

BIOLOGY

Carolyn L. Bouma. Study of carbohydrate transport in bacteria, and its genetic regulation, using techniques of molecular biology, biochemistry, microbiology, and genetics; applied environmental microbiology.

Dr. Joshua Brown. Wildlife management and biology. Population genetics, landscape genetics, and conservation genetics of waterfowl; modelling demographic patterns and how landscape level environmental factors and hybridization drive adaptation and speciation.

Donna Byers. Natural bioactive compounds and their effectiveness as chemotherapeutics, using cell culture and molecular techniques. Genetic and morphological changes due to cholinesterase inhibition during early development of the mammalian brain.

Dr. Fernando Diaz. Evolutionary Genomics and Molecular Ecology. I use genetic and bioinformatic tools to address questions in Ecology and Evolution, such as 1) the regulation of gene expression associated with phenotypic plasticity and climate change adaptation in insects, 2) genomic changes associated with the speciation process, and 3) the landscape genetics of species overlapping natural and disturbed environments.

Nabarun Ghosh. Aerobiology, allergy, air quality and evaluating air purifiers, digital, fluorescent and electron microscopy; cytology: cell and chromosome research; tissue culture in plants; plant pathology—virology: sugar beet and wheat viruses.

Stephen Karaganis. Circadian biology of the murine gastrointestinal tract. Gut motility and hormone rhythms in vivo and in vitro.

Raymond S. Matlack. Population and community ecology of mammals, including development of a monitoring protocol for free-tailed bats; study of responses of small mammals to frequency of fire in shortgrass prairie; ecology of small mammals in Palo Duro Canyon and other locations in the Texas Panhandle.

Maitreyee Mukherjee. Environmental microbiology, microbial ecology, molecular microbiology, microbial processes impacting soil and water quality in natural, artificial, and engineered environments; antimicrobial resistance and multidrug resistance.

W. David Sissom. Systematics and natural history of scorpions and other arachnids; biodiversity inventory of terrestrial arthropods in Texas.

ENVIRONMENTAL SCIENCE/GEOLOGY

Erik Crosman. Study of applied meteorology and air quality on the Southern High Plains (e.g., extreme heat, ozone and dust, flooding), satellite remote sensing of the environment, numerical earth system modeling, and atmospheric boundary layer processes.

Naruki Hiranuma. Study of atmospheric ice nucleation, aerosol-cloud-climate interactions, weather modification (e.g., precipitation enhancement, hail prevention) and aerosols' impact on public health.

William Jim Rogers. Environmental assessment, decision support modeling, environmental risk modeling, toxicology, environmental remediation, waste management and handling with emphasis on natural resource and environmental quality protection.

Rebecca VanderLeest. Stratigraphy and sedimentology with geothermochronology, basin modeling, and stable isotopes to interpret changes in tectonics, eustatic sea level, and climate; seeks to understand how and why landscapes are changing on the millions of years timescale.