Electrical and Computer Engineering

Vision

The Department of Electrical and Computer Engineering will provide programs of the highest quality to produce world class engineers who can address challenges of the millennium.

Mission

The Department of Electrical & Computer Engineering will:

- Dedicate itself to providing its students with the skills, knowledge and attitudes that will allow its graduates to succeed as engineers and leaders.
- Maintain a vital, state-of-the art research enterprise, which provides its students and faculty with opportunities to create, interpret, apply and disseminate knowledge.
- Prepare its graduates for life-long learning to meet intellectual, ethical and career challenges.
- Recognize and act upon the special mandate to make high quality engineering education available to the residents of El Paso and the surrounding region.

Programs

The Department of Electrical and Computer Engineering offers a PhD degree in Electrical and Computer Engineering, Master of Science degrees in Electrical Engineering and Computer Engineering, and a Graduate Certificate in Electric Power and Energy Systems. The Department of Electrical and Computer Engineering offers a Bachelor of Science in Electrical Engineering, and a Minor in Electrical Engineering for non-majors.

Master of Science

- M.S. in Computer Engineering (http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/computer-engineering-ms/)
- M.S. in Electrical Engineering (http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/electrical-engineering-ms/)

Doctor of Philosophy

- Ph.D. in Electrical and Computer Engineering (http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/electrical-computer-engineering-phd/)

Certificate

- Graduate Certificate in Electric Power and Energy Systems (http://catalog.utep.edu/grad/college-of-engineering/electrical-computer-engineering/electric-power-energy-systems-graduate-certificate/)

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Research Interests: 3D printing, electromagnetics, metamaterials, antennas, nanophotonics, high power microwave devices, computational electromagnetics

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Research Interests: Digital Signal Processing, Image Processing, Image Compression, Compressive Sensing, Volumetric Data Compression, 3D image processing, Biomedical Signal Processing

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Research Interests: Biomedical sensor design for non-invasive glucose monitoring, electron beam melting of titanium, planar and selective electroless nickel plating of polymer rapid prototype substrates, and the selective deposition of CdTe on micron- and nano-scale patterned substrates for X-ray imaging applications.

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Research Interests: Digital signal processing with emphasis on wavelet transforms, Fourier transform, time-frequency analysis, compressive sensing, tomographic imaging, overcomplete signal expansions, and parameter estimation. Processing of one-dimensional or multidimensional signals, collected with dense sensor arrays and processed with computationally intensive algorithms running on computer clusters. The main applications of the research include tomography and source localization in biomedical and radar imaging. Other interests include digital and analog hardware architecture and design to create dedicated instrumentation that complements the infrastructure needed for the research.

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