
Gretchen M. Chiqués-Torres

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Education

- 2002 - Present M.S. In Geological Science, University of Puerto Rico, Mayagüez Campus. Current GPA 3.68 in a 4.00 scale. Thesis - Spectral Characterization of Coastal Sediments with Remote Sensing techniques.
- 1996 - 2002 B.S. In Geological Science, University of Puerto Rico, Mayagüez Campus. Minor in Geographical Information System. Certification of NASA Partnership of Spatial and Computational Research (PaSCoR)
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Work Experience

CSA Group Architecture and Engineers, San Juan, PR

GIS Databases developing and implementation. Spatial (graphical) and tabular (non-graphical) data Analysis. Integration geographic data (maps) with engineering and environmental data.

USGS Hawaii Volcano Observatory, Hawaii National Park, HI

Updating paleomagnetic GIS database of Mauna Loa Volcano, Hawaii in ARC View and Microsoft Access. Mapping explosive eruption of Mauna Loa Caldera using GPS and GIS. Assist in collecting charcoal and preparing for analysis for radiometric dating.

Research experience

Land use of the Southeast Municipalities of Puerto Rico

Land Use photo-interpretation of color aerial photograph. Arc Edit digitalization and editing, land use map. Arc Info polygon label and transform tics. Arc View presentation

GIS Quality Control in the Land Use of the Caribbean National Forest El Yunque

Identify, analyze and correct errors cause in GIS project.

Patchiness of Luminescence in Bahia Fosforecente: a tide related phenomenon?

Field sample collection and laboratory counting of dinoflagellate, GIS thematic population map distribution using Arc View extension, 3D Analyst.

Water Quality Puerto Mosquito Bay, Vieques, Puerto Rico

Field sampling of marine bay and coastal Caribbean waters; salinity, pH and dissolved oxygen. Laboratory analyses of heavy metals with the use of an atomic absorption spectrophotometer.

Land use of the Southwest Municipalities of Puerto Rico

Land Use photo-interpretation of color aerial photograph. Arc Edit digitalization and editing, land use map. Arc info polygon label and transform tics. Arc View presentation. GPS location of new roads, and overlay in topographic map using Arc View.

Land Use of National Rain Forest, El Yunque

Land Use photo-interpretation of aerial photograph. Arc edit digitalization and editing, land use map. Arc info polygon label and transform tics. Arc view presentation

Petrologic analysis of volcanic rock of St. Lucia, Caribbean Lesser Antilles

Analyze thin section, hand specimens, and chemical composition of volcanic rock. Classification of chemical composition and minerals characteristic by geological age.

Geological map of the west of Rincon Municipality

Sample collection on field, description in stratigraphic column. Strike and dip measurements using pocket transits. Geological map with cross sections and stereonet interpretation.

VOLUNTEER EXPERIENCE

Private Consulting – Identify, measure and video recording of coral in Caribbean waters.

Research Sampling – Oceanographic cruise sample collection, bottom sediments and tramp sediments collection in Mayagüez Bay.

Museum Tour Guide and Seminars – Tour Guide of the University Geological Museum. Earth Science and related topics talks to K –12 in locals schools.

Student Mentor – Mentor of Secong year students of PaSCoR. Summer Workshop in Remote Sensing and GIS

SKILLS

Language

Read, write and speak Spanish and English. Excellent oral communication and teamwork

Operating System

Windows 95, Windows 98, Windows NT, Windows 2000, Windows Me, Windows XP, Macintosh.

Applications

Arc GIS 8.2, Arc GIS 8.3, Arc Info 4.0, Arc View 3.2. Corpscon, ENVI 3.6. Canvas, Adobe Photoshop and Corel Draw.

Laboratory

Laboratory analysis of sediment: sieving, carbon composition, Sedigraph, XRD. Preparing water sample for Atomic Absorption Spectrophotometer. Preparation of thin section of rock, use of Petrologic microscope. Counting Dinoflagellates.

Field

Transplant Corals, Measure coral cover by species using transect technique. Pocket transit measures. GPS Observations. SSI Open Water Certification and Specialty Diver Certification. Collect water column sample.
