Architecture, Faculty

- Carrion Awilda Rodriguezr
  - Computer-Aided design and architectural drawing
  - Computer-Aided Manufacturing
  - Digital Technologies
  - Hospitality Architecture
  - Intelligent Materials
  - Responsive Environments & Spatial Identity
- Carrissa Ramming
  - Design and analysis of steel structures and engineering mechanics
  - Special interest in classical and numerical structural analysis
- Jeanne Homer
  - collaboration and integration of systems
- Jeff Williams
  - Architectural Design
  - Computer applications in the design studio
  - The history of architecture through the ages
  - The relationship between contemporary and historical architecture
  - Urban issues in design
- Jerry Stivers
  - Architectural Design/Analysis
  - Architectural History
  - Urban Design
- John Womack
  - Design Communications, methods
  - Freehand drawing and watercolor painting
  - History of world cultures and architecture with a particular focus on the architecture of U.S. Route 66
  - Regional design and the integration of site, program, and building materials into an organic synthesis
  - The art and cultures of Japan and the American Indian
- Michael Rabens
  - American architecture of the 19th and 20th centuries.
  - History of Renaissance/Baroque architecture particularly that of 17th century France
- Mohammed Bilbeisi
  - Architectural Analysis
  - Architectural design and representation
  - Graphic Thinking and communication
  - History of Islamic Architecture
  - Visual Literacy
- Nathan Richardson
  - Design, practice and project delivery in architecture with a particular focus on the role of real estate expertise and entrepreneurship in the profession and the production of the built environment.
- Paolo Sanza
  - Adaptive Reuse
  - Computers
  - Design Studio
  - Materials
- Randy Seitsinger
  - Architectural design
  - Computer applications in the design studio
  - History and theory of art
  - Oklahoma architecture
  - Representational methods for design projects
  - Theatre set design
  - The history of architecture through the ages, with particular interest in medieval architecture and culture
- Seung Ra
  - Digital Design & Practice

Interdisciplinary Design

Stan Carroll

Steven O'Hara

Design and analysis of concrete structures, steel structures, timber structures, and masonry structures

Special interest in classical and numerical structural analysis

Susan Bobon

Faculty/Librarian Collaboration

Improving Information Literacy and Writing Skills among Architecture Students

New Library Architecture

Oklahoma’s Built Environment

Suzanne Bilbeisi

Engineering Education

History of western architecture and its' influence on contemporary western architecture

The methods and means of teaching beginning design students

Tom Spector

Architecture design theory, especially as it relates to professional practice issues

Developing topics in architectural design ethics

Moral philosophy

Theory and practice of perspective drawing

Civil and Environmental, Faculty

Avdhesh Tyagi

- Bridge and Culvert and Scour Modeling
- Finite Element Modeling
- Fuzzy Theory to Ground Water Modeling
- GIS applications to surface water modeling
- Remediation of Hazardous Waste Sites

Bruce Russell

- Concrete Materials
- Structural concrete

David Lampert

- INFEWS
- Life cycle assessment
- Contaminant fate and transport modeling
- Remediation of contaminated sites
- Wastewater treatment
- Hydrologic and water quality modeling
- Python programming

Gregory Wilber

- Biological Treatment of an Industrial Waste Stream Containing Waste Ink and Surfactants
- Examining the Effects of Various Environmental Factors on the Biotransformation of Chlorinated Aliphatic Compounds in Landfills
- Nitroaromatic compounds (such as TNT and RDX) in soils and in engineered treatment systems

John Veenstra

- Disinfection By-Products in drinking water
- Drinking Water Treatment
- Increasing the Participation and Advancement of Women in Academic Science and Engineering - National Science Foundation

Julie Hartell

- Construction Materials
- Concrete Durability
- Nondestructive testing and monitoring methods
- Infrastruction Condition Assessment

Kelvin Wang

- Automated Cracking Survey
- Automated Technologies for Pavement Survey and Pavement Data Systems for Design and Management
- Paving the way for improvements

Mark Krzmarzick

- Impact of oil/gas production fluids on soil microbial communities
- PCB and TCE bioremediation with the co-amendment of natural organochlorines
- Reduction of 2,4-dinitrophenol and study of nitro-reductase genes in soil bacterial communities.

Mohamed Soliman

- Behavior of structures under extreme events
- Fatigue and fracture in steel and aluminum structures
- Sustainability and life-cycle management of structures deteriorating due to aging and natural hazards
- Reliability of structural systems
- Structural Health Monitoring
- Resilience of infrastructure systems
- Risk assesment and risk-based decision making

Norb Delatte

- Concrete Materials
- Structural concrete
- Engineering Education
- Nondestructive testing and monitoring methods
- Failure Analysis and Forensic Engineering

	Roller Compacted Concrete
	Pervious Concrete
	Concrete Pavement
Paul TIkalsky	
	Concrete Materials
Qiang (Joshua) Li	
	Mechanistic-Empirical based Pavement Design (MEPDG)
	Data Automation for Pavement Surface Characterization and Evaluation
	Sustainable and Resilient Infrastructure Asset Management
	3D Simulation of Vehicle-Pavement Interaction for Pavement Safety
Rifat Bulut	
	Unsaturated and Expansive Soils
	Soil Stabilization
	Pavement Foundations on Expansive Soils
	Soil-Structure Interaction
	Surface Energy Characterization of Asphalt Pavement Materials
Robert Emerson	
	Nondestructive evaluation of structural materials and structural engineering concepts in durable and affordable housing
	Timber and Concrete Engineered Structures, including research and development of engineered structural products and systems
Samir A. Ahmed	
	Design, planning, and management of transportation systems and facilities
	Highway traffic operations and control
	Intelligent transportation/ infrastructure systems and facilities
	Public Transportation Systems
	Transportation Safety
	Systems Modeling, Simulation, and Optimization
Steve Cross	
	Asphalt Pavement Construction
	Pavement recycling
	Soil Stabilization
Tyler Ley	
	Development of a Passive Corrosion Sensor - OTC
	Implementation of the MEPDG Design for Oklahoma - ODOT
	Investigation of Precast Bridge Deck System - OTC
Xiaoming Yang	
	Soil and Rock Mechanics
	Numerical Analysis on Geotechnical Problems
	Design and Application of Geosynthetics
	Geotechnical Design Reliability
Yongwei Shan	
	Construction productivity measurement and improvement
	Building Information Modeling for Engineering, Construction, and Facility Management
	Effective Engineering Information Delivery
	Technology Implementation and Diffusion

Chemical, Faculty

Alan Tree

- Material Science
- Polymers

Ashlee Ford-Versypt

- Systems biomedicine
- Mathematical biology
- Multiscale computational modeling
- Nonlinear dynamic systems
- Pharmaceutical drug delivery
- Transport through heterogeneous media
- Physiology related to cancer and diabetic kidneys
- Engineering education and STEM outreach

Brian Neely

Clint Aichele

- Emulsion Formation and Stability
- Gas Treating
- Improved Separations for Algae Fuel Production

Geir Hareland

- Drilling Optimization and Drill Bit Modeling
- Rock Mechanics in Drilling and Completion Operations
- Drilling Fluids and Hydraulics
- Drilling System Parameter Integration and Optimization
- Well Completions and Stimulation Optimization
- Cementing

Heather Fahlenkamp

- Tissue Engineering: Advanced Tissue-Equivalent Models to Study Inflammation Associated with Vascular Complications, Allergens, and Infectious Agents.
- Drug Delivery: Nanoparticles and Biomembranes for Controlled Delivery

Jindal Shah

- Monte Carlo and Molecular Dynamics Simulations
- Phase Equilibria
- Ionic liquids
- Dye-sensitized solar cells

Joshua Ramsey

- Engineering Novel Gene Delivery Vectors
- Improving Industrial Relevant Enzymes and Microorganisms
- Microbial Deterioration of Concrete Infrastructure
- Virtual Design and Screening of Therapeutic Compounds

Marimuthu Andiappan

Peter Clark, Professor

Prem Bikkina

- Interfacial phenomena relevant to geological sequestration
- Enhanced oil recovery (EOR) using ASP, CO2, and CO2 foams
- Multi-phase emulsion characterization
- CV- Prem Bikkina

Robert (Rob) Whiteley

- Distillation
- Ethanol Separation for Biofuels
- Process Monitoring/ Controls/Optimization
- Robert (Rob) Whiteley, Distillation

Runar Nygaard

Russell Rhinehart

- Process improvement (modeling, optimization and control)
- Product improvement (modeling and design)

Sayeed Mohammad	
Seokjhin Kim	
	Inorganic Membranes and Thin Films of Nanostructured Materials
	Controlled-Pore-Size Membranes for Water Purification and Hydrocarbon Separation
	Gas Transport and Diffusion Study in Modified-Pore Membranes
Sundar Madihally	
	Reactor Design
	Scaffold Sythesis
	Stem Cell Based Tissue Engineering
	Trauma Induced Muscle Wasting and Drug Delivery
Yu Feng	
	Computational Fluid-Particle Dynamics and Advanced Numerical Methods
	Physiologically Based Pharmacokinetic (PBPK) Modeling
	Particulate Matter Transport Phenomena
	Lung Aerosol Dynamics

Electrical and Computer, Faculty

Carl Latino

Digital System & Logic Design
Fractals & Chaotic Systems
Microprocessor Systems and Architecture
Multi Processor System Design Robotics

Chris Hutchens

C. Hutchens, Labs

Chris Hutchens, Secure memory
Design of large geometery (in excess of 1mm width transistors) short channel transistors for GHz applications

High speed and low power MCOS analog to digital converters (ADC) and digital to analog converters (DAC) on deep submicron thinfilm Silicon CMOS

low power sigma delta and several 4 bit GHz flash ADCs, a 4 bit DAC and a MEMS chopper amplifier for an integrated power meter

Microelectromechanical systems (MEMS) transducers and transducer amplifiers

Mixed mode CMOS VLSI including analog, MIMS and digital electronics, sensor/transducer systems and biomedical engineering

Chuck Bunting

Analysis of optical and microwave structures using numerical methods including finite element techniques.
antenna systems and radio frequency (RF) design
Computational electromagnetics

Electromagnetic characterization and application of reverberation chambers

Engineering Education

Daniel Grischkowsky

Laser Science
Optical and THz Science and Engineering
Ultrafast Optoelectronics

Daqing (Daching) Piao

Endoscopic imaging by coherent optical techniques
Endoscopic imagining by diffuse optical techniques
Modeling and instrumentation for biomedical optical imaging
Optical Imaging Laboratory (OIL)

Gary Yen

Intelligence Control
Neural Networks

George Scheets

Communications Systems and Theory
Computer Simulation
Network Analysis & Design
Signal Processing

Guoliang Fan

Computer Vision and Mutimedia
Digital Image and Video Processing
Machine Learning and Pattern Recognition

James Stine

Computer Arithmetic
Digital Circuit and System Design
General-Purpose and Application-specific Architectures
Very Large Scale Integration (VLSI)

James West

Antenna Design and Analysis
Microwave Systems
Numerical Electromagnetics
Radar, Radar Scattering
Radar Remote Sensing--Synthetics Aperture

Jeffrey Young

Antenna Theory and Design
Microwave Ferrite Materials and Devices
Electromagnetic Field Theory
Computational Electromagnetics

	EM Waves in Complex Media
Jerzy Krasinski	
	Laser Application
	Laser Engineering and Development
	Laser Spectroscopy
	Nonlinear Optics
Keith Teague	
	Low Bit Rate Speech Coding
	Speech/Signal/Image Processing
Martin Hagan	
	Control Systems
	Neural Networks
	Signal Processing
Nishantha Ekneligoda	
	Power system controls and smart-grid
	Power system modeling
	Power electronic based controls
	Micro-grids and distributed energy resources
	Nonlinear optimal control and game theory
	Electric machines and drives
Qi Cheng	
	Communications and Information Theory
	Distributed Change/Fault/Anomaly Detection
	Distributed Detection and Estimation
	Monte Carlo Methods
R.G. Ramakumar	
	Energy Conversion, Renewable Energy
	Engineering Reliability
	Power Engineering
	Sources and Systems, Energy Storage
Richard Guo	
	Smart Grids
	Power and Energy Systems
	Cyber-Physical Systems
	Sustainable Computing and Networking Systems
Sabit Ekin	
	Communications Systems and Theory
	Statistical Signal Processing Methods and Its Applications to Communication Systems
	Cognitive Radio Networks
	Interference Modeling and Management
Subhash Kak	
	Cybersecurity, Cryptography
	Quantum Computing
	Wireless and Sensor Networks
	Quantum Cognitive Science
	Neural Networks
Weihua Sheng	
	Computational Intelligence
	Embedded Computing
	Mobile Robotics
	Sensor Networks
Weili Zhang	
	Nano- and mirco-structured material optics
	Semiconductor Processing
	Terahertz Optoelectronics
	Ultrafast lasers and phenomena
Yanmin Gong	
	Security and Privacy
	Big Data
	Mobile Computing
	Cyber-physical Systems

Industrial and Management, Faculty

Arash Pourhabib	
	Modeling and Analysis of Advanced Manufacturing Systems
	Statistical Machine Learning
	System Informatics and Control
Austin Buchanan	
	Combinatorial Optimization
	Integer Programming
	Design and Analysis of Networks
	Operations Research
Balabhaskar (Baski) Balasundaram	
	B. Balasundaram, Labs
	Algorithms
	Graph Theory
	Network Design & Analysis
	Operations Research
	Optimization
	Linear Programming
	Integer Programming
	Prescriptive Analytics
Camille DeYong	
	Economic Analysis
	Service Quality and Customer Satisfaction
	Total Quality Management
Chaoyue Zhao	
	Stochastic integer programming
	Data-driven risk-averse stochastic optimization
	Power grid security
	Energy policy analysis and renewable energy management
David Pratt	
	Manufacturing Systems
	Production Planning and Control
	Simulation
	Strategic Management Processes
Farzad Yousefian	
	Convex Optimization
	Variational Inequalities and Games
	Stochastic Approximation Algorithms
	Distributed Optimization
	Power Systems and Markets
John Nazemetz	
	Computer-aided manufacturing
	Robotics
	Coalition in support of the aviation sector (CASI)
Kalyani Nagaraj	
	Monte Carlo methodology and analysis
	Simulation optimization
	Rare event simulation
Manjunath Kamath	
	Information Systems
	Object-Oriented Modeling and Simulation
	Performance Modeling of Manufacturing Systems and Supply Chains
	Petri net Modeling
	Stochastic Modeling and Queuing Theory
Sunderesh Heragu	
	Real-time Decision Support
	Mathematical Programming
	Queuing Network
	Emergency Preparedness
	Design & Analysis of Warehouses
	Performance Analysis of Material Handling Systems
Terry Collins	
	Bio-energy research & development
	Cost Modeling and estimation
	Engineering Management
	Management decision theory
	Performance measurement system development & assessment
	Project Management
Tieming Liu	

	Supply chain coordination Transportation and logistics planning Revenue management and dynamic pricing Renewable energy capacity coordination Healthcare data analytics
Tim Hardin	
	Engineering Management Engineering economics Engineering finance Work design
William J. Kolarik	
	Process definition, design, control/measurement, and improvement Quality system design, analysis, and modeling Reliability analysis and modeling

Mechanical and Aerospace, Faculty

A. Kaan Kalkan

A. Kalkan, Labs

Biomedical Monitoring
Bottom-up Nanofabrication via Plasma/Solution Chemistry
Manufacturing and Materials
Nanodevices, Nanosensors
Nanostructured Materials
Single Molecule Detection and Imaging

Afshin J. Ghajar

Computational Heat Transfer and Fluid Mechanics
Heat in Transfer in Mini/Micro Channels
Mixed Convection Heat Transfers
Thermal and Fluids Sciences
Two-Phase Flow Heat Transfers

Andrew S. Arena

A. Arena, Labs

Aerodynamics and Flight Dynamics
Aerospace Vehicle Stability and Control
Aircraft Performance
Nonlinear Flight Dynamics
Unsteady and High Angle of Attack Aerodynamics Aeroelasticity

Arvind Santhanakrishnan

A. Santhanakrishnan, Labs

Biofluid Mechanics
Bio-Inspired Design
Experimental Fluid Mechanics
Flow Control
Fluid-Structure Interaction
Medical Device Design, Development and Validation

Aurelie Azoug

Mechanical Behavior of Materials
Smart Materials
Elastomers
Viscoelasticity
Hyperelasticity

Balaji Jayaraman

Computational Fluid Dynamics and Advanced Numerical Methods
Turbulence
Turbulence Modeling: DNS, LES and Hybrid URANS/LES
Aerodynamics
Geophysical Flows
Lagrangian Transport and Particulate Flows
Flow Control
Reduced order Modeling
Inverse Problems
Bio-fluid Dynamics
Multimaterial and Multiphase Flows
Moving Boundary Phenomena
Plasma Physics

Brian Elbing

Experimental Fluid Mechanics
Multiphase Flow
Flow Control
Flow Visualization and Imaging
Drag Reduction
Hydrodynamics
Fluid-structure-interactions
High-speed gear Lubrication
Flow Noise Reduction

Charlotte Fore

Christian Bach

Heat Pumps and Air Conditioners
Virtual Sensors for Vapor Compression Systems
Evaporators, especially with respect to
Flow Control and Flow Distribution
Frosting and Fouling
Optimization of Defrost Process
Compressor Performance Improvement
Heat Recovery

Craig Bradshaw

Thermal and Energy Systems
Positive-Displacement Equipment Modeling
Waste-Heat Recovery

Daniel E. Fisher

Building energy analysis and load calculation
D. Fisher, Labs

Displacement ventilation and chilled ceiling systems
Numerical heat transfer and fluid flow
Simulation of Building Systems
Thermal and Fluids Sciences
Thermal system simulation and design

Don A. Lucca

D. Lucca, Labs

Ion-solid interactions

	Manufacturing and Materials
	Nanomechanical properties of materials
	Precision engineering
	Surface mechanics/surface engineering
	Ultraprecision manufacturing and synthesis process
Ehsan Moallem	
	Air Conditioning (HVAC)
	Experimental Measurements of Flow
	Heat Exchangeres and Microchannels
	Heat Transfer Calculation and Two-Phase Flow
	Numerical Simulation (CFD)
	Refrigeration Cycles and Heat Pumps
He Bai	
	Dynamics and Controls
	Nonlinear and Adaptive Systems
	Robotics and Automation
	Multi-Agent Systems
	Sensor Fusion
	Planning, Control, and Estimation for Unmanned Systems
	Sense-and-Avoid
	Intelligent Systems
	Integration of UAS into National Airspace
J. Keith Good	
	Applied Mechanics and Design
	Experimental Stress Analysis
	Finite Element Analysis
	Instrumentaion
	K. Good, Labs
	Machine Design and Analysis
	Materials and Failure Analysis
	Solid Mechanics
James Kidd	
	Aero-Optics and Sensors
	Engineering Professional Development
	Flight Dynamics and Controls
	Fluid Dynamics
	Manned and Unmanned Aerial Systems Integration and Flight Test
James Manimala	
	Solid and Structural Dynamics
	Experimental Mechanics
	Acoustic Metamaterials
	Smart/ Adaptive/ Multifunctional Structures and Materials
	Flexible Nanocomposites
Jamey Jacob	
	Aerodynamics and Flight Dynamics
	Bio-Fluid Flow
	Flow Control
	Inflatable Aerostructures
	J. Jacob, Labs
	Plasma Physics
	UAV Design & Flight Testing
	Vortex Dynamics
Jay C. Hanan	
	Advanced Structural Materials (2 new patent pending high strength materials)
	Applied Mechanics and Design
	Automation and data processing
	Increasing useful service life
	Non-destructive analysis
Jeffery D. Spitler	
	Building Energy Analysis and Load Calculations
	Ground Source Heat Pumps
	Thermal and Fluids Sciences
	Thermal Systems Simulation and Design
Jerome Hausselle	
	Biomechanics
	Musculoskeletal Modeling
	Artificial Joints
	Musculoskeletal Disorders
Karl N. Reid	
	Control Strategies
	Longitudinal Dynamics
Khaled A. Sallam	
	Atomization & Sprays
	Bio-Flows
	Droplet-based Microfluids
	Fluid Dynamics
	Holography
	Laser Diagnostics
	Nanofibers and Nanparticles
	Thermal and Fluids Sciences
Kurt Rouser	
	Pressure Gain Combustion
	Gas Turbines
	Unmanned Aerial Systems Propulsion
Matthew Klopfstein	
	Mechanical Behavior of Materials
	Nanoindentation
	Near Surface Characterization
	Ultraprecision Manufacturing

Omer San	
	Fluid dynamics Turbulence modeling and large eddy simulations Geophysical flows Multiphase and multimaterial flows High performance computing Model reduction and optimization Computational mathematics and numerical methods
Rushikesh Kamalapurkar	
	Data-driven Control Nonlinear Control Reinforcement Learning Intelligent Machines
Raman P. Singh	
	Applied Mechanics and Design Composites Experimental Mechanics and Advanced Materials Polymer Derived Ceramics Polymer Nanocomposites Raman Singh, Labs
Robert Taylor	
	New product design for manufacturing New process design for manufacturing Measurements and instrumentation Electromechanical system design Antennas R.Taylor, Labs
Sandip P. Harimkar	
	Biomaterials: Processing, Characterization and Mechanical/Bio-properties Laser Processing of Materials: Machining, Forming, Micromachining Manufacturing and Materials Nanotechnology: Nano-composites and Nano-coatings Pulse Electrodeposition: Amorphous and Nanocomposite Coatings S. Harimkar, Labs
	Spark Plasma Sintering:amorphous alloys, Nanoceramics: nanocomposites Surface Engineering: Ceramic-, Composite-, and Amorphous-Coatings Thermal Modeling
Shuodao Wang	
	Mechanics and Process Optimization of Transfer Printing Techniques for Micro-electronic Systems Mechanical Actuators and Sensors Bio-inspired and Bio-integrated Electronics Theoretical and Experimental Solid Mechanics
Xiaoliang Jin	
	Micro-Machining Nano-Machining Machining of Aerospace Materials Cutting Mechanics and Dynamics Precision Control of Machine Tools

Material Science, Faculty

Do Young Kim

Colloidal inorganic nanomaterial synthesis

Low cost solution processed organic and inorganic photodetectors

Organic and organometal halide perovskite photovoltaic devices
Organic and quantum dot light emitting diodes (OLED & QD-LED)
Organic thin film transistors and organic light emitting transistors

James Smay

Colloidal Processing of Martials
Direct Write Manufacturing
Encouraging STEM Education in the Native American Community
Materials Science
Rheology of Complex Fluids

Nirmal Govindaraju

Wide bandgap semiconductors for high-temperature, high power, and radiation hard electronics

Nanomaterials for thermal management and advanced packaging applications

Design and development of thermal, electrical, and optical property measurement systems
Nanomaterials for sensor technology development
Nanomaterials for biological imaging and drug delivery
Solid oxide fuel cells

High density energy storage - high k dielectric materials and batteries

Pankaj Sarin

Fuel Cells: Oxide ceramic electrolytes for high temperature proton conducting SOFCs
Energy Storage Materials: Novel framework structures for rechargeable battery electrodes
High Temperature X-ray Diffraction/Scattering: Phase transition, thermal expansion, and oxidation properties
Biomaterials: Biotemplating of highly porous HA/CaP scaffolds for controlled biodegradation and osteogenesis
Thermal Management: Geopolymers for solar heat storage
Composites: Ultra High Temperature Ceramic (UHTC) composites for aerospace applications; ceramic armor

M3 Ceramics: Micro-Meso-Macroporous ceramics for water purification

Paul Tikalsky

Concrete materials

Raj Singh

Nanostructured Materials: Diamond thin films, BN-Nanotubes
Energy Storage Materials: Materials for Li-Ion and Na-S Batteries
Biomaterials: Nanomaterials for drug delivery and biocompatibility/functionality
Thermal Management: Diamond thin films for thermal management of electronics
Fuel Cells: Electrode, Electrolyte and Self-repairable sealing materials for SOFC

Composites: High temperature ceramic composites processing and properties

Electrical Ceramics: Piezoelectric and shape-memory materials processing and properties

Ranji Vaidyanathan

Manufacturing scale-up and product development for large composite parts for aerospace and energy sectors

Interlaminar modification of polymer and ceramic composites for improved toughness and energy absorption using nano-sized fillers

Recycling of materials into high-value engineered products (carpet, foam, tires, composites)
Structure-property relationships (Mechanical, Electrical, Magnetic, Thermoelectric, Biological etc.) of composite materials
Nanotechnology for energy and biomedical applications

Rapid manufacturing and rapid prototyping of advanced engineering materials

Biosystems and Agricultural, Faculty

- Ajay Kumar
  - Bioenergy & Bioprocessing
  - Biofuels
  - Biopower
  - Bioproducts
  - Gasification
  - Pyrolysis
- Al Sutherland
  - Agricultural Weather and Climate
  - Agricultural Weather Applications
- Carol Jones
  - Machinery Systems
  - Bioprocessing
  - Biomechanical
  - Electromagnetism
  - Farm Safety
  - Grain Bin Safety
  - Grain Storage
  - Stored Products
  - Post Harvest Technology
- Dan Storm
  - Environmental Quality, Water
  - Ecological Engineering
  - Environmental Statistics
  - Tribal Water Issues
  - Water Quality
  - Watershed Modeling
- Daniel L. Thomas
  - Water
  - Drainage
  - Irrigation
  - Precision Agriculture
  - Water Resource Engineering
- Danielle Bellmer
  - Food Processing
  - Bioenergy & Bioprocessing
  - Value-added Product Development
  - Waste Utilization
- Doug Hamilton
  - Environmental Quality, Waste Management
- Garey Fox
  - Environmental Quality, Water
  - Nutrients
  - Rivers
  - Streams
  - Water Quality
  - Water Quantity
- Glenn Brown
  - Environmental Quality, Water
  - Contaminant Transport
  - Low Impact Development
- J.D. Carlson

	Environmental Quality, Weather
	Oklahoma Mesonet
	Wildland Fire Meteorology and Behavior
	Atmospheric Dispersion
	Boundary-Layer Meteorology
	UAV Applications in Wildland Fire
	Remote Sensing Applications
	Operational Weather-Based Models
	Agricultural Meteorology
	Remote Sensing
	UAVs
	Weather Modeling
	Wildland Fire
Jason Vogel	
	Environmental Quality, Water
	Emerging Contaminants
	Environmental Pathogens
	Erosion Control
	Hydrology
	Low Impact Development
	Stormwater
	Stream Restoration
	Water Quality
Jessie Yu Mao	
	Biomaterials
	Nanomaterials
	Biomedical Engineering
	Enzyme Engineering
	Biosensors
John Long	
	Instruments & Sensors, Machine Systems, Precision Ag
	Intelligent Machine Systems
	Mechatronics
	Precision Livestock Management
	Precision Pasture Technology
	Sprayer Technology
Hasan Atiyeh	
	Bioenergy & Bioprocessing
	Bioprocess Engineering
	Gas & Sugar Fermentation
	Modeling
	Reactor Design & Scale Up
Michael Buser	
	Bioenergy & Bioprocessing, Environmental Quality, Machine Systems
	Abatement Technologies
	Air Modeling
	Air Quality
	Air Sampling
	Bioenergy Logistics
	Controlling Air Emissions
	Forage Production
	Forage Storage
	Machinery Design
	Pneumatic Systems

	Standards Development
	Traceability
Ning Wang	
	Instruments & Sensors, Machine Systems
	Automation
	Information Technology
	Machine Vision
	Mechatronics
	Precision Agriculture
	Robotics
	Sensor Aid Control
	Sensor Network
Nurhan Dunford	
	Bioenergy & Bioprocessing, Food Processing
	Grain Processing
	Microalgae
	Oilseed Processing
	Value-added Product Development
	Vegetable Oil Processing and Quality
	Waste Water Treatment & Reuse
Paul Weckler	
	Instrumentation, & Sensors, Controls
	Electromechanical System Design
	System Integration & Testing
	Machine Vision Systems
	Digital Image / Signal Processing
	Electro-Optical Sensor Systems
	Airborne Remote Sensing
	Automated "Smart Machines"
	Food & Crop Processing
	Soil & Water Conservation
	Irrigation Engineering
R. Scott Frazier	
	Bioenergy & Bioprocessing, Water
	Energy Management
	Fuels
	Irrigation Energy
	Life Cycle Assessment
	Renewable Energy
	Sustainability
Raymond L. Huhnke	
	Bioenergy & Bioprocessing
	Biomass Gasification
	Biomass Logistics
	Biobased Products & Energy Center (DIRECTOR)
	Sun Grant Program
Randy Bean	
	Machine Systems
	Ag Electricity
	Ag Structures
	Plasma Cam
	Small Engines

	Welding
Randy Raper	
	Oklahoma Agricultural Experiment Station
Randy Taylor	
	Machine Systems, Precision Ag Ag Machinery Crop Production Machine Testing Precision Agriculture
Saleh Taghvaeian	
	Instruments & Sensors, Water Irrigation Remote Sensing
Tim Bowser	
	Design of Food Equipment Facilities and Processes Cleaning and Sanitation Food Safety

Division of Technology

Construction Management Technology, Faculty

Heather Yates

- Construction Management
- Construction Materials Testing and Inspection
- Women and STEM Education

Gouranga Banik, Professor and School Head

- Resilience and Sustainability
- Food-Energy-Water Nexus
- Sustainable Materials
- STEM Education

Jonghoon Kim

- Self-Sufficient Buildings
- Water-Energy-Food Nexus
- Underground Construction Technology (e.g, trenchless technology)

Lantz Holtzhower

- Energy and Water Conservation
- Implementation of Low Energy and Net-zero Energy Buildings into the Institutional Construction Market
- Net-zero Energy Buildings and Overall Sustainable Construction

Mark Pruitt

- Building Systems
- Construction Law
- Design-build and Integrated Project Delivery Systems

Rachel Mosier

- Construction Indoor Air Quality
- Structures (timber, concrete, and steel) under Construction and Fire loads
- STEM Diversity and workforce development
- Construction Education
- Airport and Transportation sustainability, pavement, and construction equipment

Electrical Engineering Technology, Faculty

Antone Kusmanoff

- Parallelism in Affordable Concentrated Architectures
- HPC Applications to Support Tactical and Industrial Applications
- STEM Educational Objectives for Parallel Processing
- Communications Systems and Theory

Avimayo Sahoo

- Event-triggered adaptive control
- Event-based control of cyber physical systems
- Neural network based control
- Lnear, nonlinear and optimal adaptive control

Brian Norton

- Facility Electrical Infrastructure
- Power Systems

Ellis Nuckolls

- Data Acquisition
- Embedded Microcontrollers
- Engine Controllers

Imad Abouzah

- Control

Data Acquisition
Expert LabVIEW Programming

Fire Protection & Safety Technology, Faculty

Bryan Hoskins

Life Safety Design and people movement
Structural Design

Ed Kirtley

Community Risk Reduction
Fire Protection Management
Issues in Local Government & Fire Services

Floyd Luinstra

Fire Investigation
Life Safety

Jarett Metheny

Firefighter Occupational Health & Safety
Hazardous Materials
Municipal Fire Protections
Emergency Management

John Stevens

Environmental
Industrial Hygiene

Haejun Park

Fire dynamics
Fire modelling
Performance-based fire safety design
Fire experiment design

Building design effects on fire performance of buildings

Leslie Stockel

Safety
Health

Qingsheng Wang

Emergency Response
Fire and Process Safety
Fire Suppression and Detection
Flame Retardant Polymer Nanocompositites
Materials Flammability
Thermal Analysis and Calorimetry

Robert Agnew

Confined Spaces
Arc Flash
Electromagnetic Energy
Vapor Intrusion
Emergency Response

Virgina Charter

Building and Fire Code Applications
Egress Analysis
Smoke Control Analysis
Fire Suppression Systems
Water Supply Analysis
STEM Education and Accreditation
Women and STEM Education

Mechanical Engineering Technology, Faculty

Aaron Alexander

Acoustical Engineering
Computational Fluid Dynamics
Industrial noise

	Wind Energy
Chulho Yang	
	Vibration and Acoustics Design Optimization and Automation CAD/CAM/CAE Structural Dynamics and Design Structural Health Monitoring Linear/Nonlinear Mechanical System Identification Vehicle NVH Test and Development Biomechanics and Protection
Hitesh Vora	
	Additive Manufacuring (3D Printing) Laser aided additive and subtractive manufacturing and characterization of advanced high-performance materials with emphasis on establishing processing-structure-property relationship. Measurement Science of Additive manufacturing: Real-time in-situ dimensional and property (temperature, thermal stresses, Young's Modulus) measurement of advance material. Multiphysics finite-element modeling (FEM) and simulations of advance manufacturing processes with emphasizing on materials aspects. Biomaterials Process and Product Development, Characterization, and Mechanical/Bio-properties Machining and manufacturing Lasers for advanced materials processing and surface engineering
Ken Belanus	
	Data Acquisition and Analysis Dynamics Finite Element Analysis Ground Source Heat Pumps Heat Transfer Instrumentation Machine Design Numerical Thermal and Stress Analysis Statics Strength of Materials
Richard Beier	
	Ground Source Heat Pumps Thermal Response Tests on Boreholes Heat Transfer Fluid Mechanics Petroleum Resevoir Engineering Flow Through Porous Media Applications of Fractals to Porous Media
Warren Lewis	
	Computer Integrated Manufacturing Industrial Materials Manufacturing Processes Physical Metallurgy Production Processes
Young Bae Chang	
	Fluid-Structure Interaction Firearms Dynamics Body Protection Hydraulic Fluid Power Pneumatic Fluid Power