



TEXAS TECH UNIVERSITY

Department of Chemical Engineering™



ABOUT THE DEPARTMENT

Enrollments (Fall 2017):

Foundational Freshmen	290
ChE Undergraduate	286
Master's	8
Doctoral	79

Tenure and Tenure-Track Faculty: 17

Endowed Chairs and Professors: 4

National Academy Members: 1

Research Expenditures (FY 16): \$5.6M

DEGREES

Doctor of Philosophy in Chemical Engineering
Master of Science in Chemical Engineering
Bachelor of Science in Chemical Engineering

150-Hour Combined B.S./M.S.

CONTACTS

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Dr. Rajesh Khare
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Dr. Mark Vaughn
Undergraduate Advisor
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STUDENT TESTIMONIALS

"I found the courses to be really effective and useful."

"Excellent working environment for research."

"Seminars were thought-provoking and scientifically stimulating."

"My advisor was a good mentor and leader. He motivated students to develop independent research skills."

"I have always felt that everyone was here to help me succeed."

"All the people in the department are very helpful and made my stay here wonderful."

OVERVIEW AND RESEARCH

The Department of Chemical Engineering at Texas Tech University offers nationally ranked programs resulting in B.S., M.S. and Ph.D. degrees. The department has seen tremendous growth over the past ten years, doubling student populations and becoming a research-intensive department.

Overall faculty scholarship ranks 47th nationally according to Academic Analytics. Momentum continues to grow as we attract the very best students and faculty.

Research in the department covers a broad range of innovative experimental programs and state-of-the-art modeling and simulation activities. The M.S. and Ph.D. programs enable students to be involved in cutting-edge research in the following areas:

- Bioengineering
- Energy and Sustainability
- Polymers and Materials
- Simulation and Modeling in Chemical Engineering

Undergraduates are also strongly encouraged to participate in research, and a number of our undergraduate and graduate students have won national-level awards.

FROM HERE, IT'S POSSIBLE



Qian Tian won first place in the Student Poster Competition at the 2016 International Conference for Thermal Analysis and Calorimetry (ICTAC).



Mizanur Rahman won the Student Investigator Space Flight Award at the 2016 American Society for Gravitational and Space Research meeting; Jennifer Hewitt won second place in the poster competition.



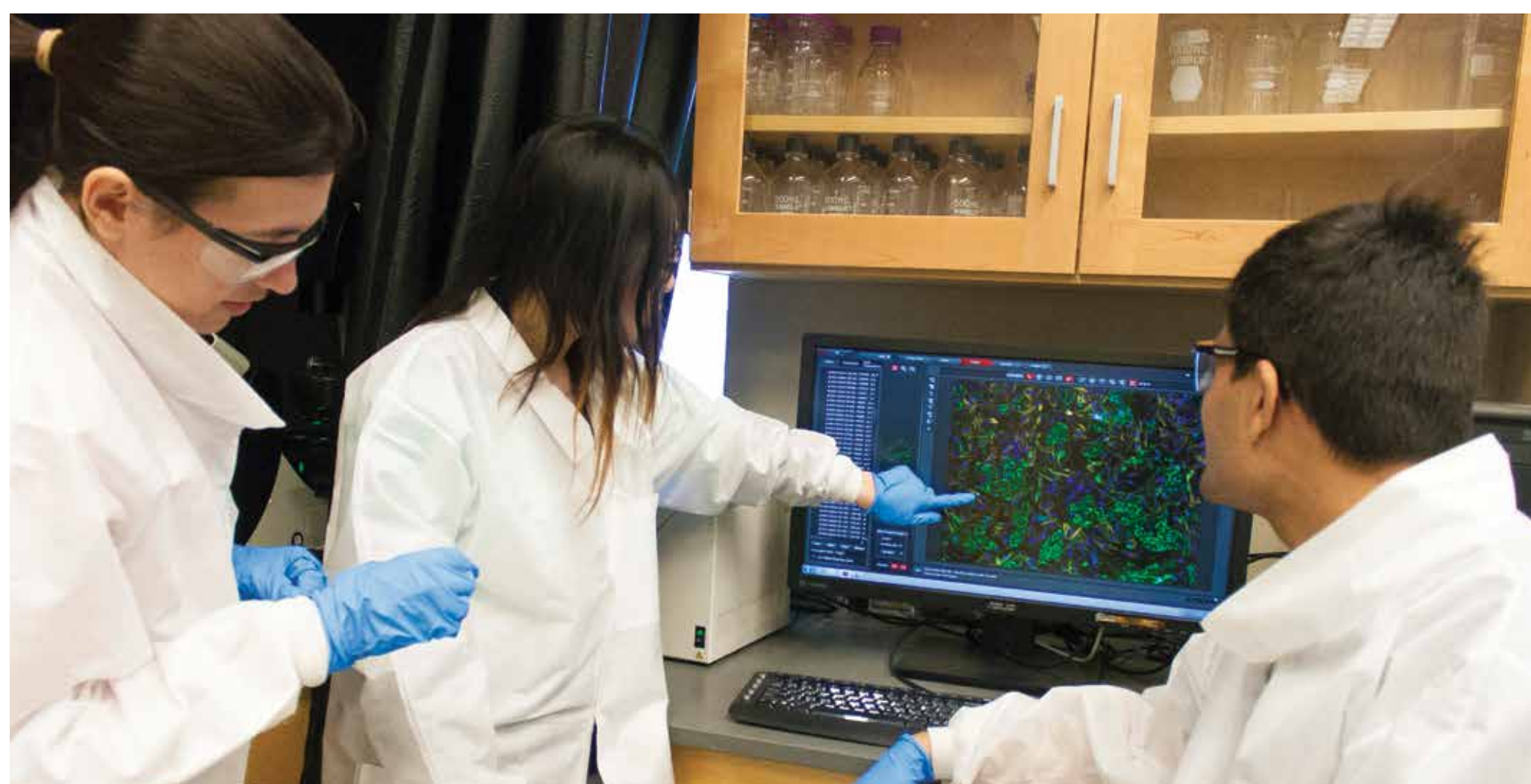
The Car Team won the poster competition and took second place in the car competition at the 2016 AIChE Regional Meeting. The Jeopardy Team also placed second.



Hattie Schunk was named a 2016 Barry Goldwater Scholar. Hattie also received awards for Academic Excellence in Chemical Engineering in 2015 and 2016.



Michael Wurmstein won first place at the 2015 AIChE meeting in the Computing and Process Control category for his research poster. He took second place in 2016.





TEXAS TECH UNIVERSITY

Department of Chemical Engineering™

Chemical Engineering Research

Faculty Specializations



Dr. Ya-Wen (Winnie) Chang

Assistant Professor

Soft and living matter, cell organization and behavior, microfluidics and 3D printing



Dr. Jeremy Marston

Assistant Professor

Fluid and granular flows, cavitation, high speed imaging



Dr. Chau-Chyun Chen

Professor and Jack Maddox Distinguished Engineering Chair in Sustainable Energy

Molecular thermodynamics, phase equilibria, process modeling



Dr. Gregory B. McKenna

Horn Professor and John R. Bradford Chair in Engineering

Polymer and soft matter physics, rheology, nanorheology, nanomechanics



Dr. Gregory Fernandes

Research Assistant Professor

Solution and adsorbed polymer behavior, structure and dynamics of colloidal systems



Dr. Nurxat Nuraje

Assistant Professor

Enhanced oil recovery, photocatalysis, renewable energy



Dr. Harvinder Singh Gill

Associate Professor

Drug and vaccine delivery, bionanomaterials, immunomodulation



Dr. Al Sacco Jr.

Dean of the Whitacre College of Engineering

Transition metal and acid catalysts, zeolite synthesis



Dr. Ronald C. Hedden

Associate Professor

Networks, gels, and elastomers, biofuels, polymer processing



Dr. Sindee L. Simon

Whitacre Department Chair and Horn Professor

Physics of glasses, nanoconfined reactions, calorimetry, dilatometry



Chijuan Hu

Assistant Professor of Practice

Undergraduate teaching laboratories and biochemical engineering



Dr. Siva A. Vanapalli

Associate Professor

Microfluidics, mechanics of cells and biopolymers, colloidal assembly



Dr. Sheima Jatib-Khatib

Assistant Professor

Heterogeneous catalysis, membrane reactors



Dr. Mark W. Vaughn

Associate Professor and Undergraduate Advisor

Nitric oxide in microcirculation, membrane transport



Dr. Rajesh Khare

Professor and Graduate Advisor

Molecular simulations of polymers and soft matter, nanocomposites, rheology, separations



Dr. Brandon L. Weeks

Professor and Associate Dean for Research

High explosives, nanolithography, microcantilever, crystal growth



Dr. Carla Lacerda

Assistant Professor

Heart valve degeneration: models, mechanisms and prevention



Dr. Theodore F. Wiesner

Associate Professor

Solar energy, hydrogen production, CO₂ mitigation



Dr. Wei Li

Assistant Professor

Cell/polymer interaction, cell microenvironment, biomedical devices