

## Roy Andrew Seaton, Dean Emeritus, Dies After Illness

Roy Andrew Seaton, 86, dean emeritus of engineering at Kansas State University, Manhattan, died May 23 in Manhattan after a prolonged illness.

Dean of engineering from 1920 to 1949, Seaton was associated with the KSU engineering school as a student, teacher and administrator from the time he entered as a freshman in 1901 until his official retirement in 1954, except for short leaves of absence for advanced study, industrial experience, war service and service with the federal government. Only one other man was associated with the University over a longer period of time.

A native of Glasco, Kan., where he was born April 17, 1884, Seaton studied engineering at KSU, the University of Wisconsin and Massachusetts Institute of Technology. He held B.S. and M.S. degrees from K-State, the S.B. from MIT and an honorary doctor of science from Northeastern University, Boston.

Seaton joined the K-State faculty in 1904 as an assistant in mathematics and advanced to become dean of engineering in 1920. When he was relieved of administrative responsibilities in 1949, Seaton continued to serve KSU as building expediter. He had charge of all new construction on the K-State campus from 1906 until he retired in 1954.

During World War I Seaton served as a captain in the U.S. Army Ordnance, where he won recognition as a designer of artillery ammunition.

From 1940-1942 Seaton was in Washington, D.C., to organize and direct the engineering, science and management war training program of the U.S. Office of Education. This was a national program of short courses offered in more than 200 colleges and universities.

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Proposed Addition to Ward Hall in Department of Nuclear Engineering.

## \$90,000 in Gifts, Pledges Needed To Make Addition to Ward Hall

Fund-raising for the addition to Ward Hall which houses laboratories and the Triga Mark II Reactor of the K-State department of nuclear engineering remains about \$90,000 short of the necessary funds.

"The response to our need to date by our engineering alumni has been encouraging and gratifying," says Dr. Ralph G. Nevins, dean of engineering.

The proposal calls for a 13,000 square foot addition costing at least \$750,000. Thus far the department has received approximately \$185,000 in contributions, a state legislative appropriation of \$100,000, and a National Science Foundation matching grant of \$375,000.

Dr. Nevins said there is a possibility of losing the NSF grant, however, if an additional \$90,000 is not raised through gifts and pledges in the near future.

The need for the \$90,000 was necessitated by an increase in building costs since the original proposal was made and by the recent decrease in the stock market. A large portion of the funds raised in contributions for the building to date is in the form of stock which has decreased in value since it was donated.

In case you have not had a chance to contribute and would like to do so, a pledge card has been published in this issue of IMPACT. Simply fill it out and return it to us in care of Dr. R. G. Nevins, KSU, College of Engineering, Seaton Hall, Manhattan, Kansas 66502.

(CLIP OUT)

Date .....

### MATCHING FUNDS FOR WARD HALL ADDITION (Nuclear Engineering)

Dean Ralph Nevins:

- I will be able to help match the NSF Award for an addition to Ward Hall.
- I pledge \$ ..... Bill me quarterly, semi-annually, annually for (two) (three) years.
- A check for \$ ..... is enclosed.
- Please call. I need more information.

Signed .....

Street Address .....

City..... State..... Zip.....

## K-State Coed Engineer Hopes for a Career In Research, Design

There's at least one engineer who doesn't fit into the average engineering classroom at K.S.U.

Reason—this K-State engineer is a “she.”

Laree Mugler, a sophomore in mechanical engineering from Clay Center, Kan., often finds herself the “only girl in the room.”

What sort of reaction does she get from the rest of the class? “Well, the first couple of days they kind of look at you as if to ask ‘what are you doing here?’ Then, after a while, they accept you as one of the guys,” Laree says.

Miss Mugler has yet to find discrimination against women in the classroom. “The instructors have all been real great.”

But she is apprehensive about reaction by recruiters to a woman seeking a position with a male-dominated firm. This isn't her major worry about seeking a job though.

Right now her concern is which direction to go in searching for a job. She is inclined toward research and design in the space program. But she cautions that with all the alternatives available in engineering, the space program interest is only tentative.

Miss Mugler has received reaction from other sources. She is dating a physics major. He occasionally asks, “Just why are you in engineering anyway?” The bond between physics and engineering helps him understand her interest in engineering more than if he were in an unrelated field, she says.

Miss Mugler began her K-State engineering program in chemical engineering, but soon found “it wasn't my bag.” She enjoys drafting and the mechanical side of things, so she chose mechanical engineering. She also likes being around a shop, a trait she picked up from her father.

Her father, Keon Mugler, is president of Hutchinson Manufacturing Company in Clay Center. The firm specializes in building all types of grain handling equipment.

Her work in Hutchinson's engineering department in the summer gives her considerable practical experience which she might not get in the classroom.

“When you go out into the shop and watch something being built, you begin to see some of the problems you create in design.”

## Roy Seaton, Dean Emeritus

(Continued from page 1)

Following his retirement at KSU, Seaton served as academic director of the United States Air Force Institute of Technology at Wright Patterson Air Force Base, Dayton, Ohio, from 1954-1957. There he had charge of organizing and directing undergraduate and graduate technical programs for the Air Force.



COMPUTERS AND OSCILLOSCOPES are completely foreign instruments to most K-State coeds, but not to sophomore Laree Mugler of Clay Center, Kan. Laree, often the only girl in her male-dominated engineering classes, believes women can make it in this field.

## Cummins Award Is Established

Rodney L. Webring, 22, Stafford, Kan., has been named the first recipient of the new Cummins Award to an outstanding junior in mechanical engineering at Kansas State University, Manhattan.

The award, a \$100 check and a personal plaque, was established at K-State through the efforts of Keith M. Hostetler, a 1963 KSU mechanical engineering graduate. Hostetler is group leader of the thermoscience department at Cummins Engine Company, Columbus, Ind.

Webring's name has also been inscribed on a permanent plaque in the office of the K-State department of mechanical engineering.

The plaque's citation read: “. . . to the student who is considered by the faculty to be the most outstanding based on engineering and professional extra-curricular activities, scholastic achievement, character, responsibility, and potential for professional growth.”

Webring, a 1966 graduate of Stafford High School, is an officer in the K-State student chapter of the American Society of Mechanical Engineers and Pi Tau Sigma, a mechanical engineering honorary. He is the son of Mr. and Mrs. Gerald A. Webring, Stafford.

## Microcircuitry Used By Russell Eberhart To Solve Problem

A bright, young Ph.D student in electrical engineering at K-State has developed a prototype of an all-electronic control box for a beet-hoeing machine.

Distributed by a Manhattan farm equipment firm, the machine was designed to remove the weeds around and in between beet plants, hoeing six or eight rows at a swath.

Unfortunately for the firm, the machine's former electro-mechanical control box was “not as reliable as was necessary,” said Russell C. Eberhart, Hutchinson, who was assigned to devise the new box.

The beet-hoeing machine, also called a crop thinner, is used primarily on sugar beets. It can also be used on lettuce and tomatoes.

Eberhart, a student of Dr. Michael S. P. Lucas who is director of the K-State Solid State Engineering Laboratory, took about nine months to solve the problem. He employed microminiature circuitry in the box which works in forward and reverse modes.

Each row is thinned by a separate hoe head with eight knives placed radially on the head which is rotated hydraulically.

In the forward mode, the machine goes along and senses a plant. This plant is skipped automatically. Then the machine hoes for a fixed distance, usually 4-8 inches.

“Then the sensing circuit is energized, causing the machine to hunt for the next plant which it skips. This process repeats itself over and over again while the machine is operated,” explained Eberhart who received his B.S. and M.S. degrees in electrical engineering at K-State.

He pointed out that his control box gives the farmer an excellent advantage. “If he wants to, the farmer can set the control box to hoe out small, scraggly beet plants below a given size and leave only the healthy plants,” he said.

The machine has also been designed to operate in a reverse mode. It helps make the farmer's yield greater. “This way small beet plants which might not be sensed will be left instead of being hoed out,” Eberhart added.

The farmer can select either the forward or reverse modes by simply flipping a switch.

Eberhart isn't stopping here. His long range development plans call for the design of a control box which will automatically select either mode according to field conditions.

“Then the farmer won't have to worry about selecting a mode,” Eberhart said.



**EQUIPMENT FOR ICRE** — A new \$5,000 Wang 700 Stored-Program Calculator has been acquired by the new Institute for Computational Research in Engineering at KSU. Dr. John O. Mingle (left) ICRE director, says it is an intermediate level machine for solving problems requiring more accuracy than a slide rule but not complicated enough to warrant use of a computer. Information for it can be stored on cassette tapes. Dr. Hugh S. Walker, associate ICRE director, looks on.

## Career Development Award to Erickson, Will Conduct Multi-disciplinary Research

A coveted five-year, research career development grant has been made to the K-State department of chemical engineering by the U.S. Public Health Service.

Dr. Larry E. Erickson, associate professor, is the recipient, Dr. L. T. Fan, professor and head of the department, has announced. Erickson is the fifth K-State faculty member to receive such an award.

The grant, which will pay Erickson's salary for the next five years, will allow the chemical engineering department to expand its engineering program in biology and medicine.

Research on the modeling, analysis and optimization of biosystems will be conducted under the grant. This will include research in biomedical, biochemical and environmental engineering.

In biomedical engineering, the research will also involve a faculty research group in physiological sciences—Dr. Charles E. Cornelius, Dr. Rudolph Clarenburg, and Dr. Ronald R. Gronwall. This joint effort will be concerned with finding solutions to the problem of jaundice.

Erickson also plans to conduct biochemical engineering research on the modeling and analyses of growth processes. He would like to develop an economical pro-



L. E. Erickson

cess for producing protein by growing micro-organisms on oil or natural gas. He believes such a process has great potential for remedying some of the world's food shortage problems.

There is suggestive evidence that the mental capacity of 60 per cent of the world's pre-school population is being impaired by poor diet, Erickson says. Since protein shortages are the primary cause of this irreversible mental problem, he believes this research is very important.

The K-State department of chemical engineering will also continue to expand its research concerning the problem of man and his environment. In this area, research on water quality, biological waste treatment, water purification, air purification, and the reuse of solid wastes is being conducted.

Besides those three areas, Erickson and other department members are also interested in studying broad ecological problems such as continued availability of water, oxygen, food, power, and various other needs requiring raw materials, required by the world's population.

The grant is another step toward a goal the department of chemical engineering set two years ago to become more involved in bioengineering and environmental research.

## William H. Johnson Named Successor To George Larson

Dr. William H. Johnson of Ohio State University and the Ohio Agricultural Research and Development Center has been appointed the new head of the department of agricultural engineering at K-State effective July 1.

Dr. Johnson, 47, associate chairman and professor in the department of agricultural engineering at Ohio State, will succeed Dr. George H. Larson, who asked to be relieved of his administrative duties to devote full time to teaching and research interests.

This past academic year Johnson has been on leave as a visiting scientist and lecturer in the department of agricultural engineering at Texas A & M University, College Station.

From 1964 to 1968, he was associate chairman and professor of the OSU and OARDC

department. In 1968-1969, he was the department's acting chairman in addition to his administrative responsibilities with the research and development center.

Johnson was associate professor and associate chairman of the agricultural engineering department from 1959 to 1964. He was on leave from OSU in 1958-1959 as a research assistant in the department of agricultural engineering at Michigan State University.

He was an instructor in the Ohio State agricultural engineering department and the Ohio Agricultural Experiment Station in Columbus from 1948 to 1953. Johnson was promoted to assistant professor and associate chairman of the department in 1953.

His research experience is in administration and technical areas of soil-plant-machine dynamics and harvesting. He has done consulting work in India and the U.S.

Johnson's educational background includes three degrees from Ohio State University, a B.S. in agriculture in 1948, a B.S. in agricultural engineering in 1948 and an M.S. in agricultural engineering in 1953. He was granted his Ph.D in agricultural engineering at Michigan State in 1960.

He is married and the father of a son, Lawrence, in graduate school at North Carolina State University, and two daughters, Cheri Ellen, and Dana Sue, both undergraduate students at Ohio State.



W. H. Johnson

# Newsorthy Notes

Dr. Hermann J. Donnert, professor of nuclear engineering, received a silver jubilee medal June 4 for academic achievements in nuclear engineering and physics during the Tri-Centennial Anniversary of the University of Innsbruck, Austria.

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The Continental Oil Company, Ponca City, Okla., has established a new \$3,000 graduate fellowship for 1970-1971 in the department of chemical engineering. Dr. L. T. Fan, professor and head, has announced.

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Mrs. Margaret Emma Brown, Manhattan, Kan., has established the Leonard Leon Brown Memorial Scholarship in Engineering to honor her late husband. He operated a blacksmith shop at 117 South 3rd where, before his death, he employed many K-State students who worked part-time.

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Dr. George H. Larson, who stepped down July 1 after 14 years as head of agricultural engineering at K-State, has accepted a two-year assignment in Bogota, Colombia. He will serve as a professor at the National Research Center for Agriculture of the Institute of Colombian Agriculture. He will return to K-State following that assignment.

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The department of industrial engineering will award its Ph.D. in August to F. T. Hsu. Dr. Frank A. Tillman, professor and head, said that there are now six students working on Ph.D.'s in the department which began its doctoral program only two years ago.

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The Engineering Advisory Council has voted to expand from 13 to 18 members, announced Dr. Cecil H. Best, associate dean. New groups to be represented include the Kansas junior colleges, four-year colleges, and the Kansas Engineering Society. New members are Martin K. Eby Jr., Wichita, Kan., and Edward T. McNally, Pittsburg, Kan.

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Sharon Hachenberger, 20, incoming senior majoring in clothing and retailing, has been elected president for 1970-1971 of the Engin-dears, a coed auxiliary serving the College of Engineering. She was one of three finalists in the balloting for the 1970 St. Patricia, who reigns with St. Patrick over KSU's annual Engineers' Open House.

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Frederik F. Leopold, visiting professor of industrial engineering spring semester, returned home June 1 to Eindhoven, Holland. He is a member of the Institute for Perception Research, a joint educational unit affiliated with the Philips Company, a 290,000-employee electronics firm based there, and the Technical University of Eindhoven.

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J. Tom Ratcliffe, senior in mechanical engineering from Manhattan, Kan., won first place in the 1969-1970 regional technical paper competition of the American Society of Mechanical Engineers. He won \$100 for his paper "Pollution Control."

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Dr. Ali F. El-Saiedi, assistant professor of nuclear engineering the past two years, returned home June 5 to assume full-time duties with Egypt's Atomic Energy Establishment. There he is conducting research in nuclear and radioisotope applications.

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A 15-minute motion picture careers film, "Engineering Makes a World of Difference," shared the top audio visual achievement award in a competition sponsored by the American Society of Association Executives. Jack M. Burke was executive producer and John R. Stockard the producer.

## Four K-S Educators Are Given Awards For Quality Teaching

Four engineering faculty members at K State have earned awards in 1969-1970 for outstanding teaching.

Dr. N. Dean Eckhoff, assistant professor of nuclear engineering, received \$1,000 for excellence in teaching at the undergraduate level. Gerald R. Potts, an instructor in mechanical engineering, was awarded \$500 in a competition restricted to graduate assistants or instructors whose responsibility is at the freshman or introductory level.

The awards to Eckhoff and Potts are university-wide and are funded by the Standard Oil (Indiana) Foundation.

Robert E. Crank, professor of mechanical engineering, won the \$500 teaching effectiveness award for the midwest section of the American Society for Engineering Education. Crank was nominated by the K-State College of Engineering Center for Effective Teaching.

The center was established in June, 1969, through the generosity of the late James L. (Jim) Hollis, 1938 engineering graduate who passed away last month following surgery. His home was Silver Springs, Md.

Sponsored by ASEE and underwritten by the Western Electric Fund, Crank's award is one of 18 presented nationally in 1969-1970. He was the only recipient in ASEE's midwest section comprising Kansas, Arkansas, Missouri, Nebraska and Oklahoma.

Dr. Clyde H. Sprague, assistant professor of mechanical engineering, also won an ASEE midwest section competition made to a faculty member below age 36 showing outstanding promise as an engineering educator.

The award was an expense-paid trip to the ASEE annual meeting in June at Ohio State University. It was funded by the Dow Chemical Company.

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