

Professor:

Ramón E. Vásquez, Dean of Engineering

Phone 787-832-4040 x. 3508

reve@ece.uprm.edu

Pieter Van der Meer

Telephone 787-832-4040 x.3573

pvander@ece.uprm.edu

Students:

Beatriz Cruz González

Ingrid Militza Plá Rodríguez

Applications of Remote Sensing for the Modeling of the Caribbean Climate

The main objective of the research work is to provide input for Regional Climate Modeling in the Caribbean. Surface temperature depends on the volumetric water content and the type of soil. The Soil Conservation Maps, as published in 1982 by the United States Department of agriculture Soil Conservation Service in cooperation with the College of Agricultural Sciences in the University of Puerto Rico-Mayaguez Campus, were digitized to quantify the soil groups and characteristics on a region-by-region basis using GIS. GIS technology enables researchers to qualify and quantify information and other characteristics because it provides a database with information using a metric coordinate system (Lambert). The soil group information together with textural class generalization for 0.5 meters in depth, serves as input for the Climate Model for Puerto Rico to measure and model the effect of land surface and soil variables on the climate in the Caribbean Region. A soil map of the entire Puerto Rico area was assembled and produced as a final product. In addition, the GIS software "Arc View" will be used to display the results and to publish it.