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Geomatics Program
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Academic Degrees

- Ph.D. 1982. University of Michigan
- M.S. 1978. University of Michigan
- B.S. 1975. Michigan State University

Positions

- Professor, University of Florida, 2005-Present
- Associate Professor, University of Florida, 1989-2005
- Scientist, Kodak Remote Sensing, 1987-1989
- Assistant Professor, Ohio State University, 1982-1987

Books

- Princz, P., S. Smith, K. Hatfield and J. Olah. 2003, "*Improvement of the Biological Degradability of Wastewaters Using Modified Zeolites*". In: Humics for Environmental Remediation. I. Perinova and H. Herbert (eds.), NATO Science for Peace Program Publication.
- Smith, S. "*Mapping of the Soil Surface*", 2004, In: Geographic Information Technologies for Environmental Soil and Landscape Modeling, S. Grunwald and M. Collins (eds.), Marcel Dekker, Inc. Publishers, NY.
- Smith, S. "*The Aswan High Dam at 30 Years*", 2003, In: Conservation, Ecology and Management of African Fresh Water, T. Crisman, L. Chapman, C. Chapman and L. Kaufman (Eds.). University of Florida Press, pg. 305-326.
- Smith, S. "*Environmental Impacts of the Aswan High Dam: Prospects and Analysis*", 1987, In: A Multidisciplinary Approach to Renewable Energy Resources in Developing Countries, Hitzhusen and MacGregor (eds.), Publishing Horizons, pp. 169-183

Refereed Journal Articles

- Monsef, H and S. Smith, 2018, “*Integrating Remote Sensing, Geographic Information System and Analytical Hierarchy Process for Hazardous Waste Landfill Site Selection*”, Arabian Journal of Geosciences.
- Liu, T., B. Dewitt, S. Smith, A. Abd-Elrahman, J. Morton, V. Wilhelm, 2018 , “*Evaluating the Potential of Multi-View Data Extraction from Small Unmanned Aerial System (UAS) with Consumer Grade Camera for Object-based Land Cover Classification aided by Bidirectional Reflectance Distribution Function Modeling*”. [GIScience & Remote Sensing](#). In Review.
- Xu, Y., S. Smith, S. Grunwald, A. Abd-Elrahman, S. Wani, 2018, “*Effects of Image pan sharpening on soil total nitrogen prediction models in South India*”. Geoderm.
- Abd-Elrahman, A. G. Barnes, A. Benjamin, K. Britt, B. Dewitt, , H. Hochmair, S. Smith, B. Wilkinson, 2019, *Geomatics Education at the University of Florida: A Case Study of Challenges and Adaptation, Surveying and Land Information Science*, 78 (No. 1).
- Xu, Y., S. Smith, S. Grunwald, A. Abd-Elrahman, S. Wani, (2017), “*Evaluating the Effect of Remote Sensing Image Spatial Resolution on Soil Exchangeable Potassium Prediction Models in Smallholder Farm Settings*”. Journal of Environmental Management, In review.
- Xu, Y, S. Smith, S. Grunwald, A. Abd-Elrahman and S. Wani, 2017, “*Evaluating the effect of remote sensing image spatial resolution on soil exchangeable potassium prediction models in smallholder farm settings*”. Journal of Environmental Management.
- Xu, Y., S. Smith, S. Grunwald, A. Abd-Elrahman, S. Wani, 2017, “*Spatial Downscaling of Soil Prediction Models based on Weighted Generalized Additive Models in Smallholder Farm Settings*” Environmental Monitoring and Assessment. Spring Press. Accepted.
- Szantoi, Z. L. Koh, S. Smith and S. Wich, 2017, “*Mapping of Orangutan Habitat Using Landsat Imagery Augmented with Unmanned Autonomous Vehicle Photography*”. International Journal of Remote Sensing. <http://dx.doi.org/10.1080/01431161.2017.1280638>.
- Monsef H. and S. Smith, 2017, “*A New Approach for Estimating Mangrove Canopy Cover Using Landsat 8 Satellite Imagery*”. Computers and Electronics in Agriculture. 135. 183-194.
- Xu, Y., S. Smith, S. Grunwald, A. Abd-Elrahman, S. Wani, 2017. “*Incorporation of Satellite*

Remote Sensing Pan-sharpened Imagery into Soil Prediction Models to Characterize Soil Property Variability in Small Agricultural Fields". ISPRS Journal of Photogrammetry and Remote Sensing. Volume 123, pg 1–19.

- Darwish, K, S. Smith and M. Torab, 2016, “*Geomorphological Change Detection along the Nile Delta Coastline between 1945 and 2014 Using Satellite Remote Sensing*”. Journal of Coastal Research.
- Szantoi, Z., F. Escobedo, Abd-Elrahman L. Pearlstine, B. Dewitt. S. Smith. 2015, “*Classifying Spatially Heterogeneous Wetland Communities Using Machine Learning Algorithms and Spectral and Textural Features*”, Environmental Monitoring Assessment. DOI 10.1007/s10661-015-4426-5.
- Darwish, K, M. Torab and S. Smith, 2015, “*Geomorphic Changes of Coastal Lagoon Barriers along the Nile Delta Coast in the 20th Century*” The XIX INQUA Congress on Quaternary Perspectives on Climate Change, Natural Hazards and Civilization, Nagoya, Japan
- Monsef, H. S. Smith and K. Darwish, 2015, “*Impacts of the Aswan High Dam 50 Years On*”, Water Resources Management. Volume 29, Issue 6, pp. 1873-1885.
- Xu, Y, S. Grunwald and S. Smith, “*Spatial Resolution Effects of Remote Sensing Informed Soil Nutrient Models Based on Landsat 8, RapidEye, WorldView-2 and GeoEye-1 Images*”. Proceedings of the AGU Fall Meeting. San Francisco.
- Burgess M., C. Zweig, S. Newman, M. Cook, H. Rodgers, R. Carthy, B. Wilkinson, T. Whitley, T. Ward, J. DiRodio , P. Frederick, P. Ifju, S. Smith and F. Percival, 2015, “*Applications of High-Resolution Aerial Photography and a Small Unmanned Aircraft System in Everglades Science*”, Greater Everglades Ecosystem Restoration.
- Kursad D., Levent G., E. Melis M. Inalpulat, S. Smith and U. Kimal, 2014, “*Yield Estimates Using Spectral Indices in Eggplant and Bell Pepper Grown Under Deficit Irrigation*”. Fresenius Environmental Bulletin Vol. 23; No. 5, p.1232-1237.
- Genc, L. M. Inalpulat, M. Kizil, U. Mirik, S. Smith., 2013, “*Determination of Water Stress with Spectral Reflectance on Sweet Corn (Zea mays L.) Using Classification Tree (CT) Analysis*”. Zemdirbyste-Agriculture, Volume 100, No: 1(2013), pp. 81-90.
- Szantoi, Z., F. Escobedo, A. Abd-Elrahman, S. Smith, and L. Pearlstine. 2013, “*Analyzing Fine-Scale Wetland Composition using High Resolution Imagery and Texture Features*”. International Journal of Applied Earth Observation and Geoinformation 23: 204–212.

- Szantoi, Z., S. Malone, F. Escobedo, O. Misas, S. Smith, and B. Dewitt. 2012, “*A Tool for Rapid Post-Hurricane Urban Tree Debris Estimates Using High Resolution Aerial Imagery*”. International Journal of Applied Earth Observation and Geoinformation 18: 548–556.
- Szantoi, Z. F. Escobedo, J. Wagner, L. Rodriguez and S. Smith, 2102, “*Socioeconomic Factors and Urban Tree Cover Policies in a Subtropical Urban Forest*”, GIScience and Remote Sensing, 49.3. pp. 428-449.
- Tuma, J, S. Smith and Z. Szantoi, 2011, “*Dynamics of Land Use Change in the Florida Panhandle Using Gis Optimization Models: A Framework to Determine the Impact of Climate Change on the Florida Panhandle*”, World Applied Sciences Journal 14 (10): 1428-1437, 2011, ISSN 1818-4952, IDOSI Publications.
- Levent Genç, Ünal Kızıl, Nuray Mücella Müftüoğlu, and Scot E. Smith, 2011, “*Identification of Phosphorus-Sensitive Regions Using Field Data, Remote Sensing Imagery and Kriging Techniques to Mitigate Overuse of Fertilizer in a Northwestern Town of Turkey*”. Fresenius Environmental Bulletin, Vol. 20, No. 10, 2011, pp. 2555-2561. Parlar Scientific Publications, Freisling, Germany.
- Abd-Elrahman A. M. Croxton, R. Pand-Chettri G. Toor, S. Smith, J. Hill 2011, “*In-situ Estimation of Freshwater Aquaculture Pond Water Quality Parameters Using Hyperspectral Image Analysis*”. International Journal of Photogrammetry and Remote Sensing. Vol. 66, Issue 4, pp. 463-472.
- Genc, L. and S. Smith, 2011, “*Determination of Plant Water Stress Using Spectral Reflectance Measurements in Watermelon (Citrullus Vulgaris) American-Eurasian*”, Journal of Agriculture & Environmental Science, 11 (2): 296-304, 2011ISSN 1818-6769, IDOSI Publications.
- Smith, S. Z. Szantoi, J. Perry and B. Evers, 2010, “*Design Considerations for Remote Sensing Payloads on Inexpensive Unmanned Autonomous Aerial Vehicles*” Surveying and Land Information Science Journal. American Congress on Surveying and Mapping, Vol: 70; Issue 3. Pp.131-137.
- Genc, L., H. Turhan H., A. Burak and S. Smith, 2009, “*Comparison of Spectral Indices Derived from QUICKBIRD and Ground Based Hyper-Spectral Data for Winter Wheat*”, World Applied Sciences Journal. Vol 7, Number 6, pp. 756-762.
- Smith, S. and H. Monsef, 2009, “*Geographic Assessment of Public Libraries in Egypt*”. World Applied Sciences Journal 6 (7): 861-887.
- Monsef, H., S. Smith and J. Aufmuth, 2008, “*Site Selection for Mangrove Plantations along the Egyptian Red Sea Coast*”, World Applied Sciences Journal.
- Genc, L. S. Smith and H. Turhand, 2008, “*Comparison of QuickBird Satellite Imagery and Spectroradiometer Indices for Assessing Winter Wheat*”, Journal of Precision Agriculture.

- Turhan, H., L. Genc, S. Smith, B. Bostanci and S. Turkmen, 2008, "*Assessment of the Effect of Salinity on the Early Growth Stage of the Common Sunflower (Sanay cultivar) Using Spectral Discrimination Techniques*", African Journal of Biotechnology. pp. 750-756.
- Genc, H., L. Genc, H. Turhand, S. Smith and J. Nation, 2008, "*Vegetation Indices as Indicators of Damage by the Sunn Pest (Hemiptera scutelleridae) to Field-Grown Wheat*", African Journal of Biotechnology Vol. 7 (2), pp. 173-180.
- Hersey, D. and S. Smith, 2008, "*Analysis of Watershed Vulnerability to Flooding in Haiti*", World Applied Sciences Journal. 4 (6). Pp. 869-885.
- Genc, L. and S. Smith, 2005, "*Assessment of Principal Component Analysis for Interpretation of Moderate and High Resolution Satellite Imagery*", Trakya Journal of Science, 18: pp. 32-41.
- Princz, P., J. Olah and S. Smith, 2005. "*Complex Analytical Procedure for the Characterization of Modified Zeolite and for the Assessment its Effects on Biological Wastewater Treatment*", Measurements Journal.
- Genc, L., and S. Smith, 2004, "*Determination of Forest Cover Age Classes Using the Normalized Difference Vegetation Index and Surface Temperature Derived from Landsat Thematic Mapper Imagery*," Turkish Journal of Agricultural Forestry. pg. 5-16.
- Dewitt, B., Smith, S., L. Genc and J. Nunley, 2004, "*Use of LIDAR for Locating Ordinary High Water Level in Florida Lakes*," Journal of Surveying and Land Information Systems, American Congress on Surveying and Mapping.
- Ramchandran, B., S. Smith, and L. Arvanitis, 2004, "*Interoperability Issues for a GIS Designed for Collaborative Decision Making*," Journal of Surveying and Land Information Sciences, American Congress on Surveying and Mapping.
- Ramchandran, B., S. Smith, and L. Arvanitis, 2004, "*Modeling Natural Resources Management Options: A New Approach*," Surveying and Land Information Sciences, American Congress on Surveying and Mapping.
- Smith, S., J. Nunley, B. Dewitt and L. Genc, 2004, "*Use of Remote Sensing for Locating Ordinary High Water Level in Florida Lakes*," American Congress on Surveying and Mapping, Journal of Surveying and Land Information Sciences.
- Pearlstine, L., K. Portier, and S. Smith, 2003, "*Textural Discrimination of an Invasive Plant, Schinus terebinthifolius, from Low Altitude Aerial Digital Photography*". Journal of the American Society for Photogrammetry and Remote Sensing. American Society for Photogrammetry and Remote Sensing.

- Genc, L. and S. Smith, 2005, "*Assessment of Principal Component Analysis for Interpretation of Moderate and High Resolution Satellite Imagery*", *Trakya Journal of Science*, 18: 32-41.
- Smith, S., F. McCorry and L. Genc, 2003, "*A Comparison of Landsat Thematic Mapper and Indian Remote Sensing Satellite Imagery for Land Use/Land Cover Assessment*," *Journal of Surveying and Land Information Sciences*, American Congress on Surveying and Mapping.
- Monsef, H., S. Smith, and M. El Ghawaby, 2004, "*Design and Application of a Geographic Information System for Assessing Sulphide Mineralization*," *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping.
- Genc, L., B. Dewitt, and S. Smith, 2004, "*Wetland Vegetation Classification with LIDAR*," *Turkish Journal of Agricultural Forestry*, 78: 63-71.
- Barnes, G., A. Agrawal, L. Genc, B. Ramachandran, V. Sivaraman, B. Pudi, M. Binford and S. Smith, 2003, "*Developing a Spatio-Temporal Cadastral Database Using County Appraisal Data from Northern Florida*, *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping, 63: 243-251.
- Genc, L., and S. Smith, 2003, "*Forest Cover Change Assessment in North Central Florida Using Landsat Thematic Mapper Images*," *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping, 63: 149-154.
- Monsef, H., M. El Ghawaby and S. Smith, "*A Geographic Information System of Development Planning. A Case Study of the Wadi Watir Valley in Sinai*," *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping, 63: 37-45.
- Abdelrahman, A., L. Pearlstine, and S. Smith, "*Detection of Positional Errors in Systems Utilizing Small-Format Digital Aerial Imagery and Navigation Sensors Using Area-based Matching Techniques*," *Photogrammetric Engineering and Remote Sensing*, the American Society for Photogrammetric Engineering and Remote Sensing, 67: 825-831.
- Benhanifia, K., A. Bekradda, and S. Smith, 2002, "*Multitemporal Remote Sensing and GIS: A Useful Tool for Detecting and Mapping Forest Changes*," *Journal of Surveying and Land Information Sciences*, American Congress on Surveying and Mapping, 62: pp. 180-188.
- Pearlstine, L., S. Smith, L. Brandt, C. Allen, W. Kitchens and J. Stenberg, 2002, "*Assessing State-Wide Biodiversity in Florida*," *Journal of Environmental Management*, 66: 127-144.
- Smith, S., L. Pearlstine, and J. Stenberg, 2002, "*A Comparison of Aerial Videography and Digital Camera Imagery for Improving Land Cover Classification*," *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping, 62: 163-170.

- Smith, S., F. Szilagyi, and L. Horvath, 2002, “*Environmental Impacts of the Gabcikov Barrage System to the Szigetkoz Region*,” *Journal of Clean Technologies and Environmental Policy*, 4: 54-64.
- Monsef, H., and S. Smith, 2000, “*Enhancing Landsat Thematic Mapper Imagery for Wetlands Mapping*,” *Journal of Surveying and Land Information Sciences*, American Congress on Surveying and Mapping. 60: pp. 138-146.
- Smith, S., L. Horvath, F. Szilagyi, G. Büttner, and J. Aufmuth, 2000, “*Assessment of the Environmental Impacts of the Gabcikov Barrage System Using Satellite Remote Sensing Techniques*,” *American Society of Civil Engineers Journal of Water Resources Planning and Management*, 126: 128-137. The same article was published (with permission from ASCE) in the *Water Resources Journal of the United Nations*, ST/ESCAP/SER.C/207, and pp. 32-44. December 2000.
- Smith, S., H. Monsef, and H. Fawzy, 2000, “*Assessment of the Need for New Land Development in Egypt: A Case Study and Prototype for Site Selection and Land Registration Procedure in the Sinai Peninsula*,” *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping. 60: pp. 121-129.

- Smith, S., and H. El-Monsef, 1997, “*Locating Regions of High Probability for Groundwater in Wadi El Arish Basin, Sinai, Egypt,*” *Journal of African Earth Sciences*, 25: pp. 88-95.
- Smith, S., B. Dewitt, P. Gonzalez, and W. Hurt, 1995, “*Georeferencing of Satellite Imagery for Digital Soil Mapping,*” *Surveying and Land Information Sciences*, American Congress on Surveying and Mapping. 55: 13-20.
- Shrestha, R., A. Nazir, B. Dewitt, and S. Smith, 1993, “*Surface Interpolation Techniques to Convert GPS Ellipsoid Heights to Elevations,*” *Surveying and Land Information Systems*, American Congress on Surveying and Mapping, 53: 133-144.
- Smith, S., and D. Gibson, 1993, “*County-Level Geographic Information Systems in Florida,*” *Geodetical Info*, 7: 55-58.
- Moussa, O., S. Smith, and R. Shrestha, 1991, “*A Hydrologic Regression Sediment-Yield Model for Two-Ungauged Watershed Outlet Stations in Africa,*” *Journal of Environmental Geology and Water Resources*, 17: 177-183.
- Smith, S., and H. Al-Rawahy, 1991, “*Water Allocation in Egypt—A Contemporary Assessment of an Ancient Problem,*” *Journal of Current World Leaders*, 34: 589-608.
- Shrestha, R., R. Taylor, S. Smith and L. Stanislawski, 1990, “*Preliminary Results for the Florida High Precision GPS Network,*” *Surveying and Land Information Systems*, American Congress on Surveying and Mapping, Systems, 50: 299-302.
- Smith, S., 1990, “*A Revised Estimate of the Life Span of Lake Nasser,*” *Journal of Environmental Geology and Water Resources*, 15: 123-129.
- Smith, S., and H. Al-Rawahy, 1990, “*The Blue Nile: Potential for Conflict and Alternatives for Meeting Future Demands,*” *Journal of Water Resources International*, 15: 217-222.
- Smith, S., and M. McCord, 1989, “*Ocean Current Mapping – An Historical Perspective and Preview of the Future,*” *Surveying and Land Information Systems*, American Congress on Surveying and Mapping. 49: 189-194.
- Smith, S., and A. Abdel-Kader, 1988, “*Coastal Erosion along the Egyptian Delta,*” *Journal of Coastal Research*, 4: 245-255.
- Smith, S., 1987, “*An Assessment of Structural Deterioration of Ancient Egyptian Monuments and Tombs in Thebes,*” *Journal of Field Archaeology*, 4: 71-85.
- Smith, S., 1986, “*Effect of the Sahaelian Drought on Water Management in Egypt*” *Journal of Soil and Water Conservation*, 41: 297-300. 1986.

- Smith, S., 1986, "*General Impacts of the Aswan High Dam*," ASCE Journal of Water Resources Planning and Management, 112: 551-562.

Proceeding Articles

- Frederick, P. J. Simon, J. Perry, A. Watts, S. Smith, F. Percival, P. Ifju and M. Burgess, 2009, “*Use of an Unmanned Aircraft System for Monitoring Nesting Responses of Wading Birds (Ciconiiformes) to Restoration of the Florida Everglades, USA.*” NCER Proceedings.
- Ifju, P., K. Lee, T. Rambo, B. Evers, J. Perry, J. Childs, Z. Szantoi, S. Smith, A. Mohamed, M. Burgess and F. Percival, 2009, “*A Survey Grade UAV for Wildlife and Civil Infrastructure Monitoring*”. AUVSI Proceedings.
- Princz, P., J. Olah, S. Smith and K. Hatfield, 2003, “*Complex Analytical Procedures for 2009 Characterization of Modified Zeolites for the Assessment of Biological Wastewater Treatment*,” Proceedings, XVII IMEKO World Congress, Dubrovnik, Croatia.
- Gholz, H., M. Binford, G. Starr, S. Smith, K. Clark, and T. Martin, 2002 “*Resolving the Carbon Balance of a Southeastern U.S. Landscape: A Matter of Scale*,” Proceedings, INTECOL Symposium, Seoul, Korea.
- Levent, G., S. Smith, B. Dewitt, and N. Baytorun, 2002, “*Landsat TM-Based Forest Cover Change Case Study*,” Proceedings, 3rd International Remote Sensing of Urban Areas Conference, Istanbul, Turkey.
- Smith, S., “*Application of Geographic Information Systems for Coastal Zone Management*,” 1995, Journal of the Faculty of Science, United Arab Emirates University, Vol. 8, Part 2, pp. 173-184.
- Princz, P., J. Olah, S. Smith, D. Kallo, and K. Hatfield, 2002, “*Improvement of the Biological Degradability of Wastewaters Using Modified Zeolites*,” Proceedings, 6th International Conference on the Occurrence, Properties and Utilization of Natural Zeolites, University of Thessaloniki, Greece.
- Smith, S., A. Abdelrahman, and L. Pearlstine, 2001, “*Accuracy Assessment of Landsat-Derived Wildlife Habitat Maps*,” Proceedings, Instrument Society of America/IMEKO Special Millennium Session, Houston, TX, pp. 9-11.
- Princz, P., J. Olah, S. Smith, and I. Horvath, 2001, “*Complex Biological Degradability Test of Pharmaceutical Waste*,” Proceedings, Instrument Society of America/IMEKO Millennium Session, Houston, TX, pp. 45-53.
- Pearlstine, L., K. Portier, and S. Smith, 2001, “*Textural Discrimination of an Invasive Plant, Schinus terebinthifolius, from Low Altitude Digital Imagery*,” Proceedings, 18th Annual Workshop on Color Photography and Videography in Resource Assessment, American Society for Photogrammetry and Remote Sensing, Washington, D.C., pp. 121-128.
- Leslie, C., G. Barnes, and S. Smith, 2001, “*Design of a Query System for Assessment of Land Use Change*,” Proceedings, American Congress on Surveying and Mapping, Las Vegas, NV, pp. 129-135.

- Abd-Elrahman, A., L. Pearlstine and S. Smith, 2000, “*Use of Small Format Digital Images for Classification of Satellite Images*,” Proceedings, IMEKO World Congress, Vienna, Austria.
- Princz, P., S. Smith, K. Hatfield, and J. Olah, 1998, “*Simultaneous Removal of Ammonia, Humic Acids and Organic Micropollutants from Drinking Water Using Mixed Zeolite Bentonite Filtering Materials*,” Proceedings, KEMIA 98. Finnish Chemical Conference, Finnish Chemical Society, Helsinki, pp. 121-127.
- Smith, S., and L. Pearlstine, “*GAP Analysis in Florida*”, 1998, Proceedings, 3rd Annual GIS Conference, Florida Department of Environmental Protection, Tallahassee, FL, pp. 89- 95.
- S. Smith, and M. El-Moattassem, 1992, “*Determination of Cross-section Locations for Sedimentation Studies in Lake Nasser Using Remote Sensing Techniques*,” Proceedings, International Conference on Protection and Development of the Nile and Other Major Rivers, Cairo, Egypt, pp. 5-3-1 to 5-3-15.
- Smith, S., A. Aguib, and A. Makary, 1992, “*Applications of Satellite Remote Sensing Techniques to Monitoring Sedimentation Patterns in Lake Nasser*,” Proceedings, International Conference on Protection and Development of the Nile and Other Major Rivers, Cairo, Egypt, pp. 5-2-1 to 5-2-15.
- Moussa, O., S. Smith, and A. Ward, 1990, “*GIS for Monitoring Sediment Yield from Large Watersheds*,” Proceedings, American Society for Photogrammetry and Remote Sensing Fall Convention, Anaheim, CA, pp. 946-954.
- Moussa, O., K. Bedford, and S. Smith, 1990, “*Determination of Soil Erodibility Factor by Using the AVHRR-NOAA Satellite Data*”, 1990, Proceedings, American Society for Photogrammetry and Remote Sensing Spring Convention, Denver, CO, pp. 96-103.
- Moussa, O., K. Bedford, and S. Smith, “*Satellite Data Based Sediment Yield for the Blue Nile and Atbara River Watersheds*”, 1989, Proceedings, American Society for Photogrammetry and Remote Sensing Fall Convention, Cleveland, OH, pp. 379-386.
- McCord, M., and S. Smith, “*Improved Ocean Routing Using Satellite Data*”, 1989, Proceedings, Annual Conference of Maritime Shippers, New Orleans, LA, pp. 58-69.
- Smith, S., “*Assessment of the Effect of the African Drought on Water Resource Management in Egypt Using Remotely Sensed Data*”, 1986, Proceedings, 20th International Symposium on Remote Sensing of Environment, Nairobi, Kenya, pp. 985-991, 1986.
- Smith, S., “*Use of Remotely Sensed Data for Watershed Analysis*”, 1985, Proceedings, U.S.-India Symposium on Remote Sensing, Achmadabad, India, pp. 282-297, 1985.
- Smith, S., K. Mancy, A. Latif, and E. Fosnight, 1983, “*Assessment and Monitoring of Sedimentation in the Aswan High Dam Reservoir*,” Proceedings, International Symposium on Remote Sensing and Remote Data Transmissions, Hamburg, Germany, pp. 499-508,

Research

- *Collection of Digital Imagery in Support of Aquatic Invasive Species Program and CERP*
Sponsor: U.S. Army Corps of Engineers, \$100,000, 2011-2012. CESU Agreement W912HZ-10-2-0032.
- *Development of a Geospatial Soil-Crop Inference Engine for Smallholder Farmers:*
Sponsor: National Science Foundation. \$300,000. 2011-2015.
- *Development of an Unmanned Autonomous Vehicle for Wildlife and Ecological Research.*
Sponsor: The US Army Corps of Engineers. \$330,000. 2006-Present.
- *Development of the IFAS Vegetation Mobile Mapping System for Natural Resources, Agriculture, and Water Quality Applications”,* Sponsor: IFAS. \$100,000. 2008-2011.
- *Rapid Assessment of the Urban Forest Following a Hurricane: Damage, Removal and Restoration,* Sponsor: US Forest Service, \$320,000. 2007-2010.
- *Assessment of Tree Cover Change between 1986 and 1996 in Miami-Dade and Broward Counties,* Sponsor: US Forest Service, \$98,000. 2006-2008.
 - *Improvement of the Biological Degradability of Wastewater using Activated Zeolites.*
Sponsor: NATO. \$240,000. 1998-2006.
 - *Assessment of the Use of Remote Sensing Techniques for Locating and Mapping of Ordinary High Water Line for the Kissimmee Chain of Lakes. Sponsor: Pickett and Associates and Florida Department of Environmental Protection. \$130,000. 2001-2002.*
 - *Mapping and Monitoring of Sedimentation and Sand Dune Encroachment in Lake Nasser Using Remote Sensing Techniques.* Sponsor: National Science Foundation, \$30,000. 2001-2002.
 - *Land-Use and land-Cover Change: Decadal-Scale Dynamics of Carbon Storage Patterns as a Function of Land Ownership in the Southeastern Lower Coastal Plain Region of the U.S.* Sponsor: NASA. \$370,000. 1999-2002.
 - *Biological Diversity in Florida: An Evaluation of Potential Species in Relationship to Habitat and Existing Reserves.* Sponsor: U.S. Geological Survey. \$1 million. 1992-2000.
 - *Natural and Human Resources Assessment of Wadi Watir, South Sinai, Egypt.* Sponsor: U.S. Agency for International Development. \$50,000. 1997-1999.
 - *Aerial Sampling for Brazilian Pepper on Canaveral National Seashore.* Sponsor: National Park Service. \$5,000. 1997.

- *Aerial Sampling of St. Johns River Water Management District Natural Vegetation Using Digital Photography and Analog Videography.* Sponsor: St. Johns River Water Management District, \$25,000. 1997-1998
- *Landcover and Change Analysis of Florida using Landsat Thematic Mapper Imagery.* Sponsor: Florida Game and Fresh Water Fish Commission. \$124,000. 1996-1998
- *Field and Image Processing Support for Land Cover Classification of South Florida.* Sponsor: National Oceanographic and Atmospheric Administration. \$18,000. 1996-1997
- *Analysis of Land Use/Cover Change in the Szigetkoz Area since Construction of the Gabcikovo Barrage System.* Sponsor: National Science Foundation, the Hungarian Academy of Sciences and the Hungarian Ministry of Environmental Protection. \$100,000. 1995-1999.
- *Update and Change Detection Mapping of Potential Wildlife Habitat.* Sponsor: Florida Game and Fresh Water Fish Commission. \$100,000. 1995-1996.
- *Enhanced Community College Interface, SUCCEED: A National Engineering Education Coalition.* Sponsor: National Science Foundation. \$350,000. 1992-1999.
- *Visualization and Imaging across the Disciplines, Shared University Research Program.* Sponsor: International Business Machines Corporation. \$128,000. 1995.
- *Coast of Florida GIS Project.* Sponsor: U.S. Army Corps of Engineers. \$42,000. 1994.
- *Mapping of a Preliminary Route for a Central American Biological Corridor.* Sponsor: Caribbean Conservation Corporation. \$7,500. 1993-1994.
- *Geographic and Resource Mapping of Miskito Cays* Sponsor: \$5,786, Caribbean Conservation Corporation. \$6,000. 1993-1994.
- *Technology Transfer Program for Local Transportation Agencies - Research Implementation Plan.* Sponsor: Florida Department of Transportation. \$27,000. 1991-1992.
- *Land Use/Cover Accuracy Assessment.* Sponsor: Southwest Florida Water Management District. \$27,000. 1992.
- *Terminal Interconnected Equipment and Protocol Development for a GPS Monitoring Base Station.* Sponsor: National Aeronautics and Space Administration. \$29,000. 1991-1992.
- *Identification of Land Use/Transportation Network Change.* Sponsor: National Oceanographic and Atmospheric Administration. \$79,000. 1990-1991.

- *Site Verification Using Global Positioning System.* Sponsor: Florida Department of Environmental Regulation. \$65,000. 1990-1991.
- *Expanded Geodetic Control Along the Primary Road System by Use of Satellite Surveying Technology* Sponsor: Florida Department of Transportation. \$214,000. 1990-1991.
- *Satellite Remote Sensing Imagery.* University of Florida Libraries Sponsor: State Lottery Grant. \$58,000. 1991.
- *Soils Mapping by Use of Satellite Imagery.* Sponsor: U.S. Department of Agriculture. \$20,000. 1990.
- *Georeferencing of Landsat Thematic Mapper and SPOT Data to Universal Transverse Mercator Coordinates.* Sponsor: Southwest Florida Water Management District. \$17,000. 1990.

Service to Professional Organizations

- Editorial Board and United States Representative. *World Applied Sciences Journal*. 2008-Present.
- National Director, Florida Region, American Society of Photogrammetry and Remote Sensing. 2001-2004.
- Chair, Technical Committee on Environmental Measurements, International Measurement Confederation (IMEKO). 2003.
- Editorial Board, *Measurement*, the Journal of the International Measurement Confederation. 2003-2006.
- Chair, Organizing Committee of Conference for the Environmental Measurement Technical Committee, International Measurement Confederation, September 2003.
- Program Committee, XVII IMEKO World Congress held in Dubrovnik, June 2003.

Courses Taught

- Photogrammetry
- Remote Sensing of the Environment
- Remote Sensing Applications
- Radar Remote Sensing

- Terrain Analysis
- Geographic Information Systems
- Geographic Information Systems Analysis

Consulting

- NATO, Expert visit to Egypt. Mediterranean Dialogue Program.
- SPOT Image Corporation, Academic Advisory Committee. Twelve member committee chosen from remote sensing experts in the United States. 1989-1996.
- National Materials Advisory Board, National Academy of Science, Sphinx Restoration Project. 1989-1990.

International Activity

- Fulbright Scholarship (Hungary), 2002-2003
- Guest Faculty Member, Department of Civil Engineering, Dar es Salaam University (Tanzania). 1994 and 1996
- Fulbright Scholarship (Hungary), 1993
- Guest Faculty Member, Department of Public Works, Ara Minch Water Technology Institute, Ara Minch, Ethiopia. 1997

Teaching Awards

- Lichtenstein Award, Ohio State University, 1986
- Teaching Innovation Award, University of Florida, 1995
- Professor of the Year, Egyptian Students Association, 1995.

Professional Certification

- Certified Photogrammetrist, American Society of Photogrammetry and Remote Sensing, No. 846, 2/21/91
- Professional Land Surveyor and Mapper (Florida), 1995

