



*Dr. Joseph C. Hogan*

## It's Dean Hogan

Dr. Joseph C. Hogan is now dean of the College of Engineering and Director of the Engineering Experiment Station at the University of Missouri. He had been acting dean of the College since Sept. 1, and has been a member of the teaching staff since 1947. He will retain his title of professor of electrical engineering. He succeeds Dean Huber O. Croft, who retired from the deanship in September upon reaching 65, the University's compulsory retirement age for administrative officers. Dean Croft remains on the faculty as professor of mechanical engineering.

Dr. Hogan, 39, and a native of St. Louis, received his B.S. in Electrical Engineering degree at Washington University in St. Louis in 1943. After serving as a commissioned officer in the U.S. Navy in the South Pacific during World War II, he spent about 18 months in private industry and then began his teaching career at the University of North Dakota.

He came to the University of Missouri as instructor in electrical engineering in 1947, and earned his M.S. in E.E. degree here in 1949. Promoted to assistant professor, he was granted leaves of absence to accept a fellowship and complete work for his Ph.D. degree at the University of Wisconsin. He received the doctorate there in 1953. He was promoted to associate professor here that year, and was made full professor in 1958.

Dr. Hogan has been teaching induction machinery, power system analysis and stability, control systems, and matrix and tensor analyses. He helped organize and has been director of the network analyzer facility at the University.

## HONOR AWARDS FOR ENGINEERS



*Roy Bainer*

Five outstanding engineers received the Missouri Honor Award for Distinguished Service in Engineering from the University at the Annual Engineering Convocation in Jesse Auditorium on March 17. Four of the five are graduates or former students.

Receiving the awards were: Roy Bainer, Associate Dean of Engineering at the University of California; Max C. Sons of Greenwich, Conn., Chief Petroleum Engineer of the Standard Oil Company (New Jersey); Dr. James E. Shepherd of Sudbury, Mass., general manager and Director of Research of the Sperry Rand Research Center at Sudbury; John S. Ayres of Kansas City, Mo., president of Cook Paint and Varnish Company; and Dr. Charles S. Draper of Cambridge, Mass., director of the Instrumentation Laboratory and Professor and Head of the Department of Aeronautics and Astronautics at Massachusetts Institute of Technology.

Prof. Bainer was principal speaker at the convocation, discussing "The Land Grant College Act and Technology." He was born near Ottawa, Kan., and spent his early life on a wheat farm near Scott City, Kan. He enrolled in Kansas State University, where he received a B.S. in Agricultural Engineering degree in 1926, and a Master of Science degree in 1929. He went to the University of California as assistant professor. He rose steadily to become the chairman of the department at California in 1947; assistant dean of engineering for the state-wide system of the University in 1952; and associate dean in 1961. A recipient of the McCormick Medal from the American Society of Agricultural Engineers, the Distinguished Service Award from Kansas State University, and the Ford Farm Efficiency Research Award, he has made three professional trips to South America as representative of the Food and Agricultural Organization of the United Nations.

Mr. Sons, a native Missourian, received his B.S. in Civil Engineering degree at the University in 1935 and accepted a position as materials inspector for the Missouri State Highway Department. He joined the Carter Oil Company of Tulsa, Okla., in 1936, and rose to Chief Petroleum Engineer for that firm. In



*John S. Ayres*



*Max C. Sons*



*James E. Shepherd*



*Charles S. Draper*

1954 he joined the Jersey Production Research Company, an affiliate of the Standard Oil Company, where he directed geological, geophysical and production research activities. He became vice-president of Jersey Production Research, and remained with that company until May, 1960, when he went to the main office of Standard Oil as Chief Petroleum Engineer.

Dr. Shepherd, well known electronics engineer and research scientist in the field of microwave devices for radar and communications systems, is also a native Missourian. He attended public school in La Plata, Mo. before entering the University in 1928, receiving a bachelor's degree in electrical engineering in 1932, and a master's degree the following year; majoring in physics, he served also as a graduate assistant in electrical engineering for another year while continuing graduate studies. Transferring to Harvard University, Shepherd received a Master of Science degree in communications engineering in 1935, and a Doctor of Science degree in 1940. He also served as instructor in physics and communication engineering at Harvard from 1935 to 1941, at which time he joined the Sperry Gyroscope Company as an electronic engineer. He headed their radar development engineering department for several years, and directed research in electronic tube engineering. In 1960 he was selected to organize and serve as general manager and director of research of the new Sperry Rand Research Center. As a student at the University, Dr. Shepherd was chairman of the St. Pat's laboratory exhibition; a member of St. Pat's Board; member of QEBH and Blue Key, campus honorary societies; and of Phi Beta Kappa, Tau Beta Pi, Eta Kappa Nu, and Society of Sigma Xi, academic honorary societies. He is a member of numerous professional societies, and holds a number of patents on electronic circuits.

Mr. Ayres, a native of Kansas City and graduate of Central High School there, joined the Cook Paint and Varnish Company shortly after receiving his B.S. in Chemical Engineering degree from the University in 1935. While working in Cook's research division, he also took graduate work at the University of Kansas City. Transferred to the Detroit research division of

the company in 1940, he was named manager of that division shortly afterward. Early in 1959 he returned to Kansas City to manage the industrial sales division of the company. He served as vice-president of Cook Paint (Research) in 1955; vice-president in charge of the Detroit Research Division in 1957; vice-president in charge of industrial sales in 1959; and president of the company in 1961. He is a member of numerous professional and honorary societies, civic and social clubs.

Dr. Draper has received world wide recognition for his pioneering inventions and development in the field of inertial navigation, the phenomenal mechanism which has made possible the accurate guidance of missiles, manned aircraft, and naval vessels, particularly the atomic submarine. During World War II, he developed the Mark 14 gyroscopic gun sight which played a tremendous role in our combat successes. Dr. Draper's great developments in inertial navigation are described in an article by Maya Pines, "The Magic Carpet of Inertial Guidance," in the March, 1962, issue of Harper's magazine. Dr. Draper is a native of Windsor, Mo., and attended public school and high school there before entering the University in 1917. After two years in Arts and Science here, he transferred to Stanford University, where he received an A.B. degree in 1922, majoring in psychology. He then went to M.I.T., where he has been student, teacher, and research scientist continuously since that time. He holds three degrees: B.S. in Electro-Chemical Engineering, 1926; M.S., 1928; and D.Sc., 1938, from M.I.T. He has specialized in the fields of aeronautical power plants, flight testing, vibration measurements, aeronautical instruments, and control engineering, with special attention to applications of gyroscopic principles for military and commercial equipment. He is a member of several advisory groups connected with the military services and is chairman of the National Inventors Council. Dr. Draper holds numerous honors, including high honors from the armed services and from foreign nations. His developments in inertial navigation control are considered one of the major scientific contributions in history.