Anthony J. Giarrusso
Senior Research Scientist - Associate Director
Center for Spatial Planning Analytics and Visualization
Georgia Institute of Technology

EDUCATION:

MCP	2000	Georgia Institute of Technology	City Planning, GIS
B.S.	1992	Georgia State University	Biology, Chemistry

POSITIONS AND EMPLOYMENT:

Senior Research Scientist	Georgia Tech – Center for GIS	2011 - date
Associate Director	Georgia Tech – Center for GIS	2010 - date
Research Scientist II	Georgia Tech – Center for GIS	2005 - 2011
Instructor (Intro to GIS)	Georgia Tech – College of Arch.	2003 - date
Research Scientist I	Georgia Tech – Center for GIS	2000 - 2005

AWARDS

2009 Recipient of Creating Energy Options seed grant from GT Strategic Energy Institute for development of Biomass Resource Information and Routing System, a web GIS-based site suitability tool designed to help identify significant biomass areas in Georgia. One of three recipients chosen from a pool of over fifty applicants.

PUBLICATIONS:

D. Caillaud, F. Ndagijimana, A.J. Giarrusso, V. Vecello, and T. Stoinski (2014), "Mountain Gorilla Ranging Patterns: Influence of Group Size and Group Dynamics." American Journal of Primatology. Vol 76, Issue 8, pages 730-746.

M. Falb, D. Kanny K. Powell, A.J. Giarrusso, (2007), "Estimating the Proportion of Children Who Can Walk to School", The American Journal of Preventive Medicine. Vol. 33(4), pp. 269-275.

PROJECT HIGHLIGHTS:

1. Designed, developed, implemented and maintains both the Georgia Coastal and Marine Planner (GCAMP) and Georgia Wetlands Restoration Access Portal (G-WRAP), two online suites of interactive GIS tools and resources developed for the Georgia Department of Natural Resources. Sponsored through grants from the National Oceanic and Atmospheric Administration (NOAA) and the Environmental Protection Agency (EPA), GCAMP and G-WRAP create central repositories for public data and information relating to Georgia's coastline and coastal wetlands. Theses applications provide industry, governmental agencies, and research institutions engaged in the planning and management of Georgia's ocean and coastal resources, with a series of tools and interactive maps to aid in the assessment of potential locations for offshore and onshore development, conservation, preservation, and other uses.
   http://geospatial.gatech.edu/GCAMP
   http://geospatial.gatech.edu/G-WRAP/
2. Developed optimized, multi-modal routing algorithms to model resource flow of potential biofuels across a multi-state transportation network in the southeastern US for a major oil company. Also developed a

seven state spatial database of potential biofuel resources including sorghum, switch grass, miscanthus, and sugar cane, which was used by the sponsor to comprehensively and efficiently evaluate large areas for siting biofuel processing plants based on resource availability and transportation/distribution potential. http://geospatial.gatech.edu/Resources/ChevBiofuelPoster.pdf

3. Sponsored by the Dian Fossey Gorilla Fund International, Mr. Giarrusso created the largest known spatial database of mountain gorilla ranging data from 1999-2012. Over the last 7 years, he has created interactive maps and time-series animations of the ranging data overlaid with habitat, biomass, and other relevant geospatial data. Recently, Mr. Giarrusso and his team developed and installed a "virtual sandbox" at the Karisoke Research Center in Musanze, Rwanda as part of an exhibit celebrating the 50-year anniversary of Fossey's work in Rwanda. The sandbox allows users to visualize the mountain gorilla habitat and ranging data in three dimensions. In 2018, Mr. Giarrusso conducted a land cover change analysis for an area 3-5 miles outside Volcanoes National Park in Rwanda. Using high-resolution, multi-spectral satellite imagery from 1995, 2007, and 2015, his intent was to help the Fossey Fund better understand the human impacts and landscape changes around the park over the last twenty years, and how these changes have impacted, and/or could impact, the gorillas, their habitat, and the Rwandan people living in these areas. Additionally, Mr. Giarrusso analyzed 15 years of anti-poaching data collected by park rangers to identify historic poaching hotspots and trends, which will, in turn, be used to model and predict future, high probability poaching locations.

   https://design.gatech.edu/news/virtual-sandbox-helps-plight-rwandan-mountain-gorillas - new post highlighting the virtual sandbox.
   http://geospatial.gatech.edu/Gorillas/RangingStory/ --- ESRI Story Map about the Dian Fossey Fund and their mountain gorilla ranging data collection, analysis and visualization.
   http://geospatial.gatech.edu/Gorilla3D/ --- 3D interactive map showing daily gorilla ranging data from 1999-2015. (*note: application takes 1-2 minutes to load. Once loaded, press Start and watch daily gorilla movements over 16 years)*
   http://geospatial.gatech.edu/Gorillas/Homepage/ -- summary of work done with DFGFI over the last 10 years.

4. Part of team that developed and deployed two DOE sponsored interactive maps related to offshore energy: Assessment of Energy Production Potential from Tidal Streams in the United States and Assessment of Energy Production Potential from Ocean Currents in the United States

5. 2008 and 2014 Urban tree canopy assessments in the City of Atlanta. 2018 assessment currently in progress. http://geospatial.gatech.edu/AtlantaUTC/ . Additionally, over the last 19 years, Mr. Giarrusso has conducted several land conservation projects in and around the City of Atlanta. http://geospatial.gatech.edu/Greenspace/

6. Mr. Giarrusso has been teaching introductory undergraduate and graduate level GIS courses every spring and fall semester for the last 16 years. In 2013, he developed and implemented a pilot online introductory GIS course. He has created and maintains course materials for all classes.

7. Working with the Georgia Conservancy, Mr. Giarrusso is conducting a 50-year historic land cover classification retrospective of Georgia using Landsat satellite imagery between 1970 – 2019. The results of this project will help Georgia's policy and decision makers better understand how Georgia's land cover has changed over the last fifty years and what are the implications for the future.