



Dr. Don Gruenbacher Named New Department Head



Dr. Richard Gallagher, Interim Dean, is pleased to announce the appointment of Dr. Don Gruenbacher to the position of Head of the Department of Electrical and Computer Engineering effective August 12, 2007. He brings to the position a superb set of abilities that will help the department continue to grow in its three-part mis-

sion of education, scholarship and professional service.

Following three years of professional employment at the Johns Hopkins University Applied Physics Laboratory, Dr. Gruenbacher joined the Department of Electrical and Computer Engineering at Kansas State University as an assis-

tant professor in 1997, and was promoted to associate professor in 2002.

Please welcome Dr. Gruenbacher to this important leadership position.

1956 EE Class Celebrates 50th Reunion

The department's class of 1956, which includes Don Lenhart, Professor of Electrical and Computer Engineering, celebrated the 50th reunion from Tuesday, April 25 to Thursday, April 27, 2006. The class reunion started Tuesday evening

with a reception at Don Lenhart's home. In attendance were Richard and Raymond Petr from Blue Rapids, John Hodges from California, Harvey McCarter from Texas. Eddie Fowler (emeritus faculty member) and Norman Wilms from

Topeka, Ken and Patty Adamek from Winfield, John Dollar (emeritus faculty member) from Manhattan, and Don and Anne Lenhart. Attendees enjoyed lots of good conversation and reading of the information sent by several alumni who could not make it.

Wednesday was for registration and tours set up by the Alumni Association. Late in the afternoon was an all Engineering Reception in Fiedler Hall followed by a dinner in the Alumni Center. Thursday was for more tours in the morning and then an Engineering Luncheon. The number was small but there were more EEs than all the rest combined. The afternoon peaked with an Eye-stone Lecture by one of our own - John Slaughter, President and CEO of the National Action Council for Minorities in

Engineering (NACME). Several alumni came especially to hear his lecture. Afterwards a picture was taken with the ones we could round up and one of our emeritus faculty members Mel Cottom, who is retired here in town. John had to fly out shortly after the lecture so we only got a little time with him.

The reunion concluded with a dinner that night and a breakfast the next morning for those still in town.



BR: John Hodges, Harvey McCarter, John Slaughter, Eddie Fowler

FR: Richard Kirkland, Don Lenhart, Ken Adamek, John Dollar, Mel Cottom



Greetings from the Department Head

It has been a while since we published our last newsletter. Several things have happened and the department has made significant progress in many areas. We had a very successful ABET visit in Fall 2005 with both electrical engineering and computer engineering programs receiving accreditation. Research expenditures of the department increased by 75% from 2004 to 2006 due to hard work of the department's faculty members. We added Dr. Chris Lewis to our faculty group, Chassy Nichols joined the office staff, and we updated the conference room and graduate student offices. I would like to thank all the alumni, who contributed through the EECE Academy or by other means to the department. Your contributions helped us improve the facilities of the department and provide support for student activities.

The ABET evaluators were very complimentary of both the computer engineering and electrical engineering programs. Specific strengths observed by them include hands-on practical experience received by the students, strong student body, dedication of faculty in producing excellent engineers, strong student-faculty interaction, and good tools for assessment of educational objectives and learning outcomes. Although they did not specify any shortcomings in our programs, they did provide a few recommendations to make our programs even better. We will be taking these into consideration while we continue to improve our programs.

I attended a globalization workshop organized by the Electrical and Computer Engineering Department Heads Association (ECEDHA) in November 2006

in Washington D.C. The participants expressed a general concern that interest in engineering amongst school students in USA has been declining, whereas it has been increasing in other countries, such as China, India, and Korea. Moreover, there is a perception amongst school students that degrees in computer and electrical engineering would result in a job in China or India after graduation. These perceptions and the downturn in telecom and computer market in the early part of this decade has led to nationwide declines in undergraduate enrollment in computer and electrical engineering programs. We saw a decline of 20% over a period of three years from Fall 2002 to Fall 2005. However, the enrollment stabilized in Fall 2006. Many universities nationwide are still seeing a decline, but some have experienced stable enrollments over the last year. A strong job market in electrical and computer engineering fields has had some impact on this trend. In our department, we have introduced New Student Assembly at the freshman level since Fall 2005 and that also has helped. The theme of the recently concluded 2007 ECEDHA Annual Meeting (St. Augustine, Florida, March 16-20, 2007) was "ECE 2020: Recapturing the Image". Presentations and discussions focused on strategies for recruitment and retention of students in the electrical and computer engineering. There was an agreement amongst the participants that since electrical and computer engineering areas are abstract, the young generation does not find them attractive. We need to put more efforts in showing relevance to real-life of these areas to the young generation. Including

social relevance will also help in attracting more women into the programs. The group also projected that bioengineering, nanotechnology, and power and energy systems are the areas that will see the largest growth in the coming years.

I will be completing my department head term in July. Dr. Don Gruenbacher has been appointed department head beginning in August. I feel proud to mention that the department has made significant progress in many areas over the past three years. Notable amongst them are 1) the research expenditure of the department increased substantially, 2) both electrical engineering and computer engineering programs received full accreditation, 3) the undergraduate enrollment stabilized in 2006-2007 after seeing a drop of 20% over the previous three years, and 4) the department initiated the EECE Academy. I would like to thank the faculty members, department staff, students, and alumni for their support to make this possible. A special thanks to faculty members for working hard to obtain external funding. Our faculty members and students also received several awards (details are available elsewhere in this newsletter). I am looking forward to focusing more on research and teaching. I will continue to stay in touch with our alumni friends; the ones I knew earlier and the new friends I made over the past three years. I trust that the alumni will continue to support us for future progress.

With best wishes,

Anil Pahwa

Uplink

Uplink is an annual newsletter of the Department of Electrical and Computer Engineering, Kansas State University.

Edited and designed by Anil Pahwa

Send feedback and suggestions to office@eece.ksu.edu or send them via mail to the address listed on the back cover.

EECE department website: www.eece.ksu.edu

Electrical & Computer Engineering Academy

The EECE Department initiated the Electrical and Computer Engineering Academy in January 2005. This academy recognizes alumni and friends who partner with EECE. The academy provides corporate and professional leaders with the opportunity to impact electrical and computer engineering education and personally interact with department faculty and students.

Academy Goals:

- ◆ Recognize Electrical and Computer Engineering alumni and friends who

bring honor to their profession

- ◆ Strengthen the dedication of current students in electrical and computer engineering through interactions with academy members
- ◆ Provide advisory guidance and counsel at the request of the department head, faculty or students
- ◆ Provide financial support through membership gifts for the benefit of Electrical and Computer Engineering at K-State

Benefits from Membership Contributions:

- ◆ Scholarships and fellowships to recruit outstanding undergraduate and graduate students
- ◆ Student leadership activities (Eta Kappa Nu, Institute of Electrical and Electronics Engineers, EECE Graduate Student Council, Solar Car, and other student groups)
- ◆ Professional development for faculty and staff
- ◆ Equipment and supplies to support active learning and team projects

- ◆ Travel for student professional development

Individuals and organizations can join the EECE Academy by contributing to the department or to a Scholarship Fund designated for the department. Contributions can be made any time or during the annual Telefund by designating the contribution to the department account.

The academy members for 2006-07 (contributions made between July 1, 2005 and June 30, 2006) follow:

Corporate Partners:

Cadence Design Systems Inc.
 Conoco Phillips
 Richard Donaldson
 Gilbert Ferguson
 Eddie Fowler
 Donald Gemaehlich
 Hewlett Packard Company
 Samuel Logan
 Logan Family Trust
 David Nall
 Roger Riggert
 Dennis Ruckert
 Richard Teichgraeber
 Gordon Thayer

Benefactor:

Burns & McDonnell Foundation
 Lionel D'Luna
 ExxonMobil Foundation
 General Mills Foundation
 Jeffrey Hamilton
 Roger Hammerschmidt
 Katherine Hummels
 Donald Lenhert
 Douglas McKinley
 Net2Phone
 Clair Palmer
 Stephen Reiter
 RH Trailers
 Fred Sachen
 Kevin Schoen
 Thomas Stegmann
 The Lionel & Debra D'Luna Family Foundation
 Delbert Thielman
 Thielman Living Trust

Seaton Society:

Susan Barsamian
 Stephen Cmiel
 Christopher DeWaal
 Keith Fager
 General Electric Company
 Kenneth Hass
 James Heise
 Henry Hyndman
 Dallas Kibbe
 Lance Moore
 Jon Murdock
 William Ross
 Paul Rothers
 Krishna Shekar
 Robert Zrubek

Partner:

Leland Allen
 Galen Biery
 George Cleveland
 Hamed Funmilayo
 Calvin Gooden
 Johnson & Johnson
 Juniper Networks
 James Mosimann Sr.
 Motorola Foundation
 Robert Moyer
 Christopher Reedy
 Kent Scarbrough
 Linus Schmitz
 The Boeing Company
 The Northrop Grumman Foundation
 The Scholarship Foundation:
 Lockheed Martin
 Jeffery Thetge
 Tulsa Cats
 John Walters
 Wells Fargo Foundation
 Nathan West
 World Reach Inc.
 Feng Zou

Faculty Memorial

Joseph Ward, Jr., 88, died November 10, 2005 at his residence in St. Paul, Minnesota. Mr. Ward was born in Dallas, Texas on November 19, 1916. He received the BSEE degree from the University of Texas, Austin in 1937, and the MSEE degree from the University of Illinois, Urbana in 1940. In 1941, he married Margaret Anne Scott, and they made their home together in Manhattan until relocating in October 2004 to be near their oldest son in Minnesota.

Mr. Ward was on the General Electric Company Test Course, Dept. 1937 through June 1938, and February to August 1939. In the fall of 1938, he was instructor at the University of Texas. He became a member of

the electrical engineering faculty at K-State as instructor in September 1940, attaining the rank of professor in 1961. He was on leave to the Naval Ordnance Laboratory, Washington D.C., from June 1944 to December 1946. He had numerous summer jobs, including Hughes Aircraft, Boeing, RCA, Bell Telephone Laboratories, and Bendix. His technical areas of interest included circuit theory, electronic circuits and devices, and energy conservation.

He had a consummate interest in providing an excellent undergraduate education for K-State engineering students. He was a member of Phi Eta Sigma, Eta Kappa Nu, Sigma Tau, Tau Beta Pi, and the American Society of Engineering Education.

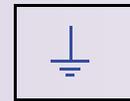
He was a senior member of the Institute of Electrical and Electronic Engineers, and was a licensed professional engineer in Kansas. He was the faculty advisor of the K-State Beta Kappa Chapter of Eta Kappa Nu from 1966 to 1981. He retired in the spring of 1983.

He also greatly enjoyed his gardening, which he started as part of the "Victory Gardens," effort during WWII, and continued after his retirement. He grew a wonderful vegetable garden every year, along with strawberries and the best cantaloupes around.

In addition to Margaret Anne Ward, his wife, Mr. Ward is survived by two sons and two daughters, Joseph Evans Ward III, of Woodbury, Minn.,

Nancy Ivy of Portsmouth, Va., Martha Hamilton of Spokane, Wash., and Kenneth Ward of Loveland, Colo. He had 12 grandchildren and six great-grandchildren.

A simple remembrance service was held in Minnesota on November 13, 2005. Inurnment is in Sunset Cemetery in Manhattan. Memorial contributions may be made to the Joseph E. Ward Scholarship in Electrical Engineering c/o Kansas State University Foundation, 2323 Anderson Avenue, Suite 500, Manhattan, KS 66502.



Welcome

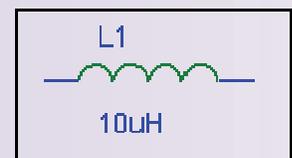
Dr. Chris Lewis joined the Electrical and Computer Engineering Department in December 2005. He graduated from Kansas State University with a B.S. in mechanical engineering in 1987. He received his M.S. and Ph.D. degrees in electrical engineering from Purdue University in 1990 and 1994 respectively. In 1995 he joined

the Intelligent Systems and Robotics Labs at Sandia National Laboratories in Albuquerque, NM where he conducted research on robotic systems. His research interests include collective control of squads of mobile robotic vehicles, dynamic simulation of systems experiencing intermittent contacts, multi-redundant

manipulator kinematics, sensor-based control of robotic manipulators and simultaneous localization and mapping.

Chassy Nichols joined the EECE staff in May of 2006 as an Accounting Specialist. She received her B.S. in Office Administration from Fort Hays State University in 1995. Chassy has eight years of ac-

counting experience in the private business sector. She also joined the department with three years of campus experience.



Alumni Fellow

Michelle C. Munson (1996) was recognized as 2006 Alumni Fellow. She is the President and Founder of Aspera Inc., an early-stage technology development company in Berkeley, California, solving the fundamental problems of network data delivery. The technology provides the fastest possible transfer of large files and data

sets over IP networks, guaranteed delivery times and exceptional bandwidth control.

She received dual bachelors' degrees from K-State in electrical engineering and physics in 1996 and has a master's degree in computer science from the University of Cambridge completed on a Fulbright Scholarship.

Munson co-invented the technology for Aspera. In its first two years, Aspera has become the market leader for media file transfer among the Hollywood studios and their partners. For example, Aspera products powered the international transfer of digital media in the making of *King Kong* by Universal Studios. It is used by NBC Univer-

sal and Disney to transfer video content to Apple for publishing on the Apple iTunes video store.

She was a software engineer in research and start-up companies for five years before setting out on her own to found Aspera in 2003 with Serban Simu.

2005 Hall of Fame

Sue Barsamian is a 1981 graduate of Kansas State University in electrical engineering. She is vice president of Global Go To Market Strategy for Mercury, responsible for ensuring the alignment and readiness of all operating groups within Mercury around a strategy that is right for each country.

Her relationship with Mercury began when it was a client of Spark and Kindling, a strategic marketing consulting firm Barsamian co-founded in 2002. With a 20-year history in marketing, sales, and business development, her experience involves fast-growth companies encompassing software applica-

tions, infrastructure, and services. She has a focus on serving worldwide markets, with many years of service in European-based positions. She has previously served as vice president of marketing for Critical Path, RemarQ Communities, and Verity, and has held a number of sales positions, including director of European operations at Sytek (now Hughes LAN Systems).

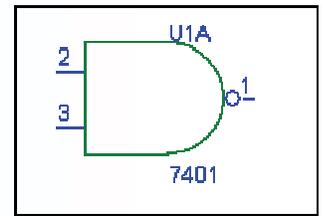
Barsamian began her career in the management development program at AT&T.

Dixon R. Doll, received his B.S. in electrical engineering from Kansas State University, 1964, as well as M.S. and Ph.D.

degrees in electrical engineering from the University of Michigan. He is the cofounder and managing general partner of DCM—Doll Capital Management, an early-stage technology venture capital firm headquartered in Menlo Park, California. DCM has become widely recognized as one of the top Silicon Valley venture firms actively investing in China and Japan.

For more than 35 years, Doll has influenced and guided entrepreneurs, investors, and executives in the computer and communications industries. In recognition of his accomplishments in venture capital, Doll

was named by *Forbes Magazine* as one of the top 100 venture investors on its 2003, 2004, and 2005 Midas Lists, as well as one of the top 100 personalities involved in creating the information highway by *Upside Magazine*. In April 2005, he was elected to the board of directors of the National Venture Capital Association in Washington, D.C.



2005 Professional Progress Awards

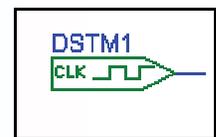
Kevin L. McGahee graduated from Kansas State University in 1985 with a B.S. in electrical engineering, later completing an M.S. in computer engineering from Iowa State University in 1988. He is the director of engineering, overseeing all engineering operations of the Kansas City-based operations of Thales ATM Inc., as well as serving as the technical inter-

face to Thales' other subsidiaries in the U.S. and abroad. He holds a U.S. patent for his work on embedded computers using multichip modules. He and his wife, Loraine, have three children.

Kevin Schoen received his B.S. in electrical engineering from Kansas State in 1985, and also earned an MBA from the Uni-

versity of Chicago in 1991. He has spent 20 years in a variety of senior supply chain leadership positions at General Mills where he is presently vice president of manufacturing and responsible for food manufacturing plants in the U.S., Canada, and Mexico. He has coached a variety of sports and has been actively involved with his local church, serving on the

board of directors for Sonscape Ministries, a non-profit organization based out of Colorado Springs, Colorado. He and his wife, Polly, have three children and live in the suburbs of Minneapolis.



2006 Hall of Fame

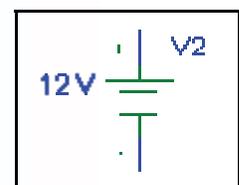
Larry J. Engelken holds a B.S., 1972, electrical engineering from Kansas State University. He is a self-employed entrepreneur and developer, managing several businesses and serving on various boards including the Fresno Grizzlies Triple-A Baseball Club (San Francisco Giants organization), FGC Investors LLC, Purchaser's Advantage LLC, and the Quinta Luna Homeowners Association.

Engelken previously spent 16 years with Convergent Group and its predecessors, a Colorado-based global information systems integration and consulting company. As a co-founding partner, he participated in overall management of the company as executive vice president of global sales until the public company's sale in November 2000 to SchlumbergerSema.

Prior to founding Convergent Group in 1985, he had worked at two global engineering design/construct services firms, including Black & Veatch in Kansas City, as well as being a founder and director of a regional computer software and data conversion services firm. Long active in the computer information technology industry, he is a past president/director of the Denver-based global educational professional

association, Geospatial Information & Technology Association (GITA).

He and his wife, Holly, have six children, one of which is a graduate student at K-State.



2006 Professional Progress Awards

Philip Bullinger graduated magna cum laude with a B.S. in electrical and computer engineering from Kansas State University in 1987. He also graduated magna cum laude with an M.S. in management of technology from National Technological University in 1992. He is currently senior vice president and general manager for Engenio Storage Group, a division of LSI Logic Corporation, responsible for the engineering, production operations, strategic and product planning, business

development, and financial performance of LSI Logic's server-attached and SAN-attached storage systems business, including disk array controllers and subsystems as well as RAID storage adapters. Bullinger holds five patents in the fields of storage I/O technology and integrated circuit design.

Robert Gray Wald graduated in 1986 from Kansas State with a B.S. in electrical engineering. He holds an M.S. in optical/electrical engineering from the

University of Colorado-Boulder. Wald currently provides technology strategy and implementation advice in advanced technologies through his company, In-Knowvvation. He helped design and manage a cable modem standard at CableLabs and evolved a datacenter-switching product for McDATA. He led ATM switch testing for Network World Magazine's Strategic Test Alliance and designed national standard laser and fiberoptic detector systems for NIST.

Wald contributed to technologies for both NSF's Optoelectronic Computing Systems Center and NASA, and developed control systems for The Boeing Company, Black & Veatch, and Burns & McDonnell. He and his wife, Susan, have a daughter and a son adopted from China.

2006 Faculty Awards

James E. DeVault, James L. Hollis Memorial Award for Excellence in Undergraduate Teaching.

Stephen A. Dyer, Distinguished Service Award from IEEE Instrumentation and Measurement Society, WESP

"Making a Difference Award."

William B. Kuhn, WESP "Making a Difference Award."

Ruth Douglas Miller, WESP "Making a Difference Award."

Medhat M. Morcos, Presidential Award for Undergraduate

Teaching, K-State HKN Distinguished Faculty Award.

Andrew Rys, WESP "Making a Difference Award."

David L. Soldan, Robert M. Janowiak Outstanding Leadership and Service Award from

Electrical and Computer Engineering Department Heads Association.

Stewart E. Stanton, WESP "Making a Difference Award."

Steven Warren, WESP "Making a Difference Award."

Student Awards

Undergraduate Student Awards

Allen Halling, EE, has been named the inaugural recipient of the W.W. Koepsel Electrical and Computer Engineering Scholarship. Dr. Koepsel, Department Head of Electrical and Computer Engineering from 1964 to 1976, and his family established this scholarship for undergraduate students emphasizing power generation or power management. Dr. Koepsel presented the award to Allen on April 14, 2007 at the Open House banquet.

Brad Lutz, EE/CMPEN, received the Morris K. Udall Scholarship. He is vice president and photovoltaic system

design lead for Project Solar House, the solar house K-State is entering in the U.S. Department of Energy's 2007 Solar Decathlon in Washington D.C. He is also working on the UFM greenhouse restoration project, designing the photovoltaic system that is to be added. At K-State, Brad is a member of Eta Kappa Nu and Students for Environmental Action. He also works as an undergraduate research assistant in the K-State S.M.A.R.T. Lab and as a tutor for the Multicultural Engineering Program.

Zachary P. Maier, CMPEN, received a Homeland Security Scholarship from the U.S. Department of Homeland Security in May 2006. His research goal

is to use computers and technology to develop a completely terrorism-proof security network. Zach is administrative assistant for Mortar Board senior honorary. He is a member of Engineering Student Council and the Institute of Electrical and Electronics Engineers. He serves on the Student Alumni Board and is a Phi Kappa Phi sophomore scholar. Zach participates in Christian Challenge, and is a Christian camp volunteer for Fun in the Son Ministries. He is on the FIRST Robotics Greater Kansas City Regional Planning Committee. He is the lead mentor for freshman students in the department as part of the New Student Assembly.

David Thompson, EE, received the Fulbright Scholarship in May 2006. He majored in electrical engineering with an emphasis in biomedical engineering and minors in physics and Japanese. He will be a Fulbright Fellow in Japan at Tohoku University in Sendai, where he will be using the opportunity provided by the Fulbright to improve his Japanese language proficiency, focusing on business and technical settings. Later in his career, he hopes to use these skills to facilitate increased academic and commercial cooperation between American and Japanese universities and companies. After the year in Japan, he plans to attend the University

Student Awards Continued

of Michigan to earn a master's and Ph.D. in biomedical engineering, focusing on the area of neural prosthetics. Career plans are to conduct research and teach in a university setting.

Nicholas Van Sickel, CMPEN, Tau Beta Pi National Engineering Scholarship for 2006-2007. He is currently a member of Tau Beta Pi, the Golden Key Society, and the Japanese Appreciation Alliance. Nick has also been involved with many organizations, in-

cluding the Sunflower Networking Group, KSU Physics Department, Students for Environmental Action, and the Office of International Programs. His future plans involve studying in Japan and later attending graduate school at KSU.

Graduate Student Awards

Kyle Kuhlman, M.S. Student, received the Outstanding GTA Award for 2007. Kyle has taught EECE 502 Electronics

Lab and EECE 431 Microcontrollers. He has also been a tutor through Eta Kappa Nu's tutoring program. He is a member of Institute of Electrical and Electronics Engineers and Tau Beta Pi. Kyle is currently researching optical interconnects under Dr. Andrew Rys' direction.

Benjamin McBride, M.S. Student, received the Outstanding GRA Award for 2007. Ben is doing research on Overlay Network Topology under Dr. Ca-

terina Scoglio's direction.

Shilpa Vaze, Ph.D. Student, received second place in Science I session for oral presentation of her paper "A Unified Mathematical Formulation and Software Architecture for Modeling and Simulation of Multidisciplinary Systems" at the 12th Annual Graduate Research Forum of Kansas State University held on March 2, 2007. Shilpa is doing research under Professor James DeVault's direction.

Eta Kappa Nu Award

We are very proud that our students have been very successful in competing for the national Eta Kappa Nu Alton B. Zerby and Carl T. Koerner Award for the Outstanding Electrical and Computer Engineering Student. Kristin Kitten was a Finalist in the 2004 competition, Christopher Weber was a Finalist in the 2005 competition, and Renee Ecklund has received the Honorable Mention in the 2006 competition. Receiving the Finalist

award placed Kristin Kitten and Christopher Weber amongst the top five students in the nation in their respective years and the Honorable Mention award placed Renee Ecklund amongst the top three students in the nation. The award was presented to Renee in St. Augustine, Florida on March 19 at the Electrical and Computer Engineering Department Heads Association Annual Meeting.



Renee Ecklund receiving the award from Dr. J. David Irwin, President of the Board of Governors of Eta Kappa Nu, and Head of the Electrical and Computer Engineering Department at Auburn University

Distinguished Lecture

Dr. Richard D. Teichgraeber, Embedded Software Specialist Sr. Staff at Lockheed Martin Aeronautics Co. presented the Distinguished Lecture on April 6, 2006.

Dr. Teichgraeber gave a brief account of his experience in the aerospace industry as an author, researcher, program manager and mentor. The General Dynamics-Lockheed Martin Employee Scholarship fund and a history of "giving back" to K-State were explained. Lessons

learned over 37 years working as an engineer and recommendations for survival in industry were described along with many, occasionally humorous examples. An account of several funny, strange, and unusual work incidents involving the author concluded the presentation.

Richard D. Teichgraeber was born in Hutchinson, Kansas. He grew up and attended public schools in Wichita. He received his B.S. in Electrical

Engineering in 1964, M.S. in Electrical Engineering in 1966 and Ph.D. in Electrical Engineering in 1969, all from Kansas State University. He has worked in applied research at Lockheed Martin Aeronautics Co. in Fort Worth for 37 years, primarily in avionic systems development. He has specialized in algorithm software development, test and evaluation of inertial navigation systems, Kalman filtering applications, flight simulation, and sensor track correlation and fusion

applications. He has been a program manager for three contracted R & D efforts. More recently, he led development of three sensor data correlation algorithms for the F-16, which are in use in currently flying aircrafts. Dr. Teichgraeber has authored or co-authored over 20 technical papers in applications of inertial navigation, fiber-optic sensors, artificial intelligence, flight simulation, and sensor data correlation and fusion.

The Eyestone Distinguished Lecture Series

Glen H. Fountain, Project Manager of NASA's New Horizons mission to Pluto, delivered the presentation "New Horizons: A Journey to the Third Region of the Solar System" on October 26, 2006. The lecture focused on planning, implementation, and tracking of the mission, which was launched in January 2006 and will reach the frozen, distant world in summer 2015.

Glen H. Fountain received his B.S. and M.S. degrees in electrical engineering from Kansas State University in 1965 and 1966, respectively, and joined the Johns Hopkins University Applied Physics Laboratory (APL) in 1966.

During his early career at APL, he held a number of appointments and supported a range of programs including the small

astronomy satellite program, the transit improvement program, and the magnetic field satellite program. As supervisor of APL's space science instrument group, he led the ultraviolet and visible instrument developments for the Delta series of missions.

Mr. Fountain served as program manager for the Hopkins Ultraviolet Telescope in the

1980s and the Special Sensor Ultraviolet Spectrographic Imager in the early 1990s. Until 2003, he was supervisor of the APL Space Department Engineering and Technology Branch.

Kabul Connection

A delegation of eight faculty members from Kansas State University traveled to Kabul, Afghanistan in November 2006 to visit Kabul University to assess the Engineering and English programs. Dr. Anil Pahwa was a part of this World Bank sponsored visit with responsibilities to evaluate and assess the Electrical Engineering program. Kabul University was a thriving university in the 1970s. Wars and political turmoil since the late 1970s have

left the university in dire straits. The engineering building, which was occupied by warlords some years ago, needs extensive repairs. The laboratories need large amounts of new equipment and the faculty members need training. Although the facilities and curriculum need massive overhaul, the delegation found the spirits of the students and the faculty members to be very high. As an outcome of this visit, the World Bank has given a three-

year award to Kansas State University to rebuild Kabul University. The major task for Electrical and Computer Engineering, a partner department in the project for the engineering part along with Civil Engineering, Mechanical Engineering, and Architecture, is to redesign the curriculum, mentor and train the faculty members at Kabul University, and update and refurbish the laboratories.



Dr. Pahwa presenting the college sweatshirt to Shab Mahmood Mebrion (Assistant Dean of Engineering at Kabul University) with Dr. Ata Mohammad Nazar (Dean of Engineering at Kabul University) on his side.

NSF ADVANCE Workshop for Women Students

The Electrical and Computer Engineering department organized a one-day workshop titled "Finding the Ideal Graduate Program" for women students in Science, Technology, Engineering and Math (STEM) fields on November 18, 2006. This workshop was supported by the ADVANCE project at K-State, which is funded by the National Science Foundation to promote success of women in academia. The goal of the workshop was to encourage more women to pursue advanced degrees to create an impact on academia in the long run. Fourteen aspiring women

undergraduate students from Kansas State University, University of Texas at El Paso, Purdue University, University of Minnesota, Fort Hays State University and Southwestern University, and a women faculty member from Fort Hays State University, attended the workshop. The workshop was successfully conducted using presentations from five faculty members and a panel of current graduate students. The presentations focused on: finding the right school; gender issues; balancing life and work; how to succeed in graduate school; and the application process. In ad-

dition to formal presentations and activities, the workshop included several social activities. Feedback received from the participants indicated that

most felt better prepared for graduate school and the workshop increased their desire to pursue graduate studies significantly.



ADVANCE Workshop Participants and Presenters

New Student Assembly



The winning team discussing their robot "Robocles" at Open House in April 2006



A team is running their robot through the maze at Open House in April 2007

The Electrical and Computer Engineering Department at Kansas State University introduced New Student Assembly for freshmen and transfer students in Fall 2005 as part of a Department Level Reform (DLR) planning project funded by the National Science Foundation with Dr. Anil Pahwa as Principal Investigator and Dr. David Soldan and Dr. Shelli Starrett as Co-Principal Investigators. The main goal of this two-semester course is to provide a friendly atmosphere for students to ease their transition into college life, learn about the department, and make friends with peers and seniors within the department. The ultimate objective is to help new students make stronger connections with the department to increase retention. Dr. Pahwa and nine upper-class students, who perform the role of mentors for the new students, facilitated the assembly, which was held once a month during each semester. The

mentors also met twice in a semester outside the class with students in their assigned group for a fun activity of their choice, such as bowling, pool, or an ice cream social. This activity provides time for further interactions in a relaxed atmosphere. During the assembly, students engaged in several icebreaking interactive activities. They discussed learning styles and some myths and realities of being an engineering student. Other activities included short presentations by student groups and selected industry representatives. The students were also given an on-line questionnaire about the department and a group exercise of meeting their advisor. During the second semester, teams of students built robots from the "Lego Mindstorms™" kit to perform certain specified tasks. These teams competed for prizes during the all-university Open House in April.

Open House 2006

The department placed second in the Open House Parade. This was the third year in a row for the second place finish. Patrick York received the award for the best technical display in the department for his project "5.2 GHz CWFM Radar." Thanks to Garmin for donating a GPS Unit for the award. Kimberly Bartak, Leyla Celebi, Renee Ecklund, Jeff Finley, Prachi Gupta, Lara Pickel, and Nicholas Potenski were recognized as Knights of St. Patrick at the Open House banquet.



Open House 2007

The curriculum display based on the TV show Jeopardy received second place. Karl Sickendick received the award for the best technical display for the project "LRIT Satellite Weather Receiver." Allison Day was a finalist for the St. Patricia award. Allison Day, Mark Hopkins, Julie Monaco, Karl Sickendick, and Arthur Thompson were recognized as Knights of St. Patrick at the Open House banquet.



Integrated System Lab (ISL)

In Fall 2005, K-State received a grant from NSF to create a lab experience that promotes student learning in the communication, signal processing and digital design areas. The new Integrated Systems Lab (ISL) was officially inaugurated in Fall 2006. ISL is equipped with 2 RF benches and 1 Digital design (FPGA) bench that will be used by students in a wide range of courses. One of the goals of the new ISL is to enable students in “lecture-only”

courses such as Communication Systems I and II to better understand complex lecture topics via laboratory “homework” experiments. Another objective of the lab development effort is to integrate laboratory projects in RF circuits, digital design, and signal processing courses to create modern complex systems. Currently, students are working on developing an LRIT satellite receiver. LRIT is the digital radio system now being used by

the GOES weather satellites placed in orbit by the National Oceanic and Atmospheric Administration. In addition to the RF and digital design benches, ISL is equipped with 3 general-purpose work benches to encourage honors student projects as well as other projects that students wish to undertake outside of their class work. There is a general purpose lounge area in the lab to provide a welcoming environment for students to spend time and

brainstorm on research/project ideas. The ISL is an “open lab” environment which can be used by students round the clock. To facilitate efficient use of ISL equipment by students from multiple courses, a “Lab Web-Cam” has been set up that students can access via a password-protected website. More information on ISL and related activities can be found in the lab website: <http://www.eece.ksu.edu/isl>

Solar House

Between 30 and 50 students from Architecture, Engineering and Business at Kansas State University and University of Kansas are building an 800–square-foot house fully powered by the sun alone, for the 2007 Solar Decathlon competition to be held in October 2007 in Washington DC. Twenty collegiate teams were selected by NREL for this competition; each team receives a \$100K grant plus a GEM electric car as seed money for the project. Architecture students in Dr. Todd Gabbard's studio have completed a physical design for the house, stressing a sense of place in Kansas with prairie and sunshine. Electrical and mechanical engineering students under Dr. Ruth Douglas Miller,

Dr. Warren White and Dr. Garth Thompson are designing the solar array system (array, batteries and associated electronics); a water-heating system that utilizes waste heat from the solar panels, thus improving the panel efficiency; and what we hope will be a high-efficiency HVAC system that will meet the “comfort zone” requirements of the competition.

There are 10 judging elements to the competition, ranging from energy efficiency to comfort, publicity and fund-raising. The multidisciplinary nature of the project is already paying off, as EEs learn to work with architecture, ArchE and ME students, along with marketing majors. We hope to have the house completely built and ready for testing by the end of May 2007. If you are in the area, stop by and ask to see the team in action!



EECE Graduate Student Council

The graduate students of the department formed the Electrical and Computer Engineering Graduate Student Council (EECEGSC) in Spring 2007. The council currently consists of five elected officers and one faculty advisor: Angel Martinez,

President; Jeff Finley, Vice President; Shilpa Vaze, Treasurer; Rajet Krishnan, Secretary; Jason Kling, Public Relations; and Dr. Don Gruenbacher, Advisor. The council began its inaugural year by creating a research forum for students

and faculty to discuss research goals and opportunities. Among many additional tasks preformed by the council were sponsoring the Outstanding GTA & GRA Awards and hosting the EECE Spring Picnic. The EECEGSC has had a

successful year and plans to continue building on that success by representing the local and distant graduate students of K-State.

Student Advisory Council

The department recently created a Student Advisory Council. The purpose of the advisory council is to provide feedback to the department head from students' perspective for continuous improvement of the department. The council has

seven members including representatives of the Freshman class, the Sophomore class, the Junior class, and the Senior class. In addition, Presidents of IEEE Student Branch, Eta Kappa Nu, and the EECE Graduate Student Council are

members of the council. The representative of the Senior class serves as the President of the council. The department head appoints the class representatives. The current members are; Senior – Allen Halling, Junior – Zach Maier, Sopho-

more – Chris Berry, Freshman – Dana Gude, IEEE Student Branch – Robert Christensen, Eta Kappa Nu – Tyler Van Slyke, EECE Graduate Student Council – Angel Martinez.

EECE Advisory Council

Council Goals:

- ◆ Take a leadership role in encouraging department alumni and friends to provide service and financial support to the department.
- ◆ Provide a connection among faculty, students, and organizations represented by council members.
- ◆ Provide advice regarding EECE research and degree programs.

Current Members:

David L. Abrams, Black & Veatch

Roderick K. Blocksome, Rockwell Collins

Gerald O. Burnham, University of Texas - Dallas

Michael R. Casey, ICE Corporation

Doug Doerfler, Sandia National Laboratories

William N. Dowling, Midwest Energy, Inc.

Stuart Gillen, National Instruments

Cal Gooden, Freescale Semiconductors

Mark Graham, Crown International

Neeraj Magotra, Texas Instruments

Ann Martin, Enginio (Chairperson)

Douglas L. McKinley, Sprint LDD

Craig Mehan, Garmin

Terry R. Weaver, Delta Resource Group

For more information on the Advisory Council visit our website:

www.eece.ksu.edu/

[index.php?page=industry](#)



Faculty/Staff holiday party



Ice cream social for new students



Graduate student picnic

Name _____ Degree(s) _____ Year(s) _____

Home Address _____ Phone _____

City/State/Zip Code _____ Email _____

Employer _____

Address _____

Job Title _____

Job Responsibilities _____

News _____

Mail to UPLINK, Department of Electrical and Computer Engineering, 2061 Rathbone Hall, KSU, Manhattan, KS 66506



Department of Electrical and Computer Engineering
2061 Rathbone Hall
Manhattan, KS 66506-5204

440

Nonprofit Organization
U.S. POSTAGE
PAID
Permit # 525
Manhattan Kan. 66502

Notice of nondiscrimination

Kansas State University is committed to nondiscrimination on the basis of race, sex, national origin, disability, religion, age, sexual orientation, or other nonmerit reasons, in admissions, educational programs or activities and employment (including employment of disabled veterans and veterans of the Vietnam Era), as required by applicable laws and regulations. Responsibility for coordination of compliance efforts and receipt of inquiries concerning Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and the Americans With Disabilities Act of 1990, has been delegated to Clyde Howard, Director of Affirmative Action, Kansas State University, 214 Anderson Hall, Manhattan, KS 66506-0124, (Phone) 785-532-6220; (TTY) 785-532-4807.

44593-5/07-4,800