

# Texas A & M AgriLife Research Blackland Research & Extension Center

LEADING IN LAND & WATER SOLUTIONS IN TEXAS FOR OVER 100 YEARS

Blackland Research & Extension Center • 720 E. Blackland Rd, Temple, TX 76502 • [blackland.tamu.edu](http://blackland.tamu.edu)



*Blackland scientists are devoted to developing new technologies and management strategies to improve water, soil, and other natural resources on agricultural, urban, and military lands. Our research, including the computer models and decision aids we develop, is deployed world-wide as people seek to: increase agricultural production and water supply; improve the environment and the economic well-being of people; and increase the sustainability of land.*

## Research Programs / Special Initiatives

- Agro-Ecosystems Research and Modeling
- Land and Water Management and Environmental Restoration
- Agricultural Systems Modeling (APEX, EPIC)
- Hydrologic Modeling (SWAT)
- GIS-Integrated Information Management
- Water Quality and Quantity Monitoring
- Conservation Effects Assessment Program
- Maintenance, Restoration, and Revegetation of Military Lands
- Watershed Development and Protection
- Rangeland Drought Monitoring and Management
- Mali Livestock and Pastoralist Initiative
- Gobi Livestock Early Warning System
- Urban Storm Water Control and Modeling
- Military 4-H and "Operation: Military Kids"

## Co-Located Agencies @ Blackland

### *USDA Agricultural Research Service (ARS) Grassland, Soil, and Water Research Laboratory*

- Focuses on developing plant growth and hydrologic computer models investigating crop, grazing, forest, and urban land management effects on soil and water resources.

### *USDA Natural Resources Conservation Service (NRCS)*

- Interacts closely with ARS and Texas A & M AgriLife Research scientists to apply hydrologic and agricultural system simulation models to solve water, natural resource, and economic concerns in Texas and across the USA.

### *Texas AgriLife Extension Service*

- Improves the lives of people, businesses, and communities across Texas and beyond through high quality, relevant education.

# Texas A & M AgriLife Research

## Blackland Research & Extension Center Scientists

### Agro-Ecosystem Analysis and Computer Modeling

- **Tom Gerik** (Ph.D., University of Nebraska), who also serves as the Resident Director for the Blackland Research and Extension Center, performs research using on-farm field studies and computer simulation models to identify best management practices that alleviate constraints to production and profitability of field crops while minimizing impacts of cropping systems on the environment.
- **Jay Angerer** (Ph.D., Texas A & M University) develops and applies computer models and decision support systems to improve management, productivity, and sustainability of pasture and grazing lands in the USA and developing countries.
- **Jean-Claude Bizimana** (Ph.D., Texas A & M University) develops and utilizes economic computer models to evaluate and identify management and marketing practices, strategies, and technology to maximize profitability of agricultural commodities and systems.
- **William E. "Bill" Fox, III** (Ph.D., Texas A & M University) conducts research on restoring disturbed agricultural and natural ecosystems. He identifies best management practices to ameliorate impairments or mitigate unintended consequences of agriculture.
- **Manyowa Meki** (Ph.D., University of Cambridge, UK) uses biophysical models to evaluate best management practices and assess environmental impacts of potential grain, biomass, and oilseed cropping systems.
- **Robin A. J. Taylor** (Ph.D., Imperial College, London) develops and applies hydrologic and agricultural computer model systems to examine and mitigate the impacts of agricultural management decisions on production and environmental risk.

### Hydrologic Systems Computer Modeling

- **Katrin Bieger** (Ph.D., University of Kiel, Germany) develops and applies hydrologic computer models to evaluate the impacts of land use and agricultural management on water resources.
- **Santhi Chinnasamy** (Ph.D., Anna University, Madras, India) develops and applies hydrologic computer models to assess the impacts related to agriculture, environmental and natural resource systems at multiple spatial scales by conceptualizing research and project methodology.
- **Yamen Hoque** (Ph.D., Purdue University) develops and utilizes hydrologic computer models to assess the impacts of anthropogenic influences (agricultural practices, urban development, etc.) on watershed systems.
- **Jaehak Jeong** (Ph.D., University of Texas) develops and applies hydrologic computer models to evaluate the impact of management on urban, agricultural, and natural landscapes.
- **Javier Osorio Leyton** (Ph.D., Virginia Tech) develops and applies hydrologic computer models to assess the impacts of agricultural and natural processes on watershed systems.

- **Xiuying (Susan) Wang** (Ph.D., Purdue University) conducts hydrologic and environmental research to assess the impacts of agricultural and natural resource systems. Develops, tests, and improves agricultural and natural resource computer simulation models.
- **Jimmy Williams** (Ph.D., Texas A & M University) develops and applies computer modeling technology to evaluate impacts of management practices on watersheds and impacts of on-farm management decisions on environmental quality.
- **Haw Yen** (Ph.D., Colorado State University) designs and develops watershed simulations to mitigate environmental and ecological impacts for the new version of the Soil and Water Assessment Tool (SWAT).

### Spatial Science and Integrated Information Systems

- **Mauro DiLuzio** (Ph.D., Padua University, Italy) develops GIS and computer modeling technology, applications, and database products to address agricultural, urban, and natural resource problems across-scales from multi-sources and uses eco-spatial conceptual methods.
- **Cesar Izaurralde** (Ph.D., Kansas State University) develops robust modeling methods for evaluating the impacts of climate change on terrestrial ecosystems and water resources. His research also examines mitigation options in agriculture and energy through soil carbon sequestration, greenhouse gas emission reductions, and the sustainable production of biofuels.
- **Raghavan Srinivasan** (Ph.D., Purdue University), who also serves as the Director of the Spatial Sciences Laboratory at Texas A & M University, develops internet-based tools using GIS and remotely sensed data and integrates data into spatial information systems. He manages training and educational outreach for use of GIS application of natural resource and hydrologic computer models for water quality and land use change.

### Water Science - Quality and Monitoring

- **June Wolfe** (Ph.D., Baylor University) conducts hydrology and water quality field research and monitoring by examining the impacts of land management on bacteria, nutrient, and sediment accumulation and transformation in streams.
- **Anish Jantrania** (Ph.D., Clemson University) develops innovative and affordable solutions for sustainable water, wastewater, and solid waste treatment processes. His work focuses on developing a statewide extension education and research program related to surface and groundwater quality protection with emphasis on non-point sources, OSSF, and other environmental issues.