This handbook provides general guidelines for ECE M.E.E. students. All degree plans and graduate student matters must conform to the Rice University General Announcements and be approved by the ECE Professional Master’s Committee. In addition, it is the student’s responsibility to become familiar with the contents of this handbook and to comply with all regulations, policies, procedures and deadlines, including the university honor code.
TABLE OF CONTENTS:

I. ABOUT THE M.E.E. IN ECE ................................................. 4
   Honor Code .......................................................................... 4

II. ADMINISTRATION/GENERAL INFORMATION ............. 4-7
   Your Department Partners ................................................. 4
   Mail .................................................................................. 5
   ESTHER .............................................................................. 5
   Student Health Services ................................................... 5
   Technology Support ........................................................... 5
   International Student Information .................................... 5
   Graduate Studies Form Library ......................................... 6
   Employment ....................................................................... 6
   GSA Information ............................................................... 6
   Women ExCEL ................................................................... 6

III. GENERAL ANNOUNCEMENTS .................................. 7-8

IV. M.E.E. TIMELINE .......................................................... 8
   Semester 1 ........................................................................ 8
   Semesters 2 & 3 ................................................................ 8

V. ACADEMICS ................................................................. 8-14
   M.E.E. Program Information ............................................ 8
   M.E.E. Degree Plan ........................................................... 9
   ELEC 698 Seminar ........................................................... 10
   Academic Advisors .......................................................... 10
   ECE Areas of Study .......................................................... 10
   ESTHER ............................................................................. 12
   Guidelines for Independent Study ..................................... 12
   Grades and Academic Status ........................................... 13
   Changing Departments ..................................................... 14

VI. IMPORTANT LINKS AND DATES ................................. 14-17
   Links .................................................................................. 14
   Dates ................................................................................ 15
   Help Available .................................................................... 15

VII. DEPARTMENT DIRECTORY ......................................... 18-22
I. ABOUT THE MASTER OF ELECTRICAL AND COMPUTER ENGINEERING (M.E.E.)

Welcome to the Rice University Department of Electrical and Computer Engineering (ECE)! Your admission to Rice is the latest milestone in an exemplary academic career. At Rice, researchers and faculty members at the forefront of their fields will guide you. You will be taught to think creatively, be a part of a network of knowledge, and redefine your own limits.

The M.E.E. at Rice University is a course-based program; no thesis is required. It is intended to enhance the education of those who have a B.A. or a B.S. in an engineering or science discipline. The Rice M.E.E. program will prepare you to succeed and advance rapidly in today’s competitive technical marketplace, and can be completed on a full or part-time basis.

Honor Code
All incoming Rice students agree to abide by the Rice University honor system. The honor system, one of the oldest and proudest traditions at Rice, is administered by the Honor Council, whose student members are elected each year by the student body. Adopted by a student vote in 1916, the honor system has remained essentially the same since that time but for changes in the procedures and membership of the Honor Council.

Students take all written examinations and complete any specifically designated assignments under the honor system. By committing themselves to the honor system, all students accept responsibility for assuring the integrity of the examinations and assignments conducted under it. More information can be found at ga.rice.edu.

II. ADMINISTRATION

Your Department Partners
ECE graduate students are welcome to ask for assistance when it is needed. ECE administrative staff, Engineering Professional Masters Program (EPMP) staff and the Professional Masters Program Committee (PMPC) are all available to answer questions. A directory can be found in Section VII.
Mail
ECE graduate student mailboxes can be found in Abercrombie Room A239. FedEx and UPS Packages are received in Abercrombie A204.

ESTHER
ESTHER is the web application for students, faculty and staff. Students will use this application to register for classes and retrieve certain data such as grades and account information. Using ESTHER, students can: update contact information; register, add and drop courses; access final grades; view holds on accounts, etc. Visit registrar.rice.edu/students/esther_FAQs/ for information about how to use ESTHER.

Student Health Services
Student Health Insurance: Rice University requires all degree-seeking students to have health insurance. Students electing to enroll in the Rice Student Health Plan may opt to be billed annually or semi-annually. Contact the Cashier’s Office for payment options (713-348-4946). You must complete an insurance waiver form to waive the Rice Insurance Health Plan.

Health Data Form (HDF): All new graduate students are required to submit a properly completed HDF to Student Health. All students under the age of 22 years, regardless of classification, must provide documentation of vaccination against meningococcal disease. See health.rice.edu for more information.

International Student Health Information: All Rice-sponsored F-1 and J-1 international students must enroll in either 1) Aetna (Rice's Student Health Insurance Plan) or 2) SAS (Rice’s Approved Alternate Health Insurance Plan for Internationals). Visit oiss.rice.edu/studenthealth/ for more information.

Technology Support
From creating websites, paper publication citations, to research collaboration, the department has a plethora of technology resources available, as well as policies users must adhere to. See ece.rice.edu/studenttech for more information.

International Student Information
International Student Newsletters can be found at oiss.rice.edu/news/ and more information is in Section VI of this handbook.
**Graduate Studies Form Library**
The Office of Graduate and Postdoctoral Studies (GPS) keeps a very useful library of commonly needed forms for everything from leaves of absence to candidacy petition to thesis submission. Visit [graduate.rice.edu/forms](http://graduate.rice.edu/forms) for more information.

Specific forms include:

*Enrollment*
- Leave of Absence
- Short Term Medical and Parental Leave
- Withdrawal

*Degree Conferral*
- Registrar’s Application for Degree
- Petition for a Non-Thesis Master’s
- Graduation Checklists

*Commencement*

**Employment**
Students must complete an I-9 form before starting work at Rice. Students working for more than 20 hours per week are not normally eligible for full-time status, and special permission is needed. See the ECE M.E.E. Program Administrator for details.

International students must obtain the appropriate work authorization from OISS before starting to work. If you work even one day before or after your authorization, you must leave the U.S. or face deportation. See [oiss.rice.edu/studentwork/](http://oiss.rice.edu/studentwork/) for additional information.

**GSA Information**
Graduate Student Association (GSA) - GSA is comprised of degree-seeking graduate students at Rice University. The GSA mission is to enrich the graduate student experience and to represent, support, and promote graduate student interests and values. Visit [gsa.rice.edu](http://gsa.rice.edu) to learn more.

**Women ExCEL**
Women Excel is a network of women in the ECE Department at Rice University that aims to provide community, mentoring, and cultural enrichment for students. They furnish a medium for networking and discussion of women-specific issues. This network also serves to promote career opportunities and cultivate female leadership. In
addition, they hope to improve the visibility of women in engineering and to advocate the importance of diversity in ECE. As one of their main outreach initiatives, they provide academic and research resources to undergraduate women in ECE. Learn more at excel.rice.edu.

III. GENERAL ANNOUNCEMENTS

Rice University publishes its “General Announcements” (GA) each year. These are the official rules of the university and include the honor code that every student agrees to abide by, as well as forms and research information. They can be found at ga.rice.edu. Two sections of the GA are of particular importance to graduate students in ECE. The first is the section titled “Graduate Degree Programs.” This outlines the basic rules and expectations for all graduate students at Rice University. The second, titled “Programs of Study,” is the department-specific information. This information covers the degree requirements for the M.E.E. and more information is found in Section V of this handbook. The ECE M.E.E. requirements from this section are reproduced below.

**Graduate Degree Program**

The master of electrical engineering (MEE) degree is a course-based program designed to increase a student's mastery of advanced subjects; no thesis is required. The MEE prepares a student to succeed and advance rapidly in today's competitive technical marketplace. A coordinated MBA/MEE degree is offered in conjunction with the Jesse H. Jones Graduate School of Business. Information on admission to graduate programs is available from the ECE Graduate Committee and on the ECE website. Students must achieve at least a B (3.0) average in the courses counted toward a graduate degree. In addition, no course in which the student earned a grade lower than a C may count toward a graduate degree.

**Degree Requirements for MEE in Electrical Engineering**

Students are admitted to the MEE program in both fall and spring semesters. MEE students must prepare a degree plan and have it approved by their ECE faculty advisor. The plan must include at least 30 semester hours comprised of 10 courses of at least 3 credit hours each. All courses towards the MEE degree must be at the 500 level or higher. The program should include a major area of specialization (18 semester hours), a minor area (six semester hours), plus free electives. ELEC 590 or ELEC 591 may not count as major area courses; no more than three semester hours can
be transfer credit from another university, and at most one 1-hour seminar course may be included in the plan. No course in which the student earned a grade lower than a C may count toward an MEE. A MEE degree planning form and current requirements may be found on the ECE website.

Learning Outcomes
Students graduating from this program will:
1. Apply the principles of mathematics and science necessary to solve advanced electrical engineering problems.
2. Practice at an advanced level in at least one of the major sub-fields of electrical engineering.

IV. M.E.E. TIMELINE
Semester 1
Your first semester at Rice will begin with Orientation Week (or O-Week) where you will learn about Rice and ECE. The major events of this week will include presentations by many of the faculty with whom you will become familiar. You will meet your advisor, discuss your career objectives and select your courses for your first semester. In consultation with your advisor, you will determine a degree plan and timeline for completion. This must be submitted to the Professional Master's Program Administrator before the start of the second week of classes in the first semester. Course plans may be revised, re-approved and resubmitted at any time over the course of the M.E.E. program. See Section V for more information.

Semesters 2 and 3
In the final semester of M.E.E. studies, an “Application for Degree” is submitted to the registrar, and a “Petition for Certification of Non-Thesis Master's Degree” form is completed, approved by the Department Chair and M.E.E. Administrator, who will submit it to GPS along with the student’s current transcript. Visit graduate.rice.edu/forms for the petition. The M.E.E. must be completed within 5 years.

V. ACADEMICS
M.E.E. Program Information
The M.E.E. is a terminal, non-thesis degree intended primarily for students who wish to strengthen their academic background through a year of additional coursework. The M.E.E. program is a bridge to industry, designed to provide advanced learning and training in the
applied aspects of ECE technology beyond the typical undergraduate electrical and computer engineering degree program.

Upon matriculation, the M.E.E. student selects a faculty advisor in his/her primary area of interest (See “ECE Areas of Study” in this section). The advisor will counsel the student in developing a degree plan consistent with the student’s career objectives.

**Degree Plan**

Coursework is based on the student’s degree plan. The M.E.E. degree plan must include:

- At least 30 credit hours comprised of 10 courses of at least 3 hours each: Major area (18 hours); Minor Area (6 hours); Electives (6 hours)
- All of the 10 required courses must be 500 level or higher
- No ELEC 590, or ELEC 591 may count for major or minor area
- ELEC 698 for each semester

Electives may be fulfilled through research (ELEC 590 or ELEC 591), other ECE electives, or through courses available through affiliated departments in areas such as Communication Training or Engineering Leadership Management, including:

- ENGI 505 (3) Engineering Project Development and Management
- ENGI 510 (3) Technical and Managerial Communications
- ENGI 528 (3) Engineering Economics
- ENGI 529 (3) Ethics and Engineering Leadership
- ENGI 610 (3) Management for Science and Engineering
- NSCI 511 (3) Science Policy and Ethics

Students may be eligible to transfer up to three hours of course credit from another university. Rice undergraduates entering the M.E.E. program may transfer course credit not applied to their undergraduate degrees, with the approval of the ECE Graduate Committee and Office of the Registrar. See the ECE M.E.E. Administrator for details.

The M.E.E. may be pursued on a part-time or full-time basis during the fall and spring semesters. A 3.0 GPA must be maintained in major and minor coursework. Only courses in which a grade of C or above is achieved will be counted towards the M.E.E. degree. Students whose GPA falls below a 2.33 will be placed on academic probation by the university. Students whose GPA falls below a 3.0 will be placed on
academic probation by the ECE Department. Students must maintain continuous program enrollment and involvement unless granted an official leave of absence. For more information see the GA: ga.rice.edu.

ELEC 698 Seminar
The ELEC 698 Seminar Course is intended to foster development of breadth among all graduates at all phases of study in ECE. The requirement is registered attendance at 3 ECE sponsored or co-sponsored seminars per semester. All M.E.E. students are required to take and earn an “S” (Satisfactory) in ELEC 698 as a part of his/her degree requirements for each semester in residence. Details of seminars are emailed on a regular-basis and are posted on the ECE website at ece.rice.edu. Some seminars hosted by the Engineering Professional Master’s Program (EPMP) can count for 2 of the 3 seminars. Please check with the M.E.E. Administrator for a list of approved seminars. Departmental attendance sheets will be provided at all seminars for the first 10 minutes. It is your responsibility to sign-in at the beginning of the seminar. If for some reason there is no sign-in sheet available, students will be responsible for emailing the M.E.E. Administrator within 24 hours of attendance in order to receive credit.

Academic Advisors
Each incoming M.E.E. student selects an academic advisor, usually a member of the Professional Master’s Committee, to help with course selection and other initial academic concerns. Final course selection does not need to be completed until after the start of classes, but must be completed before the Add deadline.

ECE Areas of Study
The ECE Department has five interdisciplinary areas of study that the M.E.E. student can choose from:

*Computer Engineering:* The Computer Engineering group at Rice University has a long track record of innovative research in physical modeling and characterization, VLSI signal processing, computer architecture, computer-aided design, and storage and network systems. Spanning the spectrum of computing from low-power personal devices to large-scale parallel information systems, networked computing solves a myriad of technology challenges. Future computing technologies, including the on-chip integration of systems and networks, will move
us beyond current methods in silicon.

*Data Science:*
Data Science is an emerging discipline that integrates the foundations, tools and techniques involving data acquisition (sensors and systems), data analytics (machine learning, statistics), data storage and computing infrastructure (GPU/CPU computing, FPGAs, cloud computing, security and privacy) in order to enable meaningful extraction of actionable information from diverse and potentially massive data sources. Data scientists seek to collect and understand the structure in data, looking for compelling patterns, telling the story that is buried in the data. They get at the questions at the heart of complex problems and devise creative approaches to making progress in a wide variety of application domains.

*Neuroengineering:*
Neuroengineering is the analysis and control of the nervous system in order to enhance and restore neuronal function. At Rice, we develop technologies to understand, repair, replace, enhance, or treat the diseases of the nervous system. We also design, construct and study devices that interface with living neural tissue.

In addition to the ongoing neuroengineering research efforts in individual laboratories across campus, the university has established the Rice Center for Neuroengineering (RCNE). The center’s goal is to integrate state-of-the-art research and technologies developed by individual research teams into broader research efforts to interrogate and understand neural systems. The mission of the RCNE is to apply engineering principals to neuroscience in a way that advances both the science and technology related to neural systems. RCNE is uniquely positioned as a leader in neuroengineering thanks to the broad, interdisciplinary research performed in conjunction with the world’s largest medical center (Texas Medical Center), steps away from the Rice University campus. Current neuroengineering research in ECE includes: nanotechnology for measuring and manipulating neural cells and circuits; optogenetic and photonic neural interface technology; computational microscopy and functional neural imaging; neural recordings in behaving animals; cutting-edge tools and algorithms for systems neurobiology; information theory and signal processing methods for neuroengineering; closed-loop neuromodulation and real-time deep brain stimulation; and theoretical and computational
neuroscience.

**Photonics, Electronics and Nano-devices:**
The focus of this program is the improved understanding of electronic, photonic, and plasmonic materials, optical physics, the interaction of light and matter, along with the application of that knowledge to develop innovative devices and technologies. The specific areas of interest cover a broad range: nanophotonics and plasmonics, optical nanosensor and nano-actuator development, studies of new materials, in particular nanomaterials and magnetically active materials; imaging and image processing, including multispectral imaging and terahertz imaging; ultrafast spectroscopy and dynamics; laser applications in remote and point sensing, especially for trace gas detection; nanometer-scale characterization of surfaces, molecules, and devices; organic semiconductor devices; single-molecule transistors; techniques for optical communications; and optical interactions with random, nanoengineered, and periodic media; and applications of Nanoshells in biomedicine.

**Systems:**
The understanding of how to analyze and restructure signals is applied to a wide range of areas, including image and video analysis, representation, and compression; wavelets and multi-scale methods; statistical signal processing, pattern recognition, and learning theory; distributed signal processing and sensor networks; communication systems; and computational neuroscience. Emergent applications include high-performance, scalable and widely deployed wireless Internet and expanding “broad-band” services for residences and public spaces.

**ESTHER**
Students must register for courses using ESTHER. ESTHER is the web application for students, faculty and staff. Students will use this application to register for classes and retrieve certain data such as grades and account information. For information about how to use ESTHER see Section II or: registrar.rice.edu/students/esther_FAQs/

**Guidelines for Independent Study**
ELEC 590 - Graduate Non-Thesis Research Projects is intended for M.E.E. students who wish to undertake specific theoretical or experimental research projects under the direction of a faculty member. The
parameters of the research project and grade determination should be discussed with the faculty member prior to enrollment. A maximum of 3 credits of ELEC 590 can be applied to the M.E.E. degree as an elective course.

ELEC 591 - Vertically Integrated Projects at Rice University (VIP)
The Vertically Integrated Projects (VIP) Program at Rice unites graduate and undergraduate education and faculty research in a team-based context. Undergraduate Rice VIP students earn academic credits, while faculty and graduate students benefit from the design/discovery efforts of their teams. Students interested in VIP projects should meet and consult with the faculty lead of that project. Visit vip.rice.edu for more information.

Grades and Academic Status

Grades—According to university guidelines, students must achieve at least a B- (2.67) grade point average (GPA) in courses counted toward the graduate degree. A 3.0 GPA must be maintained in major and minor coursework. The ECE Department adds the requirement that only courses in which a grade of C or above was earned will count towards the graduate degree. Students whose cumulative GPA falls below a 2.67, or whose semester GPA falls below a 2.33, will be placed on academic probation by the university. Students whose GPA falls below a 3.0 will be placed on academic probation by the ECE Department. To compute GPA, the credits attempted in semester hours for each course and the points for the grade earned (from A+ = 4.33 to F = 0.00) are multiplied, then the products (one for each course) are added together, and the sum is divided by the total credits attempted.

Pass/Fail—For the M.E.E. degree, elective courses taken outside the ECE department that do not count toward the student’s major or minor coursework may be taken Pass/Fail. Students must file a course as Pass/Fail no later than the end of the 10th week of classes; however, they may later convert a Pass/Fail to a graded course by filing the appropriate paperwork with the Office of the Registrar by the end of the second week of the following semester. Students should be aware that while a grade of “P” does not affect their GPA, a grade of “F” does. Visiting Post Baccalaureates cannot take courses on a pass/fail grading basis.

Satisfactory/Unsatisfactory—In the ECE Department, the faculty may
assign a grade of “S” or “U”. ELEC 698, ECE Professional Masters Seminar Series, is such a course. Students should be aware that while a grade of S or U does not affect their GPA, no credit is awarded if a grade of U is received. Courses with a grade of S will count towards total credits earned.

Incomplete (INC)—For an INC received in the fall semester, students must complete the work by the end of the first week of the spring semester or an earlier date as defined by the instructor, and instructors must submit a revised grade by the end of the second week. For an INC received in the spring or summer semester, students must complete the work before the start of the fall semester or an earlier date as defined by the instructor, and instructors must submit a revised grade by the end of the first week. If a grade is not submitted by the appropriate deadline, the INC will be automatically converted to a failing grade.

Audit (AUD)—The grade designation of “AUD” is used for people auditing a course, and specifically when the auditing student has met the audit requirements of the course. A grade designation of “NC” (no credit) is given to students who do not meet the audit requirements. Requests to audit a class or to change from audit to credit or vice versa must be done by the end of the second week of the semester.

Changing Departments
Rice recognizes interests may change after a student enters a graduate program. If a student feels his/her interests and talents could be better served in a different department, a change can be accommodated. In order to transfer from the M.E.E. program to another program at Rice University, you must meet with the M.E.E. Administrator for procedures.

VI. IMPORTANT LINKS AND DATES

Links
Academic Calendar: registrar.rice.edu
Award Opportunities: engineering.rice.edu/gradopps
Counseling Center: rcc.rice.edu
Course Catalog: courses.rice.edu
Forms: registrar.rice.edu/online_forms
        graduate.rice.edu/forms
General Announcements: ga.rice.edu
Good Practices in Graduate Education: graduate.rice.edu/goodpractices
Graduate and Postdoctoral Studies (GPS) Office: graduate.rice.edu
Guidelines for Dismissal/Petition: bit.ly/RUdismiss
Honor System and Code of Student Conduct: ga.rice.edu
International Student Information: oiss.rice.edu
International Student Forms: oiss.rice.edu/forms/
Library: library.rice.edu
Map of Campus: rice.edu/maps
Parking: parking.rice.edu
Recreation Center: recreation.rice.edu
Registration: graduate.rice.edu/registration
Research and Scholarly Activities: ga.rice.edu/GR_students/
Technology Support: ece.rice.edu/studenttech
Wellness: wellness.rice.edu

Dates
Refer to the Rice Registrar’s Office at registrar.rice.edu for all academic calendar information.

Help Available
When you or a friend is in need of help, there are many resources
available to you on the Rice campus:

*Professional Master’s Committee Chair & Administrator*
Dr. Michael Orchard, Professional Master’s Committee Chair, and Norma Santamaria, M.E.E. Administrator, are available to help students with academic and personal needs. Their contact information can be found in Section VII.

*Student Health Services:* [health.rice.edu](http://health.rice.edu)
The Rice Student Health Services provides preventive and outpatient clinical care for the students of Rice University. Student Health is located on-campus and is dedicated to meeting the unique needs of undergraduate and graduate students.

*Student Wellbeing Office:* [wellbeing.rice.edu](http://wellbeing.rice.edu)
The Student Wellbeing Office supports student development and success and is also a good first point of contact for students who want to talk to someone about solutions to their wellbeing concerns. The office can provide advice and practical support to help you resolve personal challenges, such as conflicts with friends, difficulty making decisions, struggling with your identity, and academic or other concerns.

*Rice Counseling Center:* [wellbeing.rice.edu/rcc/](http://wellbeing.rice.edu/rcc/)
The Rice Counseling Center is designed to complement the university’s academic mission by assisting students’ personal and educational development through a variety of psychological and psychiatric services. The goal of these efforts is to help students develop effective problem-solving and decision-making capabilities in order to make satisfying life choices, and maximize their capacity for continued emotional growth.

*Language and Communications:* [cwovc.rice.edu](http://cwovc.rice.edu)
The Center for Written, Oral and Visual Communication is located in the Fondren Library. They offer coaching for oral presentation delivery, videotaping, assistance with preparing professional talks and materials, communication workshops and feedback on presentation materials. They also offer UNIV 601/602, which are courses designed to improve professional communication and writing.

*Graduate and Postdoctoral Studies (GPS) office:* [gps.rice.edu](http://gps.rice.edu)
For questions concerning the graduate program as a whole, contact Sherry Vanderslice, Graduate Student Affairs Project Manager, at sdvl@rice.edu or 713-348-2154.

**Title IX Information** [safe.rice.edu](https://safe.rice.edu)

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment or gender discrimination to seek support. There are many options available both on and off campus for all graduate students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone not affiliated with the university.

Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are “confidential,” meaning that Rice will not be informed about the incident if a student discloses to one of these Rice staff members. Rice prioritizes student privacy and safety, and only shares disclosed information on a need-to-know basis.

If you are in need of assistance or simply would like to talk to someone, please call Rice Wellbeing and Counseling Center, which includes Title IX Support at extension 3311 on the Rice campus or (713) 348-3311. Policies, including Sexual Misconduct Policy and Student Code of Conduct, and more information regarding Title IX can be found at [safe.rice.edu](https://safe.rice.edu)

**IEEE Student Chapter** [ieee.rice.edu](https://ieee.rice.edu)

The undergraduate chapter of Rice Institute of Electrical and Electronics Engineers (IEEE) offers weekly lunch talks from visitors in industry. Past speakers have been from a variety of companies and organizations. All are welcome to attend.
STAFF DIRECTORY

VII. DEPARTMENT DIRECTORY

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Undergraduate Program Administrator
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713-348-4212
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Abercrombie A203

Additional information such as a full listing of all staff and their responsibilities can be found at ece.rice.edu/people/staff.aspx.
Behnaam Aazhang*
J.S. Abercrombie Professor, Electrical and Computer Engineering
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ece.rice.edu/aaz.aspx
aaz.rice.edu vip.rice.edu neuroengineering.rice.edu dce.rice.edu
Research Areas: Data Science, Neuroengineering, Systems
Research Summary: Communication theory, information theory, and their applications to wireless communication with a focus on the interplay of communication systems and networks; including network coding, user cooperation, spectrum sharing, and opportunistic access. Signal processing, information processing, and their applications to neuro-engineering with foci on (i) modeling neuronal circuits connectivity and the impact of learning on connectivity and (ii) real-time closed-loop stabilization of neuronal systems to mitigate disorders such as epilepsy, Parkinson, depression, and obesity.

Athanasios C. Antoulas
Professor, Electrical and Computer Engineering
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Research Areas: Computer Engineering, Systems
Research Summary: Large-scale dynamical systems, approximation, computation, linear algebra.

Aydin Babakhani
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Research Areas: Computer Engineering, Neuroengineering, Systems
Research Summary: Analysis, design, and testing of integrated sensors and systems with applications in high-speed wireless links, radar, medical imaging, biosensing, and oil/gas monitoring.

Richard G. Baraniuk
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Research Areas: Data Science, Neuroengineering, Systems
Research Summary: Multiscale, computational signal and image processing; open access, collaborative scholarly publication.

*Denotes ELEC 591: Vertically Integrated Projects faculty member.
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Research Areas: Computer Engineering, Systems
Research Summary: VLSI signal processing, wireless communication systems architectures, VLSI systems design and prototyping.

John W. Clark, Jr.
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Research Areas: Neuroengineering, Systems
Research Summary: Electrophysiology (neural, cardiac); mathematical modeling of biological systems; signal processing methods applied to biological systems; nonlinear system dynamics; electromagnetic field theory.

Gene Frantz
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(Signal Processing)
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Research Area: Systems
Research Summary: Entrepreneurship, intrepreneurship.

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Research Area: Photonics, Electronics and Nano-devices
Research Summary: Design and fabrication of optically responsive nano structures, nanophotonics, plasmonics.
Kevin Kelly
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Research Area: Photonics, Electronics and Nano-devices
Research Summary: Imaging and Spectroscopy at the nanoscale. Understanding the role of mathematics in image acquisition and interpretation. Scanning probe microscopy, electronic materials, compressive infrared and hyperspectral imaging.

Caleb Kemere
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Research Areas: Computer Engineering, Data Science, Neuroengineering
Research Summary: Building interfaces with memory and cognitive processes; model-based signal processing; low-power embedded systems.

Edward W. Knightly
Chair, Electrical and Computer Engineering
Professor, Electrical and Computer Engineering & Computer Science
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networks.rice.edu
Research Area: Systems
Research Summary: Wireless networks, urban-scale testbeds, clean-slate design, diverse spectrum access, multi-antenna systems, hardware platforms, high-performance protocol design, security, and performance evaluation.

Junichiro Kono
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ece.rice.edu/kono.aspx
kono.rice.edu
Research Area: Photonics, Electronics and Nano-devices
Research Summary: Optical THz processes in semiconductor nanostructures and devices. Condensed matter physics, optics and photonics, nanoscience and nanotechnology.
Farinaz Koushanfar
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Research Areas: Data Science, Systems
Research Summary: Sensor networks, low power embedded systems, optimization and statistics.

Michael T. Orchard
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Research Areas: Data Science, Systems
Research Summary: Image and video modeling and compression.

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Research Areas: Data Science, Neuroengineering
Research Summary: Distributed neural representations, algorithms for statistical inference, models of the natural environment, and computation by nonlinear recurrent networks. Theory development of the computational functions of neural networks.

Jacob T. Robinson
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Research Areas: Data Science; Neuroengineering; Photonics, Electronics and Nanodevices
Research Summary: Nanotechnology to measure and manipulate neural activity.
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Research Areas: Data Science, Systems
Research Summary: Wireless networks, information theory, multiple antenna systems, coding and computation.

Ray Simar*
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Research Area: Systems
Research Summary: Digital signal processors, design methodology and programming tools.

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Research Area: Photonics, Electronics and Nano-devices
Research Summary: Energy, photocatalysis, ultrafast spectroscopy and nanophotonics.

Frank K. Tittel
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Professor, Bioengineering
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Research Area: Photonics, Electronics and Nano-devices
Research Summary: Quantum electronic devices, laser spectroscopy with applications in environmental monitoring, atmospheric chemistry, industrial process analysis and control, medical diagnostics based on breath analysis, the life sciences, defense applications and homeland security.
Peter J. Varman
Professor, Electrical and Computer Engineering & Computer Science
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Research Areas: Computer Engineering, Data Science
Research Summary: Computer systems, storage and memory systems, virtualization and resource management, cloud computing.

Ashok Veeraraghavan
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Research Areas: Data Science, Neuroengineering, Systems
Research Summary: Computational imaging, compressive sensing for imaging, signal processing and computer vision.

Gary Woods*
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Research Area: Photonics, Electronics and Nano-devices
Research Summary: Optical probing and debugging of advanced integrated circuits.

Lin Zhong
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Research Areas: Computer Engineering, Data Science
Research Summary: Mobile and embedded systems, human-computer interaction, and nanoelectronics.

More information on all faculty members can be found at ece.rice.edu, including biographies and current research projects.