

K-STATE ENGINEERING

impact

NEWSLETTER

Engineering Open House is getting bigger and better every year. Plan to attend March 30-31. See form on page 5.

Vol. 19, Number 1

Spring 1984

Thanks . . . a million! !

College of Engineering alumni and friends have more than met the challenge to provide \$1 million in funding for equipment for Durland Hall, Phase II.

With the help of an anonymous gift of \$100,000, the funding amount has reached \$1.32 million, with still time to go before the campaign is closed out in March.

"I am extremely pleased that we have surpassed our goal," said Dean of Engineering Donald E. Rathbone. "We have had two major gifts from anonymous donors, and we are very grateful to them. The generosity of all of our donors has made it possible for us to take a major step forward in providing our students and faculty with up-to-date facilities and equipment."

The most recent anonymous gift will be used to cover construction and furnishings for the student/faculty lounge. The lounge was added after Durland, Phase II was designed.

Contributions to the Durland campaign will be accepted through March 31, the end of the three-year

fund-raising period, Rathbone said. "This will give those who have not contributed an opportunity to do so. And it will help assure that we can continue to offer our students the quality of education they need and deserve."

Names of donors are being placed on bronze plaques on a specially built wall in the lobby of the new building. "We thought this would be a good way of recognizing the many people who have made this campaign a success," Rathbone said.

He also urged alumni support for the proposed KSU coliseum. Rathbone is a member of the coordinating committee for the University campaign to raise funds for the sports arena.

"President (Duane) Acker is behind this 100 percent," Rathbone said. "Sports are important to K-State, and I encourage our engineering alumni to back this project financially to the extent that they are able."

So far, about \$5 million has been accumulated from private sources toward a goal of \$7 million.



"His greatest joy was working with the students and helping them sort out their priorities." — Mary Lee (Durland) Kind.

Dedication draws 650

About 650 persons turned out for the dedication of Durland Hall, Phase II in September.

Gov. John Carlin was scheduled to speak, but was unable to attend because of injuries he had sustained in an automobile accident. Filling in for him was Jamie Schwartz, Secretary of the Kansas Department of Economic Development.

Schwartz cited the building, engineering and K-State as symbolic of the future. "We are engaging in state government on a number of fronts with a renewed interest in high technology," he said.

Speaking on behalf of the University, President Duane Acker pledged that "engineering will remain one of the supreme programs at Kansas State University. We'll chart the way for Kansas in engineering."

Some of the characteristics of M.A. "Cotton" Durland were brought to life by Mary Lee Kind, daughter of the late Dean of Engineering, for whom the building is named.

"His greatest joy was working with the students and helping them sort out their priorities," she said. Mrs. Kind commented also on "his incredible ability to instantly recall 20 years later the name of a person he may have met only once, in the dark."

Engineering student Ambassadors led tours of the building after the ceremony.



The 175-seat Paslay Lecture Hall is electronically equipped for transmission of program material to and from remote locations.

History released

A new book released by the College of Engineering traces engineering education at K-State from 1862, the year of the Morrill Land Grant Act, through 1962.

Publication of the book coincided with the dedication of Durland Hall, Phase II. The history ends on the date of retirement of M.A. "Cotton" Durland, for whom the building is named.

Legacy: Engineering at Kansas State University, was written by Cheryl May, former news editor for the College of Engineering.

"The project evolved from Dean Roy A. Seaton's family's interest in having a book written about him," said Dean of Engineering Donald E. Rathbone. "This certainly would have been a significant contribution in itself, but I felt that a book about the overall historical development of the College of Engineering in which Dean Seaton played such a prominent role would be equally appropriate."

Many anecdotes from faculty and former students are included, as well as a chronology of KSU engineering, listings of pertinent records and awards bestowed.

The book is available through the Dean's office in the College of Engineering. Cost is \$5.

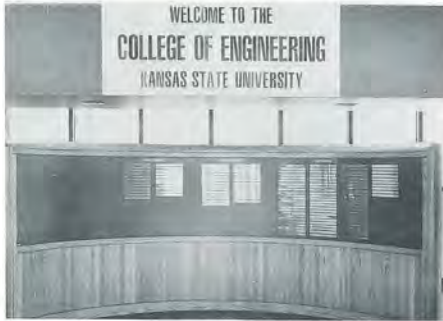
Plants grew in price

Equipment for an engineering building carries a high price tag, as any engineer knows. But Dean Donald E. Rathbone got a surprise when he looked at figures on some "extras" for Durland Hall.

Rathbone has planned to purchase plants for the lobby of the new building. But, he said, "I was completely wrong what I thought the plants were going to cost. I had estimated about \$1,000, but the minimum bid was almost \$13,000 and the maximum was \$42,000."

The plants would be placed in the balcony area, the lounge and the area under the staircase.

"I refuse to spend equipment money for plants," Rathbone said, "but this would be an excellent gift for one who would like to contribute to the beautification of our splendid new building."



Main lobby of Durland Hall connects Phase II with the original building. Donor wall, photo at left, recognizes contributors to the fund-raising campaign. Those giving up to \$1,000 will be listed as Supporters, \$1,000 or more as Benefactors; and \$10,000 or more as Donors.



Remote Computing Center in Durland Hall contains terminals and microcomputers for student use.



Scholarship Day a big attraction

More than 200 top high school students braved a winter storm to attend a College of Engineering seminar in December.

The attraction? Guaranteed scholarship money and the opportunity to learn more about engineering at K-State.

Kansas high school seniors meeting one or more of the following criteria were invited: ranking in the top 10 percent of their class; a composite ACT score of 29 or above; designation as National Merit Commended or Semi-Finalist student.

Students who attended the weekend seminar will be given a scholarship should they decide to enroll in engineering at KSU. The scholarship amounts will range from \$100 to full tuition and books.

Dean Donald E. Rathbone said 294 students signed up for the visit, but many students couldn't attend because of hazardous driving conditions caused by the storm.

"I think we did really well considering the storm. I'm amazed at the number of students who did attend.

We were hoping to get about 50 percent, and 70 percent of the students showed up," Rathbone said.

Those unable to attend will be sent a scholarship application, and a makeup visit is in the works.

What did the students think? Some comments:

—"I have just moved to Kansas from Minnesota. I had heard all the pros and cons about Kansas State and other universities. It was hard to determine which school was best. So, I came to find out for myself."

—"We got a lot of needed information about Kansas State and the College of Engineering. The scholarships available in engineering were a big factor in my visiting the school."

—"I really liked the tours of the different labs. That sparked my interest. The visit helped me learn more about KSU."

—"I hadn't really thought that much about coming to Kansas State, and I didn't really know that much about the school. The information and tours we went on during the weekend impressed me."

College has eight new faculty members



Bruce Corbin



Ruth Dyer



Stephen Dyer



Steven Eckhoff



Bruce McEnroe



Anil Pahwa



Andrzej Rys



John Schlup

The College of Engineering welcomed eight new faculty members in the fall, including a husband-wife team in electrical engineering. Ruth and Stephen Dyer joined Anil Pahwa and Andrzej Rys as new members of that department.

Stephen Dyer earned a B.S. degree in physics, an M.S. in electrical engineering and a Ph.D from K-State. Ruth Dyer has a B.S. and M.S. from K-State in biochemistry and a Ph.D in mechanical engineering from the University of Kentucky. Both taught at Kentucky, and Stephen has teaching experience from Georgetown College in Kentucky. His specialty is digital signal processing. Ruth's major area is bioengineering.

Pahwa, a native of India, received

an M.S. from the University of Maine and a Ph.D from Texas A&M. He will specialize in energy systems.

Rys is a native of Poland and received a Ph.D from Texas Tech. He will be teaching mainly solid state physics and integrated circuits.

Agricultural engineering added Steven Eckhoff, who has a B.S. in physics from Illinois Wesleyan, along with an M.S. and Ph.D in ag engineering from Purdue University. He is a former employee of the Northern Regional Research Center in Peoria, Ill., where he worked in cereal and food processing.

Bruce Corbin has joined the Department of Architectural Engineering and Construction Science. He was formerly employed by Virocon in Kan-

sas City and became interested in KSU after working on the Durland Hall project. Corbin has a B.S. in thermal and environmental engineering from Southern Illinois University.

New in chemical engineering is John Schlup. He received a B.S. and M.S. from K-State and a Ph.D from the California Institute of Technology. Prior to his appointment at K-State, Schlup worked for Corning Glass Works and is a ceramics specialist.

Bruce McEnroe is new in civil engineering. He has a B.S. and Ph.D in civil engineering from the University of Kansas and an M.S. in hydraulic engineering from the University of Iowa. He has had industry experience with Harza Engineering Co. in Chicago.

Professors' activities bring recognition

Stephan A. Konz, industrial engineering, received the Human Factors Society Paul M. Fitts Award for 1983. The award recognizes outstanding contributions to the education and training of human factors specialists.

L. T. Fan, chemical engineering, was elevated to the rank of Fellow in the American Institute of Chemical Engineers in recognition of academic and research achievements.

Frederick Rohles, director of the Institute for Environmental Research and professor of mechanical engi-

neering and psychology, was elevated to the grade of Fellow in the Human Factors Society. He also was elected chair of the Technical Group on Environmental Design.

In addition, **Rohles** and **Paul Miller**, mechanical engineering, were given Fellow rank in the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. Much of the data collected by Miller and Rohles in their research have been incorporated into ASHRAE handbooks, which are used by engineers in the design of heating and air-conditioning systems.

Charles Bissey, architectural engineering, received the 1983 Outstanding Zone Campus Representative Award from the American Society for Engineering Education. The award was given for activities in stimulating interest in the society at engineering schools in the 13 states and two Canadian provinces comprising Zone III.

Benjamin Kyle, chemical engineering, is the author of a new textbook,

Chemical and Process Thermodynamics, published by Prentice-Hall, Inc., Englewood Cliffs, N.J. Kyle developed material for the 512-page book while teaching thermodynamics over a period of 25 years as a K-State faculty member.

John Lindholm, engineering technology, was re-elected vice president of Region VIII of the American Society of Mechanical Engineers.

Harry L. Manges, agricultural engineering, was named "Engineer of the Year" by the Kansas Section of the American Society of Agricultural Engineers.

As legislative chairman for the Kansas Engineering Society, Dean of Engineering **Donald E. Rathbone** testified before the Kansas State Legislature on the need for funding for development of high technology programs at four Board of Regents schools. A bill appropriating \$1 million for research, equipment and centers of excellence has been signed into law.

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Dean of the College

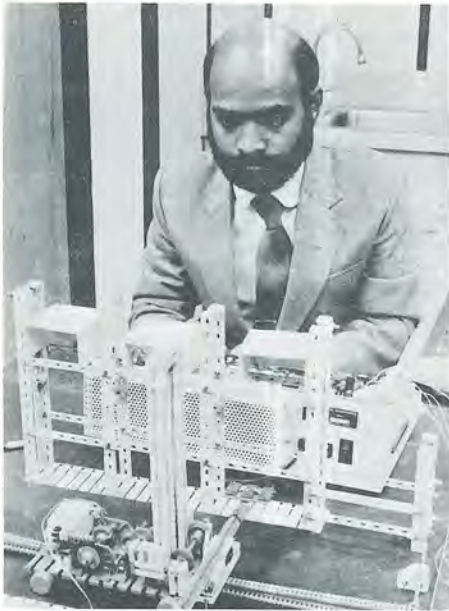
Dr. Donald E. Rathbone

Director, Engineering Experiment Station

Dr. William H. Johnson

Impact Editor

Carolee Stark



Muthuraj Vaithianathan, industrial engineering, works with model of an automatic storage and retrieval system which eventually will become part of the instruction program in computer-integrated manufacturing.

Ethics course introduced

A new course in ethics is being introduced at K-State to teach engineering students how to deal with special moral, political and social problems in their profession.

The course will be taught by Charles Reagan, head of the philosophy department.

John Dollar, assistant dean of engineering, said the class will give students a chance to do in-depth studies of ethical issues which aren't covered in other courses because of time limitations.

"The class should help raise the total ethical awareness and responsibility of our students," Dollar said.

Reagan pointed out that the public is demanding a greater accountability from business, engineering and other professions. "The way you answer ethical questions in engineering is no different than the way we answer them in our everyday lives, but the cases are much more complicated," he said.

The class will study some of the well-publicized cases of ethical problems in engineering, plus broader topics such as safety and risk, professional codes of ethics, and engineering as social experimentation.

Patent received on tillage device

The KSU Research Foundation has received a patent on a minimum tillage device developed by a former engineering graduate student.

The "Undercutter Seed Planter" was invented by Donald A. Suderman, a 1978 graduate in agricultural engineering who received his M.S. in 1981.

The device can be used to plant corn, wheat, milo and other grains.

Stanley Clark, who was Suderman's major professor, said the real advantage to the invention "lies in the ability of this planter to introduce the seed accurately into the desired location with a minimum disturbance of the surrounding soil. Thus, moisture around the seed area is conserved,

and other crop residue is not allowed to penetrate the seed location.

"Additionally," he said, "the invention has variable compression wheels that can be set to correspond to the exact soil conditions the day of planting.

"All of this is obtained in a minimum tillage device that in a single pass through the field can till, fertilize, undercut weeds, add insecticide, and still leave a residue on top of the soil to further conserve moisture," Clark said.

Suderman will receive 15 percent of any licensing royalties received by the KSU Research Foundation on the device.

Classroom know-how benefits radio station

An electrical engineering graduate student got a chance recently to apply his classroom knowledge in a project to automate the campus radio station.

The student, George Scheets, was mainly involved with circuitry design which interfaced a computer with KSDB-FM's reel-to-reel and cartridge players. The unit is capable of turning on and off 16 functions with computer commands.

"The system was designed for use when students aren't around" to man the controls, Scheets said. Scheets is employed as a technician in the Department of Journalism and Mass

Communications, which operates the station. He said a number of commercial stations have expressed interest in the system because it is easy to program and affordable for small-market radio.

Scheets was enrolled in a digital circuitry class while working on the project. "It all tied together," he said.

David MacFarland and Lee Buller of the journalism department were responsible for the design and most of the programming of the system.

"George is a very capable engineer. We couldn't have done it without him," Buller said.



Members of the College of Engineering Advisory Council, some former members and past award winners in engineering met during Durland Hall dedication day. From left, bottom row: Eugene Peltier, Donald Christy, Richard Scherer, Dean of Engineering Donald E. Rathbone, Martin Eby, Jr., Claude Wilson, and Jerry Wilbeck; Second row: Gilbert Johnson, Gordon Goering, Jim Richards, Charles Carter, Alwin Rector, Fred Benson, and Donald Chesnut. Third row: Harold Siegele, Bob Exline, Ernie Nelson, Stanley Smith, John Walter Experiment Station Director William Johnson, and Donald Curtright.

Robotics research project funded

A robotics research project in the College of Engineering has received \$47,000 of a \$175,000 allocation to K-State in a program to develop high technology.

Another engineering project has won tentative approval for funding under the same program. The Department of Grain Science and Industry also will receive a part of the \$175,000.

The Kansas Department of Economic Development awarded the grant to K-State because of the state's interest in high technology and its importance to the University. The University of Kansas, Wichita State University and Pittsburg State University also received funds.

The research in robotics will be conducted by J. Garth Thompson, mechanical engineering, and Michael Lucas, electrical engineering. In addition to the \$47,000, the project is being supported with \$71,000 in equipment and funds from International Robomation, Motorola Corp. and Armco Steel.

KDED rules for the program require that all funds be matched by industry in an amount 1.5 times the KDED allocation. The research also must be related to economic development.

Awaiting final approval for \$43,000 in KDED funds is another proposal by Thompson and Mark Schrock, agricultural engineering. They plan to do a study on computer control of tractor engines and continuously variable transmissions. The project will be supported with \$73,000 in equipment and funds from Funk Manufacturing Co., Coffeyville, and Caterpillar Tractor Co. The Hesston Corp., Hesston, will monitor the project.

According to Thompson, the robotics project "will provide a focal point for robotics research and training in the state and will enhance the educational and research capabilities of Kansas State University."

A dedicated robotics laboratory has been established in the new portion of Durland Hall. The International Robomation/Intelligence M-50 robot

and P-256 vision system will be used in the research, along with a Motorola microcomputer system. The research will involve adaptive control of robotic devices and robotic control algorithms utilizing sensory feedback.

Also planned are expansion of the robotics research and training program to involve other industries and federal agencies; a robotics workshop for industrial participants; and development of senior- and graduate-level courses in robotics.

In a program related to high-tech development, the Kansas Board of Regents has made \$130,000 available to KSU for a "Center of Excellence" in research. Matching funds from industry also would be required under this program.

According to Dean Donald E. Rathbone, the College of Engineering is pursuing development of a center on computer control systems. "This would fit the 'Center of Excellence' concept very well," he said.

Plan to attend Open House March 30-31

"Engineering: High Tech on the Rise" is the theme for 1984 Engineers' Open House. The event is scheduled for March 30-31 and will be held in conjunction with all-University Open House. Engineering displays will be open from 5:30 to 9 p.m. Friday, March 30, and again from 9 a.m. to 4 p.m. Saturday, March 31.

The College of Engineering is planning an alumni luncheon for noon Saturday at the University Ramada Inn. A social hour will begin at 5:30 p.m. at the Ramada, followed by the awards banquet at 6:30 p.m. in the K-State Union Ballroom. The K-State Singers will entertain. Please fill out the form below if you plan to attend. Reservations should be in by Monday, March 26. We hope to see you there.

PLEASE RETURN THIS FORM TO:

Donald E. Rathbone
Dean of Engineering
146 Durland Hall
Kansas State University
Manhattan, KS 66506

ENGINEERS' OPEN HOUSE
ALUMNI RESERVATION FORM
Please make checks payable to the KSU Foundation

- () I plan to attend the Engineering Alumni Luncheon on Saturday, March 30, 1984, and have enclosed my check for _____ tickets. (\$4.25 per person) (Contributors to scholarship funds and other funds and activities administered through the Dean's Office are invited as guests of the College of Engineering.)
- () I plan to attend the Engineers' Open House Awards Banquet on Saturday, March 31, 1984, and have enclosed my check for _____ tickets. (\$6.95 per person)
- () I will attend the social hour at the Ramada Inn. Please reserve _____ places for me.

NAME _____

ADDRESS _____

PHONE _____ DATE _____

Math system could improve grain grading, transportation

L.T. Fan, professor and head of chemical engineering, is applying a relatively new form of mathematics to the grading and transportation of grains.

Funded by the U.S. Department of Agriculture, the project is the first of its kind in the U.S. and could result in a better pricing method for grain and in improvements in the design of grain-moving machinery.

Key to the project is application of the "fuzzy set theory," a system of math first developed only 18 years ago at the University of California, Berkeley.

The fuzzy set theory involves calculations that take into account the wide variations possible in the physical properties of an object such as grain.

Traditional mathematics is very specific and, unlike the fuzzy set theory, does not allow for imprecise definitions of classes. These classes, or parameters, are defined in terms of properties such as weight, volume, length and width, Fan explains. Once the class or category is established, then an object may be defined as having a "degree of belonging" to the particular class, Fan said.

Applied properly, the fuzzy set theory can aid industry in developing a better system of grading the quality of grain.

Such a system could translate into better pricing methods. For example, Fan said, grain shipped overseas is priced according to quality. But if the grain is undergraded, it will be valued at less.

Such research could extend to local farmers hauling grain to elevators where it is graded and prices assigned.

The fuzzy set theory also will be used to study current methods of transporting grain, such as moving it from one area to another inside an

elevator.

Transportation can damage the grain and create dust. Using the mathematics to determine how the grains are damaged could aid industry in devising different transportation methods that would cause less damage and, consequently, keep the quality of grain higher.

Working with Fan are E. Tazaki, a visiting professor from the Tokyo

University of Science and a leading authority on the fuzzy set theory; and F.S. Lai, head of the engineering section of the U.S. Grain Marketing Research Laboratory at Manhattan and an associate professor of chemical engineering at KSU.

Seen by Fan as the mathematics of the future, the theory can be extended for research in everything from languages to business.

Lounge on second-story balcony of Durland Hall is a comfortable spot for study, relaxation. Windows on east side of room provide natural light.



Notes from the Students

The student chapter of the Association of General Contractors (AGC) has won its third annual award as outstanding chapter in the country. Contributing to the award was the chapter's work in construction of a "Welcome to Manhattan" sign; helping with painting of the K-177 Viaduct; and assisting in a city program to winterize homes of low-income persons. The chapter is now undertaking one of its largest projects ever, according to Merrill Blackman, faculty advisor. The students are constructing playground equipment for Manhattan's Lee School, with \$15,000 worth of materials provided by the PTO.

Students from 54 universities met in Durland Hall in the fall for the annual national convention of Pi Tau Sigma, mechanical engineering honorary. About 110 representatives attended, for the second-largest turnout ever, according to Subhash Sinha, faculty advisor.

Kathy Riblett, graduate student in mechanical engineering, was one of

12 graduate students chosen from universities across the nation to participate in a solar energy workshop sponsored by the United States and Saudi Arabia. The students attended lectures and toured more than 20 energy facilities in Colorado and California during the two-week program.

Victor A. Simonis, senior in nuclear engineering from Lanesville, Ind., was awarded a \$2,000 scholarship by the American Nuclear Society. Simonis is senior student operator of the University's nuclear reactor.

Denise Sullenger, junior in construction science from Kansas City, Mo., won a \$1,500 scholarship from the Association of General Contractors' Education and Research Foundation. She was one of 38 students nationwide to be selected for the 1983 scholarship awards.

Kent D. Funk, senior in agricultural engineering from Hillsboro, was one of 26 students nationwide to receive a \$750 Soil Conservation Society of America scholarship.

What's New With You?

We'd like to know, and so would your former classmates. Please take a few moments to jot down any job changes, professional or other activities, or any reminiscences you'd like to share. Send to IMPACT editor, College of Engineering, Durland Hall, Kansas State University, Manhattan, KS 66506.

Here's news from Engineering alumni

Louis E. Fry (ArchE '27, M.S. '30) was featured in the newsletter of the Washington, D.C., chapter of the American Institute of Architects. Fry founded Fry and Welch Associates, P.C. in 1928, making it one of the oldest architectural firms in the country owned by blacks. Fry also has served as school architect and professor of architecture at Tuskegee Institute, Lincoln University and Howard University.

A bit of history from **June Roberts**, P.E. (AgE '33), who says the location of the "K" and "S" on K-Hill was "carefully selected by the engineers so that it would be practically impossible for the 'Ag's' to construct the 'A' and 'C,'" denoting Kansas State Agricultural College. Any efforts at constructing these letters were abandoned after the College became Kansas State University. Roberts says he got his information from his ex-roommate, Elwood Weeber (EE '30). Roberts remembers cleaning the "K" as a freshman and as a junior was in charge of feeding freshman workers hot dogs, coffee and donuts.

Louis G. Montre (ME '37) has retired from the engineering department of International Petroleum Services, Inc., El Dorado. He spent 44 years designing oil field drilling and servicing equipment, and also served as consulting engineer. The Montres live in Wichita. Their son L. Garry Montre (ME '61) is district sales manager for Welborn Sales Co., Salina.

Charles E. Webb (ChE '41), Wallingford, Pa., has retired as manager of transportation and distribution for Pennwalt Corp.

James E. Summers (ME '42) has retired from his job as a consulting engineer. He lives in Clinton, Mo.

William H. Wright (CE '49) has been named state transportation engineer for the Kansas Department of Transportation (KDOT). He has been with the department since graduation. In his new position, Wright will be responsible for all KDOT engineering and operations functions, in addition to serving as first assistant to the Secretary of Transportation.

Gene S. Erickson (ME '51), a senior manufacturing engineer at Westinghouse Electric Corporation's small

motor division in Lima, Ohio, has been awarded the corporation's highest engineering honor, the George Westinghouse Award for Outstanding Engineering Achievement. Erickson joined the division in 1956 and later was assigned to a special group engaged in designing coil winding machines. In 1973, he received a special patent award for a motor winding he developed.

Bob Exline (Ind. Tech. '56), president of Exline, Inc., Salina, has been elected to the Associate Members' Executive Committee of the Southern Gas Association. Exline provides goods and services to the gas industry as part of its machine shop operation.

Ronald L. Chandler (CE '61) is now a partner in Wilson & Company, Salina. He will continue to manage the firm's operations in southern Kansas as partner-in-charge of the Wichita office. Chandler joined Wilson & Company after graduation and in 1971 was named "Outstanding Young Engineer of the Year" by the Kansas Engineering Society.

Mike Lackey (CE '63, M.S. '75) has been named director of the division of operations for the Kansas Department of Transportation. He has been with KDOT since 1963, and was most recently chief of the bureau of construction and maintenance.

Patrick N. Caldwell (EE '72) and **Michael J. Ruggles** (EE '82) of Hughes Aircraft Co. have received

company fellowships for post-graduate study. Caldwell will work on a doctoral degree at the University of Arizona and Ruggles will return to K-State for a master's degree. They will remain as members of the Hughes technical staff while pursuing their studies.

100 years of progress

Exline, Inc., a Salina-based firm headed by three KSU graduates, is moving into the future, with construction of new headquarters on the outskirts of the city. But it also got a reminder recently of its roots in the past.

The company was founded as a blacksmith shop by Robert W. Exline in 1872. It is now headed by Bob Exline (Ind. Tech. '56) and his brothers Doug (Ind. Tech. '61) and Jerry (Arch. '60). Exline is one of 15 Kansas industrial firms identified to date by the Kansas Department of Economic Development as 100 years old or older. In recognition of this fact, the company was presented with the Kansas Centenarian Industry Award by Gov. John Carlin.

Exline is also one of only three Kansas industries to have remained in continuous family ownership for more than a century.

The company's new building contains 10,000 square feet of space.



For the Love of Engineering . . .

Jim Ruder (ME '83) and Lisa Hoffmaster (IE '82) aren't the first KSU engineering graduates to be married, but as far as anybody knows, the wedding party is the first to include all engineers. From left are Julie Hawley Zimmerman (CE '82); Jan Russell (IE '82); Susan Cooper (NE '82); Kathy Hoffmaster, sister of the bride and an engineering student at the University of Kansas; the Ruders; and Curt Lanpher (CnS '83).

Deaths

Philip J. Edwards (EE '29) of Los Altos, Calif., Aug. 1, 1983.

Herbert L. Winston (EE '31), Salem, Ill., April 13, 1983.

Ralph W. Armstrong (CE '37), July 11, 1983, of an apparent heart attack. Mr. Armstrong was retired from the DuPont Co. as a cost engineer after 31 years of service. He was a lifetime member of the Delaware Valley Section of the American Association of Cost Engineers.

Ronald E. Sturkie (ChE '67), April 27, 1983, of injuries received in an auto accident. Mr. Sturkie was area production manager, Edwin Cooper Division of Ethyl Corp., Sauget, Ill., at the time of his death.

New ground for women

Laree Mugler is one Kansas State graduate who has made good and in the process broken new ground for women in engineering.

Mugler, a 1972 graduate in mechanical engineering, is the first woman to become a Proctor & Gamble plant manager. She now heads the Lima, Ohio, plant.

Mugler has worked for Proctor & Gamble since graduation, starting as a technical engineer and then moving to production manager.

After eight years she became personnel manager at the Lima plant.

"In general, I don't think it's been more difficult (as a woman), said Mugler, a native of Clay Center.

Census taker back again Scholarships

Wilson Tripp, professor emeritus of mechanical engineering, has a variation of the census taker puzzle which appeared in the Fall 1983 issue of IM-PACT. If you didn't get the answer to that one, try this:

Census taker (CT) notes house number, asks man (M) who comes to the door if there are any others living in the house. M says there are three. CT asks, "What are their ages?" M says, "The sum of their ages equals the house number; the product of their ages equals 6 to the 5th power." (7,776) CT asks for more information. M says, "The age of the oldest is an odd number."

CT now knows the three ages. Do you?

Answer to first census taker puzzle is 2, 8 and 81. Key: $(2 + 8 + 81 = 91 + 18 + 72) = 91$. (81 = "One of them is older than I.")

The Richard D. Bradley Memorial Scholarship in Engineering has been established as a memorial to a 1928 graduate in electrical engineering. Mr. Bradley was director of research and development of the lighting division of Emerson Electric Co. until his retirement in 1970. He died in 1979.

The parents of a 1973 graduate in building construction who died in 1983 of liver cancer have established a fund to support the activities of the KSU Center for Basic Cancer Research. The Michael F. Luckert Memorial Cancer Fund will provide for student fellowships, cancer research and educational activities. The center is part of the KSU Division of Biology.

Those wishing to make contributions to either fund may contact the KSU Foundation, Hollis House, Kansas State University, Manhattan, KS 66506.



Michelle Nee, left, from Emporia High School, Luann Horton, Lebo High School, talk with Dean Donald E. Rathbone during College of Engineering Scholarship Day in December. (Story on p. 2)



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