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Centennial Development Fund Tops \$1,600,000 Mark

Pledges Of Half Of Alumni Boost Drive To Near 90%

Pledges of support from 50 per cent of the alumni have boosted the Centennial Development Fund to over \$1,600,000. That is 90 per cent of the Phase 1 goal of \$1,775,000.

At last tally, 1,474 alumni (there are now 2,950 living alumni in the school's files) had pledged \$633,706 to the building fund. No other group so far has pledged more.

Next in total amount pledged is the Board of Managers with \$602,226, some members of which are also alumni and whose pledges are therefore counted twice.

Other groups and totals so far include foundations, \$355,992; friends, \$265,180; corporations, \$93,473; Terre Haute business and industry, \$69,669; faculty and staff, \$36,578; Board of Associates (local business and profes-

sional men), \$33,343; and parents, \$22,613. Other recent pledges include \$17,538 as a memorial to Mrs. John A. (Dorothy) Logan; Mrs. John H. (Gloria) Dougherty; and Mrs. Ralph M. (Lillian) Ross, killed in an automobile accident in April; and \$247 as a memorial to Robert A. Strecker, '07, who died in May.

Because the first phase goal of To Page 2



Largest Class Graduates: 134

Two Dorms, New Union Dedicated

A record 135 degrees were awarded at the 88th Commencement exercises this year.

Bachelor's degrees were awarded to 130, including four who completed requirements for their degrees in March and five who completed degree requirements last December. Five Master's degrees were conferred.

Last year, 101 degrees were awarded: 98 bachelor's and three master's.

E.E.'s Lead

Most of the bachelor's degrees this year were in electrical engineering, 33 in all. Next was mechanical engineering, 31; civil engineering, 22; mathematics and chemical engineering, 14 each; physics, 7; chemistry, 6; and undesignated, 2.

That is a change from last year when mechanical engineering led, electrical engineering was second and civil engineering was fifth, behind chemical engineering and mathematics.

This is the first year an undesignated Bachelor of Science degree was awarded. The program for it permits students to major in areas where no designated degree is offered, such as bioengineering; or to sample, more than electives allow, courses outside the confines of one of the designated engineering disciplines; or to take more courses in the humanities, and social sciences for instance, as preparation for graduate study in law or economics.

Master's degrees this year were in electrical engineering, 2; mathematics, 2; and mechanical engineering, 1. Master's degrees are offered in all the same areas as bachelor's degrees.

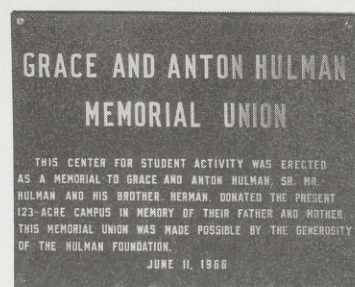
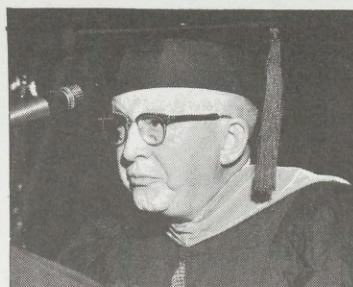
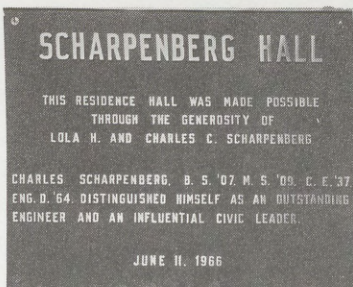
Heminway Medalist

Winner of the coveted Heminway gold medal for outstanding scholarship was **Wilfred Otaguro**, Honolulu, Hawaii. His cumulative average for four years at Rose was 3.98. As a freshman, he won the Heminway bronze medal for making straight A's in all his first year classes.

The Commencement speaker was Dr. C. A. VanderWerf, president of Hope College, Holland, Mich., and a recognized and respected research chemist.

Other speakers were **Dewitt P. Cromwell**, '19, vice president of the Alumni Association, and Rose President John A. Logan.

Honorary degrees were awarded to Dr. John Bardeen, University of Illinois Nobel prize-winning physicist, who discovered the transistor; and Dr. VanderWerf.



COMMENCEMENT HIGHLIGHTS—Unveiling the bronze plaque dedicating one of the new residence halls to Dr. Carl Leo Mees, fourth president of Rose, were (top) **Fred Crapo**, '19 (left), and **Robert T. Mees**, '31 (right), great-nephew of Dr. Mees. Another dorm was named Scharpenberg Hall (left) for **Charles Scharpenberg**, '07, and his wife. The campus center-dining hall was dedicated to Grace and Anton Hulman Sr. (right), long friends and benefactors of the school. Addressing the graduates in the absence of Alumni Association President **John B. Stineman**, '37, was Vice President **Dewitt P. Cromwell**, '19 (center).

Chem. E.'s Most Dear—

Rose Grad Costs A Bit More But He's Worth It

How good is this year's graduate of Rose Polytechnic Institute? One way to tell is to compare his starting salary with the national average. The average starting salary for a Rose graduate this year is \$678; the national average for engineering and science graduates is about \$650.

Companies recruiting Rose graduates this year continued to outnumber graduates; 177 companies vied for the 130 graduates. But only 64 companies were successful in wooing a Rose man. Some of these were highly successful, like

General Electric, which hired nine Rose graduates; General Motors, which hired four; and Boeing, Pittsburgh Plate Glass and Collins Radio, which hired three each.

Hired More Than One

Others hiring more than one Rose man include B. F. Goodrich, Caterpillar Tractor, IBM, Inland Steel, International Harvester, McDonnell Aircraft, Monsanto, NASA and Procter and Gamble.

More than 25 percent of this year's graduating class will go on to full-time graduate study at 16 universities, including Indiana University, where seven will be enrolling; Purdue, which attracted four others; Stanford, Cal

Charter Two New Societies

Two new national honor societies have been chartered at Rose Polytechnic Institute: Pi Mu Epsilon for mathematics and Sigma Pi Sigma for physics.

This brings the number of honor societies at Rose to five. The others are Tau Beta Pi for engineering, chartered here in 1928; Blue Key, chartered here in 1932; and Eta Kappa Nu for electrical engineering, chartered at Rose in 1965.

Tech, Northwestern, Notre Dame and Rensselaer Polytechnic Institute. Three will be staying at Rose for their advanced study.

Nationally, about the same percentage go on for more schooling.

Starting Salaries

Pulling down the top starting salaries this year at Rose were chemical engineers with an average monthly wage of \$697 (national average: \$677). Next in line were mechanical engineers at \$686 (N.A.: \$670); electrical engineers, \$684 (N.A.: \$681); physicists and civil engineers, \$675 each; mathematicians, \$671; and chemists, \$658. Average starting salary nationally for chemistry and physics majors was about \$625; mathematicians, \$600.

Won Commissions

While lieutenant's commissions in the Army were won by six graduates this year, only one will be entering the service immediately; the others will report within the year.

Last year the average monthly starting salary for Rose men was \$640; in 1963 it was \$615.

Collett Professors

Moench was appointed to the professorship in March when he retired as Dean of Faculty to be succeeded by Dr. **Darrell E. Criss**, '43. Moench is the third to hold the professorship. The others were **Carl Wischmeyer**, '06, Collett professor of mechanical engineering, 1932-55; and Dr. Thomas Gray, Collett professor of dynamic engineering, 1902-08.

Collett was an Indiana railroad builder and close friend of Chauncey Rose, the school's founder. Collett was vice president of the school's original board of managers and succeeded Rose as board president when he died. When Collett died, he willed the school \$75,000. In recognition of that gift and his service to the school, the board established the Collett Chair of Engineering.

There will be no Alumni Insti-

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VP And Rep To Be Elected

Alumni will elect a new vice president of the Alumni Association and a representative to serve a four-year term on the Rose Board of Managers at the Association's annual meeting at Homecoming, Oct. 15.

Nominated for vice president, to succeed **Dewitt P. Cromwell**, '19, who will become president, are **Adam K. Grafe**, '25, Dallas, Texas; Dr. **C. Chester Stock**, '32, New York; and **H. Loren Thompson**, '34, Portland, Ore.

Nominees for board representative to succeed **Joseph A. Engelhard**, '22, Louisville, Ky., elected in 1962, are **Engelhard**, **Russell E. Archer Sr.**, '34, Terre Haute; and **Robert P. Failing**, '22, Oak Park, Ill.

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New Technique, Will Shape World Of Tomorrow—Dr. Logan

"If we are not to march blindly ahead into a chaotic world of uncontrolled application of scientific discovery . . . we must encourage the growth of qualified generalists—the systems analysts—able to evaluate alternatives and thus help guide technology in shaping the world of tomorrow."

So said Rose President John A. Logan, at the recent National Conference on Solid Wastes Management at the University of California, where he was a featured speaker on management science.

There is, according to Dr. Logan, "a race between the consequences of the explosion of knowledge and our ability to control them. The outcome of the race may well be determined by whether systems analysis, as a discipline, is able to grow and develop quickly enough to meet the problems of the future which we can see will be ever more pressing and difficult."

A Definition

"Systems analysis, in its general sense, can be considered as a broad analytical approach to decision making; in a more limited context it is a procedure by which components, united by some form of interaction and interdependence, can be examined as a system or an assembly. It is both the art and the science by which groups of components making up a system can be compared from the point of view of economy, efficiency or overall effectiveness."

"The development and acceptance of the systems philosophy is an affirmative

answer to the question of whether engineers and scientists are willing to take professional responsibility for the kind of world which they are creating.

"Rene Dubos (Editor's note: Internationally recognized, award-winning French bacteriologist, member and professor of the Rockefeller Institute) has stated that it is now possible to achieve almost anything we want, so great is the effectiveness of technology based on the experimental method. Thus, he says, the main issue for scientists, engineers and for society as a whole is to decide what to do among all of the things that should be done and could be done."

Deciding What To Do

"The fact that we are willing and able to face the problems of what to do with science and technology could prove to be one of the most significant trends of the 20th century."

"Our almost total mastery of the physical world offers a challenge to human in-

telligence of a degree heretofore unknown in history; technical mastery is being supplemented by the wisdom to harness it to human ends. At a time of increasing specialization, we are returning to the approach of the encyclopaedists—the development of highly qualified 'generalists,' men able to understand the minutia of specialization but, at the same time, able to correlate knowledge in different fields in a meaningful and predictable way."

Step Back, See Forest

"There is considerable value inherent in the breadth of (this) approach; the willingness to move back from the trees of specialization to examine the overall forest that makes up the problem as a whole."

"In recent years many engineers have considered engineering components—whether bridges, water treatment plants, highways or refineries—to be the ultimate objectives. While each of these may be considered as a system, or more correctly, a sub-system, their examination as an integral part of the broader community system may provide surprising benefits."

"There is a logical argument that engineering education is now taught backwards. Most of the time available for undergraduate study is spent in developing an effective background of mathematics, science and engineering science in order

to design components. This leaves the graduate with the idea that engineering consists essentially of the design of bridges, turbine blades, electronic switching gear or more effective evaporation columns. But, by the time that it has been decided to build a six-lane steel bridge across a given river, most of the engineering has already been done: the decision that the bridge is necessary; its location; its effect on regional and city planning; its type; its size; its economic feasibility."

"A broad systems understanding of engineering puts these problems in their proper perspective; a consideration of engineering systems—objectives, criteria and professional responsibility—should therefore precede component design in the educational plan rather than follow it, as is present practice."

Encourage Generalists

"If we are not to march blindly ahead into a chaotic world of uncontrolled application of scientific discovery, professional responsibility must be assumed not only by politicians and statesmen but by scientists, engineers, agriculturists and physicians. While no one has suggested a rigid control of the direction of scientific discovery, we must encourage the growth of generalists—the systems analysts—able to evaluate alternatives and thus help to guide technology in shaping the world of tomorrow."

Rose Gets Newest IBM Computer, 1130, For Students To Work Lab Problems

Students at Rose Polytechnic Institute are now solving their problems on one of IBM's new computers, the 1130, No. 61 off of the assembly line, the first at a school and only the fourth in the mid-west.

This is the school's second computer. It had been using a Control Data G-15 since 1960.

Despite its small size, about the size of an ordinary office desk, the new computer performs operations measured in billionths of a second. It can perform, for example, 120,000 additions or 38,000 multiplications per second. Time from question to answer is a lightning 3.6 millionths of a second. Its card reader can read 300 cards per minute. Its printer can type 172 characters per second.

"That's computing power greater than systems costing many times as much," according to Dean Darrell E. Criss, Feb. '43, computing center director.

What It Costs

The basic purchase price starts at \$71,000. Monthly rentals begin at \$700.

Criss points out that the new computer's ability to work more problems in less time than the old G-15 will insure increased availability of the computer to students for hands-on training.

All students at Rose are now trained in computer program-

ming in their first year. During the remainder of their stay, they are expected to use the computer to solve their major mathematical, science and engineering problems.

Educational advantages of having a computer for all students to use include:

- 1 lets the student work certain engineering and scientific problems not otherwise practical.

- 2 because the computer works some problems quicker, there is more time left for the student to study other things.

- 3 acquaints the student with what a computer can do and what information it needs to solve problems, a familiarity he will need to carry over to his job after graduation.

- 4 teaches the student how to program a computer, a skill he will need on the job as computers become more plentiful and access to them is less restricted.

cluded \$10,000 and an around-the-world tour of research centers.

Stock joined the Institute in 1946. He was named Director of the Walker Lab in 1960; Vice President for Research in 1961; and Vice President in 1964.

He was awarded the Army-Navy Certificate of Merit for his work during the War on treatment of gas casualties, medical research and insect control.

Stock is active in the New York tech club; has served as a district representative to the Alumni Association and is another member of the Centennial Development Committee.

He is the son of Dr. Orion Stock, '08, Frankfort, Mich., retired Rose professor of drawing and descriptive geometry. They both were awarded honorary degrees by Rose in 1954.

Thompson, another civil engineer, who was awarded his professional degree in 1958; is President of Stevens and Thompson, Inc., consulting engineers in Portland.

He first went to the Pacific Northwest in the summer of 1941, while on the faculty of the University of Idaho, to design a

5 programming, in turn, teaches the student to analyze problems and their solutions—in short, to think—in a methodical, logical way, a characteristic of the engineer and scientist.

Besides the newer, faster computer, Criss indicates other steps are being studied to reduce the time it takes a student to get his problem through the data processing system. One of these, he said, is the use of "mark sense" cards, IBM cards marked with a special pencil, which the computer can read as well as a

punched card.

This would eliminate the typical bottleneck at the key punch machine according to Dr. Criss.

Uses Disks

Another feature of the new computer is that it uses new direct access storage disks. The old computer used reels of magnetic tape. Each disk, about 12-14 inches in diameter, holds 512,000 words, compared with the tape reels Rose had been using, which hold only 3-400,000 words. Storage of the reels created problems

and access to the information on them was not as direct as the new disks.

The 1130's high-speed memory can store some 8,000 words.

With the disks, the administration can make greater use of the computer to solve some of its own problems in such areas as grade reporting, grade distribution, statistical analysis, class scheduling and registration.

For the school's learning center, now being planned, another larger, faster computer is being studied.

Alumni Pledges Top \$633,706, One-Third of First Place Goal

From Page 1

\$1,775,000 is expected to be met by this fall, alumni participation will undoubtedly rise beyond the present 50 per cent and probably approach 60 per cent—exceeding the previous high of 56.5 per cent participation in the 1963-64 Alumni Fund.

"We had hoped that the alumni would be challenged by our plans and would want to participate in them to this extent (60 per cent)," according to Rose President John A. Logan. "Statistics from other schools' campaign experiences indicate that this is a high but

reasonable goal. We expect, by the end of the campaign, more than 60 per cent of the Rose alumni will have pledged their support to our objective of national recognition for Rose as the best undergraduate college of science and engineering in the country."

"The average alumni pledge so far is about \$430. That is \$143 for each year of the three-year period usually pledged. And that is four times the average gift made to previous annual alumni fund drives."

"We are allocating \$50,000 in 1965-66 and an equal amount in

1966-67 from alumni contributions to the Centennial Development Fund to maintain continuing projects usually supported by the annual Alumni Fund. The rest of the alumni contribution will help make possible the new and remodeled laboratories, residence halls, classrooms, dining facilities, library and recreation facilities we need to make our dream for Rose come true."

"I hope all those 1,400 alumni who have not yet pledged themselves to Rose's future will soon be able to. And I hope there are some who have already made pledges who are encouraged by our progress, who see our needs clearly, who are excited by our program to meet those needs, and who might want to continue to invest in Rose's future by increasing their pledges."

dent of the Terre Haute Kiwanis Club and chairman of its fund raising committee.

He also is active in the Wabash Valley tech club, was its president in 1962 and has served as a local chairman for the Alumni Fund.

Russell Jr., '61, is his son.

Failing, a chemical engineering graduate, is manager of the Broadview, Ill., plant of Chase Products Co. He has also been a plant manager for Pharma-Craft Corp. and the Wander Co.'s Ovaltine Food Products division.

Active in the Chicago tech club, Thompson has served as a class agent for the Alumni Fund and for the Centennial Development Fund.

Robert Jr., '52, is his son.

ROSE TECH CLUBS ANNOUNCE NEW OFFICERS

Recently elected officers of their Rose Tech clubs were:

Northern Ohio

Gene L. Mrava, '57, president; Donald D. Carrell, '57, vice president; Prof. Carl Wischmeyer, '06, secretary-treasurer.

Philadelphia

John A. Cushman Jr., '35, pres-

ident; Joseph E. Ross, '39, vice president; Earl Michaels, '42, secretary.

Pittsburgh

James T. Rogers, June '47, president; Berndt Olson, '59, vice president.

A 3-Way Race For V.P. & Rep.

From Page 1

Grafe, a civil engineer, is president of Fowler and Grafe, Inc., consulting engineers in Dallas.

He first went there in 1936 and has since worked for and headed engineering and construction companies building air fields and highways. He is a Fellow of A.S.C.E. and a registered Professional Engineer in 10 states.

Active in the Dallas tech club, Grafe has served as a class agent and local chairman for the Alumni Fund and is a member of the school's special Centennial Development Committee.

He is the brother of Paul, '20, Los Angeles.

Dr. C. Stock

Stock, a chemical engineering graduate and Heminway medalist, is a vice president of the Sloan-Kettering Institute for Cancer Research at New York and Director of its Walker Laboratory at Rye, N.Y. He won the Alfred P. Sloan Cancer Research award last year for his work in cancer chemotherapy. The award in-

Deaths

1897

Robert A. Philip died April 22 at White Plains, N.Y., leaving Rose his books and papers, including his own mathematical inventions involved in electrical engineering.

1903

Henry Curtis Gilbert, 83, died in March at Coral Gables, Fla. Before his retirement he was President of Gilbert-Hodgman, Inc., Chicago, electrical engineers and contractors. He was the brother of the late Miss Mary Gilbert, for many years registrar at Rose Polytechnic Institute.

1907

Robert Strecker died May 2 at Milwaukee, Wis. Retired, he had served as a major with the Army Corps of Engineers during World War I and later been with the corps at Louisville, Ky. He was a Wisconsin registered Professional Engineer.

1909

James M. Darst died Jan. 9. He was retired at Canton, O., as a final inspector for the Weber Dental Manufacturing Co.

1911

Henry W. Ker, 79, died April 3 at Wilmington, Del., after an illness of several months. He had gone to Wilmington in 1960 and was still working there as a manufacture's agent. He was a registered Professional Engineer in Delaware and Indiana. He had attended the 1965 Homecoming. He is survived by his son, **Alan**, Feb. '43.

1915

Frank J. Baxter died June 3 at the hospital after suffering an attack at his Terre Haute home. He retired in 1961 from the Austin Engineering Co., Roselle, N.J., where he had been a civil engineer. He was a Sigma Nu.

1920

Frank M. Stone died March 27 at New Orleans, La., after a brief illness. He was a consulting engineer there and a Louisiana registered Professional Engineer. He is survived by his brother, **Sam**, '16.

1921

Carl J. Dedert, 65, died suddenly June 14 while working on the election board for the Chicago primary elections. Retired lacquer department superintendent at Hermin-Williams Co., he was an Illinois registered Professional Engineer.

George H. Defel died Feb. 12 at Carlisle, Ind., his retirement home. His last position had been an instructor at Washington, Ind., high school.

1923

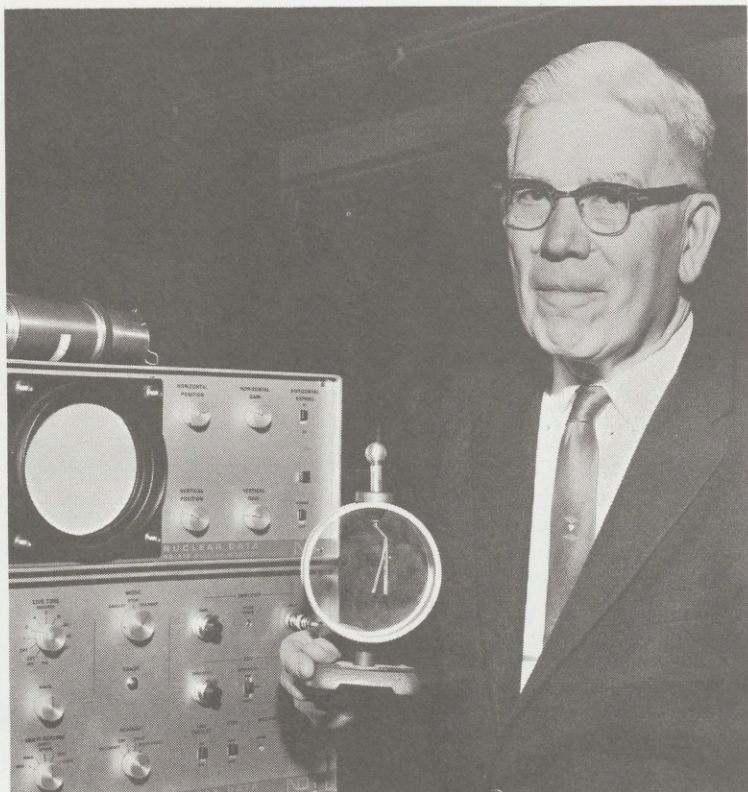
Edward F. Donham, 67, died June 26 at Homewood, Ill. Retired motor equipment superintendent for the Illinois Bell Telephone Co., he was an Illinois registered Professional Engineer. He had been active in the Chicago Tech Club; had been a district representative and once was the Chicago personal appeal chairman and a class agent for the Alumni Fund.

Jesse L. Tygart died in April. He was living at Costa Mesa, Cal., after retiring as a construction engineer on the central staff of the Ford Motor Co.

1924

Robert L. Wolf died in November. He was with Marietta Paint and Lacquer Co.

Curtis W. Lehner died in May. A member of the class who never completed requirements for graduation, Lehner was awarded an honorary Master of Engineering degree at Rose Polytechnic Institute last October—the third such degree to be awarded. He had his own sales company in Atlanta, Ga., since just after World War II, representing manufacturers of electrical power equipment. For 20 some years prior to that he was employed by the Westinghouse Electric Co., heading sales departments in Philadelphia, Boston and Atlanta.



FORTY YEARS OF PHYSICS—Are captured in this photograph of Christopher L. Mason, associate professor of physics, who retired this June after nearly 20 years at Rose and more than 40 years in all teaching physics. The electroscopie he's holding is typical of the instrumentation available when he first began teaching back in the 1920's. Compare that with the new multi-channel analyzer next to it to see what a difference 40 years make. Some other differences: When he began teaching only three of the 76 elementary particles of the proton were known, to say nothing about anti-matter. There were no cyclotrons or atom smashers. And controlled nuclear fission was still years away.

Classified News

1923

Harry H. McDargh Jr. retired June 1 as southeastern regional manager of the Portland Cement Association.

1924

Dr. G. Raymond Fitterer, director of the University of Pittsburgh's thermodynamics center, was awarded an honorary Doctor of Engineering degree in October by the Universidad Technica Federico Santa Maria, Valparaiso, Chile, in recognition of his help in starting and developing a graduate school there. The university is one of the most advanced in science and technology in Latin America.

Leon S. Maehling has retired to Columbus, O. He was an architect's and engineer's representative with Rheem Manufacturing Co., Wayne, Pa.

1926

Ralph W. Tapy, vice president of Engineering, Inc., recently established a group of consulting engineers at Albuquerque, N. M.

1928

Robert F. Alexander has retired as a colonel from the Army, where he last was executive officer to the Assistant Secretary of the Army, and has taken a position with a Washington, D. C., construction firm.

1933

Brig. Gen. **John C. Dalrymple**, Army director of military construction, was the principal speaker at the Terre Haute Armed Forces Day dinner, May 16.

1936

Louis Duenweg recently celebrated his 30th year with the De-

troit Edison Co. where he is assistant superintendent, Detroit division—overhead lines.

1937

Thomas N. Wells has been named assistant business manager at the University of Florida, Gainesville. He joined the university staff in 1950 as business office data processing section manager and last had been purchasing division director.

1938

Wendell E. Carroll, president and board chairman of Regent Controls, Inc., Stanford, Conn., has been elected a director of Dorr-Oliver Inc., Stanford, suppliers of equipment and systems to the chemical, metallurgical, pulp and paper, food, pharmaceutical and sanitary industries.

1940

Lloyd O. Krause received his Ph. D. in electrical engineering from Syracuse University in June. He is a senior staff engineer in the electronics lab at General Electric Co., Syracuse, N.Y.

Feb. 1943

John T. Newlin, vice president of Newlin-Johnson Co., Terre Haute, realtors, has been elected a director of the Midwest Development Foundation here, a new organization to encourage area inventors and innovators and aid them in developing, patenting and marketing their ideas with the ultimate goal of manufacturing those items here.

Harmon E. Rose, president of Construction-Engineering Service, Inc., has been elected president of the Francis Vigo (Terre Haute) chapter of the Indiana Society of Professional Engineers.



Miller, '49



Lape, '49

Oct. 1943

Richard C. Ellsworth has been promoted to product management director at Hamilton Cosco, Inc., Columbus, Ind. It is a new position. He was manager of the bridge, space-saver and shelving lines.

J. Francis Pfrank has joined Pipe Line Service Co. as vice president of operations at Frank-

lin Park, Ill., responsible for manufacturing at Pipe Line's 11 plants throughout the country. He had been vice president of engineering for Diamond Chain Co., Indianapolis.

1945

Dr. Fred C. Maienschein has been promoted to director of the neutron physics division at Oak Ridge, Tenn., National Laboratories. He had been associate director since 1960 and has been helping plan a \$4.8 million electron volt linear accelerator to be built there soon.

Mar. 1947

John B. Shannon now is executive architect, planning department, Sylvania Electric Products. He had been a partner in an architectural and engineering firm.

Oct. 1948

John P. Avery has been promoted to senior staff engineer at Western Electric Co., Indianapolis.

Philip R. Vance has been named to head the new command and management systems planning and engineering department at Mitre Corp., Bedford, Mass. The department will provide technical advice and support to the development of the Air Force's interim command and management system and subsequent standard system. Vance, who joined Mitre in 1959, had been head of the command and technical systems departments and last was special assistant to the systems engineering director. Before joining Mitre he was a technical staff member of MIT's Lincoln laboratory and a development engineer at Goodyear Aircraft Corp. He earned his M.S. in electrical engineering at MIT in 1950.

Jan. 1949

Frank F. Eberhardt, an education and training officer at the U.S. Air Force's Air University at Maxwell AFB, Montgomery, Ala., has been promoted to lieutenant colonel. The university conducts professional military education programs for officers and administers the Air Force ROTC program.

Wayne E. McCoy is now operations director at Gibsonburg, O., for Chas. Pfizer and Co. He had been assistant plant manager at Belleville, Ill.

Frederick C. Mikels is president and technical director of Ranney Method Western Corp., Kennewick, Wash., water supply engineers and contractors.

Benjamin D. Miller will share the 1966 Alex Dow award of the Detroit Edison Co. with two of his colleagues in the company's engineering department for conceiving a sonic method of detecting decay in wood poles and developing appropriate portable instruments. The award, recognizing achievements of "unusual merit," includes a citation, gold lapel pin, engraved watch and 10 shares of Detroit Edison stock. Miller has been with the company since graduation working all that time in engineering research.

Jean E. Lape has joined Ultek Corp. as manufacturing engineering and quality control manager at Palo Alto, Cal. Ultek makes pumps and high vacuum systems. He had been with the analytical division of Varian. Before that he had been with Western Electric, where he is credited with three manufacturing patents.

Harold W. Monroney has been promoted to assistant district engineer, District Five, Illinois Division of Highways at Paris, from district engineer of materials.

1951

Jack C. Steinsberger, vice president of Caisson Corp., Niles, Ill., has been transferred to the Southern Caisson Corp., Greensboro, N.C.

1953

Harry A. Harris is now construction superintendent atavenport, Ia., for Central Engineering Co. He was a project engineer at Cleveland, O., for Peter Kiewit Sons Co.

Gerald L. Moore has switched

as a patent attorney for General Electric to IBM at San Jose, Cal.

1954

Rex Leonard is president of the newly formed Cryogenic Associates, Inc., Indianapolis, designers and manufacturers of custom cryogenic and related equipment and systems. He had been a development group leader at Union Carbide's Linde division Speedway, Ind., laboratory, since 1962 designing and building custom cryophysics equipment. Linde division recently withdrew from the field, encouraging Leonard to form his own corporation to continue that work.

Robert Steinhauser has taken a leave of absence as assistant professor in mechanical engineering at Rose Polytechnic Institute to study for his Ph.D. at the University of Wisconsin on a National Science Foundation science faculty fellowship.

1957

James L. Griffith has been named metals industry division manager for Industrial Nuclear Corp., Columbus, O. He had been an application engineer.

1959

Dr. Warren W. Bowden, associate professor of chemical engineering at Rose Polytechnic Institute, has been named chairman of Terre Haute's new 10-member Air Pollution Control Committee.

1960

Joel R. Waldbieser, structural design engineer for Ewing Miller Associates, Inc., architects, has been elected secretary-treasurer of the Francis Vigo (Terre Haute) chapter of the Indiana Society of Professional Engineers.

1961

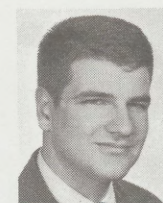
Lawrence Richard Carter is now an assistant district manager for Commercial Testing and Engineering Co., Terre Haute.

Robert H. Turecky received his Master of Business Administration degree from Indiana University in February and now is a manufacturing engineer with Texas Instruments, Inc. at Richardson, Tex. While at IU he was staff engineer at its Aerospace Research Applications Center.

John V. White is a technical staff member of System Services Corp., Falls Church, Va.



Metz, '62



Barnett, '65

1962

Ronald L. Johnson received his M.S. in physics from Trinity College, Hartford, Conn., in June.

Clyde R. Metz has received the Lieber Teaching Associates award for "outstanding" teaching at Indiana University where he is a Ph.D. candidate in chemistry on a National Institute of Health research grant.

1963

Nicholas J. Kira III received his M.S. in mathematics at Indiana University in June and is now assistant professor of computer technology at Purdue University's Indianapolis campus.

Jeffrey J. Lew, now a 1st lieutenant in the Army, volunteered to extend his tour of duty to serve in Viet Nam and has been sent there for a year. He had been assigned in France.

1964

William L. Kovacs received his M.S. in chemical engineering from the University of Colorado in January.

Second Lt. **James L. McCosky** is a platoon leader, Co. D, 864th Army Engineer Battalion in Viet Nam. He joined the Army in May 1965. Before that he was with the Washington State Highway Commission.

FREE TECHNIC

Contributors to the last Alumni Fund and the current Centennial Development capital campaign are entitled to receive the Rose Technic free. If you are not getting it, write the Alumni Secretary at Rose.

Engineering Students Go For A Summer Of Study In Europe, Too

Many schools have European summer study-tours but not many engineering schools do. In fact, Rose Polytechnic Institute may be the only one.

This summer, 14 Rose students attended the University of Salzburg, Austria, for six weeks to study elementary German, taught by one of the university's professors, and General Semantics, taught by Prof. Gordon Haist, head of the Rose humanities department.

On the way there they visited Rome and Vienna. On the way home, they stopped at Munich, Paris and London to take in such sights as the Louvre, the Sorbonne, the Pantheon, Notre Dame Cathedral and Versailles, in France; Westminster Abbey, Big Ben, Buckingham Palace, the Tower of London, Oxford University, Eton College, a London stage production and a Shakespearean play at Stratford-on-Avon, in England.

What attracts engineering students to a summer of study and travel in Europe? Basically the same things that attract liberal arts students. According to Haist that includes "broadening their experiences; awareness of other cultures; contact with foreign students in an educational atmos-

phere; a chance to see historical sites and other points of interest."

At Rose great emphasis is now placed on the humanities. All students are required to take a two-year general humanities course, which tackles such topics as "the nature of the universe;" "the nature of man;" "man's symbolic structures," including language and the arts; "man's modern predicament;" "man in society;" and "non-western culture."

In addition, students must take three or four more courses in the humanities as electives. They can choose from some 50 course titles, including such subjects as Russian literature, economic development of western civilization, forensics, modern theater practice, medieval civilization,

philosophy of religion, theories of personality, studies in political theory, cultural anthropology, legal institutions and functions of law, Russian; French; and, of course, Shakespeare.

Why the emphasis on the humanities? Why Shakespeare? Why a European summer study-tour?

Must Know Many Things

Because, it is no longer enough for the engineer and scientist to be merely technically competent. He must adopt a systems approach to his work, to solving problems. He must consider the effects of his solution, his invention, his discovery. He must understand politics, economics, sociology, psychology, human nature. And he must take these things into account when he proposes a solution to a problem.

The summer study tours to Europe help familiarize the students with the roots of their own culture and the solutions to common problems other people are working out from the same or a different set of traditions.

This was the school's second annual summer study program. Last year, 17 students and another humanities faculty member, Dr. William Young, spent six weeks at the University of Leeds, England, where they studied modern British literature and masterpieces of English literature, all taught by Leeds professors. During that time and afterwards they traveled throughout England and Scotland and spent a week in London, attending the theater there and the Shakespearean theater at Stratford-on-Avon.

Of the 14 students enrolled in this year's program, one is a graduate student; four will be seniors; three are juniors; three are sophomores and three will enter Rose for the first time this fall as freshmen!

They are majoring in such diverse fields as mathematics, electrical engineering, physics, chemical engineering and mechanical engineering.

Cost of the seven weeks was figured at about \$1,400, including tuition, airfare, lodging, meals, entertainment, souvenirs and other miscellaneous expenses.

NSF Wants To Know—

Can The Small School Do Basic Research? Dr. Ralph Llewellyn, '55, Gets Grant To Try

The National Science Foundation, principal Federal agency supporting fundamental scientific research, is going to try an experiment at Rose Polytechnic Institute: Can successful basic research be conducted at the small school by the not-so-well-known investigator? If the answer is yes, the whole pattern of NSF support—now mostly to the established, well-known researchers at the giant universities—may be changed.

Awarded to Dr. **Ralph Llewellyn, '55**, associate professor of physics and director of research at Rose, was a \$45,000 two-year grant for research in recoilless Rayleigh scattering using the recently discovered Mossbauer effect.

Rayleigh scattering is the bouncing of radiation off the

atomic nucleus.

The Mossbauer effect is the recoilless emission or absorption of radiation by the nucleus.

The grant will also test another idea: research cooperation between a small school and a giant university, in this case, the University of Illinois. Rose will do the experimental work and Illinois will provide the special equipment and consultants, like

Dr. Hans Frauenfelder, one of the world's foremost authorities on nuclear physics and the Mossbauer effect.

The cooperative idea was largely Dr. Frauenfelder's after he spent some time in 1964 at Rose as a visiting scientist.

DR. WHITE MEMORIAL

Rose Polytechnic Institute has received a bequest of cash and securities worth \$61,852 from the estate of Mrs. John White for a memorial to her husband, three times Acting President of Rose, twice Vice President, once Dean and life member of the Board of Managers, who died in 1959.

Oct. 17-18

Fourth National Bioengineering Symposium Here

Rose Polytechnic Institute will conduct its fourth national symposium on bioengineering on Oct. 17-18. The subject will be bioengineering education.

Rose's first symposium, in 1953, resulted in a definition of bioengineering. Others were held in 1956 and 1964.

Featured speakers at the October meeting will be:

William C. Howe, chief, executive staffing and recruitment program, National Aeronautics and Space Administration.

Dr. Newman Hall, executive director, Commission on Engineering Education.

Dr. Glenn V. Edmonson, associate dean, College of Engineering, University of Michigan.

Dr. Robert Stewart, chairman, agricultural engineering department, Ohio State University.

Dr. Leslie A. Geddes, director of biophysics laboratory, Baylor University School of Medicine.

Some 500 persons are expected to attend, including representatives from nearly every engineering college in the nation and government and industry.

Objectives

The symposium, billed as a "work and study" meeting by its director, Dr. Robert M. Arthur, associate professor of bioengineering at Rose, is expected to produce conclusions about (1) general goals of bioengineering education; (2) curricula; (3) nature of biology courses to be required; (4) retraining of biologists and bioengineers; and (5) the need for bioengineers.

The National Science Foundation has awarded Rose a \$2,100 grant for the symposium.

Homecoming '66 Program Is Set

From Page 1

tute this year. Taking its place will be the Collett Lecture. The decision not to plan another Alumni Institute was based on the dwindling attendance at past institutes despite the variety of topics, times and lengths of programs presented over the past three years in search of the combination most appealing to the alumni.

Another new feature of Homecoming this year will be holding the annual banquet in the brand-new Hulman Memorial Union. A long-standing tradition will be broken by admitting wives to the banquet to join in celebrating completion of the new union building and the first phase of the school's building program.

The complete Homecoming schedule is:

FRIDAY, OCT. 14

Collett Lecture,
Main building 2:30 p.m.
Reunion Dinners,
"1's" and "6's" 6 p.m.
Pep Rally and Bonfire,
field house 8 p.m.
Old Times Party,
Terre Haute House 9:30 p.m.

SATURDAY, OCT. 15

Registration, auditorium 9 a.m.
Annual Meeting,
auditorium 9:30 a.m.
Smorgasbord Luncheon,
field house 12 noon
Football, Rose vs.
Concordia of Chicago 2 p.m.
Wabash Valley Tech
Club Open House,
Hulman Union 4 p.m.
Annual Banquet,
Hulman Union 6 p.m.
Homecoming Ball,
Terre Haute House 9:30 p.m.

Reunion dinner chairmen planning their classes' celebrations are: 1906, Carl Wischmeyer; 1911, Ernest Bradford; 1916, Ralph Stuart; 1921, Robert Sewell; 1926, Ed Kelley; 1931, John Richardson; 1936, Paul McKee; 1941, John Roberts; 1946, Ed Carpenter;



NEW DORMS—To be ready for students this fall are the two new residence halls at right. Dorm at the left was opened for first time this past winter. Each holds just 78 men to preserve the small college atmosphere in the face of an enrollment of 850 this fall, 1,050 in two more years. This view is from the north. The lake is over the hill and behind the dorms. The new Hulman Memorial student union is just out of the picture to the left. There will be on-campus housing for 540 students this year.

Track Records Tumble Before Lynn, Keeler

Old Rose track records fell this year before the onslaught of two seniors, miler **John Lynn** and triple-jumper **Jeff Keeler**, and a sophomore, discus thrower **Tom Johnson**.

Lynn broke his own record for the mile with a run of 4:25.0, shaving seven-tenths of a second from his old mark. He also set a new Rose record for the 880-yard run, 1:57.2, beating **Bob Sandberg's** 1:58.4 mark.

Lynn also holds the school record for the two-mile run, 10:06.5, set a year ago.

Keeler, son of **Irvin H. Keeler, '42**, broke the school's record in

1951, Seibert Thomas; 1956, Dale Roeschlein; and 1961, Don Dekker.

the triple-jump, 44'10½", a mark he'd set himself, with a leap of 45'9"—good enough for fourth best in the NAIA listings for that week! Two weeks later he jumped 46'2" but with a wind assist.

Irv still holds the school's mark in the high jump, 6'5¼", set in 1941.

And Tom Johnson set a new school record when he tossed the

discus 136'5", breaking **Jack Monroe's** mark, which had stood since 1958.

NET LOSS IN TENNIS

Rose suffered a 3-5 losing season in tennis this year, beating Marian twice and Blackburn but losing to Wabash twice, Principia, Greenville and Illinois College.

ROSE ECHOES

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AUG 29 1966

Tom Rose

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Amendments To By-Laws

Proposed amendments to the By-Laws of the Rose Polytechnic Alumni Association to be voted on at the annual meeting, Oct. 15:

ARTICLE V Banquet Guests

Section 1. The Board of Managers, the Officers of the Association, those members of the Association who have held membership for fifty or more years and the members of the class which has been voted into membership at the Annual Meeting of that year shall be invited by the Executive Committee to attend the Annual Banquet as guests of the Association.

ARTICLE VIII Amendments

Section 1. The By-Laws may be amended by a two-thirds majority of the members present at a stated meeting, or by letter ballot by a vote of two-thirds of the returned ballots. In emergency situations, action contrary to the By-Laws may be taken by vote of the Executive Committee. These actions, however, must be ratified at the next regular meeting of the Association.