

## OURE 2009-2010 Projects

Project Title	Research Advisor
"Cyber-Geomapping" Geologic Mapping Using Spatially Rectified Digital Photogrammetry	Dr. John Hogan
"Long" Carbon Fibers for Blast Resistant Concrete	Dr. Jeffery Volz
2D Finite Element Analysis of Stress & Strain in Petroleum Reservoirs	Dr. Andreas Eckert
A Hybrid Monitoring Network for Hydrological Environments	Dr. Sahra Sedigh
A Reactive Enamel Coating to Improve Corrosion Resistance of Steel	Dr. Jeffery Volz
Airfoil and Wing Design Methodology for Unmanned Air Vehicles	Dr. Fathi Finaish
An Investigation of Heavy Metal Ion Binding by Selenoamino Acid Derivatives	Dr. Harvest Collier
Analysis of Regulation of Hof! By Phosphorylation	Dr. Katie Shannon
Application of Solar Power	Dr. Stuart Baur
Baikal Rift Zone: A Review	Dr. Stephen Gao
Carbon Credit Financial Markets and Feasibility	Dr. Joel Burken
Changing the Properties of Colored Glass for Compatibility	Dr. Richard Brow
Color Preferences Survey Analysis Code Library	Dr. Seth Orsborn
Comparing Field Sampling Methods in Phytoforensics	Dr. Joel Burken
Computational Study of Flow Fields Around Airfoils at Low Reynolds Numbers	Dr. Fathi Finaish
Computer Support of Renewable Energy Resources	Dr. Bruce McMillin
Conformance Control: Interaction Between Surfactants and PPG	Dr. Baojun Bai
Contemporary Geotechnical Instrumentation Sensors	Dr. Ronaldo Luna
Creating Earth Stratospheric Conditions in a Vacuum Chamber	Dr. Carlos Castano
Dark Side of Leadership Personality Among Developing Military Officers	Dr. James Martin
Deriving Gas-Phase Exposure History from Indoor Materials	Dr. Glenn Morrison
Development of a Electro-Hydraulic Piston Rapid Development System	Dr. Robert Landers
Development of a Thermal Control	Dr. Robert Landers
Development of an Alternative Energy Vehicle Powertrain Demonstration	Dr. Robert Landers
Development of Structural Analysis Laboratory Exercised	Dr. Lesley Sneed
Differential Equations in Topological Fields	Dr. Matt Insall
Direct Marketing Research	Dr. Morris Kalliny
Dynamic Contact Angles of Crude Oil in Brine	Dr. Parthasakha Neogi
Effect of Acid Catalysts on the Hydrothermal Degradation of Biomass	Dr. Klaus Woelk
Effects of Halogenic Salts on the Hydrothermal Conversion of Glucose	Dr. Klaus Woelk
Embedded Strain Gauge Applications in Carbon Fiber Composites	Dr. Hank Pernicka
Emotional Intelligence and Student Satisfaction	Dr. James Martin
Endophyte Benefits in Phytoremediation and Biomass Growth	Dr. David Westenberg Dr. Joel Burken
Evolutionary Algorithm Software Factory: Phase II	Dr. Daniel Tauritz
Evolutionary Algorithms for Multi/Mixed Core Computing	Dr. Daniel Tauritz
Exploratory Synthesis of Cathode Materials for Li-ion Batteries in the Iron Boro-phosphate Family	Dr. Amitava Choudhury
Exploring Innovative Learning Environments for Engineering Students	Dr. Ronaldo Luna
Explosives Engineering Research	Dr. Paul Worsey

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Feldspar's Effectiveness at Neutralizing Acid Without Producing CO2	Dr. Kwame Awuah-Offei
Ferrocement for Low Cost Housing Construction	Dr. Richard Stephenson
Fuel Cell Design/Rapid Prototyping	Dr. Frank Liou
Functional Image Restoration Using a Photorefractive Composite	Dr. Jeffery Winiarz
Fungal Communities in Missouri Streams Under Drying Stress	Dr. Dev Niyogi
Genomic Analysis of the BCA Sequence 3 Gene Family in Glycine Max	Dr. Ronald Frank
High Performance Concrete for Structural Applications Involving Hazard Mitigation and Route Remediation: Laboratory Evaluation of Repair Materials	Dr. John Myers
Identification and Isolation of a Non-Toxic Promoter for Use in Yeast	Dr. David Westenberg
Identifying PCB Degrading Microbes	Dr. David Westenberg
Implementing a Smart Card Based Medical Database System	Dr. Sriram Chellappan
Influence of Oxidative Stress on Muscarinic Receptor Signal Transduction	Dr. Robert Aronstam
Investigation of Tamper Resistance Materials for Route Remediation	Dr. John Myers
Isolation of Root Nodule Bacteria from Crotalaria Spectabilis and Mimosa	Dr. David Westenberg
Lead-Induced Oxidative Stress and its Effects on Blood-Brain Barrier	Dr. Nuran Ercal
LFRD in Geotechnical Design of Bridge Structures	Dr. Ronaldo Luna
Location Privacy in Moving Object Environments	Dr. Dan Lin
Magnetic Studies of Northern Rolla Fault	Dr. Stephen Gao
Massively Parallel Algorithms for DNA Sequence Assembly	Dr. Fikret Ercal
Metal Catalysis of Hydrothermal Carbonization of Glucose	Dr. Klaus Woelk
Microfabricated Dialysis Membranes for Micro-Bioseparations	Dr. David Henthorn
Missouri S&T's Design for an Environmental STEP Ahead	Dr. Stuart Baur
Model Checking Enhancements	Dr. Bruce McMillin
Modeling Preformed Particle Gels Swelling and Deswelling Kinetics	Dr. Baojun Bai
Nanostructures of Functional Borides Made by Innovative Methods	Dr. Manashi Nath
Nanotubes and Nanowires of Metal Thiophosphates	Dr. Manashi Nath
Nonlinear Position Control of a Linear Axis	Dr. Robert Landers
Nutrient Dynamics in Missouri Streams and Ponds	Dr. Dev Niyogi
Outlier Detection in Wireless Sensor Networks	Dr. Sanjay Madria
Palynology of the Hell Creek Formation: A Case Study from Garfield County, Montana	Dr. Francisca Oboh-Ikuenobe
Panama Canal's Instabilities in Volcanic Tuff	Dr. Ronaldo Luna
Process Modeling for Dip Pen Nanolithography	Dr. Douglas Bristow
Pulsed Plasma Electron Beam and X-ray Generation	Dr. Joshua Rovey
Regulation of Cytokinesis in Budding Yeast	Dr. Katie Shannon
Rheological Analysis of Particle Gels	Dr. Baojun Bai
Seismic Behavior of Bridge Under Combined Loading	Dr. Lesley Sneed
Silence in the Church from Late Antiquity through the Middle Ages	Dr. Michael Bruening
Simulating Worm Propagation in Vehicular Ad Hoc Networks	Dr. Sriram Chellappan
Sources of Stockpile Gradation Variability in Aggregated Processing Plants	Dr. Kwame Awuah-Offei

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Statistical Analysis of Baseball Attendance after a White Flag Trade	Dr. Michael Davis
Study of Upstream Injection Swirl to Reduce Drag and Heat Transfer	Dr. David Riggins
Survival of benthos in Sediment Remediation with Water Jet Amendments	Dr. Curt Elmore Dr. Joel Burken
Synthesis and Characterization of Vinyl-Bilimidazole Polymers	Dr. Harvest Collier
Synthesis of Hybrid Porous Materials for Hydrogen Storage Application	Dr. Amitava Choudhury
Teaching Anatomy & Physiology: 3D Virtual World of a Frog	Dr. Anne Maglia
Temperature Profile	Dr. Joseph Council
The Use of News Media to Express Religious Views in the Arab World	Dr. Morris Kalliny
Thermal Expansion of Sedimentary Rocks During Injection	Dr. Runar Nygaard
Thermal Loading of Oil Well Cements in CO2 Injection Wells	Dr. Runar Nygaard
Using Excel to Calculate and Plot Black Oil Properties	Dr. Ralph Flori
Wind Velocity Comparison for Wind Turbine Installations	Dr. Curt Elmore