



GENERAL ENGINEERING NEWSLETTER

Department of General Engineering, University of Illinois at Urbana-Champaign

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GOLDEN ANNIVERSARY

The Golden Anniversary of the Department of General Engineering occurs this year, and the fall get-together for alumni will be specifically geared to welcoming back the old-timers during Homecoming week-end. The reunion will begin at 10:00 am Saturday morning 21 October 72, followed by luncheon at 11:30 before attending the Illinois-Michigan football game.

Festivities will be held at the Champaign-Hilton "Century 21" Building, the newest and tallest structure in the Twin Cities, 302 E. John St., Champaign. Send for your football tickets early. Further information will be mailed out in August.

"PIONEER" LIFE MEMBERS

1972 marks the Golden Anniversary of the Department of General Engineering, which came into existence in 1922.

Highlighting some of the early graduates, the list below presents those from the 1920's who are Life Members of the Alumni Association. Congratulations to these "pioneers" and faithful supporters of G.E.

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|----------------------------|------------------------|
| '26 - Grant E. Beverly | Milwaukee, Wisconsin |
| '26 - Marshall M. Coolegge | Westfield, New Jersey |
| '24 - Arthur G. Dixon | Racine, Wisconsin |
| '23 - S.O.H. Dobbins | Riverside, California |
| '25 - Harold H. Hill | Pompano Beach, Florida |
| '29 - William L. Julian | Champaign, Illinois |
| '27 - Charles M. Kreider | Portland, Oregon |
| '26 - George A. McCammon | Springfield, Illinois |
| '25 - Laurance O. Millard | Scottsdale, Arizona |
| '29 - Harry E. Ridley | Naperville, Illinois |
| '28 - Herbert E. Ryerson | Venice, Florida |
| '27 - John T. Scanlon | Chicago, Illinois |
| '26 - Richard J. Stockham | Birmingham, Alabama |

Our General Engineering Association is among the 21 constituent alumni groups on the Urbana-Champaign Campus. Our membership is itemized as follows:

Free (1st year)	51	Others	7
Contributing	134	Total	307
Life	115	Non-members	1,072
Total Graduates		1,379	

If you are among the thousand-plus not-yet-members, use the handy detachable application in the *Newsletter*, and forward with your dues today.

GENERAL ENGINEERING GRADUATES HEAD SARGENT AND LUNDY ENGINEERS

Two partners of the distinguished power-plant consulting firm, Sargent and Lundy, Chicago, plus one of their latest recruits, are General Engineering alumni.



Kenneth W. Hamming



William A. Chittenden



Richard H. O'Connell

Except for two years during World War II, Professional Engineer KENNETH W. HAMMING, '40, chief executive has been with the firm since 1940, and was responsible for analysis, studies, and reports on power-plant design. He was admitted to partnership in 1956 and became a senior partner ten years later.

Partner and Project Director WILLIAM A. CHITTENDEN, '50, joined the firm in 1952 specializing in mechanical engineering and design of fossil-fuel steam-generating

plants. Admitted to partnership in 1966, Mr. Chittenden has been since 1955 Project Director for nuclear generating units. He has also directed widely diversified economic and feasibility studies. Holder of licenses in more than a half-dozen states, he has presented numerous technical papers and published extensively. He is a member of several professional societies and national committees.

RICHARD H. O'CONNELL, '72, is one of Sargent and Lundy's young engineers in the Mechanical Analytical Division. He performs a variety of engineering duties from writing specifications for stack designs to pressure drop calculations for various pipe sizes. Rich feels that the General Engineering curriculum was good preparation for his employment and that the power industry is the place for young engineers today. He also thinks any background gained by summer work in industry is a worthwhile "plus" for fledgling graduates.

These alumni represent a firm nearly 80 years old, with 1,450 employees. Sargent and Lundy service approximately 30 major accounts with a like number of current projects. The firm is very conscious of today's environmental concerns and is in the forefront of current engineering developments.

FACULTY AWARDS



Robert A. Jewett

LAYMAN-OF-THE-YEAR AWARD

The Champaign-Urbana Jaycees recognized eight men in the community as "outstanding" during the annual Jaycee Week in January. Professor ROBERT A. JEWETT was named "Layman of the Year" for his leadership as elder of the Westminster Presbyterian Church, Champaign. Bob was chairman of the church program during the summer of 1970 when the pastor and his wife were on a three-month sabbatical tour around the world, and also played an important role during the fall of 1971 when the pastor was seriously ill. For more than a dozen years, Bob has been faculty leader for a college seminar at McKinley

Presbyterian Foundation on campus. He is now co-teacher, with his wife Mary Lee, for the high school class at Westminster, where he also fills the pulpit occasionally.

SAE EDUCATOR'S AWARD TO METZ

L. DANIEL METZ has been given the Ralph R. Teetor Award by the Society of Automotive Engineers for the year 1972. This national award is given to about 30 educators annually, recognizing significant contributions in the areas of teaching, research, and community service. Professor Metz also received an all-expense-paid trip to the annual S.A.E. Exposition in Detroit where he had free access to all meetings and deliberations as guest of the Society. Dan's research interests are in the area of vehicle dynamics and systems simulation and modeling. He is currently teaching in the General Engineering design courses.



L. Daniel Metz



George W. Eggeman

EGGEMAN WINS TEACHING PRIZE AND Ph.D.

GEORGE W. EGGEMAN has been chosen one of two 1972 recipients of the Stanley H. Pierce Award. This prize is given annually to a student and faculty member who are selected as having done the most to develop empathetic student-faculty cooperation. The award consists of an engraved silver bowl and a check.

Also, during April, George completed his Ph.D. degree in Mechanical Engineering. His dissertation topic is Synthesis and Optimization for Load-Carrying Capacity of a Helical Gear-Tooth Profile, with Analysis of Running Properties." His B.S. in M.E. was from the University of Missouri of Mines and Metallurgy, Rolla, 1962, and his M.S. was received from the University of Illinois in 1968. He has worked for more than four years as a design engineer for crawler tractors at the Allis-Chalmers Manufacturing Company in Springfield, Illinois, and has taught in the Department of General Engineering, emphasizing design courses, since 1967 while pursuing advanced studies.

**MEMORIAL TO
RANDOLPH PHILLIP HOELSCHER, Professor Emeritus**



Randolph Phillip Hoelscher

RANDOLPH PHILLIP HOELSCHER, Professor Emeritus of General Engineering, and former Head of the Department of General Engineering, died January 5, 1972, in Fort Myers, Florida, where he was living in retirement. He is survived by his wife, Ruby, one son, William, and one daughter, Betty (Mrs. H.B. Christianson). Randolph was born December 12, 1890, at Evansville, Indiana. He obtained his B.S. in Civil Engineering from Purdue University in 1912, M.S. from the University of Illinois in 1927, and C.E. degree from Purdue in 1929. After practicing for four years as a Structural Engineer, he began his teaching career at Baldwin Wallace College, Berea, Ohio. In 1918 Professor Hoelscher joined the faculty at the University of Illinois as an Instructor in the Department of General Engineering Drawing, rising to the rank of full professor in 1931.

With the establishment of the Navy Pier Branch of the University of Illinois, in 1946, Professor Hoelscher pioneered the development of the faculty and physical facilities there as Associate Dean of Engineering Sciences. He returned to the Urbana campus in 1949 to become the Head of the newly established Department of General Engineering, a post he held until retirement in 1959. He was for many years Secretary of the University Senate.

He served as Chairman of the Drawing Division of the American Society for Engineering Education 1941-43, and for two terms was on its National Council. He was very active in and served as Chairman of the A.S.A. Z-14 Committee on Drawing Standards. Also he was a leader in the establishment of standards between the A-B-C (American, British, and Canadian) countries. He was author and editor of numerous books, monographs, and work-books widely used in engineering graphics education.

His civic interests and activities were extensive, including Commissioner of Champaign County Housing Author-

ity, 1963-68, member of Board of Directors of Family Welfare Association, 1945-47, presidency of the Kiwanis Club of Champaign-Urbana, and 50-year membership in the Masonic Lodge and 32nd Degree Scottish Rite. He was a member of the Presbyterian Church.

Professor Hoelscher is remembered by his many friends for his scholarship, his friendship, his devotion to duty, and his unflinching courtesy. He made a significant contribution to the life of the University, the Chicago Circle Campus, the Department of General Engineering, and to the field of Engineering Graphics.

RUHL PROVIDES SIMULATION FOR CJS

Dr. **ROLAND L. RUHL**, in addition to his teaching assignments in General Engineering has been working with the National Clearinghouse for Correctional Programming and Architecture. Rolly is involved in mathematical modeling and simulation of Criminal Justice Systems (CJS) to aid in the rational location, design, and use of correctional facilities; to predict future facility needs; to aid in sizing physical plants; and to provide insight into the total cost of CJS activities. He also is working on a study of the feasibility of applying PLATO as a general educational device in correctional institutions.

FACULTY ATTEND MEETINGS

"Design the Future" has been the subject of the 1972 Illinois Society of Professional Engineers (ISPE) Annual Conference which was held at Pheasant Run Lodge, near St. Charles, Illinois, May 4 through May 6, 1972.

One of the highlights of the three-day conference was a panel discussion on employee-employer relations by professional engineers representing private practice, industry, government, and education. Two members of the General Engineering faculty, **ROLAND RUHL** and **RALPH HEN-NEMAN**, were asked to participate in this session.

INDUSTRIAL EXHIBITS INVITED

Our Department student co-chairmen for Engineering Open House will be back again to direct the 1973 event. Paul D. Capponi, '73, and Robert J. Novaria, '73 are eager to plan even greater exhibits and secure wider participation than this spring. They are asking you as alumni for possible industrial exhibits that your own company might be willing to loan briefly during mid-March 1973. Please fill out and mail the detachable form provided.

NEW KNIGHTS OF ST. PAT

Fifteen undergraduate students were named Knights at St. Pat's Ball. Four are General Engineers: SAMMY L. ANDERSON, '73, from Mt. Vernon; JOHN M. WARREN, '72, of Elgin; ALBERT J. AIKUS, '72, Waukegan; and JOSEPH J. SARMIENTO, '73, Olympia Fields. In addition, the honorary Knight of St. Pat, Dean ROBERT W. BOKENKAMP, is a member of the G.E. faculty.

Sam Anderson received this recognition because of his service activities as vice president and rush chairman for his social fraternity, Alpha Chi Rho; his participation in Engineering Council for the second year, serving as Vice President and Chairman of the Educational Affairs Committee. Among Sam's other activities for this year, he is treasurer of I.S.G.E., a worker of Volunteer Illini Projects Committee to re-organize the VIP administration and investigate and evaluate its projects and possible new areas of service; he is also on the team that visits local nursing homes for group therapy; and, as a member of the Krannert Student Association, he helps conduct tours of the Center for the Performing Arts.

John Warren's activities include membership on the department curriculum committee for the second year and membership in ISGE the last three years. Last year, John was Department student chairman for Open House. He has been working with ISPE in an effort to get the student chapter reactivated. Back in the days when John lived in a dormitory, he helped organize Christmas parties for disadvantaged children.

Knighthood was awarded to Al Aikus primarily for his service to the Department and College. Last year Al was on the Department curriculum committee, worked in the interdisciplinary Urban Vehicle Design group and, through ISGE, helped with Open House and did so again this year. He has been 71-72 president of Gamma Epsilon, having been elected last spring. After having served ISGE as vice president in 70-71, he is currently president.

Joe Sarmiento is a member of the Department's Curriculum Committee, member of ISGE, and helped with this year's departmental Open House display. Last summer, Joe served as counselor for the JETS program on campus, and next summer he will serve in the same capacity in the NSF program for high school seniors. Back in 1969-1970, he was house marshal for his fraternity, Alpha Sigma Phi. During vacations, Joe has done medical-social work among Chicanos in south-side Chicago.

ST. PAT'S BALL

General chairman for the St. Pat's Ball Committee this year was FRANK FRONCZAK, '72, of Chicago. ISGE Princess candidate, LYNN E. LADOUCEUR, '74, from

Oaklawn was elected Queen of the Ball. Repeating last year's experiment, a group of volunteer engineering students and faculty, with the aid of a few outsiders, organized to furnish the music. Reports are that the band was excellent.

GAMMA EPSILON

Gamma Epsilon has organized its annual field trip for late in April, visiting Dresden Nuclear Power Station at Joliet. With the addition of nineteen new members who were honored at the annual G.E. Awards Banquet on May 4, Chapter size has been given a significant boost.

New initiates include: GREGORY P. BOYSEN, '73, Brookfield; DANIEL M. BURKE, '73, Mattoon; ROBERT B. BURNS, Jr., '74, Carmi; PAUL D. CAPPIONI, '73, Oglesby; MICHAEL D. CLARY, '72, Homewood; PATRICK L. DAUM, '73, Joliet; RICHARD A. DOTY, '72, Oswego; ROBERT C. EDSTROM, '74, Springfield; DAVID L. HAGEN, '74, Aurora; THOMAS L. KOEHLER, '73, Belleville; KENNETH M. KRAVITZ, '74, Skokie; JAMES R. MASON, '74, Elmhurst; ROBERT J. NOVARIA, '73, Green Bay, Wisconsin; JOSEPH J. SARMIENTO, '73, Olympia Fields; WAYNE P. SIEMS, '73, Champaign; TERRY N. SNYDER, '73, Eureka; JAMES A. SULLIVAN, '73, Alton; JERRY A. WAGNER, '72, Garden Prairie; RALPH J. WAGNER, '72, Warren; JAMES H. WILDMUTH, '72, Annawan.

For only the second time, in its history, Gamma Epsilon is initiating a coed, KATHRYN ANN DAVIS, '74, Avon, Illinois.

GENERAL ENGINEERING SCHOLARSHIP

RICHARD A. NEBEL, '75, Springfield, has been named to receive the first General Engineering Scholarship. Richard was recommended by Walter Hanson, former member of the Civil Engineering faculty and presently a consulting engineer in Springfield. Richard ranked eleventh, 98th percentile in his graduating class of 627 at Springfield High School. A James Scholar, he has achieved an average of 4.786 in 14 credit hours of work.

This award is based on the applicant's high school record, his need for financial assistance, and intent to complete the General Engineering curriculum. Recipients, who must be entering freshmen, are selected by the Department's Scholarship Committee and approved by the College of Engineering Scholarship Committee and the University's Scholarship Office. The stipend of \$500 for one year is drawn from the General Engineering Trust Fund administered by the U. of I. Foundation, and built up from the contributions made by your Department alums and faculty.

G.E. EXCHANGE STUDENT

One of two engineering students from the Urbana-Champaign campus who will study next year at the technical University of Munich, Germany, in an exchange program began in 1968, is a coed G.E., NANCY E. JAKSE, '74, La Salle. She received a scholarship for one year to cover academic and minimum living costs, but must pay her own travel and personal expenses.

Nancy ranked fourth in a class of 460 at LaSalle-Peru Township High School. She is a James Scholar and has earned membership in Alpha Lambda Delta, women's scholarship honor society.

Nancy will spend two months at Goethe Institute in intensive language study before going on to Munich for the beginning of classes in early November. The strongest programs at the Technical University are in electrical, mechanical, and civil engineering and engineering physics. Consequently, Nancy will try to take as many courses in electrical and mechanical engineering, her secondary fields, as possible and defer social science and humanities courses until her return to Urbana. This plan is particularly desirable since she would have to go to one of five other universities in Munich for non-technical courses.

G.E. CURRICULUM REVISIONS APPROVED

At its March 21st meeting, the Faculty of the College of Engineering approved revisions of undergraduate programs in General Engineering. Changes were aimed at modernizing offerings and lightening total loads, thus attracting more students in competition with other colleges and curricula such as L.A.S.

Hours required for the bachelor's degree in G.E. were reduced from 136 to 127, plus physical education. Four hours of chemistry were deleted from the freshman year, while a University-wide trimming of rhetoric requirements converted two three-hour freshman courses to one four-hour unit, to be taken from sophomore to senior levels. Nine hours previously specified in thermodynamics were cut to three. One required hour of electrical engineering was removed, and a three-hour technical elective added.

Modification of content in the G.E. design sequence moves emphasis toward new analysis techniques, principally integration of both analog and digital computing methods into a systems approach. To implement this change, G.E. 231 is replaced by a new G.E. 222, "Simulation and Analysis of Dynamic Systems." Content will include mechanical, electrical, and biological case studies. Analog and digital simulation techniques will be used, plus classical methods such as La Place transforms. Drs. L. Daniel Metz and Louis Wozniak will be co-instructors.

GENERAL ENGINEERING AGAIN TOPS EMPLOYMENT HEAP

Mrs. Polly Chapman, Placement Director, has recently completed three employment surveys for the College of Engineering. The most interesting of these, "1961 Graduates Ten Years Later," was based upon a return of 397 questionnaires from a mailing of 657 requests. Only two graduates from the College, one E.E. and one M.E., were listed as unemployed. Salaries for all engineers averaged \$1,474 per month, with General Engineers firmly in first place at \$1,842 average. Aeronautical and Astronautical Engineering was second at \$1,615 per month, Engineering Physics next at \$1,512, and Electrical Engineering close behind at \$1,506. General Engineers averaged \$534 per month in 1961, giving them a 245% increase over the ten-year period.

Those in the 1961 class who took advanced degrees have not fared as well as expected. The average for all those from the College now holding a Ph.D. in their original technical field is \$1,453 per month. Highest of any Ph.D. group is Engineering Mechanics at \$1,767 per month, appreciably below the \$1,969 average for General Engineers holding only B.S. degrees.

The second survey, "1966 Graduates Five Years Later," lists eleven of the 634 graduates of the College as unemployed, with 411 questionnaires returned. Electrical Engineers were high with four unemployed vs. General Engineers with none. Average salary for the College is \$1,184 per month. The three leaders are closely grouped, with Industrial Engineering at \$1,260 per month, Engineering Physics \$1,256, and General Engineering \$1,251. A comparison of this survey with that of the 1961 class made in 1966 shows a remarkably similar pattern. At that time, the General Engineers were in second place at \$1,029 per month, with Ceramic Engineering first at \$1,070.

The third survey, "February, 1972 B.S. Degree Graduates," lists 46 of 272 graduates of the College as available. General Engineering was one of the lowest on a percentage basis, with only two of 29. Average salary for the College is \$865 per month, with GEs at \$870, about par.

Unfortunately, many industrial placement people know little of General Engineering, and often fail to list the Department on their placement information and sign-up sheets. Are representatives from your company well-informed, and are they listing General Engineering? You can do a worthwhile service by checking with them for us. We know we have a fine product; surveys prove this each year. But we do need a little help on publicity. If you would like further information, contact Gordy Martin or Bob Jewett.

ALUMNI NEWS

'26 CHARLES E. CLIFTON, Jr. has retired from partnership in Clifton, Blue & Company of Wilmette, Ill. The partnership functioned as consultants and managers of insurance exclusively for Savings and Loan Associations.

'31 FRED W. GARTNER has retired and moved to San Diego, and in his own words is "doing as little work as possible." In 1968 he did consulting work in Australia, and in 1969 Alaska. He continues to travel both in the U.S. and abroad.

'32 GERALD C. PRIMM has retired from service with the U.S. Steel Corporation and is living in Sun City, Arizona.

'43 WILLIAM D. BARKMAN is self-employed as manager of Barkman Farms in Fenton, Ill. He received the highest honor in Masonry, the 33rd degree, last fall, and will become Commander in Chief of Moline Valley Scottish Rite this spring.

'48 DONALD OVERBEEK has made a change in occupation after 22 years in space and missile engineering. He attended the orientation program at M.I.T. called A.D.A.P.T., to prepare him for his new position as City Engineer of Blakely, Georgia.

'50 PAUL C. JONES has left the engineering sales field to take over management of eight farms and town rental properties in Burlington, Iowa. (Editor's note: Paul's name was incorrectly given in the Newsletter for Spring 1971. Our apologies.)

'57 CHARLES W. QUANTOCK has been awarded the Navy Achievement Medal for his work on the Navy's Poseidon missile-guidance program. LCDR Quantock has been assigned by the Navy to N.A.S.A. and is working at the Marshall Space Flight Center, Ala. The citation states in part that he "was largely responsible for the planning and budgeting of the Poseidon missile guidance program from the early development stage through the initial production of tactical guidance systems."

'57 DOYLE WILHITE, a former officer and director of the General Engineering Alumni Association, received his M.B.A. from Washington University, St. Louis, in 1970. Among other business endeavors, Doyle is now market manager at Intertherm, Inc., specializing in heating and air conditioning for mobile homes and recreational vehicles.

'60 THOMAS H. WALKER is a career officer in the Air Force. He flew 100 missions in Vietnam, receiving 13 Air Medals, and two Distinguished Flying Crosses. After 2½ years as an instructor-pilot in the F4C/D/E phantom jet, Tom attended Stanford where he earned an M.S. in Industrial Engineering, with computer science option, last year. He is currently commander of a support squadron at Vandenberg AFB, California.

'66 DAVID A. BURGE received his J.D. degree from the University of Louisville in 1970, and is now working as a patent attorney in Cleveland, Ohio.

'67 JESSE W. BOEHLER has completed his M.B.A. at Illinois, and has begun working for the Butler Manufacturing Co. in Kansas City as an operations analyst. He is now a staff auditor, enjoying his work immensely.

'67 DENNIS J. CALLAGHAN is currently a senior associate with the Los Angeles-based management consulting firm of Theodore Barry & Associates. At present he is living in Philadelphia while managing a large industrial engineering and operations consulting study for the new U.S. Postal Service. Dennis received his M.B.A. from Illinois in 1969, and married Diane Dobry (Home Economics '68) before working in Pasadena and later in Denver.

'67 JAMES E. SKIERSKI has been promoted to assistant plant engineer for Gould, Inc. of Kankakee.

'68 DONALD C. BISHOP was commissioned in the Navy upon his graduation. He is now a Lieutenant, serving as communications officer for Commander of Destroyer Squadron SIX at Charleston, S.C. He is planning an early return to the academic life, and will earn an M.B.A.

'68 ALTEN F. "SKIP" GRANDT completed his Ph.D. degree in Theoretical and Applied Mechanics in 1971 and then entered the U.S. Air Force. He is now a First Lieutenant and materials engineer, A.F. Materials Laboratory, Wright-Patterson AFB, Ohio.

'69 STUART E. WILKENING has been promoted to Lead Cost Engineer at the 1800-megawatt nuclear power station now being built by the Bechtel Corp. at Calvert Cliffs, Maryland.

'70 RICHARD L. DAUPHINAIS married Martha Hiser ('70 Teacher of German) in June, 1971. They are making their home in Tempe, Arizona, where Dick is in the MBA program at Arizona State University.

'70 RICHARD B. HOFFMAN graduated in February, 1970, and began work as a design engineer with Ralph Hahn & Associates in Springfield. In the fall of that year he entered the College of Law, DePaul University, in the Chicago Loop, meanwhile working part-time for the Illinois Pollution Control Board. He is now working for a patent, trademark, and anti-trust law-firm, and enjoying Chicago immensely.

IN MEMORIAM

'31 ROGER A. GORANSON — June 11, 1967

'33 ELBERT M. MOODY — December 1, 1971

'35 HORACE J. GASTON — May 4, 1971