BAE students and department head, Joe Harner
Message from the Dean

Henry Ford once said, “Coming together is a beginning. Keeping together is progress. Working together is success.”

And I believe “success” will be the result when we apply that truth to the strategic alignment between President Schulz’ K-State 2025 Plan, Kansas State University will be recognized nationally as a top-50 public research university, the vision and planning themes of the college’s Strategic Plan adopted in 2008, and the University Engineering Initiative Act (UEIA) of 2011, recently approved by the Kansas state Legislature.

The UEIA, passed by the Kansas Legislature and approved by Gov. Brownback on May 25, 2011, provides support to grow the number of graduating engineers at Kansas State to 586, or an increase of 163 beyond the basis of today’s 423 graduates. This growth is to be shared equally by K-State, the University of Kansas and Wichita State University. Each college/school will be provided $3.5M/year for 10 years, and this will require a dollar-for-dollar match. For our college, this will be accomplished through three key avenues:

- Expand our recruitment and retention programs such as MEP, SAS, MAPS, ESSI and Ambassadors; dramatically increase our scholarship programs; and enhance knowledge about our engineering programs to Kansas junior high and high school students and faculty.
- Add more faculty and staff—the addition of 20 new professors and 10 new instructors, with the requisite staff support, is unprecedented in the history of the college and we must make the most of the funding for this extraordinary opportunity.
- Expand our physical space and facility to house the increase in students, faculty and staff.

Gov. Brownback attended and spoke at the luncheon meeting of the advisory council on Oct. 7. He provided insight on the need for Kansas to proceed in a way that will produce more high-tech engineers and technology-based jobs. This in turn will grow the wealth of Kansas and bring increased economic prosperity to the state. And his bottom line on the UEIA: “I support this initiative.”

We are moving ahead full-throttle on this opportune occasion to expand and grow the possibilities of what is already good and great about our college, while meeting the goals of the UEIA and the K-State 2025 Plan. In this issue of Impact we introduce the distinguished advisory council members who are advising us in this undertaking, our new assistant dean of retention, diversity and inclusion, Betty Grauer; and our new senior director of development, Lori Rogge.

Think about what new facilities, space and instructors will mean to our already-world-class student teams as you read about their recent competitive successes. Note our award-winning faculty, whose productivity will only increase with improved facilities and new colleagues. And the story of the Ranhotra family and their giving is just one of the many examples of the type of support we will continue to need and be looking to expand on from our ever-generous alumni and friends.

Another fall highlight you’ll read about was our visit from Dr. Mike Duncan, NE ’74, and his captivating Eyestone Lecture regarding his role in leading a NASA medical team in support of the rescue of 33 trapped miners. Mike concluded his lecture with a quote from Louis Pasteur that I like very much, “Chance favors the prepared mind.” I like as well another “take” on it from renowned neurologist/author James H. Austin, “Chance favors those in motion.”

I assure you this “challenge” i.e., “opportunity” afforded us by both the passing of University Engineering Initiative Act and the challenge of Pres. Schulz’ K-State 2025 Plan is something we do not take lightly. We have been, are, and will be prepared and in motion to put our best foot forward on the path ahead.

John R. English
Dean of the College of Engineering

On the cover
Joe Harner, BAE professor and department head, is hoisted on the shoulders of BAE students celebrating the department’s stellar showing at the 2011 American Society of Agricultural and Biological Engineers Annual International Meeting. More details in related story on pages 6–7.

Alternate cover . . . . . . . . . . . . . .
A few clicks of the camera later finds Harner “awash” in victory, as students complete the celebratory ritual with a traditional “dowsing.”
It’s really a family affair—a scholarship begun by parents in recognition of their children’s education, which now 12 years and 21 recipients later continues to thrive and grow with additional support from those two children who contribute to it through matching opportunities with their respective employers.

The story of the Ranhotra Family Engineering Scholarship begins with its establishment by Gur and Tej Ranhotra in 1999, after their children, Rick CHE ’83 and Anita IE ’94 and MEM ’01, had both completed undergraduate engineering degrees at Kansas State University.

“Our parents wanted to establish this scholarship as a way to show their appreciation to K-State for the education provided to me and my brother,” Anita said. “I was proud they saw the benefits that Rick and I received from our time at K-State. Rick and I put ourselves through school, so this was our parents’ way to financially give back.”

Rick and Anita have also contributed to the scholarship annually since its inception.

“It’s served the same purpose for us as for our parents—a way to give back, a way to thank K-State for the education and opportunities given to us, and a way to help future engineers with their education,” Anita said.

Matching funds opportunities through their respective employers have enabled Anita and Rick to increase their gifts to the scholarship.

Anita is a supply chain quality manager with Hallmark Cards, Inc., Kansas City, Mo., and Rick is a processes applications engineer with the Georgia Power Company, Atlanta, Ga.

“I contributed to the scholarship when it began,” Anita said, “and then utilized the matching contributions through Hallmark in 2001 after I started working there and was eligible. Once I learned about this program and understood Hallmark’s commitment to support education, I thought, ‘How could I not take advantage of this?’”

Hallmark’s program is supported by the Hallmark Corporate Foundation and makes contributions to eligible schools or educational associations in amounts equal to contributions made by eligible Hallmark employees up to $6,000 per person per year.

Rick has contributed to the CHE department since 1989, and then to the family scholarship once it was established. His employer, Georgia Power and the Georgia Power Foundation, Inc., matches dollar for dollar donations made by qualified individuals, up to $5,000 per year, to the eligible institutions of their choice.

“I give credit to K-State for not only providing me with a valuable education that has served me well throughout my career,” Anita said, “but also for the opportunity to develop and build upon my leadership skills. I look back on my time at K-State fondly and recognize that a lot of who I am today was shaped by the time I spent there. For that reason, I feel it is important to give back.”

Giving back can take various forms, including not only finances but time. Anita has chosen to do both. In addition to supporting the scholarship, she also serves on the Industry Advisory Councils for the IMSE department and the Multicultural Engineering Program at K-State.

“Not only does this give me an opportunity to interface with students,” she said, “but I also get to represent Hallmark and help people understand what engineers do there.”

Anita has had the opportunity to meet a number of the Ranhotra Family Engineering Scholarship recipients over the years. The IMSE department hosts an annual scholarship reception that facilitates meetings between the donors and recipients.

“I’ve stayed in touch with some of those recipients,” she said, “and have enjoyed watching them progress throughout their careers—one is even now working at Hallmark!”

She encourages other alumni to consider this same path of giving back, whether financially or with time, to a specific department or the university as a whole.

“We all proudly declare that we are K-Staters, and what better way to give back than to help the next generation of K-Staters?”

—by Mary Rankin

The Ranhotra Family Scholarship is awarded each semester to one student in IMSE and one in CHE—the respective departments of alums Anita and Rick Ranhotra. Recipients for fall 2011 are Ryan Manes, IMSE junior, and Trenton Wilke, CHE junior.

“I really want to thank the Ranhotra Family for their generous support,” Manes said. “This scholarship allows me to focus my efforts on school and my goal of becoming an engineer, instead of worrying about how I’m going to pay for tuition.”

Wilke agreed and said, “This scholarship has greatly helped my educational experience this semester. I am paying for college without any assistance from my parents, and I’m better able to concentrate on my studies instead of working part-time jobs to stay in school.”

Both young men have goals for additional education to complete their career goals.

“After graduation, I want to work in the field of industrial engineering to gain some real world experience,” Manes said. “I then plan to go to graduate school for my master’s and eventually a doctorate degree, and become a college professor. I love working with students and feel I can truly impact lives in that capacity.”

“I am currently considering getting my Ph.D. after I graduate,” Wilke said. “My research will be related to either material science or biofuels—this is the type of research I’d like to pursue somewhere in industry.”

Manes and Wilke believe their experience of being scholarship recipients has definitely given them an appreciation for this type of support and an understanding of the importance of continuing the tradition.

“Like so many students today,” Manes said, “I do not qualify for substantial student aid from the government, but neither can I afford to pay for school out of pocket. With the rising cost of tuition, we must plan for even higher costs in the future. Scholarships are now and will continue to be so important.”

“Giving back to your university is an excellent way to make sure your charitable donations will be put to good use,” Wilke said. “I won’t forget the great help my scholarship support has been once it’s my turn to be supportive in this way. I will definitely give back to K-State when I get the chance.”

Students grateful for Ranhotras’ gift
Front row, left to right
James L. Tedman, CE ’67
President
Wildcat Construction Co., Inc.
Vicki J. Scharnhorst, CE ’82
President
40th Parallel Consulting
Randy D. Pope, EE ’77
President, Burns & McDonnell Engineering Co., Inc.
Sue P. Barsamian, EE ’81
Vice President, Burns & McDonnell Engineering Co., Inc.

Second row, left to right
Mark Hutton, CNS ’77
President
Hutton Construction Corp.
Cathy S. Ritter, CE ’75
President
Constellation Design Group, Inc.

Third row, left to right
Donna D. Kottwitz, CHE ’75
Reserve Manager
Eni Petroleum Co., Inc.
Scott D. Love, CHE ’80
Fellow Lead, Heavy Oil Research and Development, ConocoPhillips
Raj Nathan
Chief Marketing Officer and Executive Vice President, Worldwide Marketing and Business Solutions Operations, Sykosa, Inc.
Mike Manley, EE ’73
President
Safe Harbor Developers Inc.
Herb Whitney, CE ’63
President-retired
Chevron Corp.
Carl R. Izo, IE ’79
President and Chief Operations Officer, BNSF Railway Co.
Steven M. Theede, ME ’74
Chief Executive Officer-retired, Yokes Oil Co.

Richard M. Kerschen, CE ’64
President and Chairman of the Board, The Law Company, Inc.
Lewis Von Thaar, EE ’83
President and Corporate Vice President, General Dynamics Advanced Information Systems
Alan L. Sylvester, EE ’83
President
GenerAction LLC

Student Chapter of Associated General Contractors
Recent service activities of the K-State Student Chapter of Associated General Contractors (AGC):
- Designed and assembled, at the request of the K-State Athletic Dept., a new pushup platform for Willie the Wildcat. The lightweight metal frame with skid-proof deck weighs only 60 lbs. for each of the six handles held by the carriers.
- Planned and conducted an Alternative Spring Break trip to New Orleans, La., for 22 students and three sponsors to assist with Hurricane Katrina rebuilding efforts. This activity earned the group recognition as the “3rd best national collegiate chapter” from AGC of America, for its work in revitalizing the lower 9th Ward.
- In a joint energy-saving project with the K-State Student Chapter of AEI, insulated and sealed the attic and crawl space of President Kirk and Noel Schulz’s campus residence.
- Designed and constructed a new parking lot and sidewalks for Lutheran Campus Ministry’s campus center.
- Conducted a leaf-raking fund raiser.
- Participated in a volunteer work project with Westar Energy to construct an archery shooting range.

Sigma Lambda Chi
Sigma Lambda Chi, Construction Science Honor Society, assisted the K-State Gardens in removal of heating units, piping, and control panels from the conservatory.

Chí Epsilon
The civil engineering honorary, Chí Epsilon, worked with the Army Corps of Engineers in spreading mulch along the trails below Turtle Creek Dam.

Engineers Without Borders
Five K-State engineering students and members of Engineers Without Borders spent spring break 2011 in Guatemala, working to reduce the number of contaminants in the country’s drinking water. The group went door-to-door distributing and installing more than 200 water filters in homes in Panajachel, Guatemala. The filters came from a Rotary International grant and were about a foot-and-a-half tall, making them easily portable and allowing residents in the areas largely agricultural villages to take them into the fields for clean drinking water while working as well.

The team also built biosand filters in surrounding schools. The large filters made from layers of coarse and fine sand are able to remove around 90 percent of organic contaminants. The filtered water can then be treated with chlorine tablets, iodine drops or sunlight to kill the remaining contaminants.

K-State engineering students are frequently recognized for their successful efforts in team competitions, scholarship awards and research endeavors. But another category where they shine equally as bright is in giving time in service to others. An individual, three student chapters, and a group in an international organization are highlighted below for their accomplishments in this area.

BAE student recognized for innovation and service
DeeAnn Turpin, BAE, is creator of the campus-wide program, Give It Up for Good, where areas are provided in each dorm lobby in the spring for students to donate unwanted, reusable items that are then sold and the money donated to local charities.

Turpin initiated the partnership with the Manhattan United Way, Habitat for Humanity and several student organizations, engaging more than 200 volunteers, who in May 2011, collected more than 80,000 pounds of furniture and household goods as students moved out of the dorms. All of the items were either sold, raising $2,500 for local charities, or recycled, preventing tons of wastes from going to the landfill.

Her efforts were recognized at the World Wide United Way conference this summer where the project received the Innovation Award for creative use of electronic media to engage the student population in giving and advocating.

A salute to service-oriented students

DeeAnn Turpin

Give It Up for Good
Department shines at international meeting

They came. They saw. They conquered. While not quite literally performing Julius Caesar’s famous quote describing his short war with the enemy in Turkey, nevertheless K-State’s biological and agricultural engineering department definitely made a similar conquest at the 2011 American Society of Agricultural and Biological Engineers Annual International Meeting in Louisville, Ky., Aug. 7–10.

Students and faculty alike raked in the awards, with three student groups placing first in team competitions; two student groups winning outstanding branch awards; other students recognized for academics and papers; and several faculty recognized for research and service. In addition, numerous technical papers were presented by K-State BAE faculty and graduate students.

“The BAE department historically has been recognized for excellence in providing undergraduate design and extracurricular experiences. The 2011 ASABE awards ceremony continued the tradition of excellence and showcased the quality of engineering education provided to Kansas State University’s young people,” said Joe Harner, BAE professor and department head. “The recognition received was truly a reflection of the total KSU educational experience.”

They excelled in activities with different criteria. The foundation of our tradition of excellence is committed and dedicated faculty working with committed and dedicated students,” Harner said.

The following is a synopsis of K-State’s BAE accomplishments recognized at the 2011 ASABE meeting:

BAE robotics team: 1st place; ASABE annual international competition—fifth consecutive year of national championship

BAE fountain wars team: 1st place; ASABE annual international competition

BAE quarter-scale tractor team: 1st place, ASABE annual competition—K-State has placed in the top three in 11 of the 12 years of this competition.

2011 Association of Equipment Manufacturers Trophy Awards for Outstanding Student Branches: Student Engineering Branch Participation – 1st place, K-State BSE Club; Student Mechanization Branch Participation – 1st place, K-State ATM Club

Phoas of Alexandria Global Learning Award for 2011: Allie Archer, BAE senior, first recipient of this award honoring an outstanding undergraduate upper-class level or graduate ASABE student member who exhibits interest in engineering problems and global learning outreach.

Xiaorong Wu and Donghai Wang, and Karnamal Theerarat-tanannaon, Ph.D. student, Superior Paper Award

Kyle Douglas-Mankin, 2010–2011 ASABE Leadership Citation—Publications Council, recognizing service to ASABE for performance above and beyond the norm

Kyle Douglas-Mankin, Jim Koeliker and Shawn Hutchinson, 2010 Honorable Mention Paper (top 5% of manuscripts published in 2010)

Phil Barnes, assumed chair of ASABE Soil and Water Division.

They came. They saw. They conquered.
Every effort has been made to produce a comprehensive listing of donors for the calendar year July 1, 2010, through June 30, 2011. We apologize for any incorrect information.

Founders
The Seaton Society awards lifetime membership to its founders, those who have made a commitment in excess of $100,000 to innovation education excellence.
Grauer named to new post

Bette Grauer has joined the Kansas State University College of Engineering as the assistant dean for retention, diversity and inclusion.

Grauer holds bachelor’s degrees in civil engineering and physics education from K-State, and a master of curriculum and instruction degree from Wichita State University. She has held engineering positions in industry, government and consulting. She worked as a professional engineer specializing in hydrology and hydraulics, including dam design, breach analysis and open channel design.

Grauer also is a licensed science educator and has taught secondary science methods and supervised science student teachers for the K-State College of Education.

Her interests include building successful strategies for retention and outreach in engineering education, encouraging diversity and inclusion in engineering, and developing engineering-applications for middle and secondary science and mathematics curricula.

Senior development director announced

Lori Rogge joined the College of Engineering in May 2011 as senior director of development. She leads the formulation and implementation of plans in support of individual and corporate philanthropy for the college.

Rogge was the associate director of gift planning for the KSU Foundation from 2005–2011 and served as a gift planning officer from 2004–2005. In her roles in gift planning, she assisted donors with the integration of their charitable intentions with their investment portfolio.

Prior to joining the KSU Foundation, Lori was a personal financial advisor for more than 10 years. She specialized in retirement, estate and tax planning. Lori presented at seminars, conferences, contributed to publications and has extensive experience in development and client relations.

Rogge earned her bachelor’s degree in business administration from Kansas State University in 1994. She is a Chartered Advisor in Philanthropy, and holds life and health insurance and variable contract licenses.

Big 12 Engineering Consortium wins award

The University Professional and Continuing Education Association recognized Kansas State University’s Division of Continuing Education for excellence in several areas, including programs, teaching and marketing.

The honors, presented at the association’s annual conference, April 6–9, in Toronto, Canada, included an award to the Big 12 Engineering Consortium’s nuclear engineering program—The Distance Learning Community of Practice Exemplary Program Award.

The program provides, with assistance from the Division of Continuing Education, online underwriting courses for nuclear engineering to Big 12 engineering students.

“We’re grateful to receive this wonderful national recognition for our efforts to make nuclear engineering education accessible to students and professionals from various campuses and industries via distance education,” said Mohammad Hosni, professor of mechanical and nuclear engineering at K-State.

“Our primary goal is to create an atmosphere of collaborative teaching and learning, and help educate our future nuclear engineers who will be successful in their chosen careers and professional fields.”

Hosni undergraduate courses in nuclear engineering to Big 12 engineering students.

Thirty-three miners, trapped 2,200 feet underground, for 69 days—this was the story the audience gathered in Fiedler Auditorium had come to hear first hand on Sept. 30 from College of Engineering alum James Michael Duncan, M.D. Duncan, from the NASA Headquarters Office of International and Interagency Relations, presented the Eyestone Lecture, “Chilean Miner Rescue: The NASA Experience.”

Duncan led the NASA team that traveled to Chile in September 2010 in support of the rescue of the 33 trapped miners. For their efforts, they were recently awarded the NASA Exceptional Achievement Medal and the 2011 Samuel J. Heyman, Service to America, National Security and International Affairs Medal.

Prior to his current NASA Headquarters assignment, Duncan was deputy chief medical officer, Space Life Sciences Directorate, at the Johnson Space Center in Houston, Texas. He began his work with NASA when he joined Wyle Laboratories in 1999 to provide medical coverage to astronauts in training in Star City, Russia. Subsequently, he became a NASA flight surgeon in 2000 and participated in the Space Shuttle Program as deputy crew surgeon for STS-104 and STS-108 before being named lead crew surgeon for Expedition 6 to the International Space Station. He served as manager of medical operations from 2002 to 2004 and as chief of space medicine from 2004 to 2009.

Duncan has also received the Johnson Space Center Superior Achievement Award and the NASA Outstanding Leadership Medal. A native of Wichita, Kan., he received a B.S. degree in nuclear engineering from Kansas State University in 1974, going on to complete his Doctor of Medicine degree at the University of Kansas School of Medicine. Duncan is a diplomat of the American Board of Internal Medicine and is certified in internal medicine and pulmonary disease. He is a full member of the International Academy of Astronautics, having been elected by his peers in 2010. He is also an FAA Senior Aviation Medical Examiner, a Fellow in the American College of Chest Physicians and an instrument-rated private pilot.

The Eyestone Lecture Series, established in 2000, is funded by an endowment of the late Fred and Mona Eyestone. Fred Eyestone, a 1941 K-State graduate in electrical engineering, was a member of the College of Engineering Advisory Council and a Distinguished Service Award recipient.

—by Mary Rankin
Four alumni of K-State’s ARE program were recently named to Consulting-Specifying Engineers magazine’s “40 under 40” list, an honor bestowed on the best and brightest, 40 years old or younger, who are engaged in the building engineering and construction industry. Those honored include the following:

**2011**

- **Jeff Smith** (EE) and **Charlene (Linsky) Smith** (EE ’92, MSEM ’02) started Young Minds At Play in 2010 (www.youngmindsatplay.com), a company specializing in manufacturing and selling natural, wooden educational toys, and have recently won the 2011 Dr. Toy Best Green Product Award for their First Jigsaw Puzzle – Square. The national award recognizes the best green playthings of the year.

- **Jacob Miller** (CNS) has been assigned by Black & Veatch to a coal-fired power plant construction project in South Africa. The 4800-megawatt facility is set to be the fourth largest in the world upon its completion.

**2010**

- **Blake Brosa (CNS)** has been named “Construction Rookie of the Year” by the Target Corporation. Now located at Target headquarters in Minneapolis, Minn., Brosa is the project manager for the exterior building envelope and cyclical repaint programs.

**2009**

- **Michael Smith** (IE) has been recognized in a recent issue of the American Institute of Steel Construction with the Award for Excellence in Manufacturing, which recognizes those who have made a significant impact on the steel industry.

**1993**

- **Rick Kuhn (CNS)** has been appointed interim dean of the Dwight Look College of Engineering, acting vice chancellor for engineering of The Texas A&M University System, and acting director of the Texas Engineering Experiment Station.

- **Joe Richard Gray (ME)**, Coffeyville, Kan., died May 4, 2011, from pancreatic cancer. For the past nine years he had been vice president for Equitable Resources in Charleston, W.V. At the time of his death he was working for Crosstex Energy in Dallas as vice president of operations. He is survived by his wife, Jan, three children and seven grandchildren.

**1980**

- **N.K. Anand (M.S., ME)** has been appointed as associate professor at University of Detroit Mercy and has received the Outstanding Educator of the Year award.
Entrepreneurship Excellence

Lecture and panel discussion

Mike Manley, EE ’73, right, emphasizes a point as part of “Entrepreneurship Excellence,” a lecture and panel discussion hosted by the Colleges of Engineering and Business, Oct. 5 in the K-State Union. Manley and fellow alums Toby Rush, ME ’98, and Dave Dreiling, MKTG ’89, discussed their experiences in achieving entrepreneurial success. John English, dean of the College of Engineering, and Ali Malekzadeh, dean of the College of Business, served as facilitators of the event.

Manley started his own company, QualTrak Corporation, which produced software for QA professionals and provided the first commercial software bug tracking system in the world, the first commercial software test management system and was awarded two patents. Since selling QualTrak to Pure Software, he has been involved in multiple venture capital projects.

Rush co-founded Rush Tracking Systems and serves as president and CEO. Rush Tracking Systems has a proven track record working with Fortune 100 client organizations to deliver best-in-class RFID solutions that help optimize operations.

Dreiling owns GTM Sportswear Inc., a Manhattan company he and a partner founded 20 years ago. GTM sells customized imprinted sportswear to athletic teams, corporations, cheer squads and other related markets throughout the world. Through GTM, and several other business ventures, Dreiling’s companies employ more than 1,300 people nationwide.