The University of Texas at Arlington

ELECTRICAL ENGINEERING

GRADUATE PROGRAM

Advising Office
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Graduate Catalog at
http://catalog.uta.edu/engineering/electrical/#courseinventory

Information for New or Prospective Students

This document has been prepared to assist the new or prospective student in acquiring an understanding of the graduate program in Electrical Engineering offered at The University of Texas at Arlington. Answers to often-asked questions are provided, but it serves only as a supplement to the UTA Graduate Catalog.

The Catalog is the authoritative source of university information. You should become familiar with it and consult it for answers to questions regarding policies, regulations, and course descriptions. Information of special interest to EE students will be posted outside the Advising Office (Room 501). Any questions should be directed to Dr. Davis, Dr. Dillon, or the staff of the EE Advising Office.

Revised July 11, 2019

The University, College, and Department

The University of Texas at Arlington is situated in the center of the Dallas/Fort Worth Metroplex, the heart of the North Texas technology region. The University is part of The University of Texas System and has a global enrollment of nearly 60,000, including 42,496 on-campus students, enrolled in more than 180 degree programs. The University is a growing Carnegie Research-1 very high research activity powerhouse committed to life-enhancing discovery, innovative instruction and caring community engagement. The College of Engineering boasts an enrollment of more than 7,200 students, including nearly 2,600 graduate students, and more than 130 faculty members. Total engineering research expenditures reached $35 million in 2017-18, with the Electrical Engineering Department contributing $7.1 million of that total.

The Electrical Engineering Department is one of seven departments and offers bachelors, masters and doctoral degrees. The departments research facilities include laboratories, centers and institutes such as the UTA Research Institute, the Shimadzu Nanotechnology Research Center, the Energy Systems Research Center, the Advanced Control and Sensors Group, the Airborne Networking and Air Traffic Management Lab, the Analog and Mixed-signal IC Design Lab, the Celik-Butler Lab, the Complex Power Electronics Systems Lab, the Image Processing and Neural Networks Lab, the Multimedia Processing Lab, the Nanophotonics Device Group, the Nonlinear Optics, Nanophotonics and Optical Communications Lab, the Pulsed Power and Energy Lab, the Signal Processing in Sensor Systems Lab, the Sun Lab, the Virtual Environment Lab, the Wireless Communications and Radar Sensor Networks Lab and the Zhou Lab.

The Electrical Engineering graduate program is managed by graduate advisors Dr. Alan Davis and Dr. William Dillon, with assistance from office staff. Students seeking consultation should contact the Advising Office for more information about advisor schedules. Advising Office hours are Monday-Friday, 8 a.m.-Noon and 1-5 p.m.

Financial Aid

Graduate Research and Teaching Assistantships (GRA/GTA) are awarded on a competitive basis. The GTA or GRA cannot be awarded to probationary or provisional students. In addition, GTAs are not usually awarded the first semester. Graduate Research Assistantships are awarded at the discretion of individual faculty members and are subject to available funding. They are very competitive and are typically obtained by contacting the professor once you are on campus, enrolled as a full-time graduate student. If you are interested in other types of financial aid, you may contact:
The University of Texas at Arlington, Financial Aid Office, Box 19199, Arlington, TX 76019.

Admission Criteria

The admission process considers all of the application material including official transcripts, and GRE scores. In addition letters of recommendation and the statement of purpose are required of PhD candidates only. No single objective factor is used to finalize the decision for admission or to deny admission. An attempt will be made to match the technical aspirations of the potential graduate students with the departmental resources in order to provide a stimulating academic environment for the students and their graduate education.

Admission decisions will be based on the following criteria:

1. Admission with Unconditional status: A typical applicant who is admitted into the graduate program will have met the following admission requirements.

- The minimum undergraduate GPA requirement
  - For MSEE admission 3.25 (on a 4.0 scale) based on upper division course work (junior and senior level or equivalent)
  - For Ph.D. admission 3.5 based on the MSEE degree or equivalent
- Relevance of the students undergraduate degree (background) to the EE curriculum.
- Rigor of the students Bachelors degree.
- Reputation of the University/College that the student has received his/her previous degrees
- For Ph.D. applicants, the publications in scholarly conferences/journals are optional, but will improve both a students chances of securing admission and receiving financial support.
- Three recommendation letters that are required for PhD applicants only should come from individuals who can judge the probability of success of the students graduate study.

· GRE scores of at least the following
  a. Quantitative score
  $\geq$ 156 (old 720) for MS or $\geq$ 159 (old 750) for Ph.D.
  b. Verbal score $\geq$ 146 (old 400)
  c. Analytical Writing $\geq$ 3 for MS or $\geq$ 3.5 for Ph.D.
· For an international student, an additional requirement beyond those stated above:
  The total TOEFL score $\geq$ 83 with a minimum of 19 in each category, or an overall score of 6.5 for the IELTS test.

2. *Admission with Provisional status:* An applicant unable to supply all required official documentation prior to the admission deadline, but whose available documentation otherwise appears to meet admission requirements may be granted provisional admission.
3. *Deferred status:* A deferred decision may be granted when a file is incomplete.
4. *Denied status:* An applicant that does not meet categories 1, 2, or 3 above will be denied admission.
5. *Fellowships:* Award of a fellowship will be based on the criteria required by the sponsor agency (including the graduate school) on a competitive basis.

Requirements for the Master of Science in Electrical Engineering

General Requirements Applicable to Thesis, Thesis Substitute, and Non − Thesis Degrees

1. Each degree plan must have courses in at least three different areas of specialization, called Technical Areas. EE has ten such areas. Please see the catalog to determine the Technical Area to which a course is assigned.

1. Digital and Microprocessor/Controller Systems:

   Digital Signal Processors, Embedded Microcontrollers, Microprocessors, Advanced Microprocessor Systems.

2. Solid-State Devices, Circuits and Systems:

   Semiconductor Theory, Microwave Devices and Circuits, Analog Electronics.

3. Systems, Controls and Automated Manufacturing:

   Systems, Controls, Manufacturing, Discrete Event Control, Neural and Fuzzy Control, Nonlinear Modern Control, Biomedical Signal Processing and Instrumentation

4. Electromagnetic Fields and Applications:

   Remote Sensing, Electromagnetic Fields, Propagation, Scattering, Radiation, and Microwave Systems.

5. Digital Signal and Image Processing:

   Vision Systems, Neural Networks, Statistical Signal Processing, Nonlinear Image Processing, Virtual Prototyping, and Virtual Environments.

6. Communications:

   Information Transmission and Communication Systems.

7. Power Systems and Industrial Power Electronics:

   Efficient Operation, Generation, Transmission, Distribution, Deregulation; Power Electronics Engineering.

8. Optical Devices and Systems:

   Optics Electro-optics, Diffractive Optics, Nonlinear Optics, and Lasers.

9. Nanotechnology and MEMS Materials and Devices

   Quantum Electronic Devices, Semiconductor Surfaces and Interfaces, Single Electron Devices, Sensors and Detectors, Carbon Nanotube Devices, Noise and Reliability in Nanoelectronic Devices, Micro-actuators, RF MEMS, Polymer Electronics, and Nanophotonics.

10. Renewable Energy Systems and Vehicular Technology:

2. The maximum combined number of transfer and non-UTA Electrical Engineering credits is six (6) hours. Only graduate level courses in Engineering, Math, and Physics may be used. The grade earned must be a B or higher. The overall graduate GPA must be 3.0 or greater. If the GPA falls below 3.0 for two consecutive semesters, the student must petition to continue.

3. The EE course work GPA must be 3.0 or greater. The overall graduate GPA must be 3.0 or greater.

Thesis Degree Requirements

1. Minimum total degree requirement: 30 hours (minimum 24 course hours plus EE 5698).
2. The student must orally defend the thesis before the Supervising Committee. The defense is documented as the Final Master's Examination. The Supervising Committee will consist of three faculty, one of whom may be outside the EE Department.
3. EE 5391 (Advanced Study in EE) may not be used on a thesis degree plan.

Thesis Substitute Degree Requirements

1. Minimum total degree requirement: 30 hours (27 course hours plus EE 5392).
2. The student must present the project results to the EE Faculty. The project presentation is documented as the Final Masters Examination. A minimum of three faculty must serve as project examiners.
3. EE 5391 (Advanced Study in EE) may not be used on a thesis-substitute degree plan.

Non – Thesis Degree Requirements

1. Minimum degree requirement: 30 course hours
2. Fulfillment of the requirement of the Final Master's Exam in Electrical Engineering for MSEE non-thesis degree candidates:

· The purpose of the Master's Final Exam is to demonstrate a comprehensive knowledge of at least three of the major areas of study in Electrical Engineering.

· This will be demonstrated by earning a GPA of 3.3 or better in three Technical Proficiency Courses or their equivalents (one each from at least three areas). The examination committee of record will consist of the Graduate Advisor (chairman), Graduate Studies Committee Chairman, and Associate Chairman of the EE Department.

3. EE 5391 (Advanced Study in EE) may be used once on a non-thesis degree plan.

Due to similarities of content, only one from each of the following combination of courses may be included on the degree plan:

EE Course	Outside Course	Outside Course
EE 5311	CSE 5350	
EE 5314	CSE 5442	
EE 5323	AE 5337	ME 5374
EE 5350	CSE 5366	
EE 5356	CSE 6366	
EE 5360	CSE 5344	
EE 5368	CSE 5345	

Technical Areas, Courses, and Technical Proficiency Courses

All MSEE students must take courses from three Technical Areas. Non-thesis students must take one technical proficiency course from each of three areas, and earn at least a 3.3 GPA in those three courses.

Technical Area	Courses	Technical Proficiency Courses
1. Digital and Microprocessor/ Controller Systems	EE 5313 EE 5314 EE 5315 EE 6313 EE 6314	EE 5313 - Microprocessor Systems Approved Substitution: EE
2. Solid State Devices and Systems	EE 5305 EE 5310 EE 5311 EE 5312 EE 5316 EE 5317 EE 5318 EE 5340 EE 5341 EE 5342 EE 5345 EE 5346 EE 5347 EE 5348 EE 6318 EE 6341	EE 5305 - Advanced Electronics EE 5310 - Digital VLSI Design EE 5340 - Semiconductor Device Theory EE 5341 - Fundamental for Semiconductor Devices Approved Substitution: EE
3. Systems, Controls and Automated Manufacturing	EE 5304 EE 5307 EE 5320 EE 5321 EE 5322 EE 5323 EE 5324 EE 5325 EE 5326 EE 5327 EE 5328 EE 6321 EE 6322 EE 6323 EE 6327	EE 5307 - Linear Control Sys. Theory EE 5320 Control Systems Design EE 5328 - Instrumentation and Measurement Approved Substitution: EE
4. Electromagnetic Fields and Applications	EE 5306 EE 5331 EE 5332 EE 5333 EE 5334 EE 5335 EE 5336 EE 5337 EE 5338	EE 5306 Electromagnetic Theory EE 5331 Microwave Systems Engineering Approved Substitution: EE

Technical Area	**Courses**	**Technical Proficiency Courses**
5. Signal Processing and Machine Learning	EE 5302 EE 5350 EE 5351 EE 5352 EE 5353 EE 5354 EE 5355 EE 5356 EE 5357 EE 5358 EE 6356	EE 5302 - Random Signals and Noise EE 5350 - Digital Signal Processing EE 5356 - Digital Image Processing Approved Substitution: EE
6. Communications	EE 5360 EE 5361 EE 5362 EE 5363 EE 5364 EE 5366 EE 5367 EE 5368 EE 6362 EE 6363 EE 6364 EE 6367 EE 6368	EE 5360 - Data Communication Engineering EE 5362 - Digital Communications Approved Substitution: EE
7. Power Systems and Industrial Power Electronics	EE 5308 EE 5371 EE 5372 EE 5373 EE 5374 EE 5375 EE 5376 EE 5377 EE 5378 EE 6372	EE 5308 - Power System Modeling and Analysis EE 5371 - Power System Transmission 1 Approved Substitution: EE
8. Optical Devices and Systems	EE 5365 EE 5380 EE 5382 EE 5383 EE 5384 EE 5385 EE 5386 EE 5387 EE 5388 EE 6343 EE 6380 EE 6382 EE 6365	EE 5380 - Principals of Photonics and Optical Engineering EE 5386 - Integrated Optics Approved Substitution: EE

Technical Area	Courses	Technical Proficiency Courses
9. Nanotechnology and MEMS - Materials and Devices	EE 5343 EE 5344 EE 5381 EE 6342 EE 6344 EE 6345	EE 5343 - Silicon IC Fab. Technology EE 5344 - Introduction to MEMS EE 5381 - Foundations in Semiconductors Approved Substitution: EE
10. Renewable Energy Systems and Vehicular Technology	EE 5370 EE 6371 EE 6373 EE 6374 EE 6375 EE 6376	EE 6375

Requirements for the Ph.D. in Electrical Engineering

The Ph.D. is a degree with emphasis on research. Requirements for the doctoral degree are described in detail in the UTA Graduate Catalog section on Degree Offerings/Requirements. Permission to continue beyond the master's degree will be based on the grade point average and GRE scores as described above. Approval to continue in the doctoral program is given by satisfactory completion of the following procedure:

1) Obtaining the approval of a dissertation adviser, and
2) Passing the Diagnostic Examination. This exam will be over three of the diagnostic exam courses listed below.

The Diagnostic Exam must be completed within the first two long semesters of coursework toward the Ph.D. A student not having attempted the Diagnostic Examination by this time will be allowed one more opportunity to take the examination during the next full semester. The courses used for the diagnostic exam are listed below.

EE 5302 - Random Signals and Noise	EE 5340 - Semiconductor Device Theory
EE 5305 - Advanced Electronics	EE 5344, 5381 - Intro. MEMS
EE 5306 - Electromagnetic Theory	EE 5350 - Digital Signal Processing
EE 5307 - Linear Systems Engineering	EE 5362 - Digital Communications
EE 5308 - Power System Modeling and Analysis	EE 5380 - Principles of Photonics
EE 6375 - Power Electronics Engr.	

The program of work is expected to include a **minimum** of 15 semester hours of graduate level coursework beyond the master's degree that include at-least two advanced courses in electrical engineering and sufficient dissertation semester hours as required to complete the dissertation. Students are also required to take two seminar courses (EE 5190). The non-advanced courses may include graduate level mathematics, science, or engineering relevant to the student's dissertation research program, but only with approval of the graduate adviser.

Status as a doctoral candidate is assigned for students who have passed an oral Comprehensive Examination (a comprehensive dissertation proposal) and submitted a Final Program of Work. The comprehensive Examination will be required by the time the student has completed the required course work. If the student fails the examination, he may be given one more chance to pass it no later than during the following semester. Upon completion of the Comprehensive Examination, the candidate should enroll in the dissertation course (EE 6399, EE 6699, or EE 6999) continuously until defense of the dissertation. The last semester the student must be enrolled in EE 7399 or EE 6999. This ordinarily requires approximately 30 semester hours of dissertation credit.

Advanced Courses

For Ph.D. students the advanced courses are listed below.

1. Digital and Microprocessors / Controller Systems
   None
2. Solid State Devices and Circuits
   5312, 5316, 5342, 5346, 5347, 5348, 6318, 6341
3. Systems, Controls, and Automated Manufacturing
   5321, 5322, 5323, 5324, 5325, 5326, 5327, 5328, 5329, 6323, 6327,
4. Fields and applications
   5332, 5333
5. Signal Processing and Machine Learning
   5352, 5354, 5357, 5359 (Multimedia Processing)
6. Communications
   5369, 6362, 6364, 6365, 6367
7. Power Systems and Industrial Power Electronics
   5309 (Pulsed Power), 5373, 5374, 5375, 5379 (Power Electronics)
8. Optical Devices and Systems
   5365, 5382, 5385, 5386, 5387, 5388, 5389, 6343, 6365, 6381, 6382
9. Nanotechnology and MEMS - Materials and Devices
   5349 (Low Noise Amplifiers), 6342, 6344, 6345, 6382
10. Renewable Energy Systems and Vehicular Technology
    5309 (Renewable Energy), 5309 (Electric Motor Drives)

Continuation

The Electrical Engineering Graduate Program, in fulfillment of its responsibility to graduate highly qualified engineers, has established certain policies and procedures. In addition to the requirements of the Graduate School listed elsewhere, to continue in the program each MSEE student must maintain at least a B (3.0) GPA in all electrical engineering coursework and at least a B (3.0) GPA in all coursework A student working toward a Ph.D. must maintain a 3.5 GPA in all electrical engineering coursework and at least a 3.5 GPA in all coursework. The grade of R (research in progress) is a permanent grade; it cannot be changed by completing course requirements in a later semester. To receive credit for an R-graded course, the student must continue to enroll in the course until a passing grade is received.

An incomplete grade (the grade of I) cannot be given in a course that is graded R, nor can the grade of R be given in a course that is graded I. To receive credit for a course in which the student earned an X, the student must complete the course requirements. A grade of I cannot be changed by enrolling again in the same course. At the discretion of the instructor, a final grade can be assigned through a change of grade form.

Three-hour thesis courses and three- and six-hour research and dissertation courses are graded R/F/W only. The grade of P (required for degree completion for students enrolled in thesis or dissertation programs) can be earned only in six-hour thesis courses and nine-hour dissertation courses or in EE 7399.

Undergraduate Requirements to Qualify with a Non – BSEE for the EE Graduate Program

The purpose of this qualifying procedure is to prepare a student holding a BS degree in a field closely related to Electrical Engineering to a level commensurate with the BSEE in order to enter the EE Graduate program. This can apply to students with the BS in other engineering programs, Engineering Physics, and possibly other science majors. These requirements go beyond fulfilling the prerequisite for desired graduate courses and are intended to qualify the student with a broad background in the undergraduate EE curriculum.

A student may qualify for entering the MSEE program from a background other than the BSEE by taking a sequence of courses approved by the Graduate Advisor. The following standards apply:

1. A grade of B or better must be received in each course taken. The overall GPA for all classes taken must be 3.25 or better.
2. A course may be waived by scoring in the upper 30% of the class in the final (comprehensive) exam for

the course.
3. A course may be waived by establishing that a grade of B or better has been obtained in equivalent course or courses.
4. A course may be waived by earning a grade of B or better in a closely related EE graduate level course.

A student from a background other than the BSEE should show competence in the following course areas. For those courses marked with an * a student should take at least two of these courses or show equivalent competence. A student with a BS in another engineering discipline can usually qualify by taking from 4 to 10 of these courses. A student from a science background may need to take the majority of these courses.

1. EE 2347 Mathematical Foundations of EE
2. EE 3407 Electromagnetics
3. EE 2415 Circuit Analysis I
4. EE 3446 Circuit Analysis II
5. *EE 3302 Fundamentals of Power Systems
6. *EE 3310 Advanced Microprocessors
7. EE 2403 Electronics I
8. EE 3316 Continuous and Discrete Signals and Systems
9. EE 3330 Probability and Random Signals
10. EE 2441 Digital Design & Programmable Microcontrollers
11. EE 3318 Real-Time Digital Signal Processing
12. *EE 4314 Control Systems
13. *EE 4330 Fundamentals of Telecommunication Systems
14. *EE 3444 Electronics II

Degreed Undergraduate (DUG) Enrollment Guidelines

Applicants to the Master's program may be allowed to take undergraduate electrical engineering courses as a Degreed Undergraduate if application to the UTA Graduate Program in Electrical Engineering has been made and if the Electrical Engineering Advising Office has been provided with the following information:
1. A copy of all transcripts for the junior and senior years of course work.
2. A letter of intent indicating the reason for enrolling in courses as a Degreed Undergraduate.

The student must be in one of the following three categories:
1. Have a GPA that is too low to allow admission into the Graduate Program and wish to take junior or senior EE courses to raise the GPA.
2. Have a degree in physics or another branch of engineering (NOT engineering technology) and need to take required undergraduate electrical engineering courses to meet the background requirements necessary for admission to the Electrical Engineering Graduate Program.
3. Be admissible to the Graduate Program but have missed the application deadline for the semester in which enrollment is desired. The student could then be allowed to take courses for one semester in order to complete the application procedure.

No student will be allowed to take Graduate courses to be used toward a graduate degree as a Degreed Undergraduate unless she/he has acceptable GRE scores and an undergraduate Grade Point Average 3.25 or above for the junior and senior years.

Degreed Undergraduates will be allowed to take courses only as long as they are making reasonable progress toward their goals as listed above. Therefore, students who make grades below B in such courses may be denied further enrollment. A cumulative GPA of 3.25 must be maintained for all Degreed Undergraduate courses taken.

Required Course Load for Graduate Teaching Assistants/Associates and Graduate Research Assistants/Associates

1. During the fall and spring semesters, all students enrolled in the master's or doctorate program in Electrical Engineering who are employed in the Electrical Engineering Department as Graduate Teaching Assistants or Graduate Research Assistants are required to enroll in 9 semester hours. At least 6 semester hours are required in the summer semester.
2. MSEE students who serve as GTAs must be enrolled in the Thesis option.
3. During the fall and spring semesters, all students enrolled in the doctoral program in Electrical Engineering (with a master's degree completed) who are employed in the Electrical Engineering Department as Graduate Teaching Assistants or Graduate Research Assistants are required to enroll in at least 9 semester hours. At least 6 semester hours are required in the summer semester.
4.Doctoral students who have passed the Diagnostic Exam are eligible to enroll for dissertation credit. Once a student has enrolled in the dissertation course, continuous enrollment is required each fall and spring semester. Enrollment in EE 6999 or EE 7399 is required in the graduating semester.

The Electrical Engineering Faculty and Major Research Interests

Digital and Microprocessor/Embedded Controller Systems
Jonathan Bredow, Sungyong Jung, Wei-Jen Lee

Solid State Devices : Circuits & Systems
Zeynep Celik-Butler, W. Alan Davis, Sungyong Jung, Howard Russell

Systems, Controls, and Automated Manufacturing
George V. Kondraske, Frank L. Lewis, Qilian Liang, Yan Wan

Electromagnetic Fields and Applications
Kambiz Alavi, Jonathan W. Bredow, Saibun Tjuatja, Robert Magnusson

Signal Processing and Machine Learning
Venkat Devarajan, Michael T. Manry, Ioannis Schizas K. R. Rao, Ramtin Madani

Communications
Jonathan W. Bredow, R. Stephen Gibbs, Qilian Liang, Saibun Tjuatja,

Power Systems and Industrial Power Electronics
Ali Davoudi, William E. Dillon, David Wetz Rasool Kenarangui, Wei-Jen Lee, Ramtin Madani

Optical Devices and Systems
Kambiz Alavi, Michael 'Vasilyev, Weidong Zhou, Yuze Alice Sun, Robert Magnusson

Nanotechnology and MEMS : Materials & Devices
Kambiz Alavi, Zeynep Celik-Butler, Weidong Zhou,

Electrical Engineering Faculty

KAMBIZ ALAVI, Ph.D., MIT, 1981. (817-272-5633) Molecular Beam Epitaxy (MBE) of compound semiconductors, physics and applications of heterostructures, multiple quantum wells and superlattices for optoelectronic and electronic devices, magneto-optics; nonlinear optics. alavi@uta.edu

JONATHAN W. BREDOW, Ph.D., Kansas, 1989. (817-272-3497) Remote sensing, radar, microwave circuits, antennas, electromagnetics, digital signal processing, digital systems. jbredow@uta.edu

ZEYNEP CELIK-BUTLER, Ph.D., Rochester, 1987. (817-272-1309) Measurements, analysis and modeling of noise in advanced electronic devices, semiconductor device reliability, microelectromechanical systems (MEMS), infrared microsensors, electronic devices on flexible substrates, nanoelectronic transport, superconducting devices. zbutler@uta.edu

W. ALAN DAVIS, Ph.D., Michigan, 1971. (817-272-3495) Microwave and RF circuit component design, microwave semiconductor device modeling. adavis@uta.edu

ALI DAVOUDI, Ph.D., University of Illinois Champaign Urbana, 2010. (817-272-2667) Power electronics, digital control of drivers, microscopic energy conversion. davodi@uta.edu

WILLIAM E. DILLON, Ph.D., UTA, 1972. (817-272-5720) Power electronics; space power applications; high voltage techniques; conventional power system analysis; computer simulation of electrical components and systems. dillon@uta.edu

R. STEPHEN GIBBS, Ph.D. UT/Dallas, 2003. (817-272-3470) Digital and analog communications and systems, sgibbs@uta.edu.

SUNGYONG JUNG, Ph.D., Georgia Tech, 2002.(817-272-1338) Analog and mixed signal integrated circuit design, high-speed transceiver circuit design for telecommunication, systems-on-chip implementation, modeling of high speed circuit parasitics, digital signal processing. jung@uta.edu

RASOOL KENARANGUI, Ph.D., Iowa State, 1980. (817-272-3423) Power systems analysis and operation. kenarang@uta.edu

DUKHYUN KIM (Senior Lecturer), PhD., Georgia Institute of Technology, 1998. (817-272-3472) Telecommunication & Information Systems, Signal Processing, Digital Circuits and Systems. dukhyun.kim@uta.edu

GEORGE V. KONDRASKE, Ph.D., UTA and UTSWMC, 1982. (817-272-3473) General systems performance theory; human performance modeling and measurement; task characterization; performance-related issues associated with any type of system; cybernetics; virtual reality; sensor development; and microprocessor-based instrumentation. kondraske@uta.edu

WEI-JEN LEE, Ph.D., UTA, 1985. (817-272-5046) Power system transient stability analysis; power system dynamic stability analysis and control; power system load flow analysis; power system operations; numerical methods in power system simulations; low voltage surge protection; power electronics. wlee@uta.edu

FRANK L. LEWIS, Ph.D., Georgia Tech, 1981, IEEE Fellow. (817-272-5972) System modeling and control; robotics and nonlinear process control; neural networks and fuzzy logic systems in feedback control; discrete event manufacturing controllers; robust and adaptive systems. lewis@uta.edu

QILIAN LIANG, Ph.D., USC, 2000. (817-232-1339) Wireless communications systems and communication theory, wireless networks, ad hoc networks, signal processing for communications multimedia, network traffic modeling and classification. liang@uta.edu.

JASON LOSH (Professor in Practice), PhD. UTA 1994. Embedded microprocessors. jlosh@uta.edu

RAMTIN MADANI, PhD., Columbia University, 2015. (817-272-3483) Power Systems, Smart Grids, Optimal Control, Nonlinear Optimization ramtin.madani@uta.edu

MICHAEL T. MANRY, Ph.D., UT/Austin, 1976. (817-272-3483) Neural networks, image processing, digital signal processing, parameter estimation, and pattern recognition. manry@uta.edu

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K. R. RAO, Ph.D., New Mexico, 1966. (817-272-3478) Digital image/video/audio compression and coding for transmission and storage based on international standards (ITU, ISO, IEC). Multimedia, video indexing & retrieval. rao@uta.edu

HOWARD RUSSELL (Senior Lecturer), PH.D. Santa Clara University, 1976, (817-272-3154) High Frequency Microelectronics Devices and Circuits VLSI and Semiconductors. hrussell@uta.edu

IOANNIS D. SCHIZAS, Ph.D. Minnesota, 2011, (817-272-3467) Statistical signal processing, distributed algorithms, adaptive information processing, dimensionality reduction, wireless sensor networks, digital communications, digital signal processing.schizas@uta.edu

YUZE ALICE SUN, Ph.D., University of Michigan, 2011. (817-272-1317) Biophotonics, optofluidic biomedical and chemical sensing, microfluidic point-of-care devices, bioinstrumentation. yuzesun@uta.edu

SAIBUN TJUATJA, Ph.D., UTA, 1992. (817-272-3974) Remote sensing of the environment; wave scattering and emission from random media; parametric retrieval using remotely sensed data; wireless communications; numerical techniques for electromagnetics. tjuatja@uta.edu

GREGORY TURNER (Senior Lecturer), PhD. UTA, 2014. (817-272-3934) Embedded Control Systems for Renewable Energy & Microgrid Applications. gkturner@uta.edu

MICHAEL VASILYEV, Ph.D. Northwestern, 1999. (817-272-1224) Quantum and nonlinear optics, quantum electronics, optical communications, electromagnetics, nanophotonics. vasilyev@uta.edu

YAN WAN, PhD., Washington State, 2009. (817-272-6838) Decentralized control, cyber-physical systems, large-scale dynamical networks, stochastic network modeling and analysis, airborne networking, air traffic flow management, sensor networking, systems biology. yan.wan@uta.edu

DAVID WETZ, Ph.D., Texas Tech, 2006. (817-272-1058, 2-2667) High power, pulsed power, electromagnetic launch, energy storage, microgrids. wetz@uta.edu

WEIDONG ZHOU, Ph.D., Michigan, 2001. (817-272-1227) Photonics and optoelectronic materials and devices; photonic crystal materials, devices and photonic integrated circuits; optical interconnect and system on a chip; nanofabrication techniques and applications. wzhou@uta.edu