



# New institute designed to strengthen MSU high-tech resources

Jim Lytle

*State-of-the-art scientific visualization equipment is used in the work of the GeoResources Institute.*

*By Bob Ratliff*

Four technical centers at Mississippi State are pooling their resources and personnel to better meet common educational and research goals.

The university's newly designated GeoResources Institute combines missions and expertise areas of the Remote Sensing Technologies Center, Mississippi Water Resources Research Institute, Computational Geospatial Technologies Center, and Visualization, Analysis, and Imaging Laboratory.

"By administratively reorganizing into the GeoResources Institute, we will have more resources to address some pressing issues, including water quantity and quality, efficiency of agricultural production, and invasive species monitoring and management," said director David Shaw.

"The collaboration will maintain and continue to enhance our close relationships with other university departments and external agencies, as well as allowing us to take advantage of the tremendous current and future funding opportunities," he added.

Established three years ago, the Remote Sensing Technologies Center has gained widespread recognition for its partnership efforts with a variety of private industries and public sector agencies. The alliances have involved a number of high-profile remote sensing and geospatial projects related to agriculture, forestry, environment issues, state and local government, and transportation.

The federally mandated Water Resources Research Institute is part of a national network administered through the United States Geological Survey. Each state institute is charged with recruiting and training water scientists, exploring new approaches to water problems and providing water-related research results to water managers and the public.

The Computational Geospatial Technologies Center, a part of the university's Engineering Research Center, works with government, commercial and public interests to research, develop and validate computational geospatial information products. It also helps apply those products to terrestrial, hydrologic, oceanic and atmospheric processes.

Also at the ERC, the Visualization, Analysis, and Imaging Laboratory's work includes the use of high-performance computing to apply state-of-the-art scientific visualization to real-world problems, such as 3-D forest canopy structure and ocean flow changes.

"Bringing these four centers together at MSU allows us to further develop our common goals, as well as pool our talents and resources on research and educational projects," Shaw said. "It also allows us to enhance already strong relationships with various academic and research departments and colleges throughout the university and to pull teams of faculty together for multidisciplinary projects that develop solutions to meet the needs of society and our stakeholders."

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