

IV. GRANT AND RESEARCH ACTIVITIES:

Principal Investigator, *The Collaborative Project: GIS/T Resources and Applications for Career Education – GRACE* (2014 – 2018, DRL-1433712, \$2,000,000.00), funded by NSF Innovative Technology Experience for Students and Teachers Program.

Project Administrator, *Wayne County U.S. History & Geography Project: Building Competence in U.S. History through the Use of Geographic Information Systems*, 2013-2014, \$200,000.00, funded by Michigan Department of Education - Title II Program.

Project Director, *GIS Mapping System for Activity One B: Statewide Education Network for the 22i Technology Readiness Infrastructure*, 2013, \$48,000.00, funded by Michigan Department of Education - The 22i Grant, which supports implementation of online testing that will increase computer traffic to and from each k-12 building in the state.

Principal Investigator in Science, *Investigating Climate Change and Remote Sensing (ICCARS)*, 2010 – 2013, \$750,000.00, funded by US NASA.

Project Director, *Grassland Ecosystems and Societal Adaptations Under Changing Grazing Intensity and Climate on the Mongolian Plateau*, 2009 – 2013, \$458,298.00, funded by US NASA Land Cover and Land Use Change Program and University of Michigan.

Project Administrator and Co-PI, *Hyperspectral Remote Sensing and Science-Based Management of Invasive Species in the Detroit River International Wildlife Refuge*, 2010 – 2013, \$500,000.00, funded by the National Oceanic and Atmospheric Administration.

Project Administrator and Co-PI, *Coupled Remote Sensing and Biological Monitoring of Invasive Plant Species and Their Impacts on the Detroit River International Wildlife Refuge (CRSBM-DRIWR)*, 2009-2011, \$633,350.00, funded by the National Oceanic and Atmospheric Administration.

Project Director, *RAPIDS (Regional Air Pollutants Inventory & Database System) 3.0 Coding, Testing and Implementation*, 2009 – 2012, \$197,680.00
Project Director, *Regional Urban Tree Canopy Assessment and Implementation*, 2009 – 2011, \$163,381.00, funded by USDA Forest Service.

Principal Investigator, *(City of Detroit) Mayor's Youth Technology Corps - Creating Safe Communities through Information Technology Training in Homeland Security Applications*, 2008-2011, \$900,000.00, funded by the US National Science Foundation.

Project Director, *Design and Development of the CAROL Web Portal*, 2009-2010, \$117,680.00

Co- Principal Investigator, *DHB: LLMAP - Language and Location: A Map Annotation Project*, 2006 – 2010, \$600,000, funded by the US National Science Foundation.

Principal Investigator, *ENvironmental Disaster Urban REcovery (ENDURE) Model*, 2005-2006, \$50,000.00, funded by Pacific Disaster Center.

Project Director, *GPS/GIS SMRT Vehicle Management Integration Development*, 2004-2006, \$150,000.00, funded by Detroit Public Schools.

Project Director, *Detroit's Integrated Sidewalk Management System (ISMS)*, \$ 110,000.00, 2005-2006, funded by City of Detroit Engineering Department.

Principal Investigator, *VISIT: Virtual Immersion in Science Inquiry for Teachers*, 2001-2005, \$1,240,000.00, funded by the National Science Foundation Teacher Enhancement Program.

Principal Administrator, *WebPolis Consortium*, 2002-2004, \$250,000.00, funded by United States Department of Commerce Technology Opportunity Program.

Principal Investigator, *GIS/Mathematical Model for Predicting Wetland Plant Community Responses to Proposed New Lake-level Regulation Plans*, 2003-2004, \$30,000.00, funded by USGS (Geological Survey).

Principal Investigator, *Dynamic Telecommunications Infrastructure Planning System (DTIPS)*, \$110,000.00, funded by MERIT Network, Inc. and Heart Of Michigan Planning Group, 2002-2003.

Co-PI, *Supporting Beginning Mathematics and Science Teachers*, 2001-2002, \$80,000.00, an Eisenhower grant from the State of Michigan.

Co-PI, *Teacher Learning that Supports Student Inquiry: Interdisciplinary Science Investigation of Contemporary Problems*, 2000-2001, \$75,000.00, an Eisenhower grant from the State of Michigan.

Lead Technology Researcher, *Digital Community and Collections for Science and Mathematics*, \$800,000.00, National Science Foundation for the National Science, Mathematics and Engineering Digital Library, 2000-2002.

Interim PI and Co-PI, *Work/Site Alliance: Community-Based GIS Education*, 1997-2000, \$1,200,000.00, funded by the National Science Foundation.

Principal Investigator, *Development of 3d Modeling Tools and the FIELDS System - Fully Integrated Environmental Location Decision Support*, \$100,000.00, USEPA-Region 5, 1999 - 2002.

Project Director, *GIS Applications Development and Technical Services*, \$100,000.00, Wayne County Department of Public Services, 2000.

Principal Investigator, *Technical Support For FIELDS – Fully Integrated Environmental Location Decision Support*, \$200,000.00, USEPA-Region 5, 1999 - 2000.

Project Director, *Flint Census Tract – Parcel Mapping*, the Greater Eastside Community Association of Flint, 1999.

Project Director, *Wayne County Transmap Quality Assurance Tool-Box and Quality Control*, Wayne County Department of Public Services, 1999-2001.

Principal Investigator, *Lakewide Information Management System for Lake Erie Lakewide Management Plan*, USEPA-Region 5, 1998 - 1999.

Project Director, *Macomb County Customized Arc/Info Training for County-wide GIS Applications*, Macomb County Department of Planning and Economic Development, 1999.

Co-Principal Investigator, *Lake Michigan Shoreline Damage Studies*, the US Army Corps of Engineers - Detroit District, 1998 - 1999.

Project Director, *Washtenaw County GIS Technical Support*, Washtenaw County Department of Information Technology Service, February – December 1998-99.

Project Director, *Great Lakes Water Use Database Management Systems*, Great Lakes Commission, Fall, 1998.

Project Director, *Online Spatial Data Sharing and Integrated Mapping: Great Lakes GIS Online*, 1997-1998, GLNPO (Great Lakes National Program Office) through GLC (Great Lakes Commission).

Project Director, *Mapping Ohio Online: An Integrated Spatial Data Project*, 1997-1998, Ohio-Environmental Protect Agency through GLC (Great Lakes Commission).

Project Director, *Geographic Information Services Project*, for the academic year 1995-1997, Michigan State Research Excellence Fund awarded through Eastern Michigan University.

GIS Coordinator, *Kellogg Groundwater Education and Research Grant*, 1994-1997, awarded by Kellogg Foundation.

Physical Scientist and GIS/Remote Sensing Consultant at US Army Corps of Engineers – Detroit District through Inter-government Personnel Act (IPA), 1995-1997.

Principal Investigator, *The FIELDS (Fully Integrated Environmental Location Decision Support) System Technical Support and Enhancement Project*, awarded by USEPA-Region 5 in 1997.

Principal Investigator, *The Information Synthesis Support for Lake Erie Lakewide Management Plan*, awarded by USEPA-Region 5 in 1997.

Principal Investigator, *The Ashtabula (Ohio) Site Environmental Decision Support Project*, awarded by USEPA-Region 5 in 1997.

Co-Principal Investigator, *Detroit River GIS on Internet*, funded by the Michigan Department of Environmental Quality, January - July, 1997.

Project Director, *Design of Database Management and Query Interface for Analyzing Contaminated Sediments in the Great Lakes*, the US Environmental Protection Agency - Region 5, and the US Army Corps of Engineers - Detroit District, Fall, 1995.

Project Director, *Desktop GIS Demonstration and Training for Analyzing Contaminated Sediments in the Great Lakes*, the US Environmental Protection Agency - Region 5, and the US Army Corps of Engineers - Detroit District, Fall, 1995.

Project Director, *Exploring Potential Usage of Satellite Imagery in Community-based GIS Applications*, Research Seed Grant, 1995-1996, awarded by NASA-Michigan Space Grant Consortium.