Making the Investment

Impact

Kansas State University College of Engineering Spring 2000

Time + energy + direction = Open House success

It started on Friday with the parade, the torch runner's arrival, the crowning of St. Pat and St. Patricia, an Engineering Awareness Seminar for high school students, and the evening opening of student displays and Open House facilities.

A full Saturday followed with a pancake feed, high school design competitions, again the Open House facilities and student displays, industrial displays, a reception for Steel Ring alumni, an engineering alumni luncheon, the social hour, and the Engineering Open House Awards Banquet.

And all it took for the successful accomplishment of the 78th annual Engineering Open House, March 31–April 1, 2000, was nine months of planning and several hundred hours of combined efforts of students, faculty, and administration—now that's an investment in K-State engineering!

Steel Ring, the college's senior engineering honor society, is the driving force behind Open House.

Each spring, the group's outgoing members select 20–24 new members who will be graduating in either May, August, or December of their one year of service. The new members immediately elect their officers, and as Steel Ring advisor and asst. dean of engineering, Ray Hightower, explained, "Work on the next Open House essentially begins as soon as the coming year's officers are elected. Steel Ring members must 'hit the ground running' each August in order to make Open House happen in the spring.

"Steel Ring meets as a group once a week during the school year, and then each committee meets once or twice a week. Members put in 150 to 200 hours a semester," Hightower said.

And the return on this investment—"It's our best way to sell engineering," according to Hightower, "and not just to high school students and those off campus, but we actually have K-State students from other departments switch to engineering after coming to our Open House.

"But it's also an outstanding educational opportunity for our students," Hightower, who's sponsored Steel Ring for 23 years, continued. "I get real joy seeing Steel Ring members mature in people, team, and leadership skills as they work on this event throughout the year."

2000 Open House awards:

Outstanding Department–ARE

Yellow Brick (best float and skit)–ISME

Best Technical Display–EECE

Best Open Class Display–CNSM

Best Limited Class Display–CNSM

Best Freshman/Sophomore Display–ARE

Best Curriculum Display–ARE

"Open House is such a benefit to the students," agreed Alison Pacheco, asst. professor of architectural engineering and construction science, faculty advisor for ARE students for Open House, and advisor for the student chapter

continued on page 4

King says of Bosse–

A "fantastic supporter"

continued from cover

While much of the itinerary of the alumni fellows' campus visit involved speaking, meeting, and sharing with various groups, Bosse was not a stranger to this type of service to the College of Engineering, holding positions on both the college's advisory council and the corporate advisory board of IMSE.

"Nadalie is a fantastic supporter of the K-State College of Engineering and the Department of Industrial and Manufacturing Systems Engineering," Terry King, dean of engineering, said. "Through her participation on the college's and the department's advisory councils, she's helped guide us to greater levels of success. I am absolutely delighted that she is the 2000 College of Engineering Alumni Fellow.

"Nadalie is one of those outstanding graduates I like to talk about," he stated. "She has accomplished so much through her innate intellectual talent and strong work ethic. Any recent graduate would do well to have Nadalie as a mentor."

Like many successful people, King's comment continued, Bosse has the ability to "cut to the heart of any issue." This was clearly demonstrated as she spoke to students about the path of career success at an evening lecture sponsored by the Society of Women Engineers as part of her visit.

"My philosophy on the job," Bosse told the audience, crediting much of it to what she learned at K-State, "is to go out, do the work, and deliver—people who employ you have the right to expect that from you.

"Learn the business, not the job," she continued. "Ask yourself—'How does what I am doing fit into decisions being made company-wide?'"

Another piece of advice from Bosse—find and be a mentor. "Don't be afraid to ask someone to be your mentor," she advised. "Find that person whose knowledge and experience you respect, and tell him or her you see yourself having a career much like theirs."

And be ready to offer that service as well. Bosse said much of what she gained while at K-State came in the form of faculty personal interest—those people who were available to let her know what was "out there" career-wise.

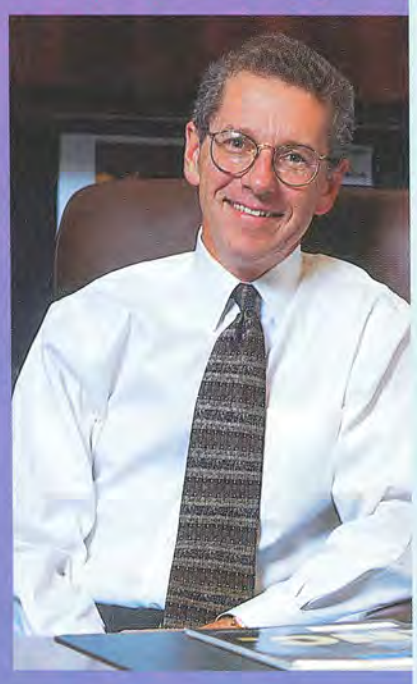
"Most students don't know what they want to do, but when faculty or mentors are willing to guide you towards internships and career paths—and this is what was done for me—it can make all the difference. If I can give some insight in these areas," she continued, "while I'm here on campus and through the advisory councils, I'm more than willing to do so."

Being the first woman alumni fellow for the college affords Bosse perhaps some extra insight for the

continued on page 6

Khris House and Jenny Wright

Message from the Dean



Making the Investment—these are pretty popular buzz words in our culture today with all the talk about the stock market and how our investments are doing. But as the stories and features of this spring edition of *Impact* started taking shape, we began to see a broader application of the term. We saw that many people—from alumni and friends to students and faculty—were making that commitment—with time and service, and financial support—to invest in the future of the K-State College of Engineering.

Perhaps our 2000 Alumni Fellow Nadalie Bosse, whose cover story leads off this issue, put it best when she said of our institution and her role in support of it, "[T]here needs to be a contribution back . . . in order to keep it going for the next generation."

And thus these investments or contributions have a twofold effect—they meet immediate needs, yet maintain a foundation for the future. So my challenge to you, as you read through these pages, is to stop and ask: "Where do I fit in? How best can I make my investment in engineering education at Kansas State?"

You'll find the opportunities are varied and unique as you learn about the different people who have stepped forward to give of their time and talent and finances. From the Telefund volunteers who asked, to the Telefund contributors who said "yes," these investors make up the "portfolio" that is K-State engineering.

Our investors are represented by students and faculty putting in countless hours to pull off the rousing success of our annual Open House. The years of teaching and leadership from men like Roy Seaton and Stu Swartz; advisory council service of Nadalie Bosse, Bob Tointon, and Gary Edwards, along with their respective gifts of scholarship, faculty, and facility support; Lloyd Smith's funding for an innovative course; our Company of the Year, TDM, and its support of our solar car team; this fall's Fiedler Hall dedication—all of these resources and more give evidence to the claim: "The College of Engineering is a solid investment."

Last fall we verbalized the vision or goal of these investments, that of making our college "the best comprehensive college of engineering in the United States." That's a substantial dividend I know you'll want to plan to be a part of!

T S King

Terry S. King, Dean

Swartz notes changes, advancements during 32-year career

When the clock struck midnight on January 1, 2000, Dr. Stu Swartz, P.E., Martin K. Eby Distinguished Professor, and head of the KSU Department of Civil Engineering, essentially entered his fifth decade of service to the college. Having joined the CE faculty as an assistant professor in 1968, he will retire this coming August after 32 years with the department.

"You get the 'total package' when you look at Stu Swartz's contributions," Terry King, dean of the College of Engineering, said. "This is a man who has dedicated his entire career to Kansas State University. His research has brought national and international prominence both to himself and the college. His service to the civil engineering department, including holding the position of department head since 1992, has been invaluable."

Swartz

The terms "seen it all" and "done it all" do tend to come to mind when looking at the span of Swartz's career.

"I came in a year of great turmoil," Swartz said of his move here from the Chicago area where he had earned his B.S., M.S., and Ph.D. degrees, all CE, from the Illinois Institute of Technology. "The near west side of Chicago had been burned during the riots following Martin Luther King's death. I thought I'd escaped all that and chosen a nice, safe place in Manhattan, Kansas. But in my first year here, some students burned down Nichols Auditorium. It was just a time of turmoil everywhere, I think."

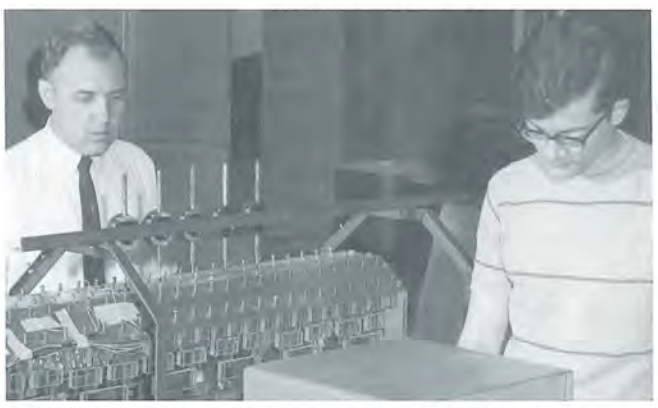
And of course, there were other differences then than just the political climate. Take the infrastructure of the college, for example. "When I first came," Swartz explained, "all of engineering was housed in Seaton Hall, except for nuclear, which was in Ward, and chemical in the Chemistry Annex, which is now just a memory. The football team practiced on a grassy field where Durland Hall now sits."

Have the students changed in 32 years? "There were no female students in CE when I came and no female faculty members. But of course that changed, and while we're now at about five percent female enrollment in CE, at times we've had up to 18 percent. We've had lots of successful female graduates," he continued, "and they're filling many leadership roles in our professional societies now."

Swartz's area of technical expertise is structural engineering. He taught numerous undergraduate- and graduate-level courses related to this field, serving as major professor for the research of many M.S. and Ph.D. students, as well. His own research in this field is well documented, with 12 of his projects sponsored by the National Science Foundation. He is the author or co-author of 38 refereed journal articles and co-author of the textbook, *Fracture Mechanics of Concrete*.

The biggest change Swartz has encountered in teaching and research involves the growth and use of electronic equipment. "My first four or five years of teaching," Swartz said, "I took great 'pride' in all the 'neat' tricks with a slide rule I could teach my advanced students." Then came the first calculators, followed by the rapid change to computers.

"When I was a graduate student at IIT," he recalled, "the best computer available filled an entire room. Everything it could do can now be done on a PC or even a hand-held calculator. We also used to develop our own software in CE, but now we teach students how to access what's available.



Swartz, left, circa 1969, works with student Warren Rosebraugh testing a model of a folded plate shell.

"It's been very difficult to keep up with the changes in computing—the machines and the software," he continued. "As an administrator, it's tough to decide how much of our resources to commit to something that changes so rapidly."

Swartz has been actively involved in three key professional societies related to the field of civil engineering—the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE), and the Society for Experimental Mechanics (SEM). He has been elected a Fellow of all three, and held state and/or national offices in each, as well as being a recipient of numerous awards.

"I'm proudest of my work with SEM," Swartz admitted, speaking of the group he served as national president of in 1983–84. "This group is made up of the world's leaders in development of experimental mechanics. Virtually all of the equipment in this field in use today has been studied and tested through the work of the members of this society."

Swartz feels his main contribution to the state of Kansas, that has come in part from his teaching and leadership tenure at K-State, is that "the 70 per cent of the college's civil engineering graduates which stay in Kansas or the Kansas City area are leaders in the profession."

Evidence of this can be seen in the leadership rosters of the Kansas chapters of both the Society of Professional Engineers and ASCE—these roles, Swartz said, that are often 100 per cent filled by KSU civil engineering graduates. "Civil and agricultural engineering [at KSU] are the best at keeping our graduates in the state and in leadership roles," he said.

"I don't really think I'm going to miss too much about my current job," Swartz commented, with a chuckle. "Dean King had it right when he said department heads have the hardest jobs on campus. But I will miss teaching and my advisory capacity with Chi Epsilon"—a group that has honored his endeavors, including presenting him with its national Harold T. Larsen Award for outstanding service in advising.

"When you first come to Manhattan, Kansas," Swartz said, "I really don't think you ever expect to stay, but one day you find you've lived your whole life here and it's been pretty good."

He and his wife Doris raised a son and daughter here, and plan to retire "in this area," although it will most likely involve moving to a different home—one where Swartz can get his hobby "up off of the floor"—literally.

The hobby is an O-gauge Lionel train collection that Swartz admitted he got "stuck on" after buying a set for his son as a gift. "Many thousands of dollars later," he commented, "I'm still not set up to operate in the way I'd like to be. With some new space and more time, I plan to do that."

An "extended trip to Europe" is also on Swartz's retirement "to-do" list. "We've been to Europe several times," he explained, "but I've promised my wife we'd go back and hit all of our favorite spots—primarily in Germany."

And of course, it really doesn't sound like he's going to totally be leaving either K-State or the civil engineering profession too far behind, with plans to "stay active in some SEM committee work," or "maybe teach on a course-by-course basis," or "do some advising with Chi Epsilon."

He does, however, acknowledge some regret in not moving with the department to their new headquarters in Fiedler Hall, planned for occupancy in the summer of 2000. But because there's still work to be done on a base isolation system invention (i.e., making structures earthquake resilient) that he and retired CE professor Philip Kirmser, and retiring (May 2000) CE professor Kuo Hu, are collaborating with an industrial partner to market, Swartz said the three may find themselves sharing office space in Fiedler.

Let's see—teach a course or two, do a little advising, stay active in SEM, and promote an invention—did somebody say Stu Swartz was retiring?

–by Mary Rankin

CE council establishes scholarship

The Civil Engineering Advisory Council, chaired by John Ahern, CE '77, has announced establishment of the Dr. Stuart E. Swartz Civil Engineering Scholarship. This scholarship will honor Dr. Swartz upon his retirement and will be established with contributions from CE Advisory Council members, alumni, friends, and colleagues. Those wishing to participate may do so by making their contributions to The Kansas State University Foundation, 2323 Anderson Ave., Manhattan, KS 66502, designated for the Swartz Scholarship Fund.

Three who made "the investment"

In what area do I want to make my investment in the College of Engineering? This may be a question alumni and friends of the college will consider now or in the future. Whether an annual Telefund pledge, or establishing an endowment with a gift of cash, securities, or real estate—the avenues for giving are varied and designed to meet individual needs.

Then there's also the matter of gift designation—where you'd like your support to go, the area of engineering education that you think is most important. The following accounts demonstrate choices of three committed alumni families who are "making the investment" in K-State engineering.

To "provide a valuable asset"

The Edwards

One of the more tangible ways that alumni and friends of the College of Engineering choose to show their support is through an investment in facility needs. The recent addition to the engineering complex of the soon-to-be-completed Fiedler Hall provides ample opportunity for this type of giving.

Gary (CE '63) and Peggy (AS '63) Edwards, Houston, Texas, have chosen this avenue of support demonstrated by their naming and equipping of the main level conference room in Fiedler with at $50,000 gift, which includes a match from Conoco.

Edwards is the senior executive vice president of corporate strategy and development for Conoco. He has been a member of the KSU Engineering Advisory Council since 1985, holding the office of president in 1996 and 1997. He was inducted into the College of Engineering Hall of Fame in 1989.

"I attended KSU on a baseball scholarship," Edwards said, "and for many years after graduation, I contributed to the athletic department, and in fact, still do on special occasions. But 15 years ago when I was invited to join the advisory council, we decided to shift our financial support to the College of Engineering, as this was where I had really developed the capabilities that have enabled me to offer this type of contribution. Utilizing my KSU engineering education led me to achieve a financial capacity to now return significant gifts to the college."

The Edwards' gift will provide multi-media equipment for the state-of-the-art conference center that will be used by student leaders, faculty, and administration campus-wide. The new area will facilitate activities such as electronic and in-person conferences and meetings in a professional and comfortable environment.

"Gary and Peggy's gift demonstrates their legacy of commitment to engineering education at Kansas State University," according to Dean Terry King. "Equipping this conference room will enhance the engineering education experience for our students, faculty, and staff as we move into the 21st century."

"Peggy and I are pleased and honored," Edwards said, "to be able to provide this conference room in the new Fiedler Hall, and trust it will provide a valuable asset for many years to come."

To "give . . . youngsters a boost"

The Smiths

To further student education at K-State, Lloyd and Jacqueline Smith of Newton, Kan., have formed the Lloyd T. and Jacqueline Smith Fund to establish and underwrite the course "Creative Problem Solving in Engineering." The fund also establishes the Lloyd T. Smith Award in Innovative Thinking for students who have participated in the course.

The Smiths will underwrite the fund with a gift of $10,000 annually. The fund will eventually be endowed with their bequest of $250,000.

"In my long career in engineering and management, the first half of it was spent in narrow and rigid thinking," Lloyd said. "I didn't really learn how to use the brainpower of my co-workers and how to listen to others' viewpoints.

"Then it occurred to me—if I'd had a class that had taught me those kind of skills in college, I would have known those things. Then I said, 'Why not start something like that?'"

Lloyd Smith (ME '47) worked for Ford Motor Co. and was vice president of marketing at Hesston Manufacturing. He helped develop an innovative business that creates tools. Customers have purchased millions of his Screwball ratcheting screw drivers, hand drills, and Ice Breaker windshield scrapers and snow brushes. Some of the tools are featured in the product catalog of the Museum of Modern Art in New York City.

"This course is designed to teach students to think in a different way," Lloyd said. "It will give these youngsters a boost when they go out to look for a job. They are going to be plunged into an intensive work environment and creativity skills are enormously important."

"Creativity is invaluable in the work force," dean of the College of Engineering, Terry King, said. "This class will assist our graduates in facing today's technological changes and challenges that demand innovative thinking. Lloyd and Jacqueline have given more than money with this gift—they have given their life experiences to us and created better K-State graduates."

Faculty: "the key factor"

The Tointons

Research and teaching are the foundation of any university.

That's why Bob (CE '55) and Betty (HE '55) Tointon, Greeley, Colo., have committed a gift of $500,000 to establish the Tointon Professorship in the College of Engineering.

"There is more and more competition for some of the key faculty members," Bob said. "The state budget is not letting Kansas State University be competitive enough to keep some of its best professors. The dean thought 12 professorships would go a long way toward solving his problems. I don't have enough money for 12 professorships, but we decided to help with one."

Bob is currently the president of Phelps-Tointon, Inc. He created the company in 1989 with Joseph Phelps. Bob is a KSU Foundation trustee and Betty is a past KSU Alumni Board member and a KSU Foundation trustee.

"I have no question that faculty are the key factor in making universities great," Bob said. "I had several very good faculty while I was in college. I feel very good about the quality of education I received from KSU."

Bob said an incentive to give money for professorships came from the Kansas Regents Partnership for Faculty of Distinction Program. The program contributes state money to qualified gifts. For K-State, the gift must be at least $500,000 over the first two years of the program.

"We would have done it anyway," Bob said, "but, the regent's plan was an added kicker to make the giver feel good about the leverage KSU gets from our contribution."

For example, the Tointon's gift will produce $25,000 per year in support of a professorship. The state would match the $25,000 generated by the gift.

"Bob and Betty Tointon are making a tremendously positive impact on K-State Engineering and our educational programs," dean of the College of Engineering, Terry King, said. "At the heart of any great university are the faculty because individual faculty members are the catalyst for the education of our graduates. It is becoming increasingly difficult for K-State to attract and retain the very best educators: the professors who inspire the students and lead their profession to new heights.

"Gifts like Bob and Betty's professorship make it possible for K-State engineering to be more competitive with other universities and help us reach our vision of being the very best comprehensive college of engineering in the United States."

Forging a strong future from a strong past

Seaton

The past inevitably affects the future, and former dean of the College of Engineering, Roy Andrew Seaton, influenced the college and Kansas State University by striving for higher standards and greater service to society.

"He spent his entire adult life working to improve engineering education, the quality of the engineering profession, and serving his country. The well-being of students, as well as the other citizens was always uppermost in his mind," Seaton's daughter Mardi Belter said in a letter sent to the current dean of engineering, Terry King, after the inaugural banquet of the Seaton Society last October.

"My father would be most pleased to have his name attached to the 'Seaton Society,'" Belter wrote. "It was 50 years ago that he retired as dean, and I want to thank you for honoring him after all these years."

Seaton was the longest serving dean in the history of K-State College of Engineering, serving from 1920 to 1949. He established new curricula in the college, formed and organized Steel Ring, and began the annual Engineering Open House.

He came to K-State as a student in mechanical engineering just after the turn of the century. Graduating in 1904, he was hired as an assistant in the mathematics department while pursuing his graduate degree. He later began teaching as a graduate student in ME. In 1910, that department was divided, and Seaton was promoted to full professor of applied mechanics and hydraulics. The administration granted him two years leave to further his education. Seaton spent one year at the Massachusetts Institute of Technology, where he graduated with honors. He then followed up his education with a year at General Electric Co., developing some of the earliest compressors.

In 1917, Seaton joined the military and used his engineering experience to aid his country during World War I. He helped to determine the whereabouts of the "Big Bertha" cannons that were bombing Paris. Seaton mathematically determined their location based on the trajectory of the shells. He found the site within 24 hours of being given the assignment.

Belter described her father's ingenuity during WWI and WWII in her letter to King.

"His redesign of artillery shells in World War I no doubt reduced loss of life among our troops from shells exploding in the guns, or falling short," she wrote. "In WWII, he set up and administered the first two years of the college-level training program of six-month courses to provide the trained manpower this country needed to get it ready for war."

Seaton was given the prestigious Lamme Medal by the American Society for Engineering Education for his work in military training courses, which were offered in more than 200 colleges and universities across the country, with more than 1.7 million students participating in them.

He was named dean soon after he returned from WWI and began personally supervising construction of the new engineering building, known today as Seaton Hall.

Also with Seaton's guidance, the curriculums of landscape architecture, architectural engineering, chemical engineering, and an industrial arts program were established.

"After mandatory retirement as dean at age 65, he continued in charge of building activity on the campus," Belter wrote. Seaton supervised the construction of several major buildings and additions to others.

Seaton gave many years of his life in order to better K-State engineering. In the spirit of this contribution, the Seaton Society was established in 1999 to recognize donors who provide significant annual gifts to support the College of Engineering, and to recognize outstanding alumni whose accomplishments bring honor to their alma mater through professional practice and public service.

The effect of Seaton Society donors is seen in every aspect of the college as it moves forward in excellence of engineering education. Membership in the Seaton Society recognizes all donors who contribute $500 or more annually to any area within the College of Engineering. Corporate gifts that match employee contributions will be counted.

Donors may renew their membership each year by making a gift at one of six levels. The exception is the Founder Level; these donors, at the dean's invitation, receive lifetime membership for their extraordinary support of the vision and mission of the college.

–by Jennifer Ryan

Open House investment benefits students

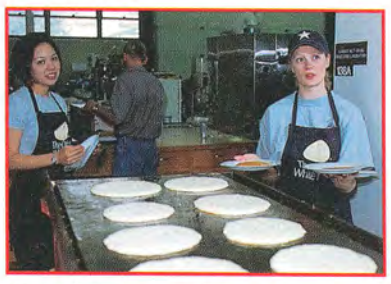
continued from page 1

Students display National Gas Machinery Lab project.

of AEI-Architectural Engineering Institute. "They get to know each other outside of class, show their commitment to the department, and learn by working on the technical displays."

ARE won the Outstanding Department Award this year. "I was extremely thrilled to win," Pacheco said. "The last time ARE won was 1991—the year I graduated. I'm very proud of our 40-plus students that participated, and particularly our co-chairs, Ginger O'Haver and Jacob Musick, who did a tremendous job organizing and keeping everyone on track—absolutely all credit goes to them."

"Preparing for this year's Open House has been a year-long process, with many hours and students involved," O'Haver, senior in ARE, said. "Yet it was definitely worth it, not only because ARE won the Outstanding Department Award, but because of how brilliantly it brought our students and faculty together and gave us the opportunity to show prospective students what AREs are all about."



Pancakes anyone?

Khris House, senior in ARE and president of Steel Ring, experienced Open House from the student involvement angle of working on his department's float and technical displays, and also from the organizational side of "seeing 21 Steel Ring members, who barely knew each other, come together over nine months time and put on probably the biggest event of the College of Engineering all year."

"The whole point of Open House," House said, "is to get freshman and sophomore engineering students involved with upperclassmen so they can find out what being a part of the College of Engineering and Open House is all about. We have to have someone to take our place."

House, who has accepted a position with the Carter Burgess engineering consulting firm in Ft. Worth, Texas, following graduation, had one other experience associated with Open House, that being elected St. Patrick.

"I was surprised and honored," House said, "that my peers liked me well enough to choose me. It was a great experience to represent the college and tour the displays and meet the guests and faculty members from other departments."

Elected with House, as St. Patricia, was senior in BAE, Jenny Wright. She has been involved in Open House all of her five years at KSU, participating in everything from torch runner, to float builder/rider, to setting up her department's student displays.

Tension runs high in Seaton Hall as strength is tested in the high school bridge design competition.

"Our department is one of the smaller ones," Wright said, "so our students have to be really involved and do

Above right: Let the good times roll! Annual parade kicks off 2000 Open House.
Left: ISME wins Yellow Brick for best skit and float entries.
Below: Bride-to-be considers Bachelor No. 2 as ChE students entertain the crowd with a humorous parody.

Pacey honored for advisory role

Pacey

Dedication to students and devotion of time have made David Pacey an outstanding faculty advisor, according to the Society of Automotive Engineers (SAE).

Pacey, associate professor of mechanical and nuclear engineering, has been chosen to receive the 2000 SAE Faculty Advisor Award.

"I'm very flattered," Pacey said. "The nicest thing about this award was receiving a trip to the SAE World Congress in Detroit. I've never had a chance to go before. I had the chance to speak about student activities and, hopefully, gave some attendees an advisor's point of view."

Pacey was nominated by the K-State SAE student chapter, which he advises throughout the year.

"This is an award from the students, for helping them. I'm touched that K-State students nominated and supported me," Pacey said.

After being nominated, advisors must send an application, be an SAE member, and currently serve as an advisor to an SAE student chapter. Then, a panel of peers, the faculty advisory committee, chooses the recipient. Nominees are judged on how long they have served as a faculty advisor and how active the student chapter is.

"As an advisor and teacher, there are a lot of things we do. Sometimes we wonder how much of a difference we make," Pacey said. "It's recognition like this award and students like those in our SAE chapter that make me want to continue."

Kale Needham–th

Today's global economy—driven by many companies serving a global marketplace—presents a dual challenge for the engineering student who will enter that world. Such a young person must possess strong professional training in her field, as well as develop a cross-cultural competence that will enable him to be open to different cultural perspectives, communicate with a broad range of people, and have a knowledge of the international dimensions of her chosen field.

Kansas State University's International Student Exchange Program (ISEP), Study Engineering Abroad, offers engineering students the opportunity to broaden their academic horizons in this way. According to Ray Hightower, asst. dean of the College of Engineering, there are currently nine students, in six different disciplines, studying engineering abroad in six different countries.

One of those students, Kale Needham, senior in ChE from Prairie Village, Kan., recently shared some of his experiences in the program from his current location in Nancy, France, where he is attending classes at the Institut National Polytechnique de Lorraine (INPL). Since the inception of the program in 1992, 11 KSU engineering students have been enrolled at INPL, including Needham and current ChE senior Kerry Campbell, Montrose, Penn.

Students applying for the INPL program must have had a minimum of four semesters of college-level French, and completed the necessary prerequisites needed to attend senior-level courses in their major. Because Needham is involved with a direct-exchange program, he paid only his normal fees and tuition at KSU—INPL charges no tuition, but travel and living expenses are paid by each student.

While national engineering associations accredit all engineering programs available through ISEP, Needham did find the setup of earning an engineering degree in France a bit different than the one at Kansas State. For starters, the INPL operates under a system of "grandes ecoles"—the highest, most elite academic track in French professional education. While the majority of students in France attend public universities, only a select number, equivalent to being admitted to the top ten percent of ranked universities in the U.S., attend a "grand ecole."

With five "grand ecoles" dedicated to engineering at INPL, Needham is enrolled in ENSIC—the Engineering School of Chemical Industries. "After two years of post-

and college

more to be successful. But it makes me so proud to be a part of the College of Engineering during Open House."

Like House, Wright, who will join ExxonMobil in Houston as a facility engineer after graduation, felt "honored" to be elected by her peers. Standing on the steps of Seaton Hall during opening ceremonies on Friday was an "emotional experience," she said.

"As I looked out over the crowd at my parents, and friends, and faculty whose support has meant so much to me," Wright said, "all I could think of was, 'Look at what I'm a part of!'"

Chemical engineering students use a model to demonstrate fuel refinery processes.

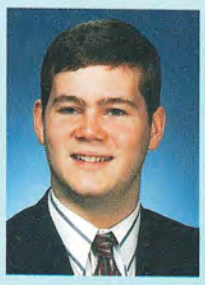
Engineering Banquet awards:

- *Advisor of the Year*—***Ray Hightower***
- *W. Leroy Culbertson Steel Ring Leadership Scholarship*—***Jenny Ziegler, senior ARE***
- *Induction of Knights of St. Patrick by Dean Terry King*—***49 students representing top 10% of graduating seniors based on academics, and support and involvement in the college***

e French connection

high school preparatory classes," he explained, "the degree a French student completes at ENSIC is in between a bachelor's and master's degree. These students are highly educated and are required to perform at a high level."

Many of the professors, Needham said, are alumni of the school and thus have been through the rigors of obtaining their engineering degrees from a "grand ecole." But, as in our States-side schools, he noted, "Each has his or her own personality and teaching style that renders the class somewhere in the spectrum of poorly to superbly organized/executed."



Needham

As for the facilities, Needham offered the following comparisons: "The main engineering building is considerably older than most on the KSU campus. With that said, though, their computer rooms and chemistry laboratory building (for physical, analytical, and organic labs) have been built and furnished within the past ten years. I took a physical chemistry lab that had very recent equipment."

When asked about the language issue, Needham commented, "I can't really say the language hasn't been a barrier, but I wouldn't say it's been a barrier to learning. Of course in the beginning, I didn't know, for example, the word for a 'flowrate.' But this vocabulary was easily acquired because a good portion of technical words are a direct translation of English—a fact I attribute to the choice of English as the international technical literature language."

Student housing in France is managed by the government, Needham explained, and ranges from very affordable to quite expensive. For instance, the smallest style room in a university residence hall—not much larger than the bed, desk, sink, and closest contained in it—runs a little more than $100/month. A studio in university housing runs $400/month, similarly equipped to the single room with the addition of a refrigerator, stove, and bathroom.

The city of Nancy has approximately 50,000 students spread across three universities, which should offer a setting for some exciting nightlife. But not so, according to Needham. "Before coming," he admitted, "I assumed the atmosphere would be KSU times 2.5! This is ignorant in that France does not have a bar-based night culture. The bars are most crowded from 12 p.m. to 3 a.m., but not with the activity of a U.S. college bar.

"And another difference," he added, "on Sunday nearly all of the businesses shut down. You can't shop for groceries or clothes. This always catches me by surprise!"

On an educational level, Needham would recommend the INPL program to others, saying, "Come to learn French. Come to reinforce your chemical engineering basics." And while he is quick to confirm that this experience will likely extend his opportunities to work abroad someday, it's also given him a new appreciation of family and the American way of life.

"I honestly don't think I could accept an offer to make a lifetime of work outside the U.S.," he said. "My time abroad has shown me how much I enjoy family life and being able to run home on the weekend to see my parents and brothers. Plus the convenience of life in the United States makes anything more than a couple of years abroad at a time, too much to consider at this point."

–by Mary Rankin

Alumni News

1952

Lynn W. Martin (ME) retired from Cessna Aircraft. Martin was a member of the Advance Design Group, which defined many aircraft including Model 500 Jet and 425 Turboprop. (316) 943-4067.

1957

The *Angus Journal* selected Tenroc Ranch, owned by Mike Cornett (BAE) and his wife, Shirley, as the winner of the 1999 Land Stewardship Award. The ranch was selected because of its concern for the environment and wide use of conservation practices. The Cornetts and their ranch were featured in the October 1999 issue of the *Angus Journal* and were recognized at the 1999 American Angus Association Annual Banquet. 5471 Thomas Arnold Road, Salado, TX 76571.

1959

H. Ray Sharp (IE) retired in October 1999 after 30 years in hospital facilities engineering and support services management.

1982

Mark Rohrbough (IE) was promoted in July to vice president of development at Fidelity Investments. He is responsible for the development and support of the PC-based distributed applications used by Fidelity's Systems Company located in Dallas, Texas. His wife, Linda Rohrbough, is a writer who also attended K-State. Her most recent book, *Making Money in Cyberspace* (Putnam/1998), was honored as the best general computer book of the year by the Computer Press Association. The award is Linda's third since 1992.

1984

David Haverkamp (CS) completed a master's degree in computer engineering at Iowa State University, Dec. 1999. David is a senior software engineer with Rockwell Collins, Inc. in Cedar Rapids, Iowa. 1118 Dubuque Road, Springville, IA 52336.

Sree Kailash (IE) currently works as an environmental engineer for the Nevada Division of Environmental Protection in Carson City. skailash@worldnet.att.net

Todd A. Bednar (CNSM) joined Bovis Construction Corp. in Sept. 1998 as a project manager. Some of his projects have included the Durham Bulls baseball stadium, LabCorp, Raleigh Community Hospital, and Regus Business Center.

1985

Terry W. Karst (MET) completed his MBA at Wichita State University in Dec. 1998. After working for Boeing Co. for 13 years, he has accepted a position with Honeywell as production manager for the Customer Service Center in Wichita. He and his wife, Denise, have three children: Kara, nine; Courtney, six; and Brian, two. Terry.Karst@cas.honeywell.com

1986

Kurt Balthazor (ME) and his wife, Erin Brunell, announce the birth of their first son, Connor Eli, on August 10, 1999. Kurt is a division product manager for Premdor. kurtb@pitton.com

1989

Marie Dawes Belongia (ARE) and her husband, Dwayne, wish to announce the October 1998 birth of twins, Megan and Isabel. The first year has been a busy one for the family and they apologize for the late announcement. Marie is employed as a structural engineer with Thompson, Dreessen & Dorner in Omaha, Neb. mdawes@radiks.net

Jay R. Anglemyer (CE) and his wife, Amy, announce the birth of their daughter, Lauren Christine, who was born March 16, 1999. Jay is currently a civil engineer at Shetlar, Griffith, Sheltar PA in Iola, Kan.

Christina (Rahn) Onnen (ARE) and her husband, Rick, wish to announce the birth of their second child, Courtney Elizabeth, who was born on January 20, 2000. Courtney joins an older sister, Rebecca, who is nearly three years old.

Russell Taylor (EE) and his wife, Sarah, are proud to announce the birth of their fourth child, Keegan Thomas Taylor, on Dec. 7, 1999. He was welcomed by his three sisters: Katie, Allison, and Madalyn.

1990

Peter B. Crooks (EE) and his wife, Julie, announce the birth of their second child, Kellie Christine, on February 20, 2000. Kellie was 17 weeks premature. Peter is a licensed Professional Engineer with Morrow Engineering, Inc., in Wichita, Kan. ThreeCrooks@Juno.com

Troy Ramser (EE) and his wife, Stephanie, announce the birth of their daughter, Charlotte Eileen, on Sep 6, 1999. Troy is currently employed as a senior software engineer at Bell & Howell in Ann Arbor, Mich. ramsers@mich.com

1991

Debra (Turner) Staatz (IE) and Alan Staatz (EET '93), Overland Park, Kan., announce the birth of a daughter, Sierra Elizabeth, February 6, 2000. Sierra joins a brother, Dylan Matthew, 23 months. Alan is the engineering project manager for NovaTech, LLC. Debra is self-employed as a part-time computer consultant.

Lori Vander Linden (CE) married Rob Vander Leest on Oct. 23, 1999. Lori is currently a construction coordinator with the FAA.

J. Kyle Murdock (EE) and his wife, Sharon, would like to announce the birth of their first child, Benjamin Kyle, on July 10, 1999. Kyle is an engineer with Cisco Systems and has recently relocated to Kansas City from North Carolina. You can e-mail him at kmurdock@cisco.com.

1992

Greg Richardson (IE) and his wife, Amy, announce the birth of their second child, Paige, on Aug. 25, 1999. Her two-year-old brother, Bo, welcomed her. Greg is the senior industrial engineer at Hutchinson/Mayrath in Clay Center, Kan. Greg is the 1999 chairman of the Salina chapter of the Society of Manufacturing Engineers.

Harley Peery (MET) has been employed at Learjet (now Bombardier Aerospace, Learjet) since 1992. He was promoted to group engineer for Completions Engineering Avionics Options in May 1999. He and his wife, Rebecca, have been married since 1996 and have two children. Son Seth was born Jan. 8, 1998, and daughter Ashley was born July 6, 1999.

1993

Kevin Istas (CNSM) was recently promoted to vice president of construction for American Multi-Cinema Inc. (AMC) at its corporate headquarters in Kansas City. Kevin is responsible for overseeing all theatre construction in North America. KISTAS@AMCTHEATRES.COM.

Joe Lutgen (ME) married Mary-Kay Athan on Sept. 25, 1999. The couple met in Los Angeles. Joe is a senior application engineer with Parametric Technology Corp. jllutgen@att.net

Elfriede Dustin (CNS) is currently a software test manager at Computer Sciences Corporation. Her book, *Automated Software Testing*, addresses the introduction, management, and performance of automated testing. It was published by Addison Wesley and is now available.

1997

Richard Hendricks (CMPEN) and wife, Angelina Lemon (CMPEN), work for Motorola Semiconductor Products Sector and were both recently promoted. Richard is an apps engineer, and Angie is a test engineer. The couple lives in Austin, Texas.

Dean V. Balocca (ME) and his wife, Tara, are pleased to announce the arrival of their second daughter, Rebecca, born Sept. 29, 1999. She joins her sister, Rachael, who is two years old. baloccad@asme.org

Deaths

1934

Raymond (Ray) Nelson (CE) died Oct. 24, 1999, in Del Mar, Calif. Nelson is survived by his wife of 64 years, June Wesley Nelson; and two daughters, Joy Nelson and Julie Rich; five grandchildren; and five great grandchildren.

1949

Ralph Woertendyke (EE) died Oct. 21, 1999.

1951

Larry R. Crissman (EE) died June 11, 1999. He had retired in 1992 after 35 years with Trans World Airlines. His wife, Millie, five children, and three stepchildren survive him.

1982

Kelly Johnston (CE) died Jan. 31 at Le Chesnay, France, following complications from an asthma attack. He is survived by his wife, Deborah; two daughters of Almont, Colo.; three brothers; and a grandmother.

Bosse: "It is appropriate that I give back. . ."

continued from page 1

woman engineering student. While asserting she was not on the "bleeding edge" of women in engineering, she was definitely a minority when a student at K-State, with maybe one to three women enrolled in each department of the college at that time, and never more than two or three women in any of her engineering classes.

"But coming from my farm background where a woman was viewed as a partner in accomplishment with a man," Bosse explained, "I never perceived the situation as a problem. I saw it more as a challenge and didn't want the men to be able to say, 'A woman can't cut it in engineering.'"

And this attitude carried over into her career, Bosse said, as more often her presence as a woman engineer was not met with scrutiny, but with challenge.

"Getting my degree in engineering," she continued, "was such an asset in giving me credibility as a 'smart woman.' It lent an air of seriousness to others about my capacity to learn and succeed on the job." Although she also has an MBA, Bosse contended, "My engineering education allowed me to pursue different things and direct my career path the way I wanted."

And her opinion on why so long for the college to name a woman alumni fellow? "Women are now breaking through that glass ceiling," Bosse said. "There are more of us out there succeeding and it's time we get recognized. And it's not that unusual to have a 20-year time frame—it takes time to establish that knowledge base and get more women in the pipeline for consideration of these types of recognition."

Advisor, mentor, trailblazer—but add yet another character trait of Nadalie Bosse—a person of gratitude and obligation evidenced by her recent establishment of a named, endowed scholarship for IMSE students, beginning in the fall of 2001.

"I am grateful for my education from Kansas State University," she said, "both the values I gained and the engineering skills I was taught. It is appropriate that I give back, and I am proud to do so through this scholarship."

Bosse related that when she came to Kansas State from her small-town environment of Onaga, Kansas (pop. 800), it was a "big risk," and she felt "big intimidation" from classmates from larger cities who had taken high school honors and college prep courses unavailable to her.

"But it was also an immense challenge," she said. "I had been awarded a couple of scholarships and this gave me such incentive to live up to someone else's faith in me. I know there are others out there today like me, and maybe if the financial strain gets too great, they might have to give up their dreams of an education. I want to help prevent that from happening with this scholarship."

A fellow IE classmate of Bosse's from 1980 is Brad Kramer, current department head of IMSE at K-State. He remembers her as "the one who seemed to work with more hours in the day than the rest of us." Of her service to the college, Kramer said, "Nadalie has given freely of her time and money to help the IMSE department and the college to become the best we can be. I deeply value her advice and contributions and am proud to call her my friend."

Acknowledging that most graduates are not able early on to give financially or otherwise back to their college, Bosse did offer this opinion: "I believe it would be good for students to leave here with an awareness there needs to a contribution back to the institution that provided their education, in order to keep it going for the next generation.

"Even ten years ago," she said, "I was still trying to figure out where to take my life—not really thinking at all about where I'd come from. And suddenly, I 'turned that corner,' and began to take a look at what I was contributing or giving back to what had given me so much—my education at Kansas State University."

–by Mary Rankin

Weese receives engineering DSA

John A. Weese, ME 1955, was presented the college's Distinguished Service Award at commencement ceremonies May 13. The award is given annually to a prominent person whose career has contributed notably to his or her profession.

Weese

"It was a privilege to introduce Dr. John Weese as our DSA choice for 1999–2000," Terry King, dean of the college, said. "He has certainly distinguished himself in the field of mechanical engineering through teaching, research, and his tireless efforts in behalf of several key professional societies. His leadership and service in engineering education specifically and higher education in general have been extraordinary."

Following his graduation from K-State, Weese went on to receive both M.S. and Ph.D. degrees in engineering mechanics from Cornell University in 1958 and 1959, respectively. Today he is a Regents Professor of the Texas A&M University System and a professor of mechanical engineering at Texas A&M at College Station.

While on active duty in the U.S. Air Force, Weese served on the faculty of the Engineering Mechanics Department at the USAF Academy. He spent 11 years as a member of the mechanical engineering faculty at the University of Denver and a research engineer in the Denver Research Institute. He also served four years as dean of engineering at Denver University. At Old Dominion University, Norfolk, Va., he was both dean of engineering and a professor of mechanical engineering.

Prior to joining Texas A&M University in 1986, Weese was a division director in the Engineering Directorate of the National Science Foundation for three years. He held the position of head of the Engineering Technology Department at Texas A&M from 1986 to 1997.

Weese has held numerous positions in the American Society for Engineering Education (ASEE), earning him Fellow status in 1986. He was elected president of ASEE for the 1999–2000 term. He also holds memberships in the Society for Experimental Mechanics and National Society of Professional Engineers. In 1990, he was elected to the KSU College of Engineering Hall of Fame.

Impact

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Telefund 2000: Calling on alumni

Telefund 2000, January 31–February 3, contributed 3,574 pledges worth $285,724 from student callers and alumni donors in the College of Engineering. Coordinated by the KSU Foundation, this event is the world's largest all-volunteer telephone campaign for higher education. In the College of Engineering, Telefund revenue is divided, with 80 percent of the funding providing student scholarships and 20 percent student projects.

"Telefund's success reflects student enthusiasm and alumni dedication," said Dean Terry King. "The long-term impact of Telefund extends beyond today's pledge total by improving an already outstanding academic environment. As an all-volunteer campaign, Telefund also helps our students gain a better understanding of the value of alumni support."

During Telefund, 1,437 K-State students dedicated at least one evening to contacting alumni, receiving 21,266 total pledges worth $1,235,174.

Tau Beta Pi honors TDM, Roberts

For its commitment to engineering education and quality performance, Transportation, Design & Manufacturing (TDM) has been chosen as the Company of the Year by the K-State College of Engineering and its engineering honorary, Tau Beta Pi.

Roberts

"Besides hiring K-State engineers and working with K-State engineering faculty members on leading-edge applied research, TDM and its president, Mr. William Roberts, have been inspiring supporters of the K-State engineering solar car team," dean of the College of Engineering, Terry King, said.

TDM is based in Livonia, Mich., and built a branch plant in Manhattan three years ago. TDM has successfully facilitated numerous niche-market vehicle programs in areas as diverse as high-performance fuels to generating new types of fuel for the future.

"Whether it is use of facilities and staff to help the team create its award-winning solar car or through financial support of the students' efforts, TDM has helped our team become recognized as one of the best in the nation," King said.

William Roberts was also chosen as the college's Leader of the Year for his support and dedication to K-State engineering. He has been involved in the automotive industry for more than 44 years. His connection to the industry began when he moved to Detroit, Mich., to work as an apprentice metal model maker for Anzik Manufacturing. Roberts was later promoted to supervisor of prototype operations of the company. During this time, he took night classes in engineering and manufacturing. He managed several other automotive companies before establishing TDM.

Roberts said he believes that engineering education is vital to the industry.

"I think growth and technology expansion of the industry depend on educational degrees—to have those capable human resources. It's a training aspect coming from the production perspective and joining students' education and the companies working with them," Roberts said.

Tau Beta Pi Vice President Kevin Wanklyn said Company of the Year candidates have often recruited K-State engineering graduates, helped with student projects, made financial contributions to the college or made other significant donations of time or assistance. A list of these companies are brought to an officer's meeting of Tau Beta Pi each year, where students discuss which company most deserves the honor.

"TDM was a name I heard tossed around the table many times—having a Manhattan-based assembly center, and supporting our solar car team," Wanklyn said.

After Tau Beta Pi selects the Company of the Year, the engineering honorary asks the dean of the college for help in selecting the Leader of the Year.

"It is hard, as students, to know the contribution of specific people in the company, so we ask him for assistance," Wanklyn said. "In a meeting with members of Tau Beta Pi, Dean King explains the contributions of the person that he suggests as a candidate."

Roberts and members of the company accepted the award at the April 28 Tau Beta Pi banquet.

What's new with you?

We'd like to know—and so would your former classmates. Take a few minutes to jot down job changes, births, deaths, professional or other activities, your retirement, or remembrances you'd like to share. Send your news to *Impact* at one of the addresses below.

Want classmates to contact you? Check the appropriate box below and we will include your address, phone number, or e-mail address with your news. You must indicate that you want this information printed. Also, because of space limitations in the newsletter, please select only one address for publication.

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Last call for the KSU College of Engineering Alumni Directory

The telephone verification phase of our alumni directory project, in which each alumnus/a can make a final change to his or her listing, is almost complete. Representatives of Bernard C. Harris Publishing Company Inc., the official publisher of our directory, have just a few more calls to make before final proofreading begins.

Since we are publishing only enough directories to cover pre-publication orders placed at this time, please let the Harris representative know if you are interested in purchasing your own directory. This will be your only opportunity to reserve a copy of the Kansas State University College of Engineering Alumni Directory.

If for any reason you have not heard from our publisher by June 1, you may contact the company directly at:

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Phone: 1-800-877-6554

EE team reaches finals in Design Challenge

A group of K-State electrical engineering students are finalists in a national integrated circuit design competition, technology commonly used in personal computers, cellular telephones, and other electronic devices.

During this past semester, eight students in the Integrated Circuit Design course competed in the Semiconductor Research Consortium's Copper IC Design Challenge. The contest asked student entrants across the nation to reveal the benefits of using copper as the interconnect metal in an integrated circuit.

"One big problem with integrated circuits is the amount of heat generated because of the fast speed of the processor," said Bill Kuhn, assistant professor in electrical and computer engineering and faculty advisor for the team. "Traditionally, aluminum has been used for the interconnection wires on these chips. The contest focuses on demonstrating the benefits of using copper because it has lower electrical resistance."

The contest is sponsored by SRC and offers more than $150,000 in cash prizes and $850,000 in services, such as fabrication of technology. In Phase II, first- and second-place teams will receive $30,000 and $20,000, respectively. All cash awards will go to support IC design education programs at the winning universities, with allowances for monetary awards to the participating students.

Although the team did not win Phase I of the competition, it has been selected as a finalist and will move on to compete in Phase II of the contest. Because it will be a finalist in Phase II, K-State's entry will be fabricated by the UMC Group in Taiwan and sent back to the team for testing and evaluation. At that time, the team will prepare and submit a report on their measurement results, and the final winners will be announced in mid to late summer, according to Kuhn.

Mark your calendar for dedication weekend activities!

Fiedler Hall, new home of civil engineering, will be dedicated on Saturday, Sept. 9, 2000. This third building of the Durland-Rathbone-Fiedler Engineering Complex has been referred to by many as "a crown jewel" on the K-State campus. Highlights of the dedication weekend will include meetings of the Engineering Advisory Council on Friday, Sept. 8, followed by Saturday's events of a luncheon, the official dedication ceremony, tours of the facility, the Seaton Society Banquet and Hall of Fame induction, and a student-sponsored Engineering Ball to close out the evening. For further information, contact Penny Forsyth at 785-532-6686, or by email at mafarf@ksu.edu.

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401

Making the Investment Impact

Nadalie Bosse–2000 Alumni Fellow

The Kansas State University Alumni Fellows Program was begun in 1983 in order to "recognize alumni who have distinguished themselves in their respective careers." In addition, a purpose of the program is to bring those "prominent and outstanding" alumni back to campus to "share their experiences with students, faculty, and administrators of the colleges."

Chosen to fill that role for the College of Engineering in 2000 was Nadalie Bosse, a 1980 graduate in IE, and current vice president for product delivery at SBC Communications. She, along with the other eight college representatives, came to campus Feb. 21–23, to be honored for her accomplishments and to share her expertise.

"I'm so proud of the campus and the college and how they've evolved," Bosse said. "Being here has brought back good memories of the valuable experiences I had as a student. It's reminded me that no matter how far you go in life, there's such value in your educational experience."

And "how far" that "educational experience" has brought her is to a vice presidency in a company that's the country's largest provider of local telecommunications services. With its acquisition of Ameritech in 1999, SBC Communications employs more than 200,000 people, and generates $45 billion in revenue annually in 13 states. Bosse is responsible for managing the launch of new products and management of SBC billing products. She works and lives in the Chicago area, while company headquarters are in San Antonio.

continued inside

K-STATE ENGINEERING