



# NEWSLETTER

Vol. XIII, No. 2, Spring, 1971

## DEPARTMENT OF GENERAL ENGINEERING

University of Illinois · Urbana, Illinois



G. E. GRAD  
HONORED

BARBARA CRAWFORD JOHNSON (Mrs. Robert H.), the first woman graduate from the General Engineering curriculum in 1946, will be presented the Medallion of Honor Award by the Mothers Association during Campus Mother's Day Weekend ceremonies on May 1. This award is in recognition of activities in her professional career as an engineer, her participation in the space program and the safe return of the astronauts, and her ability to combine the dual role of professional woman and homemaker.

Mrs. Johnson has worked for the North American Rockwell Corporation for 23 years. Early assignments included flight dynamics studies for programs such as Dyna-Soar, and wind tunnel and stability studies for guided missiles. At the beginning of the Apollo Lunar Landing program she became Supervisor of the Entry Performance Unit. In her present position as Manager of Mission Requirements and Evaluation, she directs the efforts of approximately 100 engineers in mission and integrated system analysis activities in support of the command and service module (CSM) programs. In addition to her bachelor degree in General Engineering Mrs. Johnson has completed studies in aerodynamics, physics and mathematics.

THE EXECUTIVE BOARD of the General Engineering Constituent Alumni Association held its spring meeting at the Illini Union on Saturday, April, 17. In addition to the officers, directors, and several faculty members, there were three others in attendance, WANDA ANDERSON (Mrs. George '48), who is chairman of the ladies' program, and students FRANK FRONCZAK and BRUCE HUBER.

Discussion was centered on three main topics, finalizing plans for the annual fall meeting 1971 (see below), beginning plans for the Golden Anniversary of the Department of General Engineering for Fall 1972, and increasing active participation by more alumni.

The forthcoming annual meeting has been set for a non-football weekend, Saturday, November 6. All facets of the schedule will take place during one day only, including the ladies' program, and possibly events at the Krannert Center.

### Proposed Plans for Nov. 6

At the Illini Union general lounge, second floor north.

Theme: HUMAN ENGINEERING  
9:30 a.m. - Registration  
10:00 - 11:30 a.m. - Welcome

Speaker 1 - General Overview  
Speaker 2 - Point of View Psychology  
Speaker 3 - Point of View Physiology

### Discussion to follow

11:30 a.m. - Business meeting and awards  
12:00 noon - Lunch  
1:15 - 2:45 p.m. - Tour research lab and projects  
2:45 - 3:00 p.m. - Coffee  
3:00 - 4:30 p.m. - Case studies-Product design and Job design  
6:00 p.m. - Banquet with wives  
8:00 p.m. - Evening at Krannert or Assembly Hall events

Special ladies program arrangements throughout the day.

## General Engineering Student's Awards

BRUCE A. HUBER, '71, Fairbury; was named recipient of the Edward S. Fraser Award. This award consisting of a plaque and \$100, is given to the outstanding senior scholar in General Engineering. Bruce not only maintained a 4.912 scholastic average but participated actively in College of Engineering and General Engineering activities.

The H. L. Marcus-L. B. Phillips Award has been presented to DANNY L. NELSON, '71, Varna. This award is given to an outstanding senior in General Engineering as recognition for his scholarship, character, and activities and on the basis of and evaluation by the senior class of the student's character and general attitude toward his fellow classmates. Dan was active on Technograph, serving as editor for 1969-70. A plaque and \$100 comprise this award.

LOUIS J. MANCINI, '72, Chicago; was chosen to receive the Randolph P. Hoelscher Award. Louis will receive a certificate and \$75 as the junior in General Engineering who has achieved exceptional scholarship and leadership. He has worked on displays for Engineering Open House and made several trips to his former high school to discuss Open House and the University of Illinois with the Science students and faculty. In his spare time Louis has participated in intramural handball, baseball, basketball, and football.

The team of students receiving the G. E. Design Award included CHARLES W. FELLMAN, Peoria; RONALD R. RUTGER, Moweaqua; and JOHN A. TURNER, Park Ridge. Title of the project was "Spring-Back Die Formation Equations." Each man will receive a certificate and \$25. All three graduated in February, 1971.

## Knights of St. Pat

The College of Engineering recognized two outstanding students in General Engineering for their contributions to the college, the community, and student life in general by naming them Knights of St. Pat at St. Pat's Ball on March 13, 1971. FRANK J. FRONCZAK, Jr., '72, Chicago; is financial Vice-President of Engineering Council and president of I.S.G.E. Frank has served his fraternity as athletic manager, house steward, and work manager. Recently he has been active in University-wide meetings on student government and reform. The rest of his free time is devoted to tutoring a fourth-grader as part of the VIP program. In addition to all this, Frank is a James Scholar and holds an honorary Illinois State Scholarship and an honorary National Merit Scholarship.

The other knight is BRUCE HUBER, '71, Fairbury. He has worked on Technograph as a staff writer, and production manager, served on the General Engineering Department Faculty - Alumni Relations Committee, been secretary and president of Gamma Epsilon, a BTEC discussion leader, Illio Sophomore manager, a member of ISGE, and played intramural football and basketball. He has served as floor vice-chairman and on the judicial board for his dormitory. In addition to all these activities; Bruce has an Alfred P. Sloan Scholarship, is a James Scholar, and has earned the R. P. Hoelscher Award, a place on the Dean's list, and membership in Phi Kappa Phi and Tau Beta Pi, as well as in Gamma Epsilon.

## G. E. 242 Design Project

A wide selection of interesting and diverse projects are ongoing this term in the Senior Project Design Course, G.E. 242. Industry sponsored projects include "Extrusion Control Parameters" with Sweetheart Plastics; "Calendar Roll Runout" with Industrial Nucleonics; "Use of Waste Heat (from electric power generation)" with Illinois Power. Also, the "Head Rest Design" project team just returned from a recent field trip to the G.M. Tech Center. Other interesting projects involve "Power Respiration Unit for Large Animals" (in conjunction with Veterinary Medicine). "Hydraulic Refuse Compactor," "Sewage Treatment for Small Towns," and "Simulation of Mob Action."

SAMUEL E. ESKRIDGE, '72, Chicago; was named Cadet Colonel and Brigade Commander of the Army ROTC for the second semester. Sam is attending the University on a scholarship from ROTC. Among the military awards he has received are the Army ROTC Superior Cadet award and the U. S. Army Award. He plans a career in man-machine systems engineering. Upon completing four years of active duty, he would like to enter the space program.

G. E. Student is  
Colonel of AROTC



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Enclosed with the Newsletter this Spring, is a special announcement concerning the Annual G.E. Alumni Meeting. If you did not receive a flyer please write and request one.

A SPECIAL ANNOUNCEMENT ABOUT A SPECIAL MEETING

# GENERAL ENGINEERING ALUMNI ANNUAL MEETING

**Saturday, November 6, 1971**

FEATURING A PROGRAM ON A TIMELY TOPIC:

## HUMAN ENGINEERING

No matter what position you hold you cannot avoid the human element. Here is an opportunity to get filled-in on what it might mean to you in terms of design, marketing, legal liability and other implications. The program will feature speakers representing both the psychological approach and physiological approach as well as a tour of laboratories and a briefing on current literature relating to human engineering.

NOTE: There is no University of Illinois football game here that day.

SPECIAL NOTE: This will be a special reunion for members of the classes of 1951 and 1961.

If you would like to receive more information about this meeting please fill out the coupon below and send it to us. As soon as a detailed program is completed we will send you a copy.

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Department of General Engineering  
117 Transportation Building  
University of Illinois  
Urbana, Illinois 61801

I am interested in attending the General Engineering Alumni Annual Meeting and program on Human Engineering. Please send me further information as it becomes available.

Name \_\_\_\_\_

Address \_\_\_\_\_

Year of Graduation \_\_\_\_\_

Current job title and employer \_\_\_\_\_

\_\_\_\_\_

## FACULTY FEATURES

### Activities of Professor Dobrovolny

As a member of the National Advisory Council on Vocational Education, Professor Dobrovolny has made two or three trips a month to various parts of the country on council business. The council serves in an advisory capacity to the commissioner of Education and President Nixon in terms of developing and implementing new and meaningful programs in vocational and technical education.

In addition to his work on the National level Jerry has also been involved in monthly meetings of the state advisory council on vocational education.

Another activity has been technical school visitations in connection with the commission on Institutions of Higher Education of the North Central Association Accreditation. Jerry has also served as consultant to a number of schools preparing for accreditation.

Chairman of the Editorial Committee for the new Technical Education supplement for the Industrial Arts and Vocational Education Magazine is another of Jerry's numerous responsibilities.

This will be the 11th summer in which Prof. Dobrovolny will have served as Director of the Summer Institute funded by the National Science Foundation. Purpose of this Institute is to upgrade teachers in Engineering Technology. Thirty junior college and technical institute teachers in electronics and machine design are expected to attend.

### 1971 Everitt Award to D. L. METZ

The 1971 Everitt "Excellence in Teaching" award was recently given Asst. Prof. D. L. METZ, by undergraduate Engineering students. He is the second successive General Engineering teacher to receive this honor, BRUCE HANNON having won the 1970 prize.

Professor Metz received his B.S. in 1965 and his Master's in Mechanical Engineering in 1967. He received his Ph.D. in 1971 from Cornell University, Ithaca, New York. Before coming to the University of Illinois in September 1970, Dan also taught at Cornell.

## COURSES, PROJECTS, AND AWARDS

### New Space Science Course

A forward-looking new course, "Introduction to Space Science," has been introduced into the Department by HAROLD KERZNER. The course is with space as opposed to earth science. Harold started with 10 students the first semester, and now has over 70 enrolled in his class.

Topics discussed involves the development and history of rockets and missiles, analysis and review of all manned space flights, types of orbits, problems of weightlessness, life support systems, propulsion and guidance systems, and a brief look into the future of space exploration and travel. Experimental design will also be introduced when appropriate.

### APEX (Air Pollution Exercise)

Some 60 students from several departments in the University are participating, for class credit, in a computer-programmed exercise called APEX (Air Pollution Exercise)

APEX is a simulated operation of an air pollution situation wherein students play community roles. Professor JOHN E. PEARSON, Department of General Engineering, shares the directorship with Professors J. J. PLAGER, College of Law and J. J. STUKEL, Department of Mechanical and Civil Engineering.

In the games, the students function as City and County politicians, legal advisors, leaders of industrial concerns, land developers, urban planners, pollution control engineers, and officials. Even community pressure groups are represented.

Decisions made by this group for one budget-year cycle are fed into the computer and the print-out indicates the pollution consequences and these data in turn set the stage for the next cycle.

The main concern of the exercise is to determine the effects on the community's Air Pollution activities as a result of community decisions. The computer print-out includes such items as financial standings, election returns, and a newspaper - The Apex Gazette.

## ALUMNI NOTES

Class:

'22 CHESTER N. CLARK, now living in Sarasota, Florida, has been retired for about ten years.

'25 VIRGIL J. COX, retired about ten years ago after working 25 years for the Ball Brothers Co. in Muncie. Currently he is Secretary, Board of Sanitary Commissioners, Muncie Sanitary District, Muncie, Indiana.

'27 GERALD M. MAGEE, has 45 years of railroad service, mostly with the Association of American Railroads. At the time of his retirement, last year, he was Assistant Vice-President, Research, located at the AAR Research Center in Chicago. Mr. and Mrs. Magee are enjoying sunny Florida, settling in the North Miami area.

'30 HERBERT T. PEXTON plans to retire this coming fall and move to southern Arizona.

'37 EDWARD F. DUDLEY, JR. after 32 years in quality control left the U. S. Steel Corporation to become the general manager for D. William Fuller Co., Chicago. The Fuller Co. designs and manufactures fixtures for destroying airborne microorganisms by ultra violet.

'48 WILLIAM H. BROWN President of the Community Gas Service, Inc., in Paris, Ill., has sent his suggestion for a part of the program of the Alumni Annual meeting to be slanted toward non-engineering occupations (business) inasmuch as probably half of the alumni are moving into non-technical occupations.

'50 PAUL C. CALDWELL has left the engineering sales field to take over eight farms and other town rental properties in the midwest. He heartily agrees with ALVIN BLAKE ('42), he does not miss Chicago's hustle and filth.

'53 ALBERT W. ALBRECHT is currently production manager for the Mathews Company in Crystal Lake. He has served on the advisory boards for mechanical design curriculum at Harper Junior College and McHenry County College where he enjoys part-time teaching. Albert completed his master's program in industrial technology at Northern Illinois University.

'56 KENNETH A. GABLIN has changed employment to become Vice-President of marketing for Protective Packaging, Inc., in Tacoma, Washington. He is also on the board of directors of Nuclear Engineering Company, Inc., which is the major nuclear waste service firm in the United States. In Feb. Mr. and Mrs. Gablin traveled through England and Western Europe. Ken presented a paper in Vienna to the International Atomic Energy Agency at their first seminar on Test Requirements for Packaging for the Transport of Radioactive Materials.

Class:

'57 RALPH I. STEPHENS, Ph.D., has been teaching at the University of Iowa, Iowa City, for five years. He is currently an Associate Professor in Mechanical Engineering. The SAE Journal of Automotive Engineering, Nov. 1970, describes Prof. Stephens: "Most of his teaching involves mechanics of materials, design, fatigue, and fracture mechanics. All of his research, publications, book reviews, presentations, and professional affiliations deal with fatigue and fracture mechanics. This semester he teaches materials science for the first time and moves into the more theoretical aspects of research, and service, and he maintains that all these should be an integral part of a university professor's involvement... A professor's major role should be more toward motivating a student rather than one toward giving detailed directions." (p.48)

'57 DOYLE WILHITE, General Manager for Associated Products, Inc., in St. Louis, is responsible for the sale of British products in the United States. Last fall Doyle traveled throughout England visiting client companies represented by A.P.I. Following this trip, he set up a national sales force of manufacturers representatives in this country. In addition to his business commitments, he is active in the Naval Reserve at Wood River, Ill., and teaches marketing at Florissant Valley Junior College. He received his master's degree from Washington University, St. Louis in June 1970.

'59 JERRY H. HOGAN is still in the Army with the rank of Major. His assignment is Systems Analyst in the Office of the Secretary of Defense in Washington, D. C.

'59 CLARK COGSWELL has married and "settled down" in Ft. Lauderdale, Florida, working as construction control supervisor for the City of Hollywood. Since graduation he has worked as a construction management engineer on a variety of projects in the Caribbean Area, the United States, Central and South America.

'60 JULIUS E. MONGE is Assistant Sales Manager for International Harvester Company, Construction Equipment Division, at the Melrose Park plant. He has been with International Harvester since 1965, moving up through sales division until now he is responsible for the Western Area which comprises 4 of the 7 field sales regions of the company. Julius and wife Rose Ellen have three children, Julius, III 8 years, Michele 6 years, and Michael 4 years.

'61 RICHARD K. VAN WEELDEN completed his M.S. in Electrical Engineering at the Illinois Institute of Technology in 1970. He is now an Assistant Professor at Purdue University in Hammond, Ind. teaching Electrical Engineering Technology.