



NEWSLETTER

Vol. XII, No. 2, Spring, 1970

DEPARTMENT OF GENERAL ENGINEERING

University of Illinois · Urbana, Illinois

RECOGNITION FOR SENIOR DESIGN PROJECT

A senior design project from last semester is receiving recognition from outside the University. The "Rapid Transit Link Between Midway and O'Hare Airports," proposed by ANDRIS MANEKS, '70, from Northlake, and JAMES HARRIS, '70, from Ottawa, will be one of three presentations at the student activity session of the national meeting of the American Society of Civil Engineers to be held this July in Boston, Massachusetts.

The project evolved from the air traffic congestion at O'Hare, currently handling twice the volume for which it was designed. The city administrators are urging some of the airlines to transfer their operations to Midway, presently operating at one-fifth capacity. While easing congestion at O'Hare, this proposal raises the problem of transferring passengers and baggage between the two terminals.

The men eliminated existing helicopter service because of its cost, inability to handle large volumes, dependence on weather, and contribution to air congestion. Any type of high-speed, ground-level, mass transportation (as the French Aerotrain) was discounted because of difficulties involved in securing right-of-ways in this densely populated and industrialized area. Existing thoroughfares would be impractical, as high-speed systems require approximately linear paths.

Instead, they proposed a gravity-vacuum transit system enclosed in a single tube running at a depth of 2,000 feet the 15.2 miles between Midway and O'Hare. Characteristics indicate a possible travel time of from 4.5 to 5 minutes between terminals and 15 minutes for a round trip, with 2.5 minutes allowed for loading.

In making their feasibility study, the men considered the geological formations of the area, all of the costs of building such a system, its expected revenue at a rate of \$2 per passenger, and the cost of financing the system by bonds.

Although this project was not chosen as an optimum solution to the problem, project advisor E. S. FRASER, Vice President of Research, Chicago Bridge and Iron Company, was so impressed with their report that he sent a copy to Mayor Daley.

ALUMNI PROMOTIONS

JOHN R. GREEN, JR., '60, MBA '63 Wayne State University, M.S. '66 Massachusetts Inst. of Technology, has been named Manager of the Chrysler Corporation Stamping Plant in Twinsburg, Ohio.



John joined Chrysler in 1960 as a management trainee and has enjoyed a steady rise in responsibility since that time.

He is a member of the American Society of Foundrymen, Society of Sloan Fellows, American Society for Quality Control, Phi Kappa Psi, and is a U.S. Army veteran. (continued on page 3)

ENVIRONMENTAL CRISIS WEEK

A program of contemporary interest was held on the Urbana campus in April. "Environmental Crisis Week" focused attention on the premise that many social-ecological problems are inter-related and solutions must be achieved through the joint efforts of society. The "teach-in," organized by SECS (Students for Environmental Control) and supported by (continued on page 2)

FACULTY FEATURES

Leadership in engineering education requires active participation in many engineering-related fields. The Department staff, under the direction of JERRY S. DOBROVOLNY, are continually attending conferences, working on committees, and participating in professional society activities. Below is a sampling of the demands on their time.

Activities of Department Head

In addition to his many departmental duties, Prof. Dobrovolny continues to play an active role in junior college and vocational-technical education work. He has recently been elected to the Illinois Advisory Council on Vocational Education and has been on a number of accreditation visitations for the North Central Association and the Engineers' Council for Professional Development. While on a recent trip to the West Coast, he had an opportunity to exchange ideas with the engineering design group at Stanford University.

His agenda since January has included an NSF-sponsored meeting of summer institute directors held in Washington, D. C.; the 50th Annual AAJC Convention in Honolulu, Hawaii; and in April, he presented the keynote address at the USOE-ATEA National Clinic on Technical Education in Miami Beach, Florida.

In addition, Prof. Dobrovolny is the editor of *Technical Education*, a new bi-monthly supplement to the magazine *IAVE--Industrial Arts and Vocational Education for the Technical Teacher*.

Summer Fellowship for Gordon Martin

Assistant Professor GORDON E. MARTIN has been awarded an NASA-ASEE Summer Faculty Fellowship in the Stanford-Ames Engineering System Design Program to be held at Palo Alto, California from June 15 to August 28, 1970.

This will be the fifth summer program held at Stanford for the purpose of acquainting faculty from other schools, by direct experience, with the various approaches, classroom techniques, and organizational schemes developed at Stanford in the field of design.

The problem studied this summer will be the collection and analysis of air pollution data, concentrating upon a system for the San Francisco Bay Area--a timely subject which interests Gordon very much.

Legal Aspects of Engineering

MAURICE G. PORTER, Assoc. Professor, officiated as the faculty member in charge of the "Legal Symposium for Engineers" which was held on the Urbana campus March 13. Co-sponsored by the Department of General Engineering and the Division

FACULTY FEATURES (cont'd)

of University Extension, the conference attracted over 150 midwest-area engineers and lawyers. The principal topics under discussion were "The Engineer as an Expert Legal Witness" and "Legal Controls on Product Design." Asst. Prof. HARRISON STREETER, of this Department, served as a panel member for the discussion of the engineer as an expert legal witness.

Audubon Award Nominee

Asst. Professor BRUCE HANNON has been named Champaign County nominee for the Illinois Audubon Society's conservation award. Actively involved in conservation work the past few years, Bruce is presently director of the Committee to Save Allerton Park and is a project team member working in cooperation with the Champaign County Development Committee to reduce pollution and to beautify the Boneyard Creek.

Engineering Graphics Meeting

Instructor MONTE L. PHILLIPS and Prof. J. S. DOBROVOLNY attended the mid-year meeting of the Engineering Graphics Division of the American Society for Engineering Education (ASEE) at San Luis Obispo, California, in January.

ENVIRONMENTAL CRISIS WEEK (cont'd)

a number of departments, foundations, business firms, and community leaders, consisted of seminars by experts in various areas of interest.

JOHN E. PEARSON, Univ. of Ill. Professor of General, Sanitary, and Nuclear Engineering, was the keynote speaker for a seminar dealing with the scientific aspects of the ecological challenge. His topic was "Atmosphere as a Dynamic System." Lecturers for this workshop were Yale University ecologist PAUL SEARS and Oak Ridge radiation ecologist STANLEY AUERBACH.

Other key speakers for the week were: ROBERT LIFTON, Yale University psychiatrist; SHELDON NOVAK, editor of *Environment*; ALLEN KNEESE, environmental quality director, Resources for the Future; WILLIAM SCOTT, State of Illinois Attorney General; VICTOR YANNAKONE, environmental defense lawyer; ALAN GUTTMACHER, president of Planned Parenthood and World Population; and past director of Illinois Environmental Quality Program, WILLIAM RUTHERFORD.

Led by Rutherford, closing day sessions were aimed at drawing the activities of the week into focus, delineating the policies and programs needed for the future, and defining the role of the University in this endeavor.

ALUMNI PROMOTIONS (cont'd)

DONALD HALLBERG, a 1946 graduate in General Engineering, has recently been appointed Manager of Manufacturing for the Metal Products Division, United States Gypsum Company, headquartered in Chicago. He was promoted from Works Manager of a steel fabrication plant in Chicago.



A native of New Jersey, Donald now resides in Wheaton, Illinois, with his wife and four children. He is active in the Glen Ellyn Evangelical Covenant Church and has served as a member of the Pioneer Y.M.C.A. Board of Directors in the inner-city of Chicago for eight years.

DEPARTMENTAL APPOINTMENT

The Department is pleased to announce that BRUCE M. HANNON has been advanced to the rank of Assistant Professor.

After receiving a B.S. degree in Civil Engineering at the University of Illinois in 1956, Bruce was employed by the U. S. Industrial Chemical Company of Tuscola, Illinois, as a structural design, research maintenance, and operations engineer. In 1965, he returned to the Urbana campus for graduate work and to serve as an instructor in the G.E. Department. He was awarded the M.S. degree in Engineering Mechanics in 1966. Bruce is presently an instructor-advisor for the project design and special problems courses.

Prof. Hannon has fulfilled all requirements for the Ph.D. degree in Theoretical and Applied Mechanics. His thesis was on Shells (thin structural members) and the finding of a load system analogy in order to duplicate the effect of thermal loads on these shells.

Bruce has recently been elected to full membership in Sigma Xi, an honorary fraternity devoted to promotion of research in science.'

ALUMNI OFFICERS MEET

The executive committee of the G.E. Constituent Alumni Association held its spring planning meeting on April 18. The officers, directors, several faculty members, and two student leaders were in attendance.

President LEON LINDLEY conducted the business session. Agenda topics given consideration were continuation of the present Technical Session format, ways of creating further student-alumni interaction, and means of improving Association finances. Prof. JOHN E. PEARSON is the faculty-alumni coordinator.

STUDENTS RECEIVE DEPARTMENT AWARDS

On April 30, the Department of General Engineering honored its outstanding students at the annual senior-faculty dinner.

The second annual presentation to the outstanding G.E. 242 Project Design was presented at this time for the 1969 calendar year. Recipients were GARY R. ALLIE, '69, Urbana, and JOHN B. SERSON, '69, Palos Park, for their "Photographic Print Dryer." Gary and John were each presented with a check for \$25 and a certificate.

The third R. P. Hoelscher Award went to BRUCE A. HUBER, '71, Fairbury. Selection criteria for this award are junior standing, scholarship, participation in technical and professional societies, and cultural development. This award consists of a check for \$75 and a certificate.

GEORGE E. CONWAY, '70, Rock Island, was chosen to receive the seventh Marcus - Phillips Award. Selection for this honor is based 50% on extracurricular activities within the University, 10% on extracurricular activities outside the University, 10% for professional activities and organizations, 10% on faculty ratings, and 20% on student vote. The award provides the recipient \$100 and a personal plaque.

PAUL LITHERLAND, '70, St. Francisville, received the E. S. Fraser Award given annually to the G.E. senior with the highest average, which for Paul is 4.8. The award includes \$100 and, like the others, a personal plaque and inscription of the winner's name on a wall plaque hung in the corridor of the Transportation Bldg. Paul also received the Lisle Abbott Rose Award for technical-humanistic excellence, and has been selected as one of five graduating engineers in the nation to receive a Tau Beta Pi graduate study fellowship. Awarded on the basis of activities and scholarship, the fellowship includes a stipend of \$2,500 for ten months of study. His plans include a M.S. degree in Engineering Mechanics.

NEW SECONDARY FIELD IN G.E.

Environmental Quality and Improvement has been organized as one of the program choices available to students in General Engineering. Some eight courses, totaling nearly 30 semester-hours of credit toward a degree in General Engineering, have been identified in the following cooperating departments: Anthropology, Biology, and Civil Engineering. Of these courses, about half can be elected for use in the curriculum and the rest can be added as electives.

With this base of interdisciplinary subject-matter, plus a senior design project devoted to solving specific problems in environmental improvement, a G.E. graduate will have the design experience and general preparation for continued study in any of the advanced environmental fields.

GENERAL ENGINEERING SCHOLARSHIP

A \$500 scholarship, awarded each year to an entering freshman in General Engineering, is being established for the fall of 1970. Selection of candidates for this scholarship will be based on need and academic potential, the recipient to be chosen by a Department committee.

All entering freshmen in General Engineering who apply for scholarship aid will be considered, including socially and economically deprived students. Candidates who qualify otherwise will be asked to answer questions establishing that they are genuinely interested in General Engineering and expect to complete a degree program in that field and department.

Money for this scholarship will come from the G.E. Trust Fund in the U. of I. Foundation which has been building gradually since 1967 through generous gifts of alumni. These have now accumulated to the point where two-thirds of the annual scholarship stipend should be returned by interest on the principal sum. For the time being, the remainder will be taken from principal, but hopefully additional gifts will soon provide complete support of the scholarship effort.

Authorization as a high-priority Department need was taken at an April faculty meeting. The recommendation was made after extended study by a faculty committee under the chairmanship of Prof. E. D. EBERT, who will also head the Selection Committee. Alumni who wish to recommend deserving and promising students may write either Prof. Ebert or Prof. Dobrovolny, Head of Department. Gifts to increase the fund and provide additional possible scholarships will also be welcomed. About \$10,000 will endow a \$500 scholarship at current interest and investment return rates without impairment of capital funds.

GAMMA EPSILON

Prof. HARRISON STREETER reports a successful year for the honorary fraternity, highlighted by a field trip to the Inland Steel Company plant at East Chicago, Indiana. The men particularly enjoyed the operations of the rolling mills and basic oxygen furnaces, both of which are spectacular to watch.

The fall pledge class included: RICHARD L. BERGSTROM, '71, of Glen Ellyn; BRADLEY K. DRAKE, '71, from Rockford; DANIEL T. GALLAGHER, '71, of Kankakee; SAMUEL C. HOPWOOD, '70, from Urbana; TERRENCE R. PHELAN, '71, from Chicago; and TERRY L. STOLTZ, '71, from Beardstown.

An annual banquet will be held in the near future, at which time new members from the fall and spring semesters will be formally initiated.

G.E. KNIGHTS OF ST. PAT

JOHN D. COCHRAN, '70, originally from Washington, Illinois, and DANNY L. NELSON, '71, from Varna, were honored as Knights of St. Pat in recognition of their service to the College, University, housing group, and the community.

John holds both an Illinois State Honorary Scholarship and a Tazewell County Veteran of WW II Scholarship. He was a manager on the *Illio* business staff for two years, directed activities in his fraternity, and a member of the Univ. of Illinois golf team for two years. This year he has been President of the Illinois Society of General Engineers and served as chairman of the Society President's Council.

A James Scholar, Danny has participated in dormitory activities, been a student member of Engineering Honors Council, and at present is student representative for the College of Engineering on a Chancellor's committee to evaluate the Honors Program. He is Vice President of Gamma Epsilon, student member of the College Student-Faculty Liaison Committee, and Editor of *Technograph*, student engineering magazine.

STUDENT AWARDS BANQUET

The Student Awards Banquet was held on April 30 at Wheat's Steak House in Urbana. In the past the banquet had been a student-faculty function only. Since the occasion this year was held in conjunction with the Honors Day Program, families of both students and faculty were also invited to attend. Prof. H. C. STEPHENS, College of Fine and Applied Arts, was the speaker for the event.

CAMPUS RECRUITING--YES! NO!

ALUMNI NOTES

As a result of the March 8th campus student protest against General Electric recruiting, the Student Engineering Council conducted a survey to determine the real opinions of students in Engineering classes concerning recruiting practices and the Engineering Placement Office services to students. The poll results are:

Question: Is the Placement Office a proper University service?

Engineering Student Responses: 2530
Yes: 2442 (96.5%) No: 88 (3.5%)

Question: Do you consider the Placement Office to be a useful service to you as an individual?

Engineering Student Responses: 2534
Yes: 2324 (91.7%) No: 210 (8.3%)

Question: Should any specific company be banned from interviewing on this campus?

Engineering Student Responses: 2465
Yes: 285 (11.6%) No: 2180 (88.4%)

Question: Do you feel your rights would be infringed upon if anyone restricted the companies allowed to interview on campus?

Engineering Student Responses: 2503
Yes: 2151 (86.0%) No: 352 (14.0%)

Question: Should the present University policy of open recruitment on campus be continued?

Engineering Student Responses: 2523
Yes: 2292 (90.8%) No: 231 (9.2%)

ILLINOIS SOCIETY OF GENERAL ENGINEERS

I. S. G. E. is broadening its horizons. The primary goal is to create a society in which the G.E. student, regardless of interests, can find a way to develop those interests.

The Society has been sponsoring meetings for students in the General Engineering curriculum for several years, and while meetings still constitute a most important facet they no longer serve as the sole purpose for the organization. This year, an attempt has been made to increase involvement in the Society by broadening the scope of I. S. G. E. itself. The *I.S.G.E. News* relays information and publicizes upcoming events. In addition, the newsletter draws attention to specific areas of concern to both faculty and students. The *I.S.G.E. Directory* provides a handy reference source for all general engineers and facilitates communication. Intramural football, basketball, and softball continue to be popular. Meetings have been planned to offer a wide-range of topics. Patent law, future jobs for graduates, and computers in managerial decision-making are talks which have met with great success.

Class:

'29 WILFORD LAHMAN, Chairman-Treasurer, Frantz Manufacturing Co., Sterling, Ill., writes of his appreciation of skills gained in classes taught by HARVEY H. JORDAN. Former positions have been as an N. B. C. studio engineer and as a partner with the Peerless Level and Tool Company, Sterling. He also served as a committee member for the 1969 National United Nations Day.

'30 GLENN G. LIEBIG is Vice-President of Mascoutah Savings and Loan in Mascoutah, Illinois.

'31 RENATO P. ALGHINI holds the position of a registered representative with the Orvis Brothers Company in Chicago.

'36 CLIFTON W. GANO is a principal of Leo L. Landauer and Associates, Inc. of Dallas, Texas. Clifton's firm consults on mechanical and electrical problems in the building industry.

'40 WILLIAM H. CHAMBERLIN holds the position of Manager of Manufacturing for Allis Chalmers-Engine Division in Harvey, Illinois.

'41 WILLIAM J. SHIVE is President-Treasurer of the Sterling Steel Casting Company of East St. Louis, Illinois.

'50 PAUL C. JONES serves as the Chicago Regional Sales Manager of Wolfe and Mann Manufacturing Company. Paul's company is active in power control instrumentation for the electric utilities, including nuclear power plants.

'53 SHERMAN L. BREMER reports that he is living in Tempe, Arizona and interested in locating an Illini club in the Phoenix area.

'57 STANLEY R. FELDERMAN, MBA '61 Northwestern University, is a sales manager for Informatics, Inc., in Chicago.

'57 RALPH I. STEPHENS, M.S. '60, Ph.D. '65 University of Wisconsin, has been promoted to Assoc. Professor of Mechanical Engineering at the University of Iowa, in the area of metal fatigue.

'58 ROBERT H. LITTLE has recently been appointed Plant Manager of Owens-Illinois' Machine Manufacturing Plant in Godfrey, Illinois.

'59 JAMES F. GAFFNEY has become Manager of Manufacturing for Blackhawk Manufacturing Co. He will be moving from Rockford to Milwaukee, Wisc.

'59 JOHN B. SHEA is living in Binghamton, New York, where he is Manager, General Aviation Trainer Sales for the Link Group, Singer Company. He joined Link in 1966 after several years as a U.S. Air Force pilot. (continued on page 6)

ALUMNI NOTES

Class:

'60 DAVID E. HARTNETT, M.S. '67 Wayne State University, holds the position of Reliability Engineer for McDonnell-Douglas, Long Beach, Calif.

'60 WILLIAM M. LITTMANN, Sales Manager of Clow Corporation in Chicago, announces the arrival of a son in August. First boy after three girls.

'60 THOMAS H. WALKER, instructor pilot stationed at MacDill AFB, Florida, has seen duty in five U.S. states, Labrador, and Vietnam. He reports 140 combat missions in the F4C, 100 of them over North Vietnam. He hopes to work on his M.S. in Industrial Engineering--Computer Use Option--at Stanford this year. Tom married a former American Airlines stewardess and has three children.

'62 NORMAN F. BOSEK holds the position of Senior Mechanical Engineer with Microwave Cavity Laboratory in LaGrange, Illinois.

'62 LYLE D. GERDES, M.S. '67, is involved in structural analysis with the Sandia Corporation in Albuquerque, New Mexico. He reports that he was married in February to Miss CECILIA MALDNE.

'62 RALPH T. HOCKING, MBA '64, is presently a student and teaching fellow at Kent State University in Ohio.

'63 JAMES E. BURGESS is a sales engineer with General Electric in Los Angeles, California. Jim received his transfer from Fort Wayne, Indiana, on August 29, was married on the 30th, and left for the West Coast on the 31st. WOW!

'63 RICHARD D. WILEN, Technical Service Engineer with Kelly Springfield Tire Company (Division of Goodyear) in Freeport, announces the arrival of a son. Richard is also president of the Freeport Jaycees.

'64 RONALD H. HAUSCH, J.D. Law '68, is employed by Universal Oil Products, Des Plaines, Illinois.

'64 DALE H. RENKEN is quality control engineer with General Electric--Nuclear Power Division--in Wilmington, North Carolina.

'65 PETER F. HAYS, with Owens Corning Fiberglass in Granville, Ohio, announces the arrival of a son, DAVID SCOTT, in January.

'65 RONALD J. KESSNER, Burnsville, Minnesota, is a sales engineer with the Carrier Air Conditioning Company. Ron has passed the mechanical engineering exam for Minnesota professional engineers and is working evenings for his MBA.

'65 JAMES M. KOEPKE, MBA '67, Lieutenant in the Coast Guard, Washington, D. C., is involved with

Class:

data processing and presently working on the conversion to a new computer. James announces the birth of MELISSA ANN in January.

'65 JOHN A. REDIN is a student at San Francisco Baptist Seminary in California.

'66 CARL E. JASKE, M.S. '67, is employed as a research engineer with the Battelle Memorial Institute in Columbus, Ohio.

'66 DENNIS E. LAFFERTY, a Navy lieutenant, is serving as an Air Intelligence Officer at Lemoore Naval Air Station, California.

'67 J. WAYNE BOEHLER, MBA '69, Order Control Manager for the Butler Manufacturing Company of Kansas City, Missouri, announces the arrival of a son, MATTHEW MARTIN.

'67 GARY L. MARCUCCI, MBA '69, is in the Gas Turbine Department of General Electric, Greenville, South Carolina, and their manufacturing management training program.

'68 DONALD C. BISHOP is a Navy lieutenant and is presently stationed in the Mediterranean area. After graduation, Don married Miss MARY LYNGE, '68, Elementary Education.

'68 GARY B. FARISS, computer engineer for the Control Data Corporation, Sunnyvale, California, writes that his department is in charge of maintenance of eight super-scale computers with more expected in the near future.

'68 ALTEN F. GRANDT, JR., M.S. '69 T.A.M., is continuing his studies in the TAM Department at the University of Illinois. Last summer he was married to Miss BARBARA RIEKER.

'69 TERRY K. ESSINGTON, Management Trainee with International Harvester Company in Louisville, Kentucky, reports the arrival of a son, SCOTT.

'69 ROGER E. WILLIAMS has moved into a new home in Hazel Crest, Illinois. Roger is a plant welding engineer for United States Steel Corporation.

DEATHS

'25 RAYMOND O. STAUSS passed away on June 10, 1969. He had been with Northern Illinois Gas Company of Lockport, for 41 years and had retired in November 1966.

Your notes, letters, and visits provide the information we need for our Alumni Notes section. Please let us hear from you. Thanks so much!