

## Curriculum Vitae

Name: Helmut Kraenzle, Ph.D.  
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### Current Position At James Madison University, Harrisonburg Virginia

05/2016 – present Primary contact to United States Geospatial Intelligence Foundation (USGIF) for USGIF GEOINT Certificate Program at JMU  
08/2002 – present Professor, tenure track  
08/2006 – 7/2009 Director of Geographic Science Program  
05/2005 – present Leading, Organizing and Hosting the Shenandoah Valley GIS Users Group  
2010 – present Faculty Advisor for Gamma Theta Upsilon (GTU), International Geographical Honor Society  
2002 Madison Scholar, College of Integrated Science and Technology  
09/1996 – 08/2002 Associate Professor, tenure track  
08/2000 – 06/2001 Interim Department Head, Department of Geographic Science  
1998 – 8/2010 Director, Applied Spatial Research Center  
08/1997 – 5/2010 Geographic Information Science Team Leader, Mine Action Information Center

### Other Positions

08/2005 – 06/2006 Director and Professor, United Arab Emirates University, Abu Dhabi and Al Ain, UAE, Masters Program of Remote Sensing and GIS (unpaid leave from JMU)  
2014 – 02/2020 Member of GIS Certification Institute (GISCI) Board of Directors representing University Consortium for Geographic Information Science (UCGIS)

### Professional Experience

**2002-2004 Technical Advisor for US Department of State for the Southeast Europe Mapping Project**

**11/1993 - 09/1996 Specialist for Geographic Information Systems, Department of Radio Network Planning, E-Plus Mobilfunk GmbH Düsseldorf, Germany**

Supervisor of the “Geographical Services” department with six full-time professionals and five part-time employees. The department included the sections “Spatial Data Bases,” “Radio Network Planning Data” and “Radio Coverage Analysis.” Responsible for the

organization, professional coordination and financial planning of the department. Led the data procurement process and the technical area during contract negotiations. Within the section "Spatial Data Bases," responsible for the provision and ongoing update of high resolution raster and vector data (e.g., land use data, population data, digital terrain models, digital building heights, digital topographic maps, digital street network) for Germany and areas of the surrounding countries. Database size: 30 GB.  
Budget responsibility per year: US\$ 3,000,000.

**10/1991 - 11/1993    Diplomgeograph (M.Sc. Geography), Deutsche Telepost Consulting GmbH, transition of the company into, Deutsche Telekom Mobilfunk GmbH, Bonn, Germany**

Project: set-up of a graphical information system covering all mobile communication networks and preparing them for service, sales and marketing. Leader of the team "Visualization of Planning Data in the Field of Mobile Communication." Development of an acquisition process of digital building heights in urban areas. Co-supervision of the digital terrain model and the land use data for Germany, particularly, professional consultant and assessor for advertisements and offers, participation in contract negotiations. Maintenance of hard- and software for applications using ARC/INFO and ERDAS. Operational planning for graphical hardware and software.

**01/1989 - 08/1991    Assistant Professor, University of Munich, Department of Geography and Remote Sensing, Munich, Germany**

Courses in FORTRAN and graphical programming, computer cartography (AUTOCAD), satellite image interpretation, GIS (Arc/Info), statistics (SPSS) as well as fieldwork and excursions. Representation of the Department in national and international scientific committees. Maintenance of hardware and software. Financial administration of the Departmental excursions. Research within the framework of the thesis "Measuring, Computing and Fractal Modeling of Coastlines."

**09/1991, 10/1992,    Guest Lecturer, James Madison University, Department of  
09/1993, 09/1994    Geography and Geology, Harrisonburg, VA, USA**

Block courses in computer cartography (AUTOCAD) and Geographic Information Systems (ARC/INFO).

**1983 - 1988            Departmental graduate assistant, University of Munich,  
Department of Geography and Remote Sensing, Munich,  
Germany**

Focus on designing software for presenting graphical data in the area of computer cartography and programming of an interface between a CAD digitizing system and a mainframe computer.

**1986                    Intern, Institute for Image Processing and Computer Graphics,  
Graz, Austria**

Software design for the Graz Terrain Model (GTM).

## University Courses Taught

- Applied GIS Program, James Madison University (selection)
  - Geographic Tools
  - Geographic Information Science (various classes)
  - Spatial Databases
  - GIS Project Management
  - Spatial Thinking and Problem Solving
  - Introduction to Python Programming for GIS
  
- General Education Program, James Madison University
  - Global Dimensions
  
- Masters of Science, Integrated Science and Technology, James Madison University
  - Reading and Research – Geographic Information Systems
  - Reading and Research – Applied Geographic Information Systems
  
- Geography Program, United Arab Emirates University, Al Ain, UAE
  - Geographic Information Science
  - Remote Sensing (1)
  
- Master Program of Remote Sensing and Geographic Information Science, United Arab Emirates University, Abu Dhabi, UAE
  - Fundamentals of Geographic Information Systems
  - Spatial Analysis Using GIS
  - Seminar in Management Issues in Remote Sensing and GIS
  
- Ludwig-Maximilians-Universitaet of Munich
  - Structural FORTRAN Programming
  - Graphics Programming
  - Computer Cartography
  - Introduction to SPSS
  - Introduction to Geography
  - Introduction to Remote Sensing
  - Introduction to Field Methods

## Educational Background

- 1989-1991 University of Munich, Germany, Ph.D. Natural Science  
Thesis: Messung, Berechnung und fraktale Modellierung von Küstenlinien (Measuring, Calculating, and Fractal Modeling of Coastlines)
- 1982-1988 University of Munich, Germany, Diploma in Geography, Minor in Computer Science and Cartography

## Language Skills:

German, native  
English, professional  
Latin, basics

## Scholarly Achievements

### 1. Funded Grants and Projects

In the last 22 years at James Madison University years I was the principal investigator (PI), Co-PI or project director of 25 grants or projects. More than 125 students have been involved in these grants, and the total value of all projects was more than \$1,030,000. I was the 2002 recipient of the College of Integrated Science and Technology Madison Scholar Award for long-term excellence in research.

#### **Early Childhood Needs Assessment and Fiscal Mapping, 2012-2013**

Sponsor: Virginia Department of Social Services, \$400,000 (PI Dr. Teresa Harris, Co-PI's Dr. Helmut Kraenzle, Dr. Susan Barnes, Dr. John Almarode)

#### **Global Positioning in Humanitarian Mine Action: Users Handbook, 2012**

Sponsor: The Geneva International Centre for Humanitarian Demining, \$11,000 (CHF 10,000), (PI Dr. Ken Rutherford, Co-PI Dr. Helmut Kraenzle).

#### **Create an Online GPS Course Module, 2011**

Sponsor: James Madison University, College of Integrated Science and Technology, \$500 (PI).

#### **Mapping the Current and Potential Distribution of Red Spruce (*Picea Rubens*) in Virginia: Implications for the Restoration and Degraded High Elevation Habitat, 2009**

Sponsor: James Madison University, College of Integrated Science and Technology, \$1,000 (Co-PI with Dr. Zack Bortolot and Dr. Heather Griscom)

#### **Archaeological Advisor II Grant, 2008-2009**

Sponsor: Shenandoah National Park, Virginia, \$25,000 (PI Dr. Helmut Kraenzle, Co-PI Dr. Carole Nash)

**Open Source Geographic Information System Learning Module, 2008-2009**  
Sponsor: James Madison University, College of Integrated Science and Technology,  
\$4,000

**Open Source Geographic Information System for Simulating Container Movement (GISSCM), 2007**  
Sponsor: Institute for Infrastructure and Information Assurance, James Madison University, \$8,861

**Geographic Information System for Simulating Container Movement, 2004-2005**  
Sponsor: Institute for Infrastructure and Information Assurance, James Madison University, \$48,431

**GIS Support for the Southeast Europe Mapping Initiative, 2003**  
Sponsor: US Department of State, \$53,000

**Spatial Information Clearinghouse, 2003-2004**  
Sponsor: US Department of State, \$83,000

**GIS Support for the SE Europe Mapping Initiative, 2002**  
Sponsor: US Department of State, \$46,000

**Spatial Information Clearinghouse, 2002**  
Sponsor: US Department of State, \$54,000

**Expand and Enhance the Clearinghouse of GIS Spatial Data, 2000-2001**  
Sponsor: US Department of Defense, Defense Security Cooperation Agency, \$8,000

**Implementing/Expanding the Clearinghouse of GIS Spatial Data, 1999-2000**  
Sponsor: US Department of Defense, Defense Security Cooperation Agency, \$26,500

**Developing a GIS for the Office on Children and Youth, 1999-2000**  
Sponsor: Office of Children and Youth, Harrisonburg and Rockingham County, \$2,000

**Shenandoah Valley Battlefields National Historic District Amendment, 1999-2000**  
Sponsor: US Department of Interior, \$21,750

**Feasibility Study to Develop a Clearinghouse for Demining Spatial Data, 1998-2000**  
Sponsor: US Department of Defense, Defense Security Cooperation Agency, \$52,200

**GIS Course Development for the Center for Security Studies and Conflict Research in Zurich, Switzerland, 1998-1999**  
Sponsor: Center for Security Studies and Conflict Research, Zurich, Switzerland, \$1,395

**GIS Prototype Development for the Center for Security Studies and Conflict Research in Zurich, Switzerland, 1998-1999**

Sponsor: Center for Security Studies and Conflict Research, Zurich, Switzerland, \$14,380

**GIS Consulting Report for the Center for Security Studies and Conflict Research in Zurich, Switzerland, 1998-1999**

Sponsor: Center for Security Studies and Conflict Research, Zurich, Switzerland, \$3,000

**National Spatial Data Infrastructure Cooperative Agreements Program, 1998-2000**

Sponsor: Federal Geographic Data Committee/US Geological Survey, \$38,965

**GIS CACTA/SEADAB Database Support, 1998-1999**

Sponsor: Management Support Technology, Inc., \$22,000

**International Mapping/GIS Conference for Humanitarian Demining, 1997-1998**

Sponsor: Office of the Assistant Secretary of Defense, Special Operations and Humanitarian Affairs, \$33,000 (approximate)

**ArcView Customizing for the Demining Support System in Bosnia, 1997-1998**

Sponsor: US Department of Defense under the auspices of Star Mountain, Inc., \$52,900

**Plotting with ArcView on the Demining Support System, 1996-1997**

Sponsor: US Department of Defense under the auspices of Star Mountain, Inc., \$5,000 (approximate)

**Demining Geographic Information System Database, 1996-1997**

Sponsor: US Department of Defense under the auspices of Star Mountain, Inc., \$16,000 (approximate)

In charge of the following **projects at E-Plus Mobile Communications, 1993-1996:**

- **Specification and procurement of landuse classification from 50 Landsat images, 25 m resolution, 15 classes, 400,000 sq km**
- **Specification and procurement of 3D building models for major German cities, resolution 5 m and below**
- **Specification and procurement of scanned topographic maps with the scale 1:1,000,000, 1:500,000, 1:200,000 and 1:50,000. Approximately 1000 maps**
- **Acquisition of population data, 100 m resolution, 350,000 sq km**
- **Acquisition of complete street network data, including all road types and pedestrian zones for Germany, meter accuracy**
- **Acquisition of Digital Terrain Model, 30 m resolution, 350,000 sq km**
- **Acquisition of administrative boundary data for Germany.**
- **Quality control and certification of above spatial databases.**

Total far exceeds \$ 3,000,000

Projects at DeTeMobil between 1991-1993:

- **Acquisition of a plot spooling system for the main branch.**
- **“D-1 Network Imaging” needs assessment project.**

- **Strategic Project to create a “Graphical Information System for Service Representatives for the D-1 Cellular Phone System.”**

Total approximately \$ 60,000

## **2. Publications**

**Kraenzle, H. (2009):** “Open Source Geographic Information System (GIS) for Simulating Container Movement” and “Shenandoah Valley GIS Users Group”. In: The Virginia Geospatial Newsletter.

**Category: Online Newsletter Article**

**Kraenzle, H. (2006):** Monitoring Shipping Containers Using ArcGIS. In: Proceedings of 2006 ESRI Homeland Security GIS Summit. Denver, Colorado, United States, October 23-26, 2006.

**Category: Invited Paper**

**Kraenzle, H. (2006):** Container Security with Geographic Information System. In: GIS Development Middle East, July-August 2006, Volume 2, Issue 4, GIS Development Branch, Dubai, United Arab Emirates, pp. 34-39.

**Category: Refereed Journal Article**

**Kraenzle, H. (2006):** Tracking Shipping Containers with a Geospatial Information System for National Security. In: Proceedings of Map Middle East 2006. Dubai, United Arab Emirates, March 26-29, 2006.

**Category: Invited Paper for Key Note Address in Special Track on National Security. Best Paper Award**

**Kraenzle, H., Cahill, E., Chenault, M., Kopek, K., McCarthy, M. and Ozeki, A. (2004):** Geographic Information System for Simulating Container Movement. In: Woodcock, Alexander (Ed.): The Critical Infrastructure Protection Project – Vol. 2. George Mason University Press, Fairfax, Virginia, Sept. 2004.

**Category: Journal Article**

**Kraenzle, H., Cahill, E. (2003):** Using a Web Based Spatial Data Clearinghouse Supporting Humanitarian Demining. In: Sahli, H., Bottoms, A.M., Cornelis, J. (Eds.): EUDEM2-SCOT 2003, International Conference on Requirements and Technologies for the Detection, Removal and Neutralization of Landmines and UXO. Vrije Universiteit Brussel, Brussels, Belgium, September 15-18, 2003.

**Category: Refereed Journal Article**

**Kraenzle, H., Beale, G.M. (2001):** The Development of the Spatial Information Clearinghouse in Support of Humanitarian Demining. In: Journal of Mine Action, Online Journal, Issue 5.2: Landmines in Latin America, James Madison University, Harrisonburg, Virginia, August 2001. URL: Mine Action Information Center: <http://maic.jmu.edu/hdic/journal/5.2/features/spatial.htm>. August 2001.

**Category: Refereed Journal Article and Online Journal Article**

**Kraenzle, H. (2000):** Building a GIS Spatial Data Clearinghouse in Support of Global Mine Action. In: Proceedings of Global Mine Action Information Coordination Workshop, James Madison University, Harrisonburg, Virginia, USA, April 19-21, 2000.  
**Category: Invited Paper**

**Kraenzle, H. (1999):** GIS and Spatial Databases for Land Mine Mapping. In: Remote Sensing for Environmental Data in Albania. NATO Science Series, 2. Environmental Security – Vol. 72. 2000 Kluwer Academic Publishers, Netherlands. Pp. 179-185.  
**Category: Refereed Series**

**Kraenzle, H. (1999):** GIS-Markt und Ausbildungssituation in den USA (The GIS Market and GIS Education in the USA). In: Geo-Informationssysteme, Wichmann Verlag, Karlsruhe, March, 2000, pp 6-8.

**Category: Refereed Journal Article**

**Kraenzle, H., Baggett, M., Brooks, L., Coombes, R. (1999):** GIS and Spatial Database Support to Humanitarian Demining Activities. In: Proceedings of the Australian-American Joint Conference on the Technologies of Mines and Mine Countermeasures, Sydney, Australia, July 12-16, 1999.

**Category: Invited Paper**

**Kraenzle, H. (1999):** Trends der GIS Entwicklung in den USA (Trends of the GIS Development in the USA). In: Proceedings of the Fourth Geo-Information-Systems Seminar 1999. Technical University of Munich, Germany, March 10 – March 12, 1999, 12pp.

**Category: Invited Paper**

**Kraenzle, H. (1998):** Developing a Geographic Information System for Humanitarian Demining. In: Proceedings of the Third International Symposium on Technology and the Mine Problem, Naval Postgraduate School, Monterey, California, USA, April 6-9, 1998, 4pp.

**Category: Invited Paper**

**Kraenzle, H. (1997):** A Geographic Information System for Humanitarian Demining. In: Proceedings of the Mapping/GIS for Humanitarian Demining Conference, James Madison University, Harrisonburg, Virginia, December 16-17, 1997, 7pp.

**Category: Invited Paper**

**Gentile, J., Gustafson, G., Kimsey, M., Kraenzle, H., Wilson, J., Wright, S. (1997):** Use of Imagery and GIS for Humanitarian Demining Management. In: SPIE Proceedings: The International Society for Optical Engineering, Vol. 3128, pp 104-109. (<http://www.hdic.jmu.edu/hdic/journal/2.1/gustafson.htm>)

**Category: Invited Paper**

**Patzig, S., Kränzle, H. (1996):** Landnutzungsdaten für die Funknetzplanung bei E-Plus (Land Use Data for Communication Network Planning at E-Plus). In: ISPRS (Ed., 1996): Commission IV, Working Group I, International Archives of Photogrammetry and Remote Sensing, Vol. XXXI, Part B4, p. 640-644, Vienna, Austria.

**Category: Refereed Paper**

**Kränzle, H. (1995):** Einsatz von Fernerkundungsdaten beim Aufbau eines Mobilfunknetzes (Use of remote Sensing Data in the Development of a Mobile Communications Network). In: Proceedings zum 1. Space Congress in Bremen, 23.-24. May 1995, European Space Report, München, pp. 2-7.

**Category: Invited Paper**

**Kränzle, H. (1995):** Fernerkundungsdaten und GIS bei der Planung eines Mobilfunknetzes (Remote Sensing Data and GIS in the Planning of a Mobile Communications Network). In: Geo-Informations-Systeme, Jg. 8, Heft 3/1995, Wichmann Verlag Karlsruhe, pp. 13-18.

**Category: Refereed Journal Article**

**Kränzle, H. (1994):** Messung und Berechnung von Küstenlinien mit Fernerkundungsdaten (Measurement and Calculation of Shorelines Using Remote Sensing Data). In: Mitteilungen der Geographischen Gesellschaft in München, Band 79, pp. 119-138.

**Category: Refereed Series**

**Kränzle, H. (1992):** Fraktale Modellierung von Küstenlinien (Fractal Modeling of Shorelines). In: Geo-Informations-Systeme, Vol.5, No. 1/1992, Wichmann Verlag Karlsruhe, pp. 12-17.

**Category: Refereed Journal Article**

**Kränzle, H. (1991):** Die Generierung von Küstenlinien mit fraktalen Modellen (The Generating of Shorelines Using Fractal Modeling). In: Wieneke, F. (Hrsg.): Beiträge zur Geographie der Meere und Küsten - Vorträge der 9. Jahrestagung München 22. bis 24. Mai 1991. Münchener Geographische Abhandlungen, Band B13, 1993, pp. 125-135.

**Category: Refereed Series**

**Kränzle, H. (1991):** The Coastline, its Measurement and Fractal Modelling. Proceedings of the 11th EARSeI Symposium, Graz, Austria, Jul. 3-5, pp. 46-56, EARSeI Secretariat, B.P.209, F-92108 Boulogne-Billancourt, France.

**Category: Refereed Paper**

**Kränzle, H. (1991):** Messung, Berechnung und fraktale Modellierung von Küstenlinien (Measuring, Calculating, and Fractal Modeling of Shorelines). In: Münchener Geographische Abhandlungen, Volume 10, München. 166 pages. ISBN 3 925 308 95 4.

**Category: Refereed Series**

**Kränzle, H. (1989):** Die Staaten der Erde und ihr Kartenbedarf. Untersuchungen anhand von Bevölkerungsdichte und Bevölkerungsverteilung (Nations of the Earth and Their

Demand for Maps: Examinations Based on Population Density and Demographic Distributions). In: Die Geowissenschaften, 7. Jahrg. 1989, Nr. 11, Weinheim, pp. 324-329.  
**Category: Refereed Journal Article**

### 3. Published Presentation

**Kraenzle, H. (1998):** Customizing a GIS and Designing Spatial Data Bases for Bosnia. In: Proceedings of Demining Technologies – International Exhibition, Workshops and Training Courses. Joint Research Center, Ispra, Italy, September 29 – October 1, 1998. pp. 177-181

### 4. Technical Reports

Harris, T., Almarode, J., Barnes, S., Grays, M., **Kraenzle, H.** (2014): Virginia Early Childhood Needs Assessment Report. James Madison University. 89 pages.

**Kraenzle, H. (2000):** Spatial Information Clearinghouse Survey Results. Department of Geographic Science, James Madison University, Harrisonburg, Virginia, 22807. 17 pages.

**Kraenzle, H. (1999):** Clearinghouse Feasibility Study for Defense Security Cooperation Agency, Department of Defense, Washington, D.C., USA, December 15, 1999. 49 pages.

**Kraenzle, H.,** Coombes, R. (1999): Geographic Information System Prototype Description for the Center for Security Studies and Conflict Research in Zurich, Switzerland. Center for GIS, James Madison University, Harrisonburg, Virginia 22807, January 15, 1999. 12 pages.

**Kraenzle, H.,** Gustafson, G., Wilson, J. (1998): GIS Consulting Report for the Center for Security Studies and Conflict Research in Zurich, Switzerland. Center for GIS, James Madison University, Harrisonburg, Virginia 22807, October 31, 1998. 32 pages.

Gentile, J., Gustafson, G., Kimsey, M., **Kraenzle, H.,** Wilson, J., Wright, S. (1996): A Geographic Information System Database of Cambodia for the Humanitarian Demining Support System. Center for GIS, James Madison University, Harrisonburg, Virginia 22807, November 1, 1996.

Gentile, J., Gustafson, G., Kimsey, M., **Kraenzle, H.,** Wilson, J., Wright, S. (1996): A Review of Geographic Information System Software for the Humanitarian Demining Support System. Center for GIS, James Madison University, Harrisonburg, Virginia 22807, November 1, 1996.

## **5. Presentations (selection)**

**March 26, 2019 at the Virginia GIS Conference GeoCon 2019, Harrisonburg, Virginia:**

“Challenges with GIS Project Management”

**Category: Invited Presentation, national**

**May 15, 2015 at the Shenandoah Valley GIS Users Group at James Madison University, Harrisonburg, Virginia:**

“Using Drones in Geography.”

**Category: Invited Presentation, national**

**May 7, 2013 at the Conference on Virginia Early Childhood Need, Assessment Data Day at James Madison University, Harrisonburg, Virginia:**

“GIS for Child Care in Virginia”.

**Category: Invited Presentation, national**

**October 5, 2012 at the College of Integrated Science and Technology Faculty Research Day, James Madison University, Harrisonburg, Virginia.:**

“GIS for Virginia Early Childhood Needs Assessment.”

**Category: Poster Presentation, national**

**September 21, 2012 at the Shenandoah Valley GIS Users Group at James Madison University, Virginia:** Together with Leeanne Jackson:

“Introduction to Python Programming.”

**Category: Invited Presentation, national**

**August 16, 2012 at conference of People Educating All Young Children (PEAYC) in Staunton, Virginia.** Together with Almarode, J., Barnes, S., Harris, T.,:

“Virginia Early Childhood Needs Assessment.”

**Category: Invited Presentation, national**

**February 24, 2012 at the Association of American Geographers, Annual Meeting, New York City, New York.** Together with Amy Ozeki.

“Attracting Tourism in Page County, Virginia with an Interactive GIS Online.”

**Category: Invited Presentation, national**

**February 10, 2012 at the Shenandoah Valley GIS Users Group at James Madison University, Virginia:** Together with Almarode, J., Barnes, S., Harris, T.,:

“Creating a GIS Supporting Early Childhood Needs Assessment in Virginia.”

**Category: Invited Presentation, national**

**January 5, 2012 at the Virginia Department of Social Services, Early Childhood Advisory Council, Richmond, Virginia:** Together with Almarode, J., Barnes, S., Harris, T.,: “Virginia Early Childhood Needs Assessment.”

**Category: Invited Presentation, national**

**November 28, 2011 at the Rotary Club in Lury, Virginia.** Together with Amy Ozeki:  
“GIS in Page County and the Towns of Luray, Stanley and Shenandoah.”

**Category: Invited Presentation, national**

**October 14, 2011 at the College of Integrated Science and Technology Faculty Research Day, James Madison University, Harrisonburg, Virginia.** Together with Amy Ozeki:

“Enhancing Tourism in Page County, Virginia with Internet GIS.”

**Category: Poster Presentation, national**

**October 1, 2010 at the College of Integrated Science and Technology Faculty Research Day, James Madison University, Harrisonburg, Virginia.:**

“Fractal Modeling of Coastlines and the Fractal Language.”

**Category: Poster Presentation, national**

**September 10, 2010 at the Virginia GIS Conference 2010, ESRI & Virginia Association for Mapping and Land Information Systems & Virginia Association of Planning District Commissions, Glen Allen, Virginia,**

“Panel Member Presentation on Hot Topics Updates from GIS Users Groups Around the State.”

**Category: Invited Presentation, national**

**April 18, 2010 at Association of American Geographers, 2010 Annual Meeting, Washington, D.C.:**

“Measurement and Fractal Modeling of Coastlines.”

**Category: Invited Presentation, national**

**October 21, 2009 at James Madison University Visual Studies Colloquium, Harrisonburg, Virginia:**

“Visualization Worldwide Container Movement Using a GIS Simulation.”

**October 9, 2009 at the College of Integrated Science and Technology Faculty Research Day, James Madison University, Harrisonburg, Virginia.:**

“Measurement and Fractal Modeling of Coastlines.”

**Category: Poster Presentation, national**

**October 3, 2008 at the College of Integrated Science and Technology Faculty Research Day, James Madison University, Harrisonburg, Virginia.:** Together with Griscom, H., Bortolot, Z.:

“Mapping the current and potential distribution of red spruce (*Picea rubens*) in Virginia.”

**Category: Poster Presentation, national**

**February 4, 2008 at the Virginia Association of Forest Health Professionals, 16<sup>th</sup> Annual Review, Charlottesville, Virginia:**

“Red Spruce Reforestation and Climate Change.” (with Dr. Heather Griscom)

**Category: Invited Presentation, national**

**November 5, 2007 at the United Nations Development Programme (UNDP), Senior Managers Workshop, James Madison University, Virginia:**

“Introduction to GIS and Geospatial Data.”

“GIS Planning and Management.”

**November 2, 2007 at the Virginia Innovation Showcase, McLean, Virginia:**

“Open Source Container GIS”.

**Category: Invited Presentation, national**

**October 12, 2007 at the Institute for Infrastructure and Information Assurance Advisory Board Meeting, James Madison University:**

“GIS Container Tracking.”

**September 14, 2007 at the Institute for Infrastructure and Information Assurance, James Madison University:**

“Open Source GIS for Simulating Container Movement.”

**May 4, 2007 at the Shenandoah Valley GIS Users Group at James Madison University, Virginia:**

“Open Source GIS and Data Interoperability.”

**Category: Invited Presentation, national**

**March 20, 2007 at Towson University Annual Geographic Information Sciences Conference, Towson, Maryland:**

“Tracking Worldwide Container Freight Using ArcGIS.”

**Category: Invited Presentation, international**

**October 25, 2006 at ESRI Homeland Security Summit, Denver, Colorado:**

“Monitoring Shipping Containers Using ArcGIS”.

**Category: Invited Presentation, international**

**June 14, 2006 at the United Nations Development Programme (UNDP), Senior Managers Workshop, James Madison University, Virginia:**

“Introduction to GIS and Geospatial Data.”

“GIS Planning and Management.”

**May 17, 2006 at the United Arab Emirates, Abu Dhabi Science Club:**

“A Retrospective on GIS and Spatial Database Applications in the Telecommunications Industry.”

**Category: Invited Presentation, international**

**March 29, 2006 at the Map Middle East 2006 Conference on Geospatial for All, All for Geospatial, Dubai World Trade Center, Dubai, United Arab Emirates, March 26-29, 2006:**

“Tracking Shipping Containers with a Geospatial Information System for National Security.”

**Category: Invited Presentation, international, Key Note Address**

**October 12, 2005 at the United Nations Development Programme (UNDP), Senior Managers Workshop, James Madison University, Virginia:**

“Introduction to GIS and Geospatial Data.”

“GIS Planning and Management.”

**July 12, 2005 at the United Nations Development Programme (UNDP), Senior Managers Workshop, James Madison University, Virginia:**

“Introduction to GIS and Geospatial Data.”

“GIS Planning and Management.”

**June 13, 2005 at the International Master of Science in Geographic Information Systems Program at the University of Redlands, Redlands, California:**

“GIS Project Management.”

“Developing a GIS for Monitoring Containers Worldwide.”

**Category: Invited Presentation, national**

**May 9, 2005 at the Third Annual Institute for Infrastructure and Information Assurance (IIA) Research Symposium at James Madison University, Harrisonburg, Virginia:**

“A Geographic Information System for Simulating International Container Movement.”

**Category: Invited Presentation, national**

**May 6, 2005 at the Shenandoah Valley GIS Users Group at James Madison University, Virginia:**

“GIS for Monitoring Containers Worldwide.”

**Category: Invited Presentation, national**

**December 3, 2004 at the ESRI Mid-Atlantic Users Conference, Silver Spring, Maryland:**

“Visualizing Container Movement with a GIS for Homeland Security.”

**Category: Invited Presentation (keynote speaker), national**

**October 25, 2004 at the Old Dominion University Computer Science Colloquium, Old Dominion University, Norfolk, Virginia:**

“Securing United States Ports Using a Geographic Information System.”

**Category: Invited Presentation, national**

**October 1, 2004 at the United Nations Development Programme (UNDP), Senior Managers Workshop, James Madison University, Virginia:**

“Introduction to GIS and Geospatial Data”

“GIS Project Management”

**Category: Invited Presentation, international**

**September 30, 2004 at the Critical Infrastructure Protection Project, Second Annual Workshop at George Mason University School of Law, Warrenton, Virginia:**

“Geographic Information System for Simulating Container Movement.”

**Category: Invited Presentation, national**

**May 11, 2004 at the Second Annual Institute for Infrastructure and Information Assurance (IIA) Research Symposium at James Madison University, Harrisonburg, Virginia:**

“A Geographic Information System for Simulating Container Movement.”

**Category: Invited Presentation, national**

**May 5, 2004 at the US Department of State, Washington D.C.:**

“Conclusion of Spatial Information Clearinghouse Project and Technical Advisory Activities for South East Europe Mapping Project for Department of State.”

**Category: Invited Presentation, national**

**March 19, 2004 at American Association of Geographers Conference in Philadelphia, Pennsylvania, USA:**

“Spatial Data Clearinghouse for Humanitarian Demining.” (Poster Presentation)

**Category: Invited Presentation, national**

**October 3, 2003 at James Madison University, Harrisonburg, Virginia to the US Department of State:**

“Progress of Grant Activities.”

**Category: Invited Presentation, national**

**September 16, 2003 at the International Conference on Requirements and Technologies for the Detection, Removal and Neutralization of Landmines and UXO, Vrije Universiteit Brussels, Brussels, Belgium.**

“Using a Web Based Spatial Data Clearinghouse Supporting Humanitarian Demining.”

**Category: Invited Presentation, international**

**September 16, 2003 at the International Conference on Requirements and Technologies for the Detection, Removal and Neutralization of Landmines and UXO, Vrije Universiteit Brussels, Brussels, Belgium.**

“Liability and Humanitarian Mine Action.”

**Category: Invited Presentation, international**

**October 4, 2002 at James Madison University:**

“Undergraduate Research in the International Humanitarian Demining Workplace.”

**Category: Presentation, local**

**May 23-24, 2002 at Applied University of Munich:**

“GIS Education at James Madison University.”

“GIS and Humanitarian Demining.”

**Category: Invited Presentation, international**

**January 25, 2002 at the visit of the National Ground Intelligence Center at JMU:**

“Geographic Information Systems for Humanitarian Demining and the Spatial Information Clearinghouse.”

**Category: Presentation, local**

**December 10, 2001 at the Advisory Board Meeting for the SE Europe Mapping Project, Ig, Slovenia:**

“Regional Imagery and Land Cover Products for the International Trust Fund for Demining. Prepared by Earth Satellite Corporation.”

**Category: Invited Presentation, international**

**June 21, 2001 at the Workshop of a GIS based 1:100,000 Planning Map for SE Europe, Ig, Slovenia:**

“The Development of a Spatial Information Clearinghouse for Humanitarian Demining.”

**Category: Invited Presentation, international**

**April 27, 2001 at the Shenandoah GIS Users Group Meeting, James Madison University, Harrisonburg, Virginia, USA:**

“The Spatial Information Clearinghouse for Humanitarian Demining.”

**Category: Invited Presentation, local**

**December 14, 2000 at the US Department of State, Washington D.C.:**

“Spatial Information Clearinghouse in Support of Humanitarian Demining.”

**Category: Invited Presentation, national**

**April 21, 2000 at the International Coordination Workshop for Global Mine Action Information, James Madison University, Harrisonburg, Virginia, USA:**

“Building a GIS Spatial Data Clearinghouse in Support of Global Mine Action.”

**Category: Invited Presentation, international**

**November 26, 1999 at the Swiss Federal Institute of Technology Zurich, Institute of Geodesy and Photogrammetry Zurich, Switzerland:**

“GIS in the United States of America.”

**Category: Invited Presentation, international**

**October 9, 1999 at the NATO Advanced Research Workshop on “Remote Sensing for Environmental Data in Albania – A Strategy for Integrated Management,”  
Tirana, Albania:**

“GIS and Spatial Data Bases for Land Mine Mapping.”

**Category: Invited Presentation, international**

**March 10, 1999 at the 4. Geo-Information-Systems Seminar 1999, Technical University of Munich, Germany:**

“Trends der GIS Entwicklung in den USA.”

(Trends of the GIS Development in the USA)

**Category: Invited Presentation, international**

**September 30, 1998 at the International Conference “Demining Technologies – International Exhibition, Workshops and Training Courses”, Joint Research Center, Ispra, Italy:**

“Customizing a GIS and Designing Spatial Data Bases for Bosnia.”

**Category: Invited Presentation, international**

**April 24, 1998 at the Shenandoah Valley GIS Coordinating Meeting, James Madison University, Harrisonburg, Virginia, USA:**

“GIS activities at James Madison University.”

**Category: Invited Presentation, local**

**April 9, 1998 at Third International Symposium on Technology and the Mine Problem, Naval Postgraduate School, Monterey, California, USA:**

“Information Management Developing a Geographic Information System for Humanitarian Demining.”

**Category: Invited Presentation, refereed, national**

**March 28, 1998 at the Association of American Geographers 94<sup>th</sup> Annual Meeting, Boston, USA:**

“Geographic Information Systems and Spatial Data Bases in the Telecommunication Industry.”

**Category: Invited Presentation, national**

**December 17, 1997 at International GIS/GPS Conference for Humanitarian Demining at James Madison University, Harrisonburg, USA:**

“Geographic Information System for Humanitarian Demining.”

**Category: Invited Presentation, international**

**January 30, 1997 visit of Ambassador Holmes at James Madison University, Harrisonburg, USA:**

“Geographic Information System for Demining.”

**Category: Invited Presentation, local**

**December 17, 1996 at Department of Defense, Washington D.C., USA:**

“Geographic Information System for the Humanitarian Demining Support System.”

**Category: Invited Presentation, national**

**November 05, 1996 at Leadership Center of James Madison University, Harrisonburg, USA:**

“The Role of Leadership in Different Cultures.”

**Category: Invited Presentation, local**

**July 18, 1996 at ISPRS, Vienna, Austria:**

“Landnutzungsdaten für die Funknetzplanung bei E-Plus.”

(Land Use Data for Communication Network Planning at E-Plus), poster presentation

**Category: Poster Presentation, refereed, international**

**May 23, 1995 at The Space Congress '95, Bremen, Germany:**

“Landnutzungsdaten beim Aufbau eines Mobilfunknetzes.”

(Use of Remote Sensing Data in the Development of a Mobile Communications Network)

**Category: Presentation, refereed, international**

**January 18, 1995 at the German-French Colloquium for Remote Sensing of the Earth, Bonn, Germany:**

“Der Einsatz von Fernerkundungsdaten zum Aufbau eines Mobilfunknetzes für die BRD unter besonderer Berücksichtigung der urbanen Regionen.”

(The Usage of Remote Sensing Data to Develop a Mobile Communications Network for Urban Regions)

**Category: Invited Presentation, national**

**September, 1991 at James Madison University, Harrisonburg, USA:**

“Measuring, Calculating, and Fractal Modeling of Shorelines.”

**Category: Invited Presentation, international**

**July 04, 1991 at EARSel Symposium, Graz, Austria:**

“The Coastline, Its Measurement and Fractal Modeling”, poster presentation

**Category: Poster Presentation, refereed, international**

**May 23, 1991 at the Symposium for the Geography of Oceans and Coasts, University of Munich, Germany:**

“Die Generierung von Küstenlinien mit fraktalen Modellen.”

(The Generation of Shorelines Using Fractal Modeling)

**Category: Invited Presentation, national**

## **6. Film and Radio**

February 10, 2005: Participation in the filming of the documentary “To Walk Without Fear” with presentation of research results. Production Company: Miracle Mile Films, Los Angeles California.

Radio Interview for Virginia Radio Program "With Good Reason": "Danger Underfoot: Efforts to Remove the World's Landmines." (Kraenzle [JMU], Stewart [JMU], Poziomek [ODU]. Program broadcasted statewide on public radio stations on January 04, 1998 from 7:30 to 8:00 a.m.

## **7. Chaired Sessions at Conferences**

Chair of Conclusions/Conference Closing Session and Co-Chair of Information Sharing Initiatives Sessions; International Conference on Requirements and Technologies for the Detection, Removal and Neutralization of Landmines and UXO; Vrije Universiteit Brussels; Brussels, Belgium; September 15- 18, 2003.

Session Chair, Conference of the Association of American Geographers for “GIS: Locations & Telecommunications,” March 28, 1998.

## **8. Reviews**

Book Review: Human Geography by William Norton and Barney Warf, Oxford University Press (Chapter 1, 10, 11, 12), May 15, 2013.

Book Review: Human Geography by William Norton and Barney Warf, Oxford University Press (Chapter 11-15), November 18, 2012.

Book Review: Fundamentals of GIS, 4<sup>th</sup> Edition, by Michael DeMers, John Wiley & Sons, Inc. (Reviewed Chapters 13, 14, 15), January 2007.

Paper Review: Fuzzy Multi-Temporal Land-Use Analysis and Mine Clearance Application, American Society for Photogrammetric and Remote Sensing, June 2005.

## **Professional Service**

### **1. Service on James Madison University Committees (selective list)**

08/2006 – 07/2009 Member, ISAT Department Leadership Team

02/2006 – 11/2006 Chair, Task Force to develop new Geographic Science curriculum

02/2007 – Present Dingledine Scholarship Panel

05/2005 – Present Leading, Organizing and Hosting the Shenandoah Valley GIS Users Group (three meetings every year)

09/2002 – 2004 Member, Departmental Personnel Advisory Committee (PAC) for Promotion and Tenure

09/2001 – Present Member, Geographic Science Curriculum Committee

09/2001 – 09/2007 Member, Integrated Science and Technology (ISAT) Graduate Program Committee

Fall 2000 Co-Chair, Champions of the Geography Culture Committee

10/1999 – 05/2002 Member, Academic Affairs Information Technology Task Force

Spring 1999 Chair, Departmental Personnel Advisory Committee (PAC) on Faculty Evaluation for 1999

1999 – 2002 Member, Center for Applications and Research in Telecommunications  
Created an initiative to design a Center of Excellence in Telecommunication Research at JMU with a team of 7 faculty members

1999 – 2000 Member, Academic Program Review Committee

12/1998 – 05/1999 Member, CISAT Dean Search Committee

11/1998 – 03/1999 Member, CISAT Vision Statement Committee

11/1998 – 5/2000 Member, Faculty Senate

10/1997 – 03/1998 Member, College of Integrated Science and Technology (CISAT) Undergraduate Curriculum Committee

Fall 1996 Chair, CGIS Lab Planning Committee

## 2. Service to Professional Organizations (selective list)

Organization	Type of Service	Date of Service
Geographic Information Systems Certification Institute (GISCI)	Board Member	2014 - 2020
Gamma Theta Upsilon, International Honor Society in Geography	Faculty Advisor for JMU Chapter	2005 - 2020
University Consortium for Geographic Information Science (UCGIS)	Delegate for James Madison University	2012 - 2020
JMU Dingledine Scholar Panel	Member and Evaluator	2009 - 2015
United Nations Development Programme (UNDP)	Conducted GIS training at each workshop to about twenty managers at the Senior Managers Workshop held at James Madison University	November 5, 2007 June 14, 2006 October 12, 2005 July 12, 2005 October 25, 2004
International Trust Fund, Ljubljana, Slovenia	Voting Member of the Evaluation Commission for the Development of Digital Orthophoto Production of Bosnia	October 15, 2002
International Trust Fund	GIS Training Workshop for Humanitarian Deminers in Ig, Ljubljana, Slovenia.	May 13-17, 2002
JMU	GIS Training Workshop for JMU Faculty	May 29-31, 2001
JMU-CISAT	Host of Seminar; "Production of Multimedia Applications Using Digital Elevation Models", Prof. Peter Kammerer, Applied University of Munich, Germany.	April 19, 2001
JMU-CISAT	Host of Seminar: "Impact of Digital Terrain Databases on the Prediction Accuracy of Radio Propagation Models", Dr. Thomas Kuerner, E-Plus Communications, Germany.	November 5, 1998
JMU MAIC & U.S. Department of Defense & Star Mountain, Inc.	Planning, organizing and managing the International Conference on Mapping/GIS for Humanitarian Demining (120 participants)	December 16-17, 1997
Center for GIS	Hosting with James Wilson a National Satellite Videoconference: "A Practical Guide to Metadata Implementation for GIS/LIS Professionals"	October 15, 1997
Center for GIS	Planning and organizing a Geodesy training class for Faculty and Staff of the Center for GIS	Seminar: August 11-14, 1997
Center for GIS	Host of Seminar: "Remote Sensing in Urban Areas", Dr. Thomas Bayer, Geosystems GmbH, Germering, Germany.	April 21, 1997
Center for GIS	Host of Seminar: "Remote Sensing Activities at the German Remote Sensing Data Center", Dipl.-Ing. Achim Roth, German Aerospace Research Establishment, Oberpfaffenhofen, Germany.	February 21, 1997
Center for GIS	Host of Seminar: "Global Vegetation Mapping with Orbital Radar Imagery", Josef Kellndorfer, Univ. of Michigan.	November 14, 1996

### **3. Professional Affiliations (Past and Present)**

- Association of American Geographers
- Gamma Theta Upsilon, International Geographic Honor Society
- National Parks Conservation Association
- Round Table GIS, Germany
- Shenandoah Valley Technology Council
- University Consortium for Geographic Information Science (UCGIS)
- Wilson Institute for Demining and Humanitarian Assistance