Seaton Society welcomes Douglas Smith and James Jaax to the Hall of Fame
“As a kid growing up in Western Kansas, I learned how to cut calves, throw hay bales, stock shelves in my dad’s grocery store, and even had a hand in building the back nine on our golf course, but I never dreamed of the career that I have enjoyed as an engineer from Kansas State University.”

What a great quote from Doug Smith, one of our two 2012 Hall of Fame inductees—a rural Kansas kid who graduated from K-State in civil engineering, going on to a career that has taken him coast to coast and around the world on projects for Tetra Tech and Black & Veatch.

And our other 2012 inductee, Jim Jaax, armed with a 4-H scholarship chose to study mechanical engineering at K-State, began an association with NASA as a student summer employee of Prof. Fred Rohles “cleaning monkey and chimpanzee cages,” interned at the Manned Space Center in 1966, and 35 years later retired as deputy director of engineering at the Johnson Space Center, having had a hand in such programs as the Apollo Moon Landing, Space Shuttle and International Space Station.

Their success stories, and those of so many others, are just one of the reasons I am so excited to be the dean of engineering at Kansas State as we head into the next 10 years with the charge of the University Engineering Initiative Act (UEIA) before us.

I’ve written about the initiative in this column before—you’ll even find a two-page spread about it in this issue—and it will likely be featured in updates and links in every Impact for the next 10 years.

But it’s that big and that important. And it’s tied to every story and article we cover. Excellence awards like Raj and Diana Nathan’s, for example, are a direct link to meeting increased recruitment and retention needs in order to grow our graduates.

The UEIA will help us support and enlarge our faculty and staff—the people who head up programs like the University Engineering Alliance, work tirelessly with our students on events like Engineering Open House, and strive to educate the next generation of talented engineers like Alumni Fellow Ray Dempsey, Jr.

And down the road, the initiative will contribute to expanded facilities, broadening opportunities even further for every aspect of engineering education at Kansas State.

It’s really all about the initiative and about all of us supporting its goals on many different levels—from responding to that Telefund call, to signing on for a hunting trip to support scholarships, to claiming a naming opportunity for a classroom or wing of a new building.

Because in the end, it will be about the lasting benefit the UEIA will bring—more and better educated engineering graduates for our state, our nation and the world.

John R. English
Dean of the College of Engineering
from the Dean

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“Universities have a major role in not only conducting basic research but, more importantly, encouraging and grooming the next generation of researchers in our country.”

— Raj Nathan

In support of research—
the Raj and Diana Nathan Undergraduate Research Excellence Award
For one, it was the opportunity for a funded undergraduate research project. For the other, it was an investment in a way of life and a means of showing appreciation.

Marshall Frey, senior in construction science and management and first recipient of the Raj and Diana Nathan Undergraduate Research Excellence Award, tackled a senior-year research project that examined the impact of integrated project delivery (IPD) and lean construction on the architectural, engineering and construction industries.

“IPD is an emerging project delivery method where the major team members of a construction project are linked by contract in order to lessen the risk of a project, while sharing in the reward that may be realized by working as a team,” Frey said. “Similarly, lean construction borrows ideas from lean manufacturing practices and applies them to the construction process in order to streamline production while eliminating waste.”

This type of innovation is the end goal of Raj and Diana Nathan’s gift, which provides financial assistance to undergraduate student research in the College of Engineering at Kansas State, while also providing a meaningful research experience for the student.

“I feel very fortunate to have been afforded this opportunity and am confident that I am a better builder because of it.”

Annually, each academic department in the College of Engineering is eligible to submit one proposal for a junior- or senior-level student to receive one year of funded research. Recipients are selected by the dean, senior associate dean and associate dean for research.

The following students have been named Raj and Diana Nathan Undergraduate Research Excellence Awardees for the 2012–2013 academic year:

- **Alexander Van Dyke**, mechanical and nuclear engineering, investigation of frost formation on mixed hydrophilic and hydrophobic surfaces

- **Levi DeLissa**, industrial and manufacturing systems engineering, modeling power purchasing and distribution
Two new members were inducted into the College of Engineering Hall of Fame Saturday, March 31 at the annual Seaton Society celebration. This is the highest honor bestowed on its alumni by the college. Honorees were recognized for their professional success and accomplishment, involvement with and support of the College of Engineering, dedication to K-State, and professional and public service.

**James Jaax**  
ME ’65, 45-year career with NASA—currently a consultant, Houston, Texas

**Douglas Smith**  
CE ’71, president, Tetra Tech Engineering and Architecture Services Group, Boulder, Colo.

“I am deeply moved and grateful to accept this honor...the most appreciated...I have ever received. To be recognized [by] the great institution that enabled it to be possible...is truly priceless.”  
— James Jaax  
2012 Hall of Fame

“I have loved my engineering career not so much for the engineering, but rather because engineers design and construct projects that improve the lives of people.”  
— Douglas Smith  
2012 Hall of Fame
Professional Progress Award

Professional career accomplishments during the first 20 years following their graduation earned 10 alumni the Professional Progress Award from the College of Engineering at the Seaton Society celebration March 31. Recipients of the award are nominated by their respective department heads and confirmed by John English, dean of engineering.

Brian Armstrong, CE '93
Bartlett & West
—Vice president

John Bridson, ME '92
Westar Energy
—Vice president of generation

Karl Hagen, IS '94
Wal-Mart Stores Inc.
—Senior technical expert and infrastructure engineering design lead

Darren Harvey, ARE '96
Smith Seckman Reid
—Vice president

Miles Keaton, BAE '96, M.S. '98
John Deere Hay and Forage Platform
—Global manager portfolio planning

Kollin Knox, CNS '92
P1 Group Inc.
—President

Mark Miller, IE '92
Accenture
—Lead solution architect communications, media and technology segment, Atlantic and Central regions of North America

Robert Rainbolt, CHE '93
Procter & Gamble
—Operations manager

Jesse Schriner, EE '92
Microsoft Corporation
—General manager manufacturing and supply chain information technology

Sabra Schriner, EE '92
Microsoft Corporation
—Senior director quality and business excellence
Four Kansas State University engineering faculty members experienced sailing the sea in a submarine as part of educational trips sponsored by the U.S. Navy.

Donald Fenton, professor and head of mechanical and nuclear engineering, and Jeffrey Geuther, university nuclear reactor facility manager, visited the Naval Base Point Loma in San Diego in November and took a one-day cruise on the USS Hampton, a Los Angeles-class, nuclear-powered fast-attack submarine.

In February, Don Gruenbacher, professor and head of electrical and computer engineering, and Mo Hosni, professor and director of the University Engineering Alliance, formerly known as the Big 12 Engineering Consortium, travelled as well to Naval Base Point Loma where, also hosted by the U.S. Navy, they toured and rode in the submarine USS Topeka. Accompanying them, also from K-State, were Sue Maes, dean of the division of continuing education, and Dana Reinert, consortium coordinator for the University Engineering Alliance.

The trips were part of a U.S. Navy objective to expose engineering faculty to the experience and training level of nuclear navy officers. This will help faculty members encourage students to consider careers in the nuclear navy, particularly the Nuclear Propulsion Officer Candidate program.

Last summer officials from the University Engineering Alliance and the U.S. Navy Naval Nuclear Propulsion and Naval Recruiting Command signed a memorandum of understanding with benefits to both parties. Because the alliance is working with the Navy, students will have the opportunity to go onboard naval vessels and interact with the Navy’s nuclear officers. Faculty will become familiar with job opportunities in the nuclear Navy that might interest Big 12 students. In turn, the alliance offers online postsecondary engineering education to Navy personnel.

The University Engineering Alliance allows students enrolled at a Big 12 school to take online nuclear engineering courses taught by other partner schools.
K-State engineering launches new minor

Due to a resurgence of interest in nuclear power in the U.S. as a way to address the country’s energy needs and combat problems commonly associated with widespread usage of fossil fuels, the College of Engineering saw an opportunity and began offering a new minor in nuclear engineering in fall 2011.

Enabled by the University Engineering Alliance, K-State students majoring in any engineering program may pick up the nuclear engineering minor to increase their success in the job market after graduation or simply because they are interested in the field. Previously, only students majoring in mechanical engineering at K-State could add an option in nuclear engineering to their curriculum.

The new minor in nuclear engineering from K-State is also available to professionals holding a B.S. degree from any ABET-accredited engineering program in the country. To accommodate those who may be far away, classes for the minor will be offered online as well as on the Manhattan campus. For more information on the nuclear engineering minor, visit www.dce.k-state.edu/engineering/minors/nuclear/.
2012 Engineering Open House

90 YEARS THE LEGEND LIVES ON

Engineering
Open House

College of Engineering
The College of Engineering hosted the 90th annual Engineering Open House, April 20–21, kicking off Friday’s activities with the traditional run from K-Hill, parade and skits, crowning of St. Pat and St. Patricia, and lighting of the torch.

Saturday events, a part of the all-university Open House, included the ASABE pancake feed, design team and departmental showcases, and industrial displays. Visitors enjoyed riding around campus on the Little Apple Express train, hands-on activities provided by student groups, and a special luncheon for Steel Ring Professional Honor Society alumni and emeritus faculty.

St. Pat—Bryant Denning, ARE
St. Patricia—Laura Wolters, CHE

Check the back for a list of this year’s Open House award winners.
The Kansas economy is substantially driven by the engineering profession. Eighty percent of all science and technology-based occupations in the state stem from engineering and information technology fields. In 2008, the top-25 U.S. exports via Kansas fell largely into two commodity categories—agriculture and engineering-intensive machines and equipment. Of the $8.1 billion export value of these top-25 commodities, engineering-intensive commodities accounted for more than $5.5 billion or two-thirds of the total.

But, the number of graduates earning degrees in engineering from Kansas universities is lower than other states represented in the Big 12 conference, creating an engineering workforce shortage in the state, and limiting productivity and innovation from industry.

**How do Kansas universities sustain Kansas industry with fresh engineering talent to impact the state, the nation and the world?**

The University Engineering Initiate Act (UEIA), signed into law by Gov. Sam Brownback last May, directs cooperation among the Kansas Department of Commerce, Kansas Board of Regents, Kansas State University, University of Kansas and Wichita State University to increase the number of engineering graduates by more than 60% within a 10-year period, translating to nearly 600 new engineers in the workforce by 2023.

Each college/school will be provided $3.5M/year for 10 years, and the UEIA requires the state’s three engineering schools to secure a $1-to-$1 match from non-state sources to access funds available for expansion from a “Kan-Grow Engineering Fund,” established from a transfer of monies from the state’s Expanded Lottery Act Revenue Fund.
Recruitment and retention, faculty and facilities

To reach graduation levels required by UEIA, we must accomplish the following:

1. Enhance recruitment and retention efforts, including an increase in scholarship dollars.
   - **Scholarships**
     - Current: $1.5M/year
     - Goal: $2.5M/year
     - Total goal: $10–20M

2. Increase the number of faculty and staff to support this rise in student enrollment.
   - **Faculty**
     - Five new chairs: $2M each
     - Five new professorships: $1M each
     - Total goal: $15M

3. Expand our infrastructure to accommodate the increase of students and faculty, as well as support for technology and innovation.
   - **New building**
     - $10–20M in naming opportunities

   **Total anticipated goal: $35–55M**

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**Projected growth of enrollment and graduates**

A strategic alignment

Accomplishing these goals will put us well on the path in support of President Schulz’ K-State 2025 Plan:

*Kansas State University will be recognized nationally as a top-50 public research university.*

For more on the UEIA, visit [www.engg.ksu.edu/ueia](http://www.engg.ksu.edu/ueia)
Twenty-two students, seven disciplines, 10 countries—Study Abroad participant data from the College of Engineering for the 2011–2012 academic year—an experience the college encourages and supports in conjunction with the K-State Study Abroad Program.

Students enrolled in electrical, mechanical, industrial, computer, chemical, civil and architectural engineering studied in England, the Czech Republic, China, Germany, Turkey, Australia, Mexico, Italy, Cyprus and Spain.

To attract even more students to the program’s benefits, the college hosted a Study Abroad Forum in February where attendees could gain further information on the overall particulars, learn of scholarship opportunities and hear first-hand from students who had studied in a foreign country.

“The single greatest value of my semester involvement in Study Abroad was really living and experiencing a different culture for a significant amount of time,” said Rob Clark, biological systems engineering, who had studied in Mexico. “It opened my eyes to the different ways people interact with each other as well as solve problems—a key to living in and enhancing the global community we are moving towards every day.”

Another speaker at the forum, Kelsey O’Hara, electrical engineering, said, “Thousands of miles away from my family and friends, I learned I was able to survive on my own. And not only survive, but thrive, in the Czech Republic where I did not even know the language, yet ended up making tons of friends and traveling to 10 different countries. It made me a lot more independent.”

Dean John English, who gave the welcome address at the forum, told students how living and studying abroad would expand their world view and understanding of the interconnectedness of the world community. Jordan Bever, industrial engineering, concurred.

“While in Istanbul, I learned the impact of current events,” she said. “Watching the conflicts unfold in Athens and Cairo made me realize the impact that world events have on industry. My classes discussed American companies and current influences from this outside perspective. It was fascinating that people from other countries know far more about the U.S. than most of us do.”

Scholarship support

While scholarship opportunities for the Study Abroad Program are available through Kansas State, nine of the engineering participants also received scholarship support through the college. Dean English, in his remarks, told students about one unique way he participates in an event that raises funds specifically for Study Abroad scholarships—the Target for Excellence Hunt.

Held at the Ringneck Ranch, Tipton, Kan., hunters join the dean for two days of guided bird hunting, a trap-shooting competition and on-site accommodations with gourmet meals. A portion of the overall cost is a tax-deductable contribution to support Study Abroad scholarships in the college. This year’s event will be Oct. 28–29, and those interested in registration can contact the College of Engineering Development Office at brandies@found.ksu.edu or 785-532-7544.
For the third consecutive year, students, faculty and staff boarded buses for the Engineering Alternative Spring Break experience. Twenty-six students from seven disciplines spent March 18–21 touring corporate facilities and project sites, networking with hiring managers and K-State alumni, and experiencing Kansas City through planned social events at the Kansas City Country Club Plaza, Legends Mall, and Power and Light District.

“The trip was a lot of fun, a great opportunity to network with companies, and a way to meet other engineering students,” said Noura Saadi, civil engineering.

“I got to see what ‘real world’ engineering companies look like,” said Meredith Guigli, mechanical engineering. “The experience of the trip opened my eyes to the possibilities of engineering for my future.”

Host companies this year were BNSF, Burns & McDonnell, Cerner, Hallmark, Harley-Davidson, Missouri Department of Transportation, Turner Construction and Westar Energy.

“My favorite part was one-on-one interaction with actual engineers during question-and-answer sessions,” said Raoul Fossi, mechanical engineering. “They described their responsibilities as engineers, gave us advice on how to make a smooth transition from school to work, as well as providing hints on getting internships and jobs.”

The students were accompanied by John English, dean; Jacqui Gatson, program coordinator for Alternative Spring Break; Sujatha Prakash, STEM program coordinator; and Emily Wilcox, retention coordinator, all College of Engineering; and Brian Neighbors, assistant director, Career and Employment Services.
John A. White, Jr., distinguished professor of industrial engineering at the University of Arkansas, member of the National Academy of Engineering and chancellor emeritus at the University of Arkansas, visited the College of Engineering on April 2. He presented the lecture “Quo Vadis, Engineering?” addressing faculty and staff in Fiedler Auditorium on current trends in engineering education.

“I had been privileged to see an advanced set of the data Dr. White presented,” said John English, dean of K-State engineering. “I believed it to be a topic particularly well suited for our college as we look into the future and the graduation requirements of the University Engineering Initiative Act.”

White served as University of Arkansas chancellor from 1997 until 2008. Prior to that he had been dean of engineering at Georgia Institute of Technology and was a member of the Georgia Tech faculty for 22 years. From 1988 to 1991, he served as assistant director for engineering at the National Science Foundation in Washington, D.C.

He received his bachelor’s degree in industrial engineering from the University of Arkansas, and holds a master’s degree in industrial engineering from Virginia Polytechnic and State University, and a Ph.D. from The Ohio State University. White also has received honorary doctorates from the Katholieke Universiteit of Leuven in Belgium and George Washington University.

Company of the Year

BNSF was honored as 2012 Company of the Year at the annual Engineering Awards and Company of the Year Banquet, April 26. The Company of the Year is chosen by members of the Tau Beta Pi Engineering Honorary Society based on exhibited commitment to engineering education, and to high standards and quality performance in the engineering profession.

Emeritus Dean Donald E. Rathbone established the Company of the Year award in 1974.

BNSF was created on Sept. 22, 1995, from the merger of Burlington Northern Inc., parent company of Burlington Northern Railroad and Santa Fe Pacific Corporation, parent company of the Atchison, Topeka and Santa Fe Railway. On Feb. 12, 2010, BNSF became a subsidiary of Berkshire Hathaway, Inc. Now headquartered in Fort Worth, Texas, BNSF Railway operates one of the largest railroad networks in North America, covering the western two-thirds of the United States.

The BNSF Railway Foundation supports communities by funding a wide variety of arts and social service organizations, and college scholarship programs. Since 2000, the BNSF Railway Foundation has contributed $46 million to educational, cultural and other worthy programs in communities served.

Carl Ice, IE ’79, president and chief operating officer of BNSF, served as representative of the Company of the Year and spoke at the banquet.
Ray Dempsey, Jr., IE ’90, vice president, government and public affairs, BP America, Washington, D.C., has been honored as the 2012 College of Engineering Alumni Fellow.

One of 12 distinguished Kansas State University Alumni Fellows for 2012, Dempsey returned to campus Feb. 22–24 to discuss current business and industry trends, and to meet informally with students and faculty.

Alumni Fellows are chosen based on their high levels of professional accomplishment and distinguished service in their respective careers. The program is sponsored by the K-State Alumni Association, the president’s office and the Deans Council.

Dempsey is a 22-year veteran of BP. He has served as vice president, strategy and portfolio for BP’s fuels value chain strategic performance unit, a “Fortune 100”-sized division of BP plc., where he had responsibility for crude oil and fuel products market analysis.

Since joining the company in 1990, Dempsey has held a variety of management and operational roles in engineering, environmental, strategy, and financial areas of BP’s operations in the U.S. and abroad.

He is the president of the BP Foundation and is a member of the Dean’s Advisory Council for the College of Engineering at K-State. Dempsey is also a member of the BP Advisory Board for the National Society of Black Engineers and is a board liaison for the National Action Council for Minorities in Engineering.

Dempsey and his wife, Alysia, have four daughters.
Telefund

Volunteers from the College of Engineering manned the phones Feb. 5–9 for the 2012 Telefund campaign. Student callers garnered 2,191 pledges—including 49 first-time participants—for a total of $255,994 in commitments for student scholarships and educational benefits. University wide, the annual event secured 12,507 pledges totaling $1,076,140.00.

ENGINEERING career fair

Austin White, ECE, center, and Jesse Hill, CMPEN, right, visit with an official from GE Aviation-Digital Systems at the MEP Career Fair Reception, Feb. 6 in the engineering atrium. Students from the Multicultural Engineering Program, Women in Engineering, Engineering Student Council and Engineering Ambassadors were invited to meet with representatives from 20 companies at the evening event featuring food and live entertainment. The following day in the K-State Union, more than 120 companies took part in the 34th annual Engineering Career Fair, jointly sponsored by the College of Engineering and K-State’s Career and Employment Services, where students were recruited for internships and full-time positions.
Recognitions

‘73 Charles “Chuck” Grier (CNS), Wichita, Kan., was recently recognized by the Quivira Council of the Boy Scouts of America with the “Good Scout Award” for his work with the council and lifelong commitment to young people. Grier is president and CEO of UCI, a general heavy contractor with 125 employees, operating primarily in Kansas and Oklahoma.

‘75 William “Bill” Stannard (CE), P.E., Kansas City, Mo., was recently elected president and CEO of Raftelis Financial Consultants, Inc., a financial, pricing and management consulting service for public and private water, wastewater and storm water utilities. Stannard has more than 35 years experience in providing consulting services to the water and wastewater utility industry.

‘94 Robin (Pham) Sawyer (CNS), Overland Park, Kan., president and business owner of Skyline Construction Co., Inc., received the Company Award for Kansas Minority-Owned Businesses from the Kansas Department of Commerce Office of Minority and Women Business Development. As a part of Kansas Minority Enterprise Development Week, her company was one of 12 recognized for its support of minority and women-owned businesses and efforts toward creating opportunities.

‘97 Sarah J. Forrest (CNS) has been promoted to chief estimator for Hensel Phelps Construction Co. where she will have oversight of estimating services in the Mid-Atlantic District office in Chantilly, Va. She has been with Hensel Phelps, one of the nation’s largest construction companies, for 15 years, the past eight in the Mid-Atlantic District and prior to that the Plains District in Greeley, Colo.

‘98 Kurt Seeman (CNS), Greeley, Colo., has been named to the “Top 20 under 40” list for the Mountain Region by the Engineering News Record. Awardees are named based on their contributions to the industry and their communities. He is a project engineer with Hensel Phelps Construction Co., managing a number of key projects, including the Denver Justice Center. Seeman is also an instructor for the Construction Industry Training Council of Colorado.

‘10 J.P. (Paul) Fangman (CE) has been assigned by ExxonMobil to an integrated drilling platform construction project in South Korea. The 41,000-tonne topsides bound for offshore Russia will be the third largest ever built.

Deaths

‘60 Do Sup Chung (M.S. CHE, Ph.D. Grain Science ‘66) passed away Feb. 19, 2012, in Birmingham, Ala. He had served on the faculty at Kansas State University in the department of biological and agricultural engineering from 1965 to 2003. He published more than 200 scientific papers on grain storage and processing, and food processing engineering. His work with USAID provided technical assistance on grain post-harvest technology in 25 countries, fostering a long list of awards and honors over the span of his career. He is survived by his wife, Okkyung Kim Chung, two daughters and four grandchildren. Donations may be made to the Chung-Kim Scholarship Fund in the department of biological and agricultural engineering or to the Dr. Do Sup Chung Scholarship for International Students, both at Kansas State University.

‘99 Weesam Kassim Alkhatib (CHE), 34, died of a rare form of cancer April 14, 2012, at his home in California. A vascular surgeon, he was a clinical instructor of surgery at Stanford University at the VA Medical Center in Palo Alto, Calif. He is survived by his parents and two sisters, and was preceded in death by his younger brother earlier this year.
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 Roberta Maldonado-Franzen, Interim Director of Affirmative Action, Kansas State University, 214 Anderson Hall, Manhattan, KS 66506-0124, (Phone) 785-532-6220; (TTY) 785-532-4807.

2012 Open House Awards

- Yellow Brick .......................... ARE
- Outstanding department ............ CNS
- Technical display .................... CHE
- Curriculum display .................. CHE
- Limited class display ............... IE
- Freshman/sophomore display ....... CHE
- St. Patricia—Laura Wolters .......... CHE
- St. Pat—Bryant Denning ............. ARE

Engineering Banquet Awards

- David and Virginia Braun Innovation Award Karl Hertel and Bryan Proctor ......... IE
- W. Leroy Culbertson/Steel Ring Leadership Scholarship Chelsea Corkins .......... BAE
- Clair A. Mauch/Steel Ring Advisor of the Year J. Garth Thompson .............. MNE