TICKLE
COLLEGE OF ENGINEERING

DEPARTMENT OF
ELECTRICAL ENGINEERING &
COMPUTER SCIENCE

Min H. Kao Building
1520 Middle Drive, Suite 401
Knoxville, TN 37996-2250
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November 10, 2016

Dear Dr. V. Ragu Balakrishnan,

The attached flyers may be of interest to the students and faculty in your department. The 1-page UTK EECS Fact Sheet briefly describes the Department of Electrical Engineering and Computer Science at The University of Tennessee.

We have openings for 3 tenure track assistant/associate professors in computer science and computer engineering and the advertisement flyer has more information on the position. Please post the advertisement in your department.

Our NSF/DOE Engineering Research Center, CURENT, has some fellowships and graduate research assistantships available in power electronics and power systems. Please post the flyer that contain some additional information on these opportunities for prospective M.S. and Ph.D. students.

If you need any additional information about these opportunities at The University of Tennessee, please let me know.

Sincerely,

Leon M Tolbert

Leon M. Tolbert
Min H. Kao Professor and Department Head

DEPARTMENT OF ELECTRICAL ENGINEERING & COMPUTER SCIENCE
fact sheet

www.eecs.utk.edu

THE UNIVERSITY OF TENNESSEE KNOXVILLE

LEADERSHIP

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1520 Middle Drive
Knoxville, TN 37996-2250
Phone: (865) 974-3461
www.facebook.com/EECS.UTK
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MISSION

We are the Department of Electrical Engineering and Computer Science at the University of Tennessee, the largest department in the College of Engineering. We have 44 faculty members, who are respected, world-class leaders in their fields and are dedicated to teaching students and aiding them in developing the technical and communication skills necessary to have successful careers. Our rigorous curriculum prepares students to be successful in their future profession and offers the flexibility for students to choose courses that match their interest areas.

ACADEMICS

Enrollment Figures

**Enrollment (Full-Time)
Academic Year 2016-2017**

Undergraduate	790
Graduate	284
Total	**1074**
Ph.D. Enrollment	202

Fall 2016 Freshman Enrollment

Computer Science	102
Computer Engineering	68
Electrical Engineering	45
Total EECS Freshmen	**215**

Degrees Granted
Academic Year 2015-2016

Undergraduate	137
M.S.	27
Ph.D.	34
Total	**198**

Faculty
Academic Year 2015-2016

Professors	23
Associate Professors	9
Assistant Professors	9
Professors of Practice	3
Total	**44**

FACULTY AWARDS

*National Academy of Engineering (NAE)
Members: 3*

NSF Career Award Winners: 10

IEEE Fellows: 9

*Faculty Members with an
ORNL Appointment: 20*

Oak Ridge National Laboratory is the largest US Department of Energy science and energy laboratory, conducting basic and applied research to deliver transformative solutions to compelling problems in energy and security. ORNL's diverse capabilities span a broad range of scientific and engineering disciplines, enabling the Laboratory to explore fundamental science challenges and to carry out the research needed to accelerate the delivery of solutions to the marketplace. ORNL is located near the University of Tennessee in the town of Oak Ridge, and several EECS Faculty members have joint ORNL appointments there and even more have joint collaborations.

RESEARCH CENTERS

Center for Ultra-wide-area Resilient Electric Energy Transmission Networks (CURENT)
curent.utk.edu CURENT was founded by the National Science Foundation (NSF) under the prestigious Engineering Research Center (ERC) program. Base funding provided by the NSF and the US Department of Energy is at $4 million per year. CURENT is the first and only ERC at UT and works closely with its industrial partners with a focus on improving the nation's electric power transmission system and accommodating a high level of renewable energy penetration.

Innovative Computing Laboratory (ICL)
icl.utk.edu The Innovative Computing Laboratory (ICL) is a large computer science research and development group specializing in advanced scientific and high performance computing. ICL's founder, Dr. Jack Dongarra, established the lab in 1989. Dr. Dongarra is the creator of the LINPACK Benchmarks, linear algebra tests that measure the mathematical capabilities of computers. The latest version of these benchmarks is used to build the TOP500 list, ranking the world's most powerful supercomputers.

Initiative Point of Need/Point of Care Nanobiosensing (PCN)
nanobio.eecs.utk.edu Joint with MABE, Nutrition and Public Health. This collaborative initiative aims to use nanobiosensing technology to design, test, and validate rapid tests at point of need (PON) and/or point of care (POC) to facilitate clinical disease diagnosis and monitoring of environmental, food or water safety.

Institute for Biomedical Engineering (iBME)
ibme.utk.edu The iBME seeks to develop and implement revolutionary, life-enhancing biomedical engineering solutions, which will be accomplished by uniting and leveraging the resources of diverse disciplines throughout the UT system.

DEGREES, MINORS & CERTIFICATES OFFERED

Degrees

Bachelor of Science
Electrical Engineering
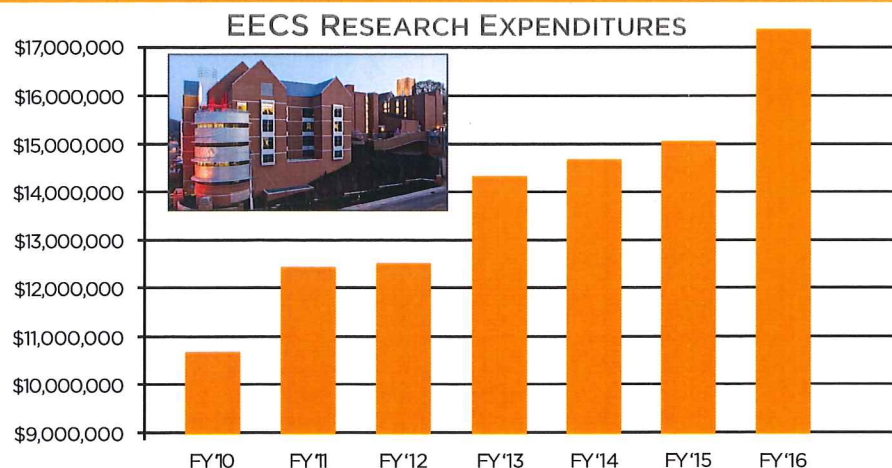Computer Engineering
Computer Science

Master of Science
Electrical Engineering
Computer Engineering
Computer Science

Doctor of Science
Electrical Engineering
Computer Engineering
Computer Science

Minors & Certificates

- *Computer Science Minor*
- *Cybersecurity Minor*
- *Datacenter Technology and Management Minor*
- *Power and Energy Systems Graduate Certificate*
- *Fire Protection Engineering Graduate Certificate*
- *Reliability and Maintainability Engineering Graduate Certificate – Electrical Engineering and Computer Engineering Concentration*

FINANCIALS

EECS RESEARCH EXPENDITURES

Chart showing research expenditures from FY'10 to FY'16, with values ranging from approximately $10,700,000 in FY'10 to $17,378,169 in FY'16.

EECS Research Expenditures for Fiscal Year 2016: **$17,378,169**

EECS Research Expenditures per T/TT Faculty for Fiscal Year 2016: **$423,858**

ASEE Survey Data

22nd nationally among public EECS programs in research expenditures per tenure-line faculty member.
12th nationally among public EECS programs in Ph.D. enrollment per tenure-line faculty member.

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www.eccs.utk.edu
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RESEARCH AREAS

Power Systems, Power Electronics and Renewable Energy
Electric Vehicles (EVs)
Wide Bandgap Power Electronics
Power Electronics for Renewable Energy
Power System Monitoring and Control
Power Grid Modeling and Economics

Microelectronics, Microwaves and MEMS
Analog and Mixed-Signal Circuits
Antennas and Microwaves
Bio-Electronics and Sensors
Integrated Circuits

Biological Applications
Bioelectronics
Bioinformatics
Bio-Medical Devices
Biotechnology and Bio-Sensor Design
Computational and Systems Biology

Networked and Embedded Systems
Cybersecurity
Mobile Cloud Computing
Network Privacy and Security
Power Control in Wireless Networks
Real-Time Embedded Systems
Sensor Networks

Signal Processing, Communications and Controls
Automatic Control
Communications
Information Theory
Statistical Signal Processing

Visual Computing and Image Processing
3D Rendering
Biomedical and Scientific Data Visualization
Computational Imaging
Computer Vision
Graphical Programming Environments
Pattern Recognition

Intelligent Systems, Data Mining, and Machine Learning
Artificial and Distributed Intelligence
Data Analytics
Deep Machine Learning
Emergent Computation
Robotics
Neuromorphic Computing

High Performance and Scientific Computing
Data Storage
Distributed Computing
Mathematical Software
Parallel Processing

FIVE-YEAR BS/MS PROGRAM

The **Five-Year BS/MS Program** allows qualifying undergraduate students to take up to 6 hours of approved graduate courses for their senior electives and have them count toward both their BS and MS degrees at the University of Tennessee thereby reducing the amount of time it takes to earn the latter.

Systers: Women in EECS @ UTK

SCHOLARSHIPS & FELLOWSHIPS

Scholarships
Carol and Malcolm Bayless
Dr. M.E. and Mrs. J.N. Casey
Grace O. Davis
Department of Electrical Engineering & Computer Science
Christopher J. and Michelle R. Gentry
S.T. Harris
Urban and Susan Hilger
Beta-Phi Chapter, Eta Kappa Nu
Dr. E. Johnson and Mrs. L.H. Kennedy
Alliene Lay
W.O. Leffell
Edgar Wyman McCall
Harlan D. and Luella C. Mills
Billy J. and Sylvia F. Moore
L.B. Murray, Jr.
Leonard B. Murray, Sr.
Erby Roy and Jean Bush Nankivell
David O. and Joan G. Patterson
Leonard and Betty Shealy
Charles and Martha Sprankle
David W. Straight
Fred Smith Vreeland
Charles Weaver Memorial
Arthur F. Woods
Min H. Kao Scholars

Fellowships
Bodenheimer Fellowships
Robert Vaughn Blalock Graduate Memorial Award
Chancellor's Honors Awards
Min. H. Kao Fellowships
Pierce Graduate Award
Ron Nutt Fellowships
Department Excellence Awards

STUDENT ORGANIZATIONS

ACM

The student chapter of the Association for Computing Machinery at the University of Tennessee is dedicated to serving its members by providing information about job opportunities, the computer science fields, and a location for our local members to share their knowledge and experience in the world.

Eta Kappa Nu

Eta Kappa Nu is the International Electrical Engineering Honor Society, with more than 100,000 members and 194 chapters in the United States, Canada and Europe. To be eligible for induction, a student's scholastic standing must be in the upper quarter of the junior class or the upper third of the senior class in electrical or computer engineering.

HackUTK

The mission of HackUTK is to promote student interest in the fields of computer and network security through participation in and sponsorship of Capture the Flag competitions and related activities that inspire, develop, and empower the future generation of computer scientists.

IEEE

The Student Chapter of the Institute for Electrical and Electronics Engineers (IEEE, "eye-triple-E") is a professional society seeking to involve students enrolled in the study of electrical and computer engineering at the University of Tennessee, Knoxville

Systers

The mission of Systers: Women in EECS @ UTK is to recruit, mentor, and retain women in Electrical Engineering and Computer Science at the University of Tennessee.

Systers is proud of their accomplishments so far: mentoring young women entering EECS, reaching out to girls in the community to tell them about opportunities in our field, and helping ensure that talented students have access to our department's resources and our community's industry opportunities, regardless of gender.

Tau Beta Pi

Tau Beta Pi's collegiate chapters elect members who have distinguished themselves with outstanding scholarship and character. Founded in 1885 to mark in a fitting manner those who have conferred honor upon their alma mater by distinguished scholarship and exemplary character as undergraduates in engineering, or by their attainments as alumni in the field of engineering, and to foster a spirit of liberal culture in engineering colleges. The Tennessee Alpha Chapter at the University of Tennessee, Knoxville was founded in 1929.

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THREE (3) TENURE TRACK FACULTY POSITIONS IN COMPUTER SCIENCE OR COMPUTER ENGINEERING

The Department of Electrical Engineering and Computer Science (EECS) at The University of Tennessee, Knoxville (UTK) is seeking candidates for three (3) tenure track faculty members at the assistant or associate professor level in computer science or computer engineering. Applicants should have an earned Ph.D. in Computer Science, Computer Engineering, or a related field. The department is expanding its teaching and research in the areas of data analytics, machine learning, cybersecurity, internet of things, cloud and virtual environments, and mobile computing systems. We welcome applicants in these and other areas of computer science and computer engineering. Successful candidates will be expected to teach at both undergraduate and graduate levels, to establish a vigorous funded research program, and to have a willingness to collaborate with other faculty in research.

EECS is housed in a new $37.5 million teaching and research facility completed in 2012. The department currently has an enrollment of more than 790 undergraduate and 280 graduate students, with a faculty of 45, and research expenditures that exceed $15 million per year. EECS offers two undergraduate minors in cybersecurity that were started in 2015. Successful candidates will be expected to contribute to the expansion of related educational and research activities in this area. UTK is a leading research institution with strong research partnerships with organizations such as the nearby Oak Ridge National Laboratory (ORNL) where several UT faculty have joint positions or research ties.

The Knoxville campus of the University of Tennessee is seeking candidates who have the ability to contribute in meaningful ways to the diversity and intercultural goals of the University. The University of Tennessee welcomes and honors people of all races, genders, creeds, cultures, and sexual orientations, and values intellectual curiosity, pursuit of knowledge, and academic freedom and integrity. Interested candidates should apply through the departmental web site at **http://www.eecs.utk.edu/people/employment/** and submit a cover letter, a curriculum vitae, a statement of research and teaching interests, and contact information for three references. Review of applications will begin on January 10, 2017, and continue until the positions are filled.