

Alumni Symposium On March 21 Features Everitt

The K-State College of Engineering will conduct its second annual Alumni Symposium on Saturday, March 21, in the Student Union. Alumni and friends of the College are encouraged to attend and participate.

Special guest speaker will be Dr. William L. (Bill) Everitt, dean emeritus of the College of Engineering at the University of Illinois, Urbana. "New Horizons in Engineering," theme for the Symposium, will be the subject of Dr. Everitt's talk.



Dr. Everitt

its faculty and students, and importantly, its alumni and friends."

The Symposium will include the keynote address by Dr. Everitt, an open forum led by Dr. Everitt with alumni, friends, faculty and students participating, and a local presentation. There will also be a program for wives.

Dr. Everitt will moderate an open forum with all in attendance invited to speak. A panel of three engineering faculty members and Dr. Emerson L. Besch, associate professor and head of physiological sciences, will work with Dr. Everitt.

Alumni Symposium will be held during the annual Engineers' Open House, set for March 20-21. The Second Annual All-University Open House at K-State is set for the same dates.

For additional information on the Symposium, please write or phone (AC 913 53 2-6405) the Office of the Dean, College of Engineering, K.S.U., Seaton Hall, Manhattan, Kansas 66502.

Adjunct Professors Co-teach Nuclear Power Engineering

Two consultants from Kansas City, Mo., are enriching the nuclear engineering curriculum at Kansas State University this academic year.

Earl O. Smith and A. Einar Swanson of the nuclear division at Black and Veatch, consulting engineering firm in Kansas City, are collaborating to teach a course in nuclear power engineering.

"We are delighted that Smith and Swanson have consented to serve as adjunct professors in our department," said Dr. Curtis G. Chezem, professor and head of nuclear engineering at K-State.

Coordinating this new adjunct professorship program for the K-State department is Dr. M. John Robinson, associate professor.

Dr. Robinson explains that the course is taught in alternate weeks by Smith and Swanson. "We feel that such an arrangement fosters interaction and feedback between the nuclear power industry and our students, who are among the future employees of that industry."

In their course, Smith and Swanson are chronologically covering the procedures and practices used by most consulting engineering firms in assessing and recommending the current and future power capacity needs for public and private utilities.

Enrolled in this one-credit course this fall semester have been 15 juniors, seniors and graduate students, including a coed civil engineering major. Thirty more students are auditing the course.

"This course is structured to be of interest to students from many disciplines and is available as a technical elective to all departments," Dr. Robinson said.



E. Smith



E. Swanson

Prospective Students Are Recommended

Nearly 100 K-State Engineering alumni and friends have sent to the College of Engineering the names of prospective engineering students. This was in response to a reply card inserted in the October-December issue of IMPACT.

These student prospect cards have been sent to KSU engineering alumni the past two years in the fall. Each recommended prospective student will receive a personal letter, appropriate pamphlets, and current information on the engineering program in which he or she is interested.

"The response was quite gratifying. Last year we received about 60 replies," said Dr. Kenneth K. Gowdy, assistant dean.

"As a consequence, more non-Kansas high school, junior college, and college students are receiving information than might have otherwise. This extra channel of communication is very helpful to our student recruitment program," he added.

In case you did not receive a card, it is not too late for you to recommend to us a prospective student. Simply drop us a note of recommendation indicating the prospective student's name, full address, age, phone, year in school, and the branch of engineering in which interested.

E.E.S. Biennial Report Ready

The 1968-69 biennial activities report of the K-State Engineering Experiment Station is off the press. It contains a brief description of each research project carried through E.E.S. as well as a listing of technical papers published and graduate theses accepted during the past two years. For a copy, write to E.E.S., Seaton Hall, K.S.U., Manhattan, Kansas 66502.

Special IER Symposium Educational Involvement For Graduate Students

A multi-disciplinary team of 14 faculty researchers plus several outstanding graduate students made presentations December 8-9 during a special symposium conducted by K-State's Institute for Environmental Research (IER).

The symposium included a report on research conducted at K-State under the \$600,000 Project THEMIS contract with the Institute. Several distinguished engineers from industry, other educational institutions, as well as representatives from the Air Force, Army, and Navy took part in the meeting.

Military personnel were headed by Dr. Glen Finch, project monitor for the Air Force Office of Scientific Research which funded this contract with K-State in the amount of \$200,000 a year since 1967.

"We were happy with the results of the meeting. I thought that the symposium proved to be a real educational involvement for some of our graduate students," said Dr. Ralph G. Nevins, chairman of the symposium. Dr. Nevins is IER director and dean of the College of Engineering.

Directors of the nine projects included in this large contract were in charge of delivering the papers and talks.

Presenting papers were:

—Dr. Preston E. McNall Jr., associate IER director and professor and head of mechanical engineering, and Dr. Naim Z. Azer, associate professor of mechanical engineering—"Thermal and Physiological Effects of Localized Ventilation."

—Dr. Nevins and Dr. John E. Kipp, associate professor of applied mechanics—"Air Distribution in Confined Spaces."

—Dr. Richard E. Christ, assistant professor of psychology—"Human Performance Changes in Altered Environments."

—Dr. Emerson L. Besch, associate professor and head of physiological science—"Physiologic Rhythmicity in Altered Environments."

—Dr. Frederick H. Rohles Jr., associate IER director and professor of mechanical engineering and psychology—"Biological Rhythms."

—Dr. Rohles—"Comparative Psychophysiology: Wind as a Reinforcing Stimulus, Effects of Temperature and Crowding on Aggression."

—Dr. Stephan A. Konz, professor of industrial engineering—"Individual Cooling."

—Dr. Embert H. Coles, professor and head of infectious diseases, and Dr. Jessie Warden, professor and head of clothing textiles and interiors—"Effects of Environment on Microbial Flora in Clothing."

—Dr. L. T. Fan, professor and head of chemical engineering, and Dr. C. L. Hwang, associate professor of industrial engineering—"Systems Study and Optimization."



REPORT ON RESEARCH FINDINGS—Dr. Glen Finch (center left), a project monitor for the Air Force Office of Scientific Research, and several other representatives of the Department of Defense, industry, and the academic community, took part in a special symposium at K-State December 8-9. Presented was K-State's work under its \$600,000 Project THEMIS contract, "Performance and Life Support in Altered Environments." Institute for Environmental Research personnel who planned and coordinated the event included Dr. Ralph G. Nevins (left), director, and Dr. Frederick H. Rohles Jr. (center right) and Dr. Preston E. McNall Jr. (right), associate directors.

MAEGC Coordinates Recruiting

Annually high school guidance counselors in Kansas are literally deluged with recruitment materials from colleges, universities, professional societies, industry and various organizations.

Representatives of engineering—from colleges, universities, institutes, consulting firms, companies, society chapters, etc.—have contributed to the increasingly massive paper load directed to the counselor's desk.

It is little wonder that engineering representatives have been so aggressive in recruiting top students last year there were 80,000 job openings in the U.S. for young engineers just out of college.

Unfortunately for employers, fortunately for new graduates, there were only 35,000 grads to fill those openings.

This situation, a boom in opportunities combined with a manpower shortage over the last decade, has nearly doubled starting salaries.

Engineering leaders, in their haste to alleviate these manpower shortages, have each developed their own recruiting programs to interest high school scholars in their profession.

But until now, little thought has been given to coordinating recruitment activities or preventing duplication of effort.

Last April a group of progressive engineers from the Kansas City area and Kansas decided to do something to lessen the plight of the counselor. They founded a new organization to try to simplify his work in counseling students interested in engineering.



K. Gowdy

Its name: **Mid-America Engineering Guidance Council (MAEGC)**. Offices are at the University of Kansas, Lawrence, with Prof. Paul Hausman of the KU engineering faculty heading office operations.

Dr. Kenneth K. Gowdy, assistant dean of engineering at Kansas State University, Manhattan, is the elected president of MAEGC.

"In the past, all these groups were flooding counselors in Kansas City and Kansas with recruitment materials.

"It has not been uncommon for several representatives to personally visit one high school at the same time—each with the best intentions, but unaware that another engineering recruiter would also be there," Gowdy said.

Each society, organization, agency, school, firm, industry "is quite naturally interested in promoting its own particular phase" of engineering.

"This is understandable, yet we knew this type of situation could and should not persist," he added.

Gowdy, Hausman, and the other council officers feel this new organization will help coordinate recruitment activities. "It should simplify the counselor's work, we hope," Gowdy said.

The plan is to have only one major contact with each counselor each year from the engineering profession, by the MAEGC office.

(Continued on page 3)



DR. LAWRENCE A. SCHMID (right), assistant professor of civil engineering, is testing his lime-biological treatment phosphorous removal process at the Manhattan, Kan., Sewage Treatment Plant. This research is being conducted under a two-year, \$41,550 contract with the Federal Water Pollution Control Administration. Assisting him are two civil engineering seniors—Ron Graybeal (left), Topeka, and John Bailey, Leon, Kan.

Hope to Set Benchmark Criteria

Three engineering professors—two from Kansas State University, a third from the University of Missouri, Columbia—are collaborating on a research project to set benchmark criteria for the evaluation of nuclear reactor core and shielding design.

Dr. Walter Meyer and Dr. John O. Mingle, K-State professors of nuclear engineering, and Dr. Darrol H. Timmons, MU assistant professor of nuclear engineering, are pooling their knowledge and efforts in this ambitious undertaking.

"This project is designed to set up benchmark criteria for evaluating shielding and core design computer codes for nuclear reactors," said Dr. Meyer, principal investigator.

Dr. Mingle is co-investigator, and Dr. Timmons, who received his Ph.D. in nuclear engineering at K-State, is a research associate.

This one-year, \$47,800 contract, entitled "Fast Neutron Transmission Measurements for Reactor Core and Shielding Materials," has been funded by the Atomic Energy Commission's division of research.

It is expected one to two years will be required to complete this research as originally outlined to the AEC.

AEC is interested in the findings of this research for two reasons:

- data gathered will be directly applicable to design of thermal fission and fast fission reactors.

- results will enable checks of various computer codes used in design of shielding materials and cores for such reactors.

About three years ago, Dr. Gale Simons, now of the Argonne National Laboratories, started work in cooperation with Oak Ridge on the development of an NE-213 Neutron Spectrometer. This device was instrumental in helping K-State receive this AEC contract. Simons earned his Ph.D. in nuclear engineering at K-State.

The spectrometer is one of only four or five in the country. "It can't be bought in the open market," Meyer said.

The NE-213 neutron spectrometer is a sophisticated device used in measuring energies of neutrons produced in a nuclear accelerator or reactor from as low as a million electron volts "to essentially infinitely high energy," he pointed out.

Under this AEC contract, Meyer and Mingle are utilizing the spectrometer to measure the energy spectrum of neutrons penetrating through thick slabs of materials used in nuclear reactor shielding or core construction.

These materials, of varying thicknesses, include concrete, iron and water, and varying combinations of these.

"A side benefit of this contract," Meyer pointed out, "is that it will contribute about

Computational Institute Gets Approval Of Board of Regents

A new Institute for Computational Research in Engineering (ICRE) for the K-State College of Engineering has been approved by the Board of Regents, announced Dr. Ralph G. Nevins, engineering dean.

"The purpose of ICRE will be to provide engineering research, development and service for computer-oriented activities with emphasis upon small computers," he explained.

Dr. John O. Mingle, professor of nuclear engineering, has been named ICRE director. Dr. Mingle earned his Ph.D. at Northwestern University in 1960 and has been a K-State faculty member since 1956.

Associate director is Dr. Hugh S. Walker, associate professor of mechanical engineering. On the College's faculty since 1964, he received his Ph.D. at K-State.

Charter ICRE members include Dr. Mingle, Dr. Walker, and Dr. Philip G. Kirmser, head of applied mechanics; Dr. Richard G. Akins, associate professor of chemical engineering; Dr. Robert R. Snell, professor of civil engineering; Dr. Floyd W. Harris, assistant professor of electrical engineering; and Dr. N. Dean Eckhoff, assistant professor of nuclear engineering.

Dr. Mingle and Dr. Walker pointed out that ICRE will provide a focal point for study of creative engineering uses of computers; assist with coordination of research proposals in this area; provide a center for dissemination of information about engineering uses of computers through conferences, institutes, workshops, and publications; provide a base for development of software engineering; and encourage engineering and scientific uses for small computers.

To Plan Recruitment

(Continued from page 2)

A letter will go out annually with a list of available recruitment literature, career films, speakers and visual aids. This way the counselor can know where to go when looking for needed information about the engineering profession.

"It is our hope counselors will accustom themselves to using Council services," Gowdy added.

MAEGC officers don't think their new organization will completely solve their combined recruitment problems, "but it should help cut down on duplication of effort, making the counselor's work a little less confusing," he said.

\$9,000 this year to operate K-State's TRIGA Mark II Reactor."

In addition to providing for university support and faculty salaries, this contract will fund three nuclear engineering graduate students for the coming year—one seeking a Ph.D., two others in M.S. degree programs.

Newsorthy Notes

Dr. Frederick H. Rohles Jr., associate director of the Institute for Environmental Research at K-State, conducted a one-day conference October 30 where the development of a long-term program of studying the school environment and its relationship to learning was discussed. Several educators and industrial representatives participated.

* * *

Dr. Dennis Zitterkopf, a 1962 K-State graduate, of the Applied Physics Laboratory at Johns Hopkins University, Silver Springs, Md., addressed a special session of electrical engineering students on October 2.

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A K-State professor of industrial engineering, Dr. Stephan A. Konz, has received the Franklin Taylor oral presentation award from a group of the Institute of Electrical and Electronics Engineers (IEEE). Konz, on KSU's engineering faculty since 1964, was lauded for the top technical paper presentation 15 months ago before IEEE's Man-Machine Systems group in Washington, D.C.

* * *

A \$2,000 Humble Oil Education Foundation grant has been presented to the departments of chemical and mechanical engineering. K-State is one of 94 institutions of higher education over the nation receiving one of these unrestricted grants.

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Some 125 engineers and scientists from across Kansas and the nation took part in K-State's Conference on Photogrammetric Engineering October 30. The meeting was coordinated by Antonio M. Aguilar, assistant professor of civil engineering. Featured speaker was William A. Radlinski of the U.S. Geological Survey, Washington, D.C.

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First recipient of a \$250 F. C. Fenton scholarship in agricultural engineering at KSU is Armin E. Johnson, a junior in agricultural engineering from Louisburg, Kan. The scholarships honor Fenton, professor emeritus and head of the KSU department of agricultural engineering for many years.

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Kansas State University received \$6,566.26 through the General Electric Foundation's Corporate Alumnus Program in 1968. The foundation matches gifts of employees up to \$2,000 a year on a dollar-for-dollar basis.

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Dr. Ralph G. Nevins, engineering dean at K-State, has been named a trustee of the newly-chartered Engineers' Foundation of Kansas. Nevins is an elected representative of the Tri-Valley Chapter of the Kansas Engineering Society.

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Dr. George H. Larson, head of the department of agricultural engineering, has been named a life member of the Kansas LP-Gas Association. The honor was to recognize Larson's contributions in the development of the LP-Gas industry in Kansas.

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Fort A. Verser Jr., KSU instructor in nuclear engineering, is the new head of the Kansas Professional Advisory Service Center (PASC). He succeeds Jerry L. Rathbun who has accepted an engineering position with Westinghouse of Pittsburgh, Pa. PASC coordinates nuclear fallout shelter development in the state.

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John C. Campbell, native of Wilsey, Kan., who received his B.S. degree in agricultural engineering at K-State in 1947, is the new chairman of the department of general engineering at Oregon State University, Corvallis. He had been serving as acting department chairman.

Engineers' Open House Set for March 20-21 By College's Students

The more than 1,100 students in the College of Engineering at K-State have slated their 46th annual Engineers' Open House the third weekend in March. It is set for Friday and Saturday, March 20 and 21.

The Open House hours are from 5 to 9 p.m. on Friday, and from 9 a.m. to 5 p.m. on Saturday.

This year's Open House will coincide with the second annual All-University Open House which for the first time has been scheduled for the same weekend. The university-wide festivity was held last April for the first time.

Engineers' Open House will feature a host of new and intriguing displays and exhibits. These are developed and created by students. They will depict for your viewing the Open House theme, "Engineering: Foundation for Our Future."

Candidates for St. Pat, the engineers' patron saint, and his lady, St. Patricia, have been narrowed from a field of 18 to 6.

St. Patricia finalists, all members of the Engin-Dears coed auxiliary, are Sharon Hachenberger, junior in clothing and retailing, Leawood, Kan.; Sharon Kauffman, sophomore in occupational therapy, Salina, Kan.; and Rita Rieschick, senior in elementary education, Soldier, Kan.

St. Pat candidates: Douglas E. Naaf, senior in mechanical engineering, Beattie, Kan.; George E. Pinick, senior in electrical engineering, Wichita; and Wayne A. Ross, senior in nuclear engineering, Webber, Kan.

Among other features of Open House will be Robby, the walking-talking robot, the Copper Man, in addition to colorful, thought-provoking displays and exhibits by leading engineering organizations and industrial firms.

"This event has been planned to keep the general public abreast of the latest developments in engineering," said Dr. John E. Kipp, faculty adviser. "Also, our Student Engineers want to interest college, junior college, high school and junior high school students to consider satisfying, rewarding careers in engineering."

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