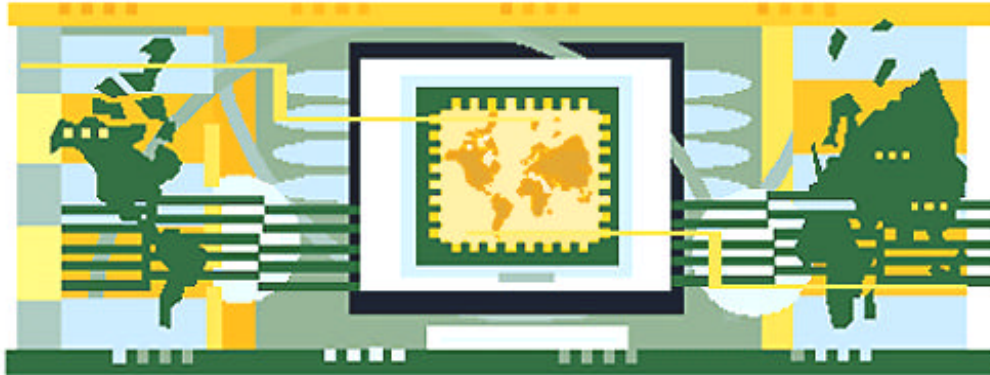


# **Electrical Engineering Doctoral Program Handbook**



## **A World of Possibilities**

**College of Engineering  
University of South Florida  
Tampa, Florida, USA 33620**

**ADMISSION TO EE DOCTORAL PROGRAM:** Please note that all USF EE Master's students that want to continue in the EE Doctoral Program after they receive their MSEE degree, **MUST** fill out the application form to attend a USF Graduate Program by the published deadline dates. Continuing EE Master students will require a letter from an EE Faculty member stating they will serve as the student's research director. Our department will not admit applicants directly to the EE doctoral program unless they have already earned a Master's degree in Electrical Engineering. The EE Department policy is to not admit students to the doctoral program if there is no faculty available to mentor a doctoral student. Continuing International students must contact ISSS regarding any I/20 or visa issues.

## DOCTORAL PROGRAM

The doctoral programs in Electrical Engineering and Engineering Science at USF are quite flexible, with much of the responsibility for course selection and accountability delegated to the student's supervisory committee. See the EE Doctoral Handbook for further information.

Specific requirements for Ph.D. degrees in Engineering are detailed in the USF Graduate School Catalog. Briefly these are as follows:

**I. Credit Hours** The student's supervisory committee is responsible for evaluating his/her overall transcript to ensure that the following distributional requirements are met:

- (i) minimum 27 hours formal regularly scheduled graduate course work in the engineering area of concentration (not necessarily electrical engineering courses); at least 20 of these hours at the 6000 level.
- (ii) minimum additional 8 hours in mathematics or statistics courses (not necessarily math department courses).
- (iii) minimum additional 8 hours outside the major area of concentration (these could be other courses in the Department).
- (iv) minimum 60 hours total course work (including i-iii above) beyond BS degree (EEL 6908-002 forward, directed research (EEL 6910-001 forward, seminars EEL 6932-5) **Each professor will have their own section for independent study and directed research section.**
- (v) minimum 20 hours dissertation (EEL 7980). **Each Professor will have their own section for dissertation hours.**
- (vi) minimum 90 hours total beyond BS degree

**MASTER'S DEGREE CREDIT FROM ANOTHER PROGRAM OR UNIVERSITY:** Students entering the EE doctoral program with a Master's degree from another program/university are usually awarded up to 30 credit hours for that degree. The candidate's supervisory committee shall determine which of the distribution requirements and the number of credit hours are satisfied by these transferred courses.

**NOTE:** The registrar's office will automatically credit these 30 hours towards your doctorate, but - your committee may elect not to accept all of them and a doctoral student may have to complete more EE courses to qualify for a doctorate.

The student and committee **MUST** write a formal doctoral plan (signed by all committee members) showing all course work to be counted toward the Ph.D degree.

**Note that students with an MSEE from USF typically begin the Ph.D. program with 18 credits in category (i), 6 credits in category (ii), and 6 hours of thesis. Thus, a heavily research-oriented program could meet the remaining requirements with:**

3 hours	math
9 hours	regularly scheduled courses in area of concentration;
8 hours	outside area of concentration;
10 hours	directed research, directed study, seminar, or course work; and
30 hours	thesis (or 20 hours class work, 10 hours directed research, and 30 hours thesis research.

## **II. Ph.D. Examinations**

**1. Diagnostic Examinations (DE):** DE's are required of all doctoral students. The DE requirement is normally addressed after 24-33 hours of graduate course work (Students entering with an MS should take the exams during their first year). There is no fee for students taking the diagnostic exams during the Master's Comps ( 6908-099: 2 tests ONLY).

**The diagnostic exam requirement may be satisfied as follows:** Students who have not written a master's thesis (at USF or elsewhere) must offer evidence of having passed our Department's Master Comprehensive Evaluations in one area of engineering specialization and in mathematics, at a level judged by the graders to reflect doctoral quality.

**NOTE: Not all master's examinations are graded on this two-level basis. You must consult with your committee, the Graduate Coordinator and appropriate grader before taking the exam.**

Students who have written a Master's thesis (at USF or elsewhere) may elect to submit the thesis to their Ph.D. Supervisory Committee. The committee will render judgment as to whether the thesis is of sufficient merit to serve as a diagnostic exam in the area of specialization and/or mathematics. If the student's advisor and a majority of the Supervisory Committee concur in this matter, the corresponding diagnostic examination(s) may be waived.

## **2. Comprehensive Qualifying Examination (CQE)**

CQE's, written and oral, are taken after most of the course work requirements have been met (typically 45-50 credits) but before initiation of dissertation research. They are administered and evaluated by the student's supervisory committee members, who determine the number of examinations, the topics, the examiners, and formats employed.

**III. Candidacy** After satisfactory completion of the Qualifying Examination sequence, the student shall submit an "Application to Candidacy" form to the Graduate School. Doctoral students are not allowed to register for dissertation hours until the semester AFTER they have been admitted to candidacy. Directed research hours cannot be exchanged for dissertation hours. Also: after you are admitted to candidacy, do not register for directed research hours again.

#### **IV RESIDENCY AND TIME**

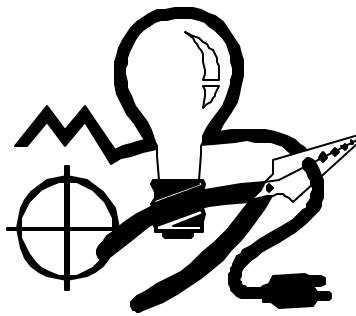
- (a) 3 academic years' work beyond the BS degree including 1 academic year's residence (9 graduate hours per term) on a USF campus **OR**
- (b) completion of 24 graduate credit hours at USF in one year **OR**
- (c) completion of 30 graduate credit hours at USF in no more than 4 semesters within a period of 3 years.

#### **In addition,**

- (d) all requirements must be completed within five **(5)** years after admission to candidacy. Students admitted to candidacy before fall, 1996 will have 7 years to complete all requirements.
- (e) all doctoral candidates must be continuously enrolled every semester for a minimum of two credits per semester, from candidacy until completion of the program or the University will drop them from the doctoral program.

**PLEASE NOTE:** If, during your course of Ph.D. study at USF, you decide to apply for your Master's Degree and wish to continue in the Ph.D. program, you **MUST** inform Engineering Advising and Graduate Admissions.

There is a box on your graduation application to "check off" . If you do not, the Advising, Admissions and Registrar's offices will assume you have left the Ph.D. program. You will not be able to register for classes and will have to be readmitted to the Ph.D. Program.



## Electrical Engineering Flow Chart for Ph.D. Students.

NOTE: Ph.D students. Please consider your major professor carefully. You will be working closely with this person for several years. You may change your major professor at anytime **BEFORE** a committee form is completed. You may change your major professor and the makeup of your committee after a committee form is completed. A new major professor may not accept your previous research. Students may not make changes

**First Semester** Students who did not enter with a dissertation director in place should meet with the EE Graduate Program Coordinator for advising. Students should try and determine their field of research and start meeting with appropriate faculty to determine a dissertation director.

**Second Semester:** By the end of your 2<sup>nd</sup> semester, you should have come to an agreement with an EE Faculty member to act as your major research professor. Meetings should be held to discuss any needed course work requirement still to be met.

**Third Semester:** Form supervisory committee (minimum 5 members including 1 major professor, 1 from outside College of Engineering, and 1 from an engineering department other than electrical). Thereafter keep your committee informed of your progress with drafts of dissertation and in meetings.

**After completion of most course work but before embarking on dissertation research:** Consult with committee on Ph.D. Diagnostic Exam, and Ph.D. Qualifying Exam. Arrange to take required examinations. Have committee submit form authenticating satisfactory performance. **NOTE: Ph.D. students cannot register for dissertation hours UNTIL AFTER ADMISSION TO CANDIDACY.** AND - after admittance - EE students are **not allowed to REGISTER FOR DIRECTED RESEARCH HOURS- ONLY dissertation hours.** After admission to candidacy, you must be enrolled for 2 dissertation hours per semester until graduation. Register with the appropriate faculty member's section. **Continue your research and start writing a draft from the outline/abstract approved by your committee. Keep your committee informed of your progress and give them draft copies.. Go to the Graduate School's web site for information on writing your Dissertation and download the Thesis/Dissertation Handbook and their templates. Check the USF Library web site. Electronic Dissertation submission will be mandatory starting with students matriculating in fall 2002.**

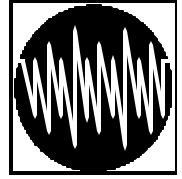
**Semester Before Graduation:** Apply for graduation. Both forms (University and COE) application form must be signed by your major professor. The deadline dates are posted. **Be aware of all forms and procedures needed for dissertation.**

Make appointments with the COE Associate Dean's Office **AND** the Manuscript Consultant with the Graduate School for your Format Checks. Again check with the USF Library for their requirements. The Deadline Dates are posted each semester. These dates **MUST** be met for all Departments.

**Graduating Semester.** Make arrangements with your committee for your oral defense and find Chair for Defense and give Permission for Oral Defense form/information to Defense Chair (Make sure your dissertation Chair has a copy of your dissertation) and to the EE Graduate Program Assistant. Be aware of all dates and forms imposed by the COE Dean's Office and the Graduate School for final submission of your Dissertation.

Final Submission for approval to the COE Dean's Office THEN final submission to Graduate School and USF Library. You **MUST** be enrolled for 2 dissertation hours the semester of your graduation. **NOTE:** If your defense is delayed and graduation cancelled or denied, you will have to reapply and register for 2 dissertation hours until you graduate.

## MILESTONES FOR Ph.D CANDIDATES



1. **First semester:** Students who did not enter with doctoral program with a dissertation director in place should determine their field of research and start meeting with appropriate faculty to determine a dissertation director. Students with directors should plan meetings to discuss course work, diagnostic exams, qualifying exams, tools of research requirement, direction of dissertation research, Ph.D. committee makeup, time frame, etc. Doctoral Students should check the Graduate School web site often for updates on the dissertation handbook, rules, committee forms, deadline dates, etc. <http://www.grad.usf.edu>.

2. **Second, third, semesters:** Form supervisory committee (minimum 5 members including 1 major professor, 1 from outside College of Engineering, and 1 from an engineering department other than electrical).

**Please consider your major professor and committee makeup carefully.** You will be working closely with your dissertation director and committee members for several years. You may change your major professor at anytime BEFORE a committee form is completed. You may change your major professor and the makeup of your committee after a committee form is completed. A new major professor may not accept your previous courses or research. Students may not make changes to their committee **six weeks before the oral defense.**

**Submit "Committee" form to EE department for approval.**

3. **After completion of most course work but before embarking on dissertation research:**

Consult with committee on Ph.D. Diagnostic Exam and Ph.D. Qualifying Exam. Arrange to take required examinations. Have committee submit form authenticating satisfactory performance.

1. **Submit** forms authenticating compliance.
2. **Submit** "Application to Candidacy" form.
3. **Submit** "Notice of Dissertation Committee Change" form *if changes are made.*

**NOTE: Ph.D. students cannot register for dissertation hours UNTIL AFTER ADMISSION TO CANDIDACY.**

AND - after admittance - EE students are **not allowed to REGISTER FOR DIRECTED RESEARCH HOURS!- ONLY dissertation hours.**

Register with the appropriate faculty member's section. Doctoral students must register for 2 dissertation hours a semester until graduation.

4. **After completion of dissertation research:**

Distribute to committee for comments. Prepare final draft. - KEEP YOUR COMMITTEE INFORMED AND UP-TO-DATE. They don't like surprises or reading an entire dissertation at the last minute.

**Check with the USF Library about requirements for Electronic submission of your Dissertation. Beginning with students admitted in fall 2002, electronic submission will be mandatory.**

**DISSERTATION GUIDELINES:** You must follow the guidelines in the "University of South Florida Handbook for Graduate Thesis and Dissertations" which is available for downloading from the Graduate School's web page - <http://grad.usf.edu>. At this site you will find the appropriate forms and templates to follow.

In all other matters, follow the IEEE publishing guidelines.

**FORMAT CHECKS:** students **MUST** have format checks with the Graduate School manuscript consultant **AND** the Associate Dean of Engineering. Also check with the USF Library as Electronic submissions will be mandatory.

Students must call and make an appointment by the deadline dates or your graduation will be postponed to the next semester. So, find templates, forms, instructions, deadline dates, and other important information at the Graduate School site.

**<http://www.grad.usf.edu>**

5. Next to last semester:

Submit (College/University) Application (and Ph.D checklist) for Graduation to Major Professor and EE Graduate Program Assistant. Make sure you know your "Deadline" dates for your presentation semester.

6. **Final (Presentation) Semester:** Register for at least 2 hours of dissertation (EEL 7980-XXX). Remember, you **MUST** be enrolled for at least 2 credit hrs. per semester (6 cr. hrs per year) from candidacy until completion of program. **You MUST make a format check appointment with the graduate school manuscript consultant and the College of Engineering Dean's Office.**

**Make sure you know what the defense deadline dates are for your graduating semester in the Engineering College and Graduate School. Make sure of the date with your entire committee and committee chairman. Reserve a room for your defense for at least two hours.**

At least 5 weeks before the end of final semester and 3 weeks before desired dissertation defense date, Major professor and student selects a qualified dissertation defense chairperson NOT in Electrical Engineering Department nor on your dissertation committee.

Again, allow enough time for format checks, corrections, signatures, copying, etc. The MC and Engineering Associate Dean will check your dissertation format. ( L You will also submit **form** requesting "**Final Oral Examination**" (dissertation defense) with endorsement of committee (defense chairperson, day, time and room), to the MC at this time. **7** (See box), **plus** the "Successful Defense" form **and** the "Announcement" of Defense to the EE Department.

**Oral Defense of Dissertation. It is the candidate's responsibility to give this information to the Chair of the defense at least two weeks before the defense date! Make sure to give the Chair of your Defense a copy of your dissertation and to confirm date, time and place of defense.**

a). Final Oral Examination Form: : Make sure you execute this form. It states the student, title of dissertation; date, time and place of the defense; the chair of the defense, and is signed by all committee members as proof the doctoral candidate has Committee permission to defend.

b). Obtain committee signatures on 4 copies of Abstract and Certificate of Approval. The signatures must be on high-quality 100 percent cotton bond.

c). Make all corrections as noted by your committee. Submit one **original** (bond), **unbound**, signed copy to the Associate Dean of Engineering for his approval. If the Dean has corrections, make them and resubmit.

d). You will receive the Check-off/Certificate of Approval form from the COE Dean's office and then submit it to the Graduate School with your dissertation.

4. **At least 2 weeks before end of final semester** submit two (2) final corrected and approved original, unbound dissertation copies to the Graduate School. Check with the USF Library about requirements for Electronic submission of your Dissertation. Beginning with students admitted in fall 2002, electronic submission will be mandatory.

**TWO WEEKS (minimum- earlier is better) before defense date, fill out dissertation (final oral examination) request form with all required signatures) then give to EE Department and the Chair of the Defense.**  
**Make sure that the Successful Completion of Dissertation form and the Certificate of Approval from are at the defense.**  
**This the student's responsibility.**

**Submit** 1 copy of dissertation, abstract, and Certificate to Department of Electrical Engineering. Copies (in binders should also be made available to the Dissertation Committee.)

**IN ALL: COUNT ON** - 4 originals (2 for the College of Engineering, 2 for the Graduate School) and **at least 7** "xerox" copies of final dissertation (3 ring binders).

4. **Receipt from Graduate School:** This verifies final acceptance of dissertation and constitutes completion of research portion of doctoral program. You cannot graduate without it. Give copy to Engineering Advising and to the EE Graduate Program Assistant.

### GRADUATION APPLICATION RULES/ DEADLINES!



**IMPORTANT:** It is a College of Engineering Regulation that students apply for graduation the semester **B E F O R E** the one in which THEY WISH TO GRADUATE! Graduate application deadlines MUST be strictly followed.

**ALL STUDENTS MUST BE ENROLLED FOR A MINIMUM OF TWO HOURS THEIR SEMESTER OF GRADUATION!**

See the *general* guideline dates below: Check with the EE Department or our WEB site to see if these have changed.

**Spring (MAY) Graduation application deadline: Oct. 10**  
**Summer (AUGUST) Graduation application deadline: February 10**  
**Fall (DECEMBER) Graduation application deadline: July 10**

NOTE: The top green cover of the graduation application MUST be completely filled out and signed by the student. EE Office personnel must initial and date the cover sheet and return to the student upon receipt and approval of the graduation application. Engineering Advising will no longer process "lost" applications if the student cannot produce initialed receipt!

### DISSERTATION **GENERAL** DEADLINES

**(check for updates each semester with the COE Dean's office and the Graduate School - THEY CHANGE!)**

Spring - April 1  
Summer - July 15  
Fall - November 18

Do everyone, especially yourself, a big favor- don't wait for the "deadline" dates for anything. Turn your paper work in as early as possible. This office, the Dean's Office, Engineering Advising, the Graduate School and the Registrar's Office have a tremendous amount of paperwork to handle and we'll do it better if it all doesn't come in at the same time - on the "deadline" date - or LATE! And, you won't be going "nuts" trying to get it done on time! Check the Graduate school web site for any updates or changes in forms or requirements.

All applications MUST have your major professor's or Option Supervisor's signature on BOTH FORMS - otherwise, the Graduate Program Director WILL NOT sign your application.

**PLEASE NOTE:** Because Engineering students are required to turn in their graduation application early, if their choice of course(s) for the semester of graduation changes, for any reason, Engineering Advising and EE MUST be informed.

You will have to correct your GREEN Engineering application form.



**CANCELLATION OF GRADUATION:** We encourage students to cancel their graduation application with Engineering Advising ASAP if - for any reason - you will not complete your degree requirements. Remember to reapply!

1. All "I" grades MUST be cleared.

NOTE: all "I", "IF", and "M" grades turn to a PERMANENT "F" at graduation. NOTE: Graduating semester grades MUST be in by grading deadline. (FEEDS included) -so INFORM your professors this is your graduating semester.

2. Appropriate transfer courses MUST be approved and posted to your record. This must be done WELL in advance of your graduation application.

3. Check your GPA. It MUST be 3.0 when you file for graduation!

4. Appropriate course work must be close to completion; AND any appropriate committee and forms (project/thesis/dissertation) MUST have been approved by the EE Department, College and the Graduate School.

We will state again: It is up to you to know the rules for your program. The Electrical Engineering Department, College and University regulations are in this handbook, on USF's Graduate School web site, the Electrical Engineering's web site and in the official USF Graduate Catalog. If you have questions, ask! If there are problems, "I didn't know the rules" won't help.

If you are canceled or denied graduation for any of the above, it is YOUR responsibility to reapply for graduation the next semester you are eligible -and by the deadline dates. There is NO automatic graduation application roll-over. You MUST fill out a new application each time.

**3rd APPLICATION DENIAL:** If a student fails to graduate by the third application, proof MUST be provided that all requirements have been completed before another (4th and final) application can be filed.

NOTE: Ph.D. Students: If you apply for your Master's degree and plan to continue with your Ph.D. Program, you MUST inform Engineering Advising and Graduate Admissions. If you do not, they assume you are leaving the University. You may not be able to register for classes and will have to reapply to the Ph.D. program under the current graduate catalog. There is an appropriate box to be checked on the Engineering graduation form.

**REMEMBER:** Students participating in graduation ceremonies are doing so before graduation certification is finalized. ALL potential graduates are subject to final approval or denial by the College of Engineering. This FINAL certification is not COMPLETED UNTIL AFTER SEMESTER GRADES ARE POSTED. This is done 2 to 3 days AFTER the graduation ceremony.

Diplomas are mailed by the Registrar's Office a month to six weeks AFTER your official graduation and after all graduation checks are completed. Check with them if you have questions.

# EE Faculty

Huseyin Arslan, Ph.D., Assistant Professor; Southern Methodist University (1998)

Research Interests: Wireless communication systems; Cellular mobile radio - Wireless LAN & Bluetooth - Fixed Wireless. Baseband signal processing for communications: Channel coding and decoding, modulation and demodulation - Wireless channel modeling, channel estimation and tracking - Advanced wireless receiver design including equalization, interference cancellation etc. - Adaptive transmitter, receiver and adaptive wireless system design techniques - Parameter estimations for adaptation schemes - Multiple access techniques - Modulation techniques and receiver algorithms for future wireless standards.

Sanjukta Bhanja, Ph.D., Assistant Professor, University of South Florida (2002)

Research Interests: low power VLSI design and estimation with emphasis on probabilistic modeling of combinational, sequential circuits using Bayesian Networks. Specifically, fundamental issues of interest are capturing spatio-temporal correlations, modeling gate, interconnect delay, and input modeling; maximum switching estimation for peak power and Bayesian Network based power sensitivity and input modeling for Finite State Machines.

Shekhar Bhansali, Ph.D., Associate Professor, Royal Melbourne Institute of Technology, Melbourne, Australia, 1997.

Research Interests: Integrating new materials and processes in MEMS fabrication; Fabrication and characterization MEMS structures using PVD, etching, electroplating, electroless plating and lithography, with focus on process integration and interface quality; Applications of ion implantation and ion beam surface modification of substrates (polyimides and Si); Study of diffusion behavior (using RBS/TEM) to develop diffusion barriers for metal structures on Si; Analysis of samples using tools like DSC, SEM, EDX, XRD, AES, RBS, TEM Profilometry and STT; Using CAD and FEA tools (IntelliCAD and ANSYS) for device modeling and finite element analysis.

Kenneth A. Buckle, Ph.D., P.E., (Graduate Coordinator), Associate Professor,

University of Wisconsin, 1984. Research interests: electromagnetics; microwave engineering; plasma theory; energy conversion; control theory; electromagnetic interface; electric machine interface.

Yun-Leei Chiou, Ph.D., Professor, Purdue University, 1969.

Research Interests: solid state devices; silicon oxidation thin oxide films, breakdown mechanism; GaAs photonic devices; thick films.

Larry Dunleavy, Ph.D., Professor, University of Michigan, 1988.

Research interests: Microwave and millimeter wave circuits; MMIC implementation; microwave CAD; measurements and modeling of passive and active microwave and millimeter wave components. Wireless systems characterization and modeling.

Christos Ferekides, Ph.D., Associate Professor, University of South Florida, 1991.

Research interests: Thin-film electronic materials and devices for optoelectronic applications; thin film depositions and properties; device fabrication and characterization.

Horace C. Gordon, Jr., M.S.E., Lecturer, University of South Florida, 1970.

Research interests: low frequency and microwave circuit theory and design; communication theory and system design; digital signal processing and hardware design.

Rudolf E. Henning, D. Eng. Sc., P.E., Professor, Columbia University, 1954. (Retired)

Research interests: microwave and millimeter wave microelectronic design; application of microwave theory and electromagnetics to instrumentation, sensing and detection; properties and applications of microwave and millimeter wave propagation; microwave/optical interactions and subsystems.

Drew Hoff, Ph.D., Associate Professor, Penn State University, 1988. Introduction and technology transfer of surface potential mapping as a monitor of charging in plasma etch, ion implantation, plasma deposition, chemical processing for dielectric and wafer contamination.

Vijay K. Jain, Ph.D., Professor, Michigan State, 1964.

Research interests: communication systems and networks(data/voice/video/multimedia). Digital signal, image and speech processing. VLSI and WSI implementations; parallel architectures. Computer arithmetic and algorithms. Pattern recognition by computers.

James T. Leffew, Ph.D., Lecturer, University of South Florida, 1985.

Research interests: microwave theory; microstrip' circuit theory; radar.

Don Morel, Ph.D., Professor, Tulane, 1971.

Research interests: Thin-film electronic materials and devices; photovoltaics and thin film transistors with applications to display and storage technologies.

Wilfrido A. Moreno, Ph.D., Associate Professor, University of South Florida, 1993;

Research Interests: Laser restructuring for quick prototyping of electronic circuits, laser machining, experimental design, data acquisition & analysis, process control, circuit theory, computer aided design.

Stephen E. Sadow, Ph.D., Assistant Professor, Electrical Engineering, University of Maryland at College Park, 1993.

Research interests: to develop wide-bandgap semiconductor materials for high-field and high-power device applications. His most recent work has focused on epitaxial layer growth on porous SiC (PSC) where improvements in epi quality, as determined by PL, XRD, DLTS, etc., have been achieved. He recently began research on Ge quantum dots on SiC surfaces with colleagues at the IEF, Univ. of Paris-Süd and is working with the colleagues at the Univ. of Delaware on SiC HBT's. His ultimate research objective is to develop smart sensor for nanotechnology applications based on SiC and GaN wide band gap semiconductor materials.

Rudy Schlaf, Ph.D., Assistant Professor, 1995, Technische Universitat Berlin, Germany

Research Interests: Surface science (photoelectron spectroscopy and scanning probe techniques), organic and polymeric luminescent and conductive materials, interfaces and devices, and 2D dopant profiling of integrated circuits.

Ravi Sankar, Ph.D., P.E., Professor, Penn State, 1985.

Research interests: Communication Networking (high-speed local and wide area networks); speech processing and recognition; signal processing and its applications; telecommunications, applications of neural networks, simulation and modeling.

Arthur David Snider, Ph.D., P.E., Professor, NYU, 1971.

Research interests: spectral analysis; optimization; math modeling in electronics and electromagnetics; communication theory; heat transfer.

E. K. Stefanakos, Ph.D., Professor Washington State, 1969.

Research interests: Electric vehicles; clean energy; photovoltaics.

Thomas E. Wade, Ph.D., Professor University of Florida, 1974.

Research interests: solid state microelectronics and related topics; VLSI multilevel inter-connection systems; test structure development; fluctuation phenomena in solid state devices; solid state material characterization.

Thomas Weller, Ph.D., Associate Professor, University of Michigan, 1995.

Research interests: Silicon micromachining, dielectric membrane-supported transmission lines, experimental and theoretical circuit characterization, millimeter - and submillimeter wave passive component design, packaging.

Paris H. Wiley, Ph.D., P.E., (Undergraduate Coordinator), Associate Professor, Virginia Tech, 1973. Research interests: biomedical instrumentation; satellite communication.

Students must check the Graduate School Website(s) for updates on format check, forms and other needed paper work, and regulation regarding electronic formats.

Graduate Studies also offers workshops and other tutorial sessions to help students successfully graduate with their thesis or dissertation.

Check their web site often for updates and changes in forms or requirements/deadline dates/format check information, etc. This is YOUR responsibility.

<http://www.grad.usf.edu/>

[http://www.grad.usf.edu/thesis\\_dissertation.asp](http://www.grad.usf.edu/thesis_dissertation.asp)

[http://www.grad.usf.edu/Thesis\\_and\\_Dissertations/general\\_Thesisforms\\_new.asp](http://www.grad.usf.edu/Thesis_and_Dissertations/general_Thesisforms_new.asp)

<http://isis.fastmail.usf.edu/commencement/>

These sites have the templates and forms students must use.

Check their site often for changes in rules, forms, templates and dates, etc.

### **USF Library for Electronic Thesis and Dissertations**

**<http://www.lib.usf.edu/virtual/etd/>**

