Welcome to the Min H. Kao Electrical Engineering & Computer Science Building. This monumental 150,000 square foot structure on the corner of Cumberland Avenue and Estabrook Drive frames the eastern boundary of campus. Its striking façade provides a visual preview of the dynamic engineering education offered at the University of Tennessee, Knoxville.

We are very proud to showcase both the building and UT alumnus Min H. Kao, whose gift made it possible. The laboratories, classrooms, student study spaces, conference rooms, and offices are designed to be both beautiful and functional with an abundance of natural light to inspire those who work and study here. It is a big building with an even bigger story.

The momentum that began with Kao’s initial gift has already translated into more excellent students, additional faculty with national and international prominence, a Governor’s Chair in Electrical Engineering and Computer Science, and an Engineering Research Center (ERC) funded by the National Science Foundation (NSF) that we have named CURENT.

We invite you to consider ways you might join our vision to inspire more students to learn, create, and lead in the fields of electrical engineering, computer engineering, and computer science fields. The pages of this booklet are only the beginning. We encourage you to visit us on our websites at www.engr.utk.edu or www.eecs.utk.edu, or stop by in person.

Sincerely,

Wayne T. Davis
Dean, College of Engineering

Kevin Tomsovic
CTI Professor and Head, Electrical Engineering and Computer Science

Min H. Kao

The Donor

Min H. Kao co-founded Garmin Corporation with Gary Burrell in October 1989 to integrate Global Positioning System (GPS) technology into navigation devices for multiple markets. Today, Kao is chairman of Garmin International Inc., and is credited with the breakthrough design and engineering of the GPS software technology that formed the foundation of the original Garmin product line.

Prior to founding Garmin, Kao served as a systems analyst at Teledyne Systems for inertial, radio navigation, and fire control systems. While at Magnavox Advanced Products, he designed the Kalman filter algorithms for Phase II GPS user equipment. He later served as engineering group leader with King Radio Corporation and Allied Signal, where he led the development of the first GPS navigator to be certified by the Federal Aviation Administration.

Kao holds a BS in electrical engineering from National Taiwan University. At the University of Tennessee, he earned his MS and Ph.D. degrees in electrical engineering and was involved in research for NASA and the U.S. Army.

The Min H. Kao Challenge

The Min H. Kao Electrical Engineering and Computer Science Challenge Campaign was a joint effort between the EECS Department and the Engineering Development Office. The campaign began when Min H. Kao and his wife, Fan, donated $5 million in addition to their building gift as a challenge match. Their gift was intended to inspire and challenge other graduates and friends of the department to invest in its future and help build momentum for innovation. That goal was reached in April 2009, providing EECS with new endowments and funds that have provided student awards, professorships, and direct program support. But the aspiration continues; private support is sought to advance our progress.

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The Min H. Kao Challenge
Meeting Tomorrow’s Challenges

Innovation and Momentum

The University of Tennessee’s flagship campus in Knoxville is the hub of a vibrant intellectual community that includes a strong alliance with Oak Ridge National Laboratory, the nation’s largest science and energy laboratory in the Department of Energy system. This provides unparalleled academic collaborations for EECS faculty and students. The university recognizes that for our country and world to advance, it must educate next generation leaders whose innovations have the potential to transform our society as Min Kao’s company Garmin did when it first defined and then created the GPS industry.

Today’s EECS faculty are nationally and internationally known for strengths in the following areas of research:

- Biological applications including acute inflammation & immunology, bioelectronics, and translational medicine
- Computer systems and architecture
- High performance and scientific computing
- Intelligent systems, data mining, and machine learning
- Microelectronics, microwave, and MEMS
- Networked and embedded systems
- Power systems, power electronics, and renewable energy
- Signal processing, systems, and controls
- Visual computing and image processing

EECS continues to experience substantial growth and is well ahead of the national pace that has noted increased interest in electrical engineering, computer engineering, and computer science. Since 2007 undergraduate enrollment in the department has increased roughly 30 percent and research expenditures have also grown more than 45 percent during that time. This has allowed the graduate program to grow as well with Ph.D. enrollment at an all-time high for the department.

The faculty of EECS continue to successfully compete for the most prestigious awards. In fall 2011, the department was awarded a National Science Foundation/Department of Energy Engineering Research Center (ERC). The center with initial funding of $18.5 million for five years will focus on wide area power system controls. This is the first such ERC in electric power transmission and places EECS squarely as a leader of Smart Grid research.
James C. Hung (1929-2010) was born in Foochow, China, and received his Bachelor of Science degree in electrical engineering from National Taiwan University. He came to the United States in 1954 to earn his master’s and doctorate degrees at New York University, and joined the University of Tennessee, Knoxville, in 1961. As a distinguished faculty member, he taught systems and control courses in the electrical engineering department, guiding 103 graduate students in his 38 years before retiring in 1999.

His most famous project was consulting with NASA to build navigation systems for the lunar rover that became commonly known as the “moon buggy” in the 1970s.

His work dealt with navigation, but he was also interested in guiding people in life. He believed he had the best job in the world as a faculty member, guiding students. One of his inspired students includes Garmin co-founder and CEO, Min H. Kao.

The Embedded Systems Laboratory in room 338 of the Min H. Kao Building has been named in honor of Hung and the impact his life had on his students.
The Min H. Kao Scholars and Fellows

The talented students of EECS are the real story behind the growing success of the department. The Min H. Kao Scholars and Fellows awards provide recognition to the very brightest undergraduates and graduates in electrical engineering, computer engineering, and computer science. This significant endowment was created by the Kaos to encourage an inventive and entrepreneurial spirit.

The Min H. Kao Scholars (front top, left to right): Stephen Holland, Dennis Ruff, Kerry Memory, Brandon Johnson, Shannon Eubank, Matthew Bowers, and Nicole Pennington. All undergraduate scholars.

The Min H. Kao Fellows (front to right): Michael Pickelimer, Penn Markham, Shuang Gao, Zhibo Wang, Yao Xu, and Jin Dong.

Gift Recognition Opportunities

Within the Min Kao Building are beautiful, functional rooms and labs which may be named in appreciation for donors at designated gift levels. Because building construction was fully funded, all gifts for these recognition levels go into an endowment that provides a permanent income stream to advance the department.

Floor plans and gift recognition levels may be viewed on the card inserted in the back pocket of the brochure.

Additional opportunities to endow the College of Engineering or the department and to establish professorships, fellowships, or scholarships may be granted to a donor who provides an endowment at key levels. Endowments are investments that provide foundational strength and momentum that will propel the university and college on its Journey to the Top 25.

For more information about ways to support this vision contact:

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Knoxville, Tenn. 37996-2012
Phone: (865) 974-2779
Fax: (865) 974-2015
E-mail: engrdev@utk.edu
www.engr.utk.edu/give/

The Min H. Kao Professor

At the core of every great university are the educators whose passion for their fields inspire and ignite students’ learning experiences. Leon Tolbert, an internationally respected expert in the fields of power systems and power electronics, hybrid electric vehicles, and renewable energy is the first and current Min H. Kao Professor. Private support to endow a professorship adds to the reputation of both the individual and the department.

Leon Tolbert (right) with graduate students in his laboratory.