

# ***RESUME***

# ***J. Ronald Eastman***

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Citizenship : USA, Canada (dual citizen)  
Languages : English, French, Spanish (basic)

## **EDUCATION :**

1979-82 Boston University, Boston, Massachusetts, U.S.A.  
Ph.D. (Geography) 1982.

1975-77 Queen's University, Kingston, Ontario, Canada.  
M.A. (Geography) 1977.

1967-71 Bishop's University, Lennoxville, Quebec, Canada.  
B.A. (Psychology) 1971.

## **PROFESSIONAL POSITIONS :**

1994- May 1994 - present  
Professor  
Clark University, Graduate School of Geography

1991- September 1991 - present  
Director, Clark Labs  
Clark University

2007- 2010 September 2007 – August 2010  
Jan and Larry Landry University Professor  
Clark University

1998-2002 June 1998 – August 2002  
Chair, Graduate School of Geography, Clark University

1996-2001 Sept. 1996 – Aug. 2001  
Visiting Professor  
Department of Resource and Environmental Sciences  
Beijing Normal University  
Beijing, China

1992-1997 Jan. 1992 – Dec 1997  
Senior Special Fellow  
United Nations Institute for Training and Research (UNITAR)  
European Office: Geneva

1988-1994 Sept. 1988 - May 1994  
Associate Professor  
Clark University, Graduate School of Geography

1981-88 Sept. 1981 - Aug. 1988  
Assistant Professor (Visiting 1981-85)  
Clark University, Graduate School of Geography

1981

Jan. 1981 - April 1981  
Lecturer  
Boston University, Department of Geography.

## PAPERS AND PUBLICATIONS :

### Peer Reviewed Journal Articles

- Glennie, E., Anyamba, A., Eastman, J.R., Tucker, C.J., (forthcoming) Midwest Agriculture and ENSO: A comparison of AVHRR NDVI3g data and crop yields in the United States Corn Belt from 1982 to 2014, submitted to *International Journal of Applied Earth Observation and Geofomation*.
- Eastman, J.R., Crema, S., and Rush, H.R., (in revision) "A Weighted Normalized Likelihood Procedure for Empirical Land Change Modeling", submitted to *Environmental Modelling and Software*.
- Rush, H.R., and Eastman, J.R., (forthcoming) "An evaluation of model skill in empirical land change modeling: a case study of the conterminous United States".
- Eastman, J.R., Crema, S.C., Sangermano, F., Cunningham, S., Xiao, X., Zhou, Z., Hu, P., Johnson, C., Arakwiye, B., and Crone, N., (in pre-submission review) "A Baseline Mapping of Aquaculture and Coastal Habitats in Thailand, Cambodia and Vietnam".
- Cunningham, S., Eastman, J.R., and Crema, S.C., (in pre-submission review) "Mapping Vulnerability and Risk of Land Conversion for Pond Aquaculture in Thailand, Cambodia and Vietnam".
- Christman, Z., Rogan, J., Eastman, J.R., and Turner, B.L. (2016) "Distinguishing land change from natural variability and uncertainty in central Mexico with MODIS EVI, TRMM precipitation, and MODIS LST data", *Remote Sensing*, 8, 478; doi:10.3390/rs8060478
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- Neeti, N., and Eastman, J.R., (2015) "Characterizing implications of two dimensional space-time orientations for Principal Components Analysis of geographic time series", *International Journal of Remote Sensing*, 36, 1, 290-299.
- Parmentier, B., and R.J. Eastman. 2014. "Land transitions from multivariate time series: using seasonal trend analysis and segmentation to detect land-cover changes." *International Journal of Remote Sensing*, 35 (2):671-92.
- Neeti, N., and Eastman, J.R., (2014) "Novel approaches in Extended Principal Component analysis to compare spatio-temporal patterns among multiple image time series", *Remote Sensing of Environment*, 148, 84-96.
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### **Other Publications**

- Eastman, J.R., (2009) Curbing Climate Change, *Geospatial Today*, August 2009, 34-37.
- Toledano, J., Eastman, J.R., Sangermano, F., Killeen, T., (2008) "Conserving Bolivia's Critical Resources", *ArcNews*, 30, 1, 12.
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Eastman, J.R., (1991) "Where's the Information in GIS", *ACSM Bulletin*, February, 50.

Eastman, J.R., (1988) "Idrisi : A Geographic Analysis System for Research Applications", *The Operational Geographer*, 15, 17-21.

Eastman, J.R., (1987) "Mapping Out a Plan of Action" -- Mapping Information Management Systems : The Long Beach Experience, *Digital Review*, Aug.3, 46-49.

### **Published Software**

Eastman, J.R., (2014) *TerrSet Geospatial Monitoring and Modeling System* (Worcester, MA: Clark University).

Eastman, J.R., (2012) *IDRISI 17: The Selva Edition* (Worcester, MA: Clark University).

Eastman, J.R., (2009) *IDRISI 16: The Taiga Edition* (Worcester, MA: Clark University).

Eastman, J.R., (2007) *The Land Change Modeler, a software extension for ArcGIS* (Worcester, MA: Clark University)

Eastman, J.R., (2006) *IDRISI 15.0 : The Andes Edition* (Worcester MA: Clark University).

Eastman, J.R., (2003) *IDRISI : The Kilimanjaro Edition* (Worcester MA: Clark University).

Eastman, J.R., (2001) *IDRISI32 : IDRISI for Workstations*, Release 2 (Worcester MA: Clark University).

Eastman, J.R., (1999) *IDRISI32 : IDRISI for Workstations*, [Version 3.0] (Worcester MA: Clark University)

Hagan, J., Eastman, J.R., Auble, J., (1999) *CartaLinx*, Version 1.2 (Worcester MA: Clark University)

Hagan, J., Eastman, J.R., Auble, J., (1998) *CartaLinx*, Version 1.0 (Worcester MA: Clark University)

Eastman, J.R., (1997) *IDRISI for Windows*, Version 2.0 (Worcester MA: Clark University)

Eastman, J.R., (1995) *IDRISI for Windows*, Version 1.0 (Worcester MA: Clark University)

Eastman, J.R., (1993) *IDRISI*, Version 4.1 (Worcester, MA : Clark University).

Eastman, J.R., (1992) *IDRISI*, Version 4.0 (Worcester, MA : Clark University).

Eastman, J.R., (1990) *IDRISI*, Version 3.2 (Worcester, MA : Clark University).

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Eastman, J.R., (1987) *IDRISI*, Version 2 (Worcester, MA : Clark University).

### **Books, Book Chapters, Monographs**

Eastman, J.R., and Toledano, J., (in press) "The Land Change Modeler", in *Geomatic approaches for modeling land change scenarios*, Olmedo, M.T.C., Paegelow, M., Mas, J.F., Escobar, F., eds., (Springer)

Eastman, J.R., and Toledano, J., (in press) "CAMarkov", in *Geomatic approaches for modeling land change scenarios*, Olmedo, M.T.C., Paegelow, M., Mas, J.F., Escobar, F., eds., (Springer)

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### **Published Conference Proceedings**

- Eastman, J.R., (2010) "Software Development Challenges for REDD+ Scenario Assessment", *Proceedings, ForestSat 2010*, Lugo, Spain, September 7 – 10, 2010 (keynote presentation).
- Eastman, J.R., (2007) La verticalización de los Sistemas de Información Geográfica. *Memorias*, XI Conferencia Iberoamericana de Sistemas de Información Geográfica, 183-195. (CONFIBSIG. Buenos Aires, Argentina, May 2007).

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- Eastman, J.R., (2016) "GeoEnvisioning", Clark University Higgins School for the Humanities Dialog Symposium presentation, March 2, 2016 (with art exhibit in the Higgins Lounge from March 2 – May 11, 2016).
- Eastman, J.R., (2015) "A Baseline Mapping of Aquaculture and Vulnerability of Coastal Habitats in Thailand, Cambodia and Vietnam", Webinar presented to the Gordon and Betty Moore Foundation, the World Wildlife Foundation and the International Union for the Conservation of Nature, Dec. 11, 2015.
- Eastman, J.R., (2015) "A Baseline Mapping of Aquaculture and Vulnerability of Coastal Habitats in Thailand, Cambodia and Vietnam", Invited presentation to the Coastal Resources Center, University of Rhode Island, Nov. 24, 2015.
- Eastman, J.R., (2015) "Soft Forecasts as an Alternative to Land Cover Change Scenarios: Techniques for Development and Assessment", Invited presentation, International Association of Landscape Ecologists, July 5-10, Portland Oregon.
- Eastman, J.R., (2015) "Land Change Modeling: An Introduction to the Land Change Modeler and the Land Change Explorer", ESRI User's Conference, San Diego, July 2015.
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- Eastman, J.R., "Applications of Soft Classifiers in Remote Sensing: Maximizing the Utility of Uncertain Information", workshop presented at the *27th International Symposium on Remote Sensing of the Environment*, June 7-12, 1998, Tromso, Norway.
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- Eastman, J.R., "Assessing a Country's Capabilities for Using New Geotechnologies", paper presented to the SPOT Data User's meeting, Feb. 2, 1995.
- Eastman, J.R., Jiang, H., "Uncertainty Metadata and GIS Software System Design", paper presented at *GISDATA'95*.

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- Eastman, J.R., "Time Series Analysis Using Standardized PCA", paper presented to the Wood's Hole Research Center, April 16, 1993.
- Eastman, J.R., "Conceptual developments and technical implementations of GIS", paper presented to the International Academy of the Environment conference "From Local to Global Environmental Management: The Geographic Information Systems Approach", Nov. 25-29, 1991
- Ruttenberg, S., Kineman, J., and Eastman, J.R., (1991) "Global Change Multithematic Database Project: How Scientists Can Collaborate to Improve Data Sets", paper delivered to the Asian IGBP Implementation Meeting, Singapore.
- Eastman, J.R., "Analysis Techniques for the Study of Global Change", paper presented as part of the special session "An Experimental Database/Analysis System for Global Change : Issues of Data Quality and GIS Functionality", ACSM/ASPRS/AutoCarto Convention, Baltimore, MD, March 1990.
- Eastman, J.R., "The Design of a Geographic Analysis System for International Development", invited paper presented to Resource Technology 90, Washington, D.C., November 1990.
- Eastman, J.R., "Change Analysis Techniques in the IDRISI System", invited paper presented to the World Bank, October 19, 1990 as part of a workshop on "Forestry and Vegetation Monitoring in Nigeria".
- \*Eastman, J.R., "Time Series Map Analysis for the ICSU/IGBP Global Change Diskette Project", paper presented to the Canadian Cartographic Association, Victoria, June 1990.
- Eastman, J.R., "IDRISI : A Geographic Information System for International Development", paper presented to the Conference on Information Technologies for Developing Countries, University of Southern California, December 1989.
- Eastman, J.R., "An Interactive Atlas : System Concept and Design", paper presented to the Canadian Cartographic Association, Halifax, June 1989.
- Eastman, J.R., "The IDRISI Geographic Analysis System", software demonstration presented for the "Innovative Software" session of AUTOCARTO 9, April 5, 1989.
- Eastman, J.R., "An Interactive Atlas of Environmental Change", paper presented to the Clark University Earth Transformed Program Workshop on an Interactive Electronic Atlas of Environmental Change, January 29, 1989.
- Eastman, J.R., "GIS Research at Clark", paper presented to the Institute of Geography, Soviet Academy of Sciences, Moscow, August 26, 1988.
- Eastman, J.R., "Grid-Based GIS Systems", workshop presented to the Canadian Cartographic Association, Annual Meeting, May 1988.
- Eastman, J.R., panel discussion participant and working demonstration on "GIS Systems for Educational Applications", IGU Commission on Spatial Data Handling Conference on Education in Geographic Information Systems, Ohio State University, May 1988.
- Eastman, J.R., "The Role of Spatial Statistics in GIS", paper and panel discussion presented to the 84th Annual Meeting of the Association of American Geographers, April 1988.
- Eastman, J.R., "Expert Systems for Map Design", paper presented to the Wilfred Laurier University Conference on Semiotic Systems for Map Design, February, 1988.

\*Eastman, J.R., "IDRISI : A Geographic Analysis System for Research Applications", poster presented to the 83rd Annual Meeting of the Association of American Geographers, April 1987.

\*Eastman, J.R., "Bi-parametric Choropleth Mapping of Skewed Distributions", paper presented to the Canadian Cartographic Association, Annual Meeting, June 1985.

\*Eastman, J.R., "Single-Pass Measurement of the Fractional Dimensionality of Digitized Cartographic Lines", paper presented to the Canadian Cartographic Association, Annual Meeting, June 1985.

Eastman, J.R., "Memory Structure and Graphic Organization", paper presented to the Canadian Cartographic Association, Annual Meeting, May, 1982.

Eastman, J.R., "Post-War Cartography and the Development of a Design Technology", paper presented to the NESTVAL (AAG) Conference, Nov 1979.

Eastman, J.R., "Canada's First Map Series: The Three Mile Sectional Maps of the West", paper presented to the Canadian Cartographic Association, Annual Meeting, May 1977.

#### **PROFESSIONAL SERVICE :**

2000-2009	December 2000 – December 2009 Contributing Editor Directions Magazine
1999-2004	Aug. 1999 – Aug. 2004 Member, Editorial Board GeoWorld / Directions Magazine
1996-1997	March 1996 - August 1997 Member, Working Group on Decision Support Systems World Bank Programme on Environmental Information Systems
1993-1995	April 1993 - April 1995 Member, Panel of Experts UNITAR / UNSO / OSS Integrated Information Systems for Environment Program (IISE)
1992-1998	Sept. 1992 - March 1998 Member, Steering Committee NCGIA Core Curriculum in Remote Sensing Project
1992-1994	June 1992 - June 1994 Member ERIM/CIESIN International Working Group on Global Food Security Early Warning
1990-1992	March 1990 - March 1992 Member, Board of Directors, American Cartographic Association American Congress on Surveying and Mapping
1990-1991	Aug. 1990 to Nov. 1991 Member, Editorial Board GIS World

1989-1992	February 1989 - December 1992 Chair, IGU Working Group on GIS Requirements IGU Global Database Planning Project
1989-1992	January 1989 - January 1992 Member, ICA Commission on Concepts in Cartography International Cartographic Association
1988-1989	May 1988 - April 1989 Member, Technical Program Committee AUTOCART 9 Conference (sponsored by ASCM & ASPRS) April 2-7, 1989, Baltimore.
1987-1990	Oct. 1987 - June 1990 Chair, Computer Assisted Mapping and GIS Interest Group Canadian Cartographic Association
1987-1992	Jan. 1987 to Jan. 1992 Contributing Editor Digital Review, Ziff-Davis Publications
1986-1988	Oct. 1986 - 1988 Long Range Planning Committee Association of American Geographers

#### **PROFESSIONAL CONSULTING / CONTRACTS / RESEARCH GRANTS**

2016-2018	December 2016 – August 2018 Principal Investigator \$645,635, The Gordon and Betty Moore Foundation A Baseline Mapping of Aquaculture and Coastal Habitats, Myanmar
2016-2017	August 2016 – February 2017 Principal Investigator \$150,000, Esri An Esri Cloud-based Implementation of the Land Change Modeler and Reorientation of Clark Labs Development to the Esri Platform, Grant Extension.
2013-2016	September 2013 – April 2016 Principal Investigator \$1,000,075, Esri An Esri Cloud-based Implementation of the Land Change Modeler and Reorientation of Clark Labs Development to the Esri Platform
2013-2018	November 2013 – June 2018 Principal Investigator \$471,806, The Gordon and Betty Moore Foundation Coastal habitats at risk for shrimp farm conversion in Vietnam, Cambodia and Thailand.
2011-2013	July 2011 – June 2013 Principal Investigator \$1,796,228, The Gordon and Betty Moore Foundation

Scenarios Simulation and Ecosystem Services in Land Allocation Planning

2010-2011	May 2010 – April 2011 Principal Investigator \$451,000.00, The Gordon and Betty Moore Foundation A Transformative Global Access to Data and Tools for Broad and Transparent Origination, Planning and Evaluation of REDD Projects, based on the Land Change Modeler, and the Computing Platform and Geospatial Database provided by Google's Earth Engine.
2010-2011	September 2010 – April 2011 Principal Investigator \$20,000, NASA Seasonal Precipitation Forecasts based on Teleconnection Patterns in Sea Surface Temperature: A Preliminary Operational Test
2009 – 2011	December 2009 – June 2011 Principal Investigator \$200,000.00, Google.org A Cloud-based Implementation of LCM for REDD
2009	April 2009 – October 2009 Principal Investigator \$40,000.00, Conservation International Codesign and initial simplified version of the REDD baseline tool in IDRISI
2009	May 2009 – June 2009 Principal Investigator \$14,057, Conservation International Spatial Planning as a Platform for Suriname Green: First Training Course
2007 – 2009	November 2007 – June 2009 Principal Investigator \$1,234,914, The Gordon and Betty Moore Foundation and Google.org A Climate Teleconnection-based Early Warning System for Food, Health and Ecosystem Security
2007 – 2008	September 15, 2007 – September 14, 2008 Principal Investigator \$62,906.41, USDA – APHIS (Animal and Plant Health Inspection Service) Analysis and interpretation of hyperspectral imagery for mapping distributions of <i>Fraxinus</i> species and emerald ash borer host trees
2006 – 2007	June 13, 2006 – Nov. 1, 2007 Principal Investigator \$644,395, The Gordon and Betty Moore Foundation Spatial Monitoring of Trends in Biodiversity through Time Series Analysis of High Temporal Resolution Remotely Sensed Imagery
2006 – 2007	September 15, 2006 – September 14, 2007 Principal Investigator \$62,996.58, USDA – APHIS (Animal and Plant Health Inspection Service) Analysis and interpretation of hyperspectral imagery for mapping distributions of <i>Fraxinus</i> species and emerald ash borer host trees
2006	Jan 15, 2006 – Oct 31, 2006

	Principal Investigator \$84,816, Conservation International Species and Biodiversity Modeling for the Andean Region
2005 – 2006	September 15, 2005 – September 14, 2006 Principal Investigator \$72,863.00, USDA – APHIS (Animal and Plant Health Inspection Service) Analysis and interpretation of hyperspectral imagery for mapping distributions of <i>Fraxinus</i> species and emerald ash borer host trees
2005	Mar. 1, 2005 – Dec 31, 2005 Principal Investigator \$248,308, Conservation International Land-use Modeling and Prediction for Biodiversity Conservation in the Andes (contract renewal)
2004 - 2005	Feb. 1, 2004 – Feb. 28, 2005 Principal Investigator \$227,037, Conservation International Land-use Modeling and Prediction for Biodiversity Conservation in the Andes (contract renewal)
2004 – 2005	September 15, 2004 – September 14, 2005 Principal Investigator \$25,000, USDA – APHIS (Animal and Plant Health Inspection Service) National-level predictive modeling of Gypsy Moths
2004 – 2005	September 15, 2004 – September 14, 2005 Principal Investigator \$55813, USDA – APHIS (Animal and Plant Health Inspection Service) Analysis and interpretation of hyperspectral imagery for mapping distributions of <i>Fraxinus</i> species and emerald ash borer host trees (contract renewal)
2003 – 2004	September 15, 2003 – September 14, 2004 Principal Investigator \$55813, USDA – APHIS (Animal and Plant Health Inspection Service) Analysis and interpretation of hyperspectral imagery for mapping distributions of <i>Fraxinus</i> species and emerald ash borer host trees
2003	June 1, 2003 – December 31, 2003 Principal Investigator \$88,312, Conservation International Land-use Modeling and Prediction for Biodiversity Conservation in the Andes
2001-2004	August 2001-August 2004 Co-Principal Investigator (with B. Turner and J. Geoghegan) \$730,000 NASA Grant #NAG 56046 Land-Cover and Land Use Change in the Southern Yucatan Peninsular Region
2000-2001	August 2000 - August 2001 Co-Principal Investigator (with A. Anyamba, NASA) \$50,000 United Nations Environment Programme (UNEP) Grant "Satellite monitoring and assessment of EL NINO and LA NINA impacts over East and Southern Africa - towards developing an early warning system"

1999-2000	<p>September 1999 - August 2000  Co-Principal Investigator (with A. Anyamba, NASA)  \$50,000 National Oceanic and Atmospheric Administration (NOAA) Grant  "Differential Effects of ENSO over the Southern Africa Region: Physical and Socio-Economic Manifestations"</p>
1998-1999	<p>September 1998 - March 1999  Principal Investigator  \$200,000 USAID Extension Grant  To continue development of an Environmental Information System in Malawi</p>
1996-1998	<p>April 1996 - September 1998  Principal Investigator  \$598,000 USAID Grant  To develop an Environmental Information System in Malawi</p>
1997	<p>October 1997  Advisor to the Department of Meteorology, Government of Botswana  Funded by the Office of Development Assistance (UK)  Presented basis for drought prediction in Botswana based on time series analysis of NDVI data</p>
1996	<p>January 1996 - December 1996.  Co-Principal Investigator (with S. Emani).  Applications of Geographic Information Systems (GIS) Technology in Environmental Risk Assessment and Management,  United Nation Environment Programme  \$50,000</p>
1995	<p>September 1995  Presented Seminar on GIS and Climate Change Research  UNITAR  Hanoi, Vietnam, September 18-22.</p>
1995-1997	<p>Aug 1995- Aug 1997  NASA Mission to Earth Program  NCGIA Core Curriculum in Remote Sensing Project  Co-PI with T. Foresman, T. Carey, J. Estes, J. Jensen, N. Faust, A. Shupin  \$196,445 (\$26,219 to Clark)</p>
1995	<p>June 1995 - December 1995  Principal Investigator  \$70,000 USAID/SARSA Grant  Extension to Malawi Project</p>
1993-1995	<p>July 1993 - June 1995 1995  Principal Investigator  \$33,197 USAID/SARSA Grant  Supplement to Malawi Project</p>
1992-1995	<p>July 1992 - August 1995  Principal Investigator  \$300,000 USAID/SARSA Grant  To field test procedures for GIS implementation in Malawi</p>
1993	<p>November 1993</p>

Presented Advanced Seminar on GIS  
UNITAR / ICIMOD  
Dakha, Bangladesh Nov. 14-18

1993 November 1993  
Presented Advanced Seminar on GIS  
UNITAR  
Cha Am, Thailand, Nov. 22-26

1993 October 1993  
Co-taught Advanced Workshop on GIS :  
Geographical Information Systems in the Field of Environmental Management.  
UNITAR / Ecole Polytechnique Federale de Lausanne  
Lausanne, Switzerland, October 13-15.

1993 August 1993  
Co-taught Advanced Workshop on GIS :  
Spatial Terrestrial Modelling.  
Nordic Academy for Advanced Study  
Arendal, Norway, August 5-12.

1992 October 1992  
Presented seminar on GIS and Image Processing  
UNITAR/Lithuania Ministry of the Environment  
Druskininkai, Lithuania, October 25 - October 31, 1992

1992 September 1992  
Presented advanced seminar on GIS  
UNITAR/ICIMOD  
Kathmandu, Nepal, September 28 - October 2, 1992

1992-1993 July 1992 - June 1993  
Principal Investigator  
\$100,000 USAID/SARSA Grant  
To develop a handbook on GIS implementation in Africa

1992 May 1992  
Presented seminar on Natural Resource Management and GIS  
UNITAR/ICIMOD/Clark University  
Clark University, Worcester, USA May 25-29, 1992

1992 March 1992  
Presented advanced seminar on error and decision making in GIS  
UNITAR / UNEP-GRID / University of Santiago, Chile  
Puerto Montt, Chile March 9-13, 1992

1991 September 1991  
Presented seminar on GIS and the IDRISI System for the  
International Centre for Integrated Mountain Development (UNITAR funded)  
Kathmandu, Nepal, Sept. 23-30, 1991

1991 May 1991  
Presented seminar on GIS and the IDRISI System for the  
Czechoslovak Academy of Science (UNITAR funded)  
Prague, Czechoslovakia, May 19-24, 1991



1991	<p>May 1991  Presented seminar on GIS and the IDRISI System for the Slovak Commission for the Environment (UNITAR funded) Bratislava, Czechoslovakia, May 27-31, 1991</p>
1991	<p>April 1991  Presented seminar on GIS and the IDRISI System for the Indira Gandhi National Forest Academy (USAID funded) Dehra Dun, India, April 8-12, 1991</p>
1990	<p>October 1990  Presented seminar on GIS and the IDRISI System for the India Ministry of Environment and Forests (USAID funded) Clark University, October 1-2, 1990.</p>
1990	<p>October 1990  Co-Principal Investigator (with L. Lewis)  \$50,000 National Science Foundation Grant  To develop an undergraduate teaching lab for GIS</p>
1990	<p>March 1990  Co-Principal Investigator (with J. Kineman)  \$8000 ICSU Panel on World Data Centers / IGBP Grant  To develop the Global Change Database Project Workbook.</p>
1990	<p>July 1990  Consultant  U.S. Agency for International Development  Presented Seminar on IDRISI at Centro de Investigaciones de la Capacidad de Uso Mayor de la Tierra (CUMAT) La Paz, Bolivia, July 16-20, 1990.</p>
1990-94	<p>September 1990 - 1994  Consultant  United Nations Institute for Training and Research (UNITAR)  Geneva, Nairobi, Bangkok, Prague, Mexico City  Consultant on the development of the UNITAR training program in GIS.</p>
1989-92	<p>November 1989 - December 1992  Consultant  United Nations Environment Program / GRID  Nairobi, Kenya / Geneva, Switzerland  Consultant on the further development of the IDRISI software system for use by the UNEP/GRID program</p>
1988-89	<p>August 1988 to December 1989  Principal Investigator  \$50,000 Clark University Earth Transformed Program Grant  To pursue the development of an Interactive Electronic Atlas of Environmental Change (in collaboration with the USSR Academy of Sciences)</p>
1987-88	<p>May 1987 - May 1988  Co-Principal Investigator (with J. Jones)  \$1500 Mellon Faculty Development Fund Grant  For the investigation of a prototype GIS for Costa Rica.</p>
1985-86	<p>Sept. 1985 to Aug. 1986</p>

SARSA / USAID Research Grant Recipient  
For research (with L. Berry) on the configuration of geographic information systems for regional planning and development.

- 1985-86 Oct. 1985 to Aug. 1986  
Consultant  
Atlas of Massachusetts Project  
University of Massachusetts, Amherst
- 1984-85 June 1984 to June 1985  
Consultant  
Integrated Resource Information Services, Inc.,  
IQC contract to USAID for Remote Sensing
- 1983 July 1983 - Oct. 1983  
Consultant  
USAID  
Assessment of the state of natural resources mapping in Baluchistan Province, Pakistan, and field reconnaissance for land use / land cover mapping, Makran Division.
- 1983 May 1983 - July 1983  
Research Associate  
United States National Parks Service / Clark University Program for International Development  
Renewable Resource Trends in East Africa atlas project.
- 1980-82 July 1980 - Aug. 1980 / July 1982 - Aug. 1982  
Site Cartographer  
Chicha Archaeological Project, Pampachiri, Peru.
- 1978 Sept. 1978 - Dec. 1978  
Site Cartographer  
Royal Ontario Museum Excavation, Qal'eh-i Yazdigird, Iran.

**AWARDS :**

- 2010 Association of American Geographers  
Geographic Information Systems and Science Specialty Group  
Robert T. Aangeenbrug Distinguished Career Award
- 2007 University Consortium for Geographic Information Science (UCGIS)  
Research Award
- 2003 Association of American Geographers  
Distinguished Service Honors
- 1996 American Society for Photogrammetry and Remote Sensing  
Second Place, ESRI Award for achievement in published research
- 1995 The Canadian Cartographic Association  
Award of Distinction for Scholarly Contributions
- 1981 American Congress on Surveying and Mapping

The Andrew McNally Award for achievement in published research.

- 1979-81      Social Sciences and Humanities Research Council of Canada  
                  Doctoral Fellowship
- 1980            Canadian Cartographic Association  
                  The President's Award for cartographic design
- 1979            American Congress on Surveying and Mapping  
                  Blue Ribbon Award for cartographic design
- 1975            Queen's University  
                  Graduate Fellowship

**CURRENT ADDRESSES :**

Clark University  
Graduate School of Geography  
950 Main Street  
Worcester, MA 01610  
U.S.A.  
Tel : (508) 793-7526  
Email : reastman@clarku.edu  
Fax: (508) 793-8842

or

83 Galen Street  
Waltham, MA 02451  
U.S.A.  
Tel : (781) 891-3906