



COLLEGE OF ENGINEERING  
**LAMAR UNIVERSITY**









# Challenging Academics

Challenging Academics

# Masters Programs

- **Master of Engineering (M.E.)**

Non-thesis M.E. programs are available in the following areas:

- Chemical Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

- **M.E. and M.E.S. Specializations**

Chemical Engineering Specializations:

- Polymer Engineering
- Membrane Engineering
- Catalysis
- Environmental Engineering
- Materials Engineering

M.E.S. Specializations:

- Environmental Engineering
- Materials Engineering
- Mechanical Engineering
- Polymer Engineering
- Process Design

- **Master of Engineering Science (M.E.S.)**

Non-thesis M.E.S. programs are available in the following areas:

- Chemical Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

- **Master of Engineering Management (M.E.M.)**

Non-thesis M.E.M. programs are available in the following areas:

- Chemical Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

- **Master of Science in Environmental Engineering (M.S.)**

Non-thesis M.S. programs are available in the following areas:

- Environmental Engineering
- Materials Engineering
- Mechanical Engineering
- Polymer Engineering
- Process Design

- **Master of Science in Environmental Studies (M.S.)**

Non-thesis M.S. programs are available in the following areas:

- Environmental Engineering
- Materials Engineering
- Mechanical Engineering
- Polymer Engineering
- Process Design

# Applying for Admission

## Admission Requirements

Bachelor's degree from a regionally accredited institution with a minimum GPA of 3.0. GRE scores are required for all M.E. and M.E.S. programs. TOEFL scores are required for international students.

## How To Apply

Applications should be submitted to the Office of Graduate Programs. The application fee is \$50. The deadline for admission is August 1st. For more information, contact the Office of Graduate Programs.



# Campus Life

Lamar University offers a sense of community that you would expect from a smaller university while offering students the resources of a much larger university.

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t n t t n t t F n n  
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**Sujay Mahale**

Chair: Dr. Thomas C. Ho



, B η P D M

*Catalysis & Reaction Engineering; Carbon Dioxide Sequestration/Conversion; Biofuels*

, D C P D O η

*Abnormal Situation Management; Flare Modeling/Control*

, D G η P D A M

*Environmental Surface Chemistry and Catalysis; Advanced Materials; Biomedical Research and Capillary Electrophoresis; Advanced Electrochemistry and Environmental Sensors*

, J η G η r P D I η I η η η η η η

*Simulation; Engineering Education*

, J H P D A M

*Biotechnology; Processing Engineering*

, η H η P D K

*Fluidization; Metal Emissions Control; Air Quality Modeling*

, C η J η P D O r η

*Bioprocessing; Nanobiomaterials*

, L P D η H η η





# Department of Civil and Environmental Engineering

Chair: Dr. Liv Haselbach



## Faculty & Research

- Analysis and Design of Concrete Pavements; Fatigue and Fracture Properties of Cementitious Composites; Development and Characterization of Sustainable Infrastructure Materials*
- Sustainable Development, Permeable Pavements, Environmental Life Cycle Assessment, Sustainability*
- Soil Evaluation and Stabilization; Foundation/Pile/Wall System Evaluation; Numerical Modeling in Geotechnical Engineering*
- Fate and Transport of Pollutants; Water and Waste Water Engineering; Water-Energy-Food (WEF) Nexus*
- Environmental Hydrodynamics; Water Quality Modeling and Solute Transport Processes in Lakes, Streams and Groundwater; Water Resource Monitoring and Management*
- Energy Positive Domestic Wastewater Treatment; Bio-remediation of Various Industrial Wastewaters; Water Treatment and Testing Systems for Emergencies; Food-Water-Environment Nexus*
- Transportation System Analysis; GIS Applications in Transportation; Waterway Safety; Electric Vehicles*
- Fiber-Reinforced Polymer Composites, Experimental Mechanics*
- Water Quality Monitoring; Solid and Hazardous Waste Mitigation; Nutrient-Water-Energy Nexus; Fate and Transport of Refractory Organic Contaminants; Sustainability*

P  
B M P BMP E P A EPA  
L E E D LEED  
H<sub>2</sub>  
D L H  
A  
H  
D

# Phillip M. Drayer Department of Electrical Engineering

H A M E N , M - 3 η

*Engineering Education*

B r P D F η I η

*Design, Control and Condition Monitoring of Electrical Machines; Alternator & Power System Components*

η H P D N η C η

*Security of Information/Communication Networks; Game/Learning Theory*

K η H η D E L

*Engineering Education*

H M P D N , M - 3 η

*Telecommunications; Image & Video Processing; Embedded Systems*

G N P D I I η - 3 η η

*Renewable Energy Sources; Electric Vehicle Design*

P D

*Radiation Effects Modeling & Hardening of Microchips, Low-Power Design & Reliability Analysis*

G - 3 I P D r - 3

*Digital Signal/Image Processing; Biomedical Signal Analysis.*

C r η r η P D O η

*Computational Electromagnetics; RF and Microwave Modeling and Characterization of Electrical Faults, Presence and Vital Sign Detection, Antenna Design for RF*

r P D N , M - 3 η

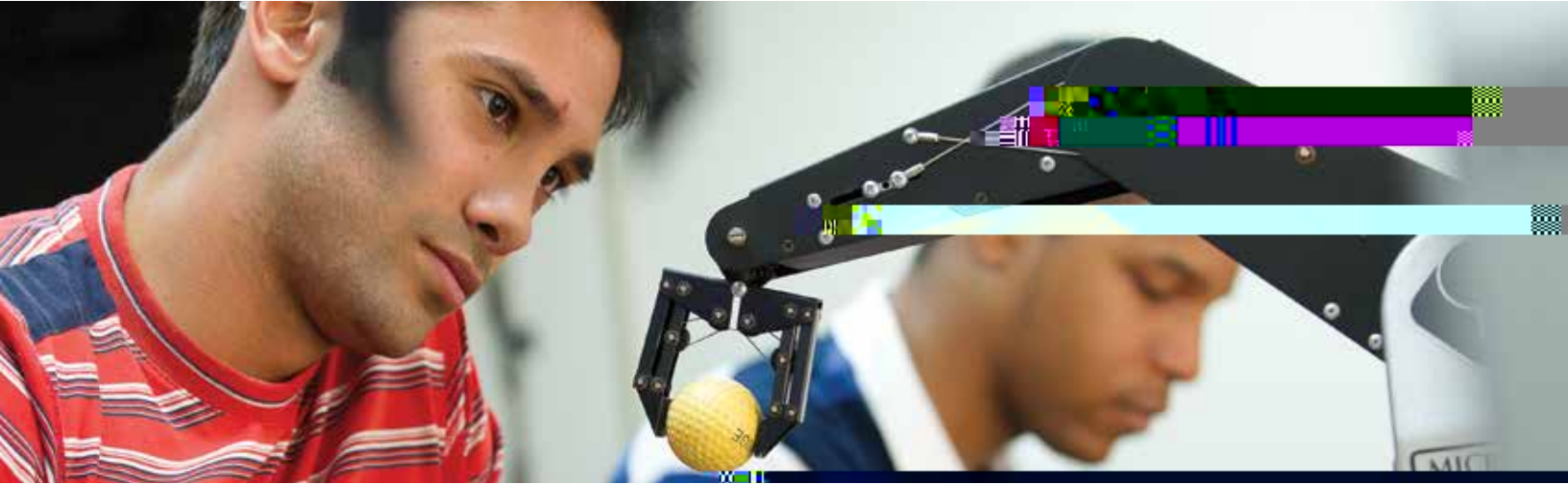
*Cyberphysical Security; Wireless Sensor Networks, Satellite and Space Communications*

H r P D M η r η η - 3 , E r η - 3 ,



# Department of Industrial Engineering

Chair: Dr. Brian Craig



## Faculty & Research

- J r C n P D n H n n  
*Maritime Transportation & Logistics; Manned-Unmanned Systems Integration; Crisis/Disruption Management.*
- B C r P D A M  
*Human Factors, Ergonomics and Safety Engineering*
- J C P D A M  
*Supply Chain Management; Optimization; Software Development; Natural Language Generation*
- M H P D n A n  
*Reliability; Data Analysis; Maintenance & Inventory Optimization; Game Theory; Warranty, Lease Contracts*
- r L P D N n C n  
*Human Factor/Ergonomics; Human-Computer Interaction; Neuroergonomics; Data Mining*
- L P D n l n C r  
*Micro-manufacturing; Laser Machining; Digital Manufacturing; Machine Design*
- A n M P D A n  
*Heuristics and Metaheuristics; Decision Support Systems; System Modeling and Optimization.*
- B n r n P D O D n n  
*Risk Management; Resilience Engineering; Engineering Management; Systems Engineering*
- E D E L  
*Optimization, Production Scheduling, Simulation, Manufacturing and Quality*
- r P D n A  
*Reliability and Maintenance; Production and Inventory Management.*
- n n n P D n H n n  
*Risk Analysis, Quality Improvement, and Financial Engineering*
- r P D N n C n  
*Computational Optimization; Meta-Heuristics; Modeling and Simulation; Haptics; Computer Aided Design and Manufacturing (CAD/CAM), Engineering Education*



# Department of Mechanical Engineering

Chair: Dr. Hsing-Wei Chu

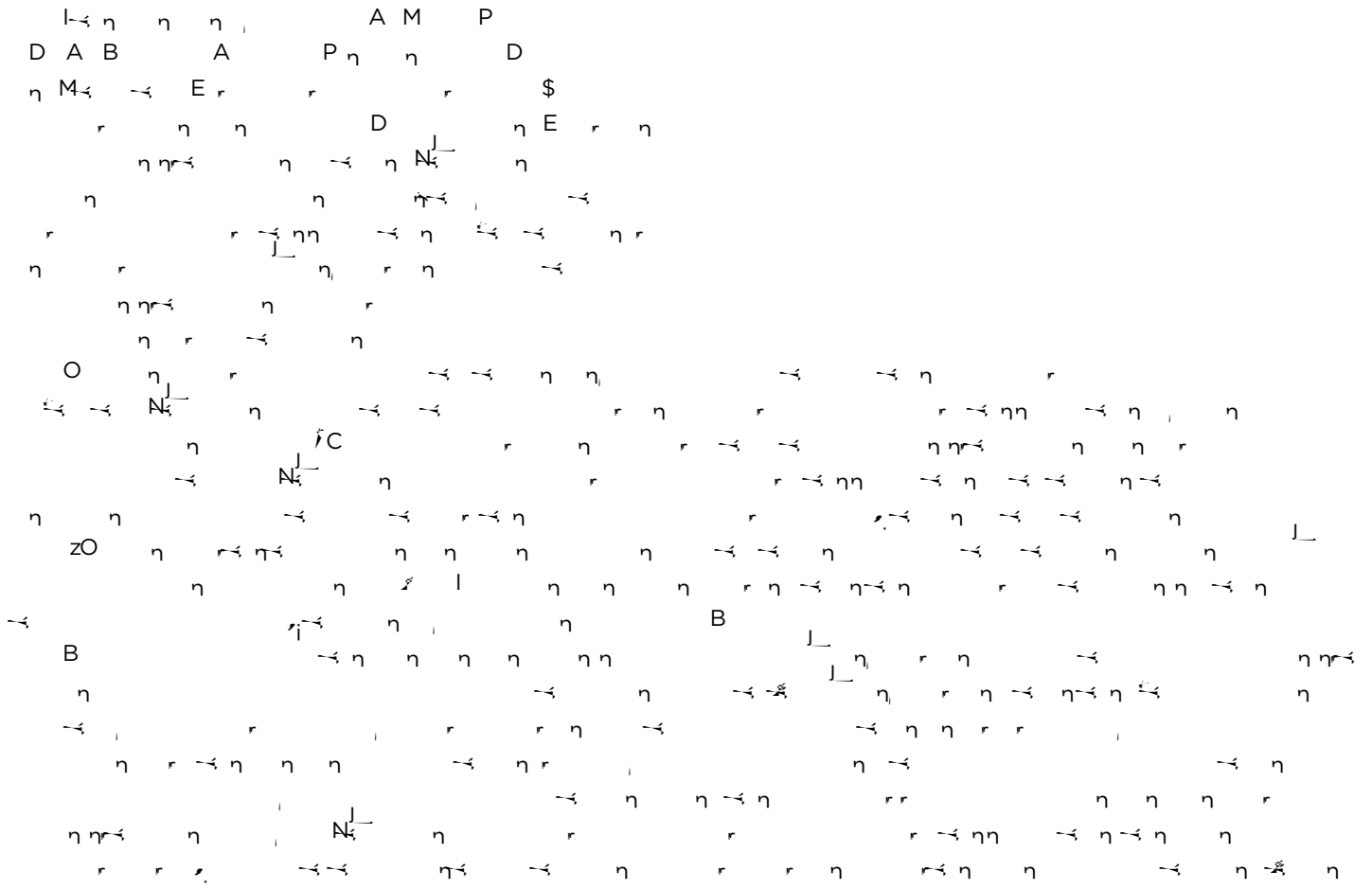


## Faculty & Research

- , K A P D η M<sub>k</sub> r  
*Simulation and Optimization of Energy and Renewable Energy Systems; Engineering Education*
- , A B P D L<sub>η</sub>  
*Tribology; Coatings and Thin Films Failure Analysis; Rotating Machinery*
- , H r C P D η A  
*Network Flow Programming; ABaCAS*
- , K D P D PO ECH η K<sub>η</sub>  
*Micro- and Nanomanufacturing; Micro- and Nanomechanics; Metamaterials*
- , F P D r  
*Characterization, Modeling and Reliability of Materials; Components and Systems in Micro- and Opto- Electronics Manufacturing and Packaging*
- , G P D A η  
*Nanomaterials; Energy Storage and Energy Harvesting; Corrosion and Failure Analysis of Materials; Structure-Property-Correlation Studies; CO<sub>2</sub> Sequestration*
- , P r H P D C η  
*Supercritical Fluids; Heavy Crude Oil Upgrading; Bio-printing; Detonation Engine*
- , r L P D C η  
*Thermal System Analysis and Optimization; Gas Turbine Cooling and Heat Transfer*
- , C η P D A M  
*Anti-Corrosion & Anti-Fouling Coating; Water Harvesting; Two-Phase Cooling Technology*
- , J η P D η M  
*Plant Biomechanics; Dynamic Responses and Vibrations of Micro-electronic Systems*



# Collaboration Hopes to Increase Efficiency in Mechanical Reactors



Ketan Solanki

H<sub>2</sub> / P I

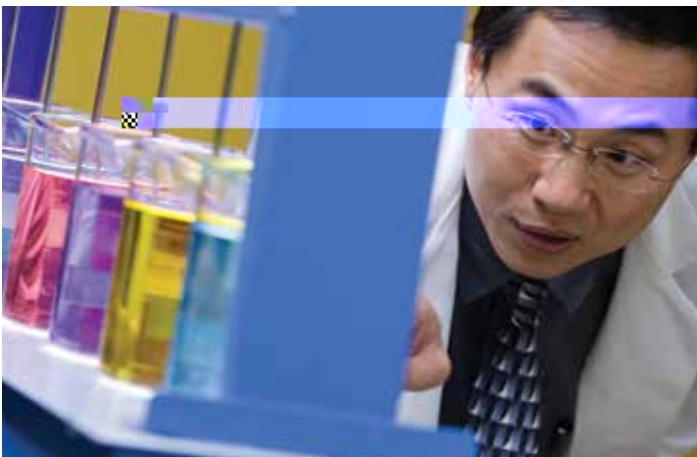
# College of Engineering Research Centers



## The Center for Advances in Water and Air Quality

CA AQ

CA AQ  
CA AQ  
EM



# The Center for Advances in Port Management

Director: M. E. S.

CAPM  
E  
C  
M

# Texas Air Research Center/Texas Hazardous Waste Research Center

Director: D. T. a H

A C H C  
C  
D C

