactions on Computer-Human Interaction*
- dd. 2011. co-Organizer and Track Chair. *Geographic Information Science and Technology and Crisis Management Special Paper Session*. 8th International Conference on Information Systems for Crisis Response and Management (ISCRAM).
- ee. 2010. Visiting Scientist. United Nations Platform for Space-based Information for Disaster Management and Emergency Response group (UN-SPIDER), Bonn, Germany.
- ff. 2010. co-Program Chair. 7th International Conference on Information Systems for Crisis Response and Management (ISCRAM).
- gg. 2010. Reviewer. *Semantic Web – Interoperability, Usability, Applicability*
- hh. 2009. co-Organizer and Track Chair. *Geo-Information Support Special Paper Session*. 6th International Conference on Information Systems for Crisis Response and Management (ISCRAM).
- ii. 2008. co-Organizer and Track Chair. *Geographic Information Science Special Paper Session*. 5th International Conference on Information Systems for Crisis Response and Management (ISCRAM).
- jj. 2007. Founder, co-Organizer, and Track Chair. *Geographic Information Science and Crisis Management Special Paper Session*. 4th International Conference on Information Systems for Crisis Response and Management (ISCRAM).

Other – International Volunteer Service

- a. 2015. Analyst and Map Product Creator. International Charter on Space and Major Disasters - Charter Call 532: Typhoon Dolphin in the Northern Mariana Islands. <https://www.disasterscharter.org/web/guest/activations/-/article/cyclone-in-northern-mariana-islands>
- b. 2015. Analyst and Map Product Creator. International Charter on Space and Major Disasters - Charter Call 519: Typhoon Dolphin in the Northern Mariana Islands. <https://www.disasterscharter.org/web/guest/-/flood-in-bolivia-plurinational-state-of>

Other – Public Outreach

- a. 2015. Syrian refugee spatial thinking research featured in RIT University News story. <https://www.rit.edu/news/story.php?id=54274>
- b. 2015. Syrian refugee RIT student engagement activities featured in RIT GCCIS story. <https://www.rit.edu/gccis/news/syrian-refugee-illuminates-syria-crisis-rit-students-skype-call-za%E2%80%99atari-refugee-camp>
- c. 2015. Rwandan Medical Education Software Development work featured in igihe.com story. <http://mobile.igihe.com/ikoranabuhanga/mobayilo/article/kaminuza-yo-muri-amerika-yakoze-application-izafasha-abaganga-kwihugura>
- d. 2015. NSF Jordan activities featured in NSF News from the Field story. https://www.nsf.gov/news/news_summ.jsp?cntn_id=134394&org=NSF&form=news
- e. 2015. Malmö activities featured in RIT Athenaeum Magazine. <http://www.rit.edu/news/story.php?id=51194>
- f. 2014. Instructor for GetConnected! high school outreach event sponsored by IEEE and IST Department.
- g. 2014. Research activities with RIT Honors program featured in GCCIS news report. <https://www.rit.edu/gccis/news/honors-students-travel-boston-nyc-conferences-and-site-visits>
- h. 2014. Honors program teaching activities featured in Academic Affairs Newsletter. <https://www.rit.edu/provost/newsletter/fall2014/index.php?sub=true&page=hp>
- i. 2014. Outreach video added to “RIT Experts - a resource for journalists”. <https://www.youtube.com/watch?v=rciNCuQLjBE>
- j. 2014. Initiated and organized at RIT 20th Commemoration of the Rwandan Genocide event. <http://www.rit.edu/news/story.php?id=50647>
- k. 2014. Initiated and organized visit of Rochester STEM High School to IST/GCCIS.
- l. 2013. Spatial Thinking Game research featured in RIT Athenaeum Magazine. http://www.rit.edu/news/athenaeum_story.php?id=50444
- m. 2013. Rwanda research featured in RIT University News. <http://www.rit.edu/news/story.php?id=50292>
- n. 2013. Spatial Thinking Game research featured in Government Computer News (CGN). <http://gcn.com/articles/2013/07/09/serious-game-tests-disaster-response-skills.aspx>
- o. 2013. Spatial Thinking Game research in RIT Athenaeum Magazine. http://www.rit.edu/news/athenaeum_story.php?id=50444
- p. 2012. IST graduate student advisee featured in RIT News Student Spotlight. <http://www.rit.edu/news/story.php?id=49647>
- q. 2012. IST Graduate Students from my Geographic Information Science and Technology class featured for Hurricane Sandy Social Media application they developed. <http://www.rit.edu/news/story.php?id=49508>

- r. 2012. Facilitated Geographic Information Science and Technology Exhibit for ImagineRIT.
- s. 2012. Organized visit of guest speaker from International Crisis Mappers Community. <http://www.rit.edu/news/story.php?id=49090>
- t. 2011. United Nations research outreach featured in *Research at RIT* Magazine.
- u. 2011. GIS assistance with flood recovery efforts with local high school featured in Rochester Democrat and Chronicle. <http://www.democratandchronicle.com/article/20111005/NEWS01/111004027/Livonia-students-assist-flood-recovery-Owego>
- v. 2011. Invited field trip with SUNY Geneseo featured in RIT University News. <http://www.rit.edu/news/story.php?id=48412>
- w. 2011. United Nations research outreach featured in RIT University News. <http://www.rit.edu/news/story.php?id=48139>
- x. 2010. Served as visiting Research Scientist with
- y. 2009. Facilitated GIS outreach event for High School students – “Livonia Students Learn to Map Disasters with Geographic and Imaging Systems”. <http://www.rit.edu/news/?v=47126>

Current Professional Memberships

- a. Association of American Geographers - Member of GIS, Cartography, Historical, and Hazards specialty groups.

Honors and Awards

- a. 2016. Provost Innovative Teaching with Technology. Rochester Institute of Technology. <https://www.rit.edu/academicaffairs/facultyawards/provost-technology-award.php>
- b. 2009. Young scholar travel award to attend the 24th annual meeting of the International Cartographic Conference (ICC) in Santiago, Chile. Grant provided by the United States National Committee of the ICA.

Professional Development

- a. 2014. *Working with Foundations Workshop*. RIT Sponsored Research Services
- b. 2014. Esri International User Conference, San Diego, CA.
- c. 2013. Africa GIS, Addis Ababa, Ethiopia.
- d. 2012. University Consortium for Geographic Information Science summer assembly meeting, Washington, DC
- e. 2012. *Project Evaluation and Assessment*. RIT Sponsored Research Services
- f. 2009. *Planning a Successful Proposal*, RIT Center for Professional Development
- g. 2009. Essential of Online Teaching, RIT Center for Professional Development