Development of High-Resolution Daytime Population Estimates for US Ports

The purpose of this research is to estimate the daily population of workers entering all businesses and facilities within maritime ports in the United States. Oak Ridge National Laboratory's (ORNL) Geographic Information Science and Technology (GIST) Group has been developing and refining a high-resolution population distribution model and database called LandScan USA. This research will apply LandScan USA's population model to 362 ports and service providers across the US in order to approximate daytime population numbers. It will consist of compiling information from various agency databases, such as Transportation Security Administration (TSA), US Census data, land use, and transportation data. Army Corps of Engineers (USACE) port data points will be enhanced with information from proprietary port websites to estimate port boundaries. The data sets will then be incorporated into ArcView Geographic Information System (GIS), which in turn will display the location of the ports with their associated facilities. Combining these locations with the LandScan population data will provide population estimates of each port and its service providers.

Student's name:	**Janel T. Brown**
School student attends:	Winston-Salem Sate University
Name(s) of mentor(s):	**Budhendra Bhaduri, Mark A. Tuttle, Phil Coleman**
Division:	Computational Sciences and Engineering
Program:	Research Alliance in Math and Science (RAMS)