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Robby Sanders, Ph.D.

Interim Chair of Chemical Engineering; Associate Professor

Research Interests Bio-assay development; drug delivery; wound healing.

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Professors

Pedro Arce Ph.D.

University Distinguished Faculty Fellow; Professor

Research Interests Nanostructured materials with functional performance; micro and nano flows in biophysical systems; environmental catalysis; engineering education.

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Joseph J. Biernacki, DRE

University Distinguished Faculty Fellow; Professor

Research Interests Modeling of multiscale materials systems composite concrete systems.

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Bahman Ghorashi, Ph.D.

Professor

Research Interests Agile manufacturing; rheology and non-Newtonian fluid flow; blockchain technology and its applications in chemical industry; m2m communication and logistics; leadership in higher.

931-372-6921 | bghorashi@tntech.edu | Prescott Hall 422 | [Profile](#)

Assistant Professor

Laura H. Arias Chavez, Ph.D.

Assistant Professor

Research Interests Improving sustainability at the water-energy nexus; fabrication and characterization of polymeric membranes; fabrication strategies for improving membrane fouling resistance and selectivity.

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Associate Professors

Sharon Huo Sharon Huo, Ph.D., P.E.

Associate Provost of Academic Affairs; Professor of Structural Engineering

Research InterestsStructural analysis; reinforced concrete design; prestressed concrete design; structural steel design; bridge design.

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Steven Click, Ph.D., P.E.

Associate Professor, Transportation Engineering

Research InterestsTraffic signal design; timing; operations; and analysis; traffic signal system design; timing; operations; and analysis; non-traditional intersection design; operations; and analysis; non-traditional interchange design; operations; and analysis; highway traffic simulation modeling.

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Tania Datta, Ph.D.

Associate Professor, Environmental Engineering

Research InterestsBiological Wastewater Treatment Process and Design; Urban Water Quality Management; Environmental Microbiology; Resource Recovery from Organic Waste Streams; Sustainable Decision Making; Role of Microorganisms in Natural Aquatic Ecosystems.

931-372-3446 | tdatta@tntech.edu | Prescott Hall 333 | [Profile](#)

Research Interests Rapid drawdown analysis; behavior of compacted clays; fully softened shear

Lori Mann Bruce, Ph.D.

Provost and Vice President of Academic Affairs; Professor

Research Interest Remote sensing; image analysis; artificial intelligence; data analytics; hyperspectral imaging and precision agriculture.

931-372-3224 | lbruce@tntech.edu | Derryberry Hall 204 | [Profile](#)

Joseph Ojo, Ph.D.

Professor

Research Interest Electric machine analysis and design; adjustable; speed motor drives; power electronics; power systems; control; applied to power electronics and power systems,

and mechanical behavior; modern manufacturing systems; optimization and simulation modeling; production planning and control.

931-372-3450 | srizvi@tntech.edu | Prescott Hall 440B | [Profile](#)

Charles Van Neste, Ph.D.

Assistant Professors

Michael Wells

Assistant Professor

Research InterestWebsite development; global engineering communication; assisting international students in acclimating to American culture.

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Department of Manufacturing and Engineering Technology

Fred Vondra, Ph.D.

Chair of Manufacturing and Engineering Technology; Professor

Research InterestMetal casting processes; foundry tooling materials; industrial maintenance.

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Professor

Ismail Fidan, Ph.D.

Professor

Research InterestAdditive manufacturing; smart manufacturing; electronics manufacturing; stem education and distance learning/remote laboratories.

Mohan Rao, Ph.D.

Chair of Mechanical Engineering; Professor

Research InterestsVibrations; acoustics; noise control; damping design; sound quality and auditory engineering.

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Jie Cui, Ph.D.

Associate Chair of Mechanical Engineering; Professor

Research InterestsComputational fluid dynamics; turbulence modeling; large eddy simulation; numerical heat transfer; thermal fluids.

auditory engineering. [Table of Contents](#) (r3 Tc n H0.006 2w [(H)0.5 (.1 (e)-al)-293 (l)-21l)-2.3a/P1at0197

Research Interests: transient model for propulsion; power and thermal systems for system design; optimization and control architecture development.

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Assistant Professors

Ahmad Vasselbehagh, Ph.D.

Assistant Professor

Research Interests: Turbulence and vortex dynamics; renewable energy generation; energy storage: atmospheric flows; fluid-structure interactions.

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Peng Zhang, Ph.D.

Assistant Professor

Research Interests: Computational fluid dynamics; experimental fluid and solid mechanics; fluid structure interactions; multifunctional materials; optimal design

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Center for Energy Systems Research (CESR)

Satish M. Mahajan, Ph.D.

Director of CESR; Professor of Electrical Engineering

Research Interests: Optoelectronics (lasers; solar cells; optical fibers); electromagnetics; wireless charging of EVs; sensors; renewable energy.

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Ali Arzani, Ph.D.

Research Assistant Professor

Research Interests: Grid-Friendly, Smart, and Intelligent Control of Inverter-Based Resources; Transmission Planning with EMT Software; Real-Time Simulations and HIL Studies; Active

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Ying Zhang, Ph.D.

Director of CMR; Professor of Mechanical Engineering

Research Interests: Protective coatings; high temperature materials; thermal barrier coatings (TBC); chemical vapor deposition (CVD).

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Nan "Terry" Guo, Ph.D.

Assistant Research Professor

Research Interests: NextG wireless communication & networking; Data & information science (data science, information theory, detection & estimation theory, signal processing, sensing, etc.); Industrial IoT & secure smart manufacturing.

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