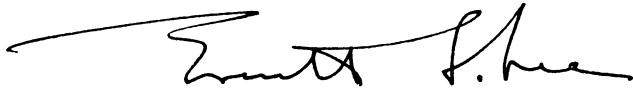


INSTITUTE ACTIVITIES

We Begin a New Institute Year

—A Message From the President



Together we begin a new Institute year—a year in which each of us advances his contributions of the past year into the year at hand for great mutual good.

For each member everywhere there is work to be done, enjoyable work, together with your associates to continue the engineering friendships which you have established and to make new ones, and to progress the activities with which you are associated, be they Section, Student Branch, technical committee, general committee, or officer at Student Branch, Section, District, or national level.

Our far-reaching activities covering all electrical engineering have been well established and their interest has been vigorously maintained and advanced. There may be some members, however, who do not feel that they are sufficiently established within the Institute to have caught its full spirit, to have appreciated its vast contributions, to have made the Institute life a vital part of their engineering life, who have not had the pleasure of Institute engineering friendships. To these I suggest a definite budget of time for Section activities, meeting and joining with their associates to progress the planned activities and to join in the planning of whatever is together thought to be mutually helpful, ever mindful of the opportunity awaiting participation, which means the giving of time and talents to the progression of the desired work. This is the formula of those who have gone before; this is the formula for us now.

And as opportunity advances to join in the District and national activities, the enjoyment and satisfactions become the greater. And for the Students, a full participation in the Student Branch activities is the forerunner of all of these. There is a place for every member and a work for every member to do if he but will.

Especially to the Student members who just have been graduated from their engineering schools and who are continuing their electrical engineering activities, do I urge that you enter the Section activities of the Institute in your community where you are—making yourselves known to the officers, and bringing to the Section your abilities for continued participation. And the Section members and officers welcome you to this further participation.

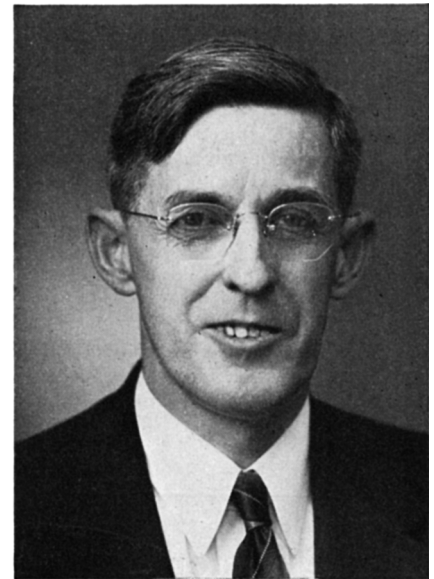
Our national problems are not many. We are not quite balancing our budget. Each member has received the chart of income

and expenditures. We will have to act on this problem during the year. Expenditures have been scrutinized carefully. Increased costs have affected us as well as all others. As I am privileged to talk with more and more of our members, I find they do not want our opportunities for further participation to be jeopardized. They are proud of our standing as a profession. They want continued participation, and express a willingness to sustain it, even at increased cost.

Everywhere I go I find the members asking as to the over-all engineering society. The activities in our Institute on this subject in the past two years resulted in a report; this has been referred to Engineers Joint Council. There it still is.

But I would call definitely to your careful attention the opportunities we have for participation to bring to engineers the recognition which engineers see in their brother professions of the law and of medicine. I call to your attention that there is a doctor in the intimate talk in every family circle of our land; there is a lawyer in the intimate talk of nearly every family circle of our land; whereas the engineer, while bringing contributions to every family in our land through his daily activities to bring into being every material thing we have, is not personally in the intimate talk of every family circle of our land. The engineer in his contributions is a man apart—his contributions are the thing—not the engineer as an individual.

Now the engineer can change this if he will participate the more in the personal aspects of our life. We are told today the education facilities in every community in our land need added aid. Through committee and school participation engineers can be of service here, and as the service is personal, the engineer becomes known, and engineers will become known for their service. This is only one of many opportunities. They abound in the service clubs, in civic programs, in the churches. Through an augmentation of personal participation in these services, recognition of the engineer will become established. This is not new. It is going on and has been for years. But there needs be more, and it needs to be made more personal. I trust that in each Section the program committees, as they plan their Section meetings for the year, include a meeting wherein the member participation in community affairs be the subject. And may it be thoughtful. Let it be an experience



Everett S. Lee

meeting, just as our technical meetings are experience meetings. And let it be the beginning of many more to come. And if perchance there are no experiences to relate, let that situation be studied and analyzed to answer the question, "Why?" And I am sure the results will be for great good.

We will not stop in our efforts for an over-all engineering society; however, personal engineering recognition which many engineers feel they should have will not come from the top alone. It can come only if there is the personal knowledge of engineers and their contribution at the individual level in the community. This each engineer has to bring about himself. The whole then will emanate as a totality, ever enlarging from the local participation to the over-all. To those engineers who may not feel this way, I offer the foregoing for consideration and thought and action.

In the last analysis, the world needs engineers for engineering, and it needs electrical engineers for electrical engineering. To this need we apply ourselves. The efforts we put into the more general activities to bring to our fellowmen a more personal knowledge of the engineer is the frosting of the cake. We have baked a good cake. And if we want it frosted, we will have to frost it.

Middle Eastern District to Meet in Washington, D. C., October 5-7

A technical program of exceptional interest has been planned for the 3-day meeting of the Middle Eastern District to be held in Washington, D. C., October 5-7, 1948. Headquarters will be in the Statler Hotel with registration beginning Monday afternoon, October 4. A general session will be held at 10:30 a.m. Tuesday, with Doctor E. U. Condon, director of the National Bureau of Standards, as the principal speaker. The air transportation committee has selected this meeting for its principal technical sessions on air transportation for the year, and aircraft electrical engineers should find many papers of interest. Four technical sessions covering marine transportation are scheduled and will afford an unusual opportunity for marine electrical engineers in manufacturing, shipbuilding, and the government agencies to meet for the discussion of a diversified group of marine electrical subjects. Inspection trips of unusual interest, entertainment for the women, a smoker, and a dinner-dance assure a busy time for everyone.

INSPECTION TRIPS

An inspection trip to the David Taylor Model Basin Research Laboratory has been planned for Wednesday afternoon. Thurs-

day morning the Carnegie Institution of Washington will be the center of interest. Thursday afternoon two trips are scheduled, one to the Washington National Airport, the other to the National Bureau of Standards.

ENTERTAINMENT

A smoker will be held on Tuesday evening and a banquet followed by dancing on Wednesday evening. Golf and tennis will be arranged for as requested. The women's program includes an informal supper-game party while the smoker is in progress. A sight-seeing trip to Mt. Vernon with luncheon at Collingwood Inn has been planned for Wednesday. Thursday has been set aside for sight-seeing and shopping in Washington proper.

HOTELS

Meeting headquarters will be in the Statler Hotel which is within two blocks of the Carlton, Hamilton, Hay Adams, and Lee Sheraton Hotels. Members of the District receiving an "Application for Hotel Accommodations" form should fill in and mail it promptly to the hotel of their choice. Confirmation will be made directly by the hotel accepting the reservation.

Rates are as follows:

	Single	Twin Beds
Statler.....	\$4.50-\$11.00.....	\$9.00-\$13.50
Carlton.....	6.00- 8.00.....	9.00- 11.00
Hamilton.....	4.50- 5.00.....	7.00- 8.00
Hay Adams.....	4.50- 7.00.....	8.00- 9.50
Lee Sheraton.....	4.50- 6.00.....	7.00- 9.00

ADVANCE REGISTRATION

Members of the District who will be sent advance registration cards should fill them out as soon as possible and forward them to J. O. Pease, Chairman, Registration and Housing Committee, Rumsey Electric Company, 219 Southern Building, Washington 5, D. C. Prompt action greatly will assist the committees making arrangements for the meeting and save time upon arrival. A registration fee of \$2 will be charged all nonmembers, except Enrolled Students and the immediate families of members.

DISTRICT MEETING COMMITTEE

Members of the District meeting committee are as follows:

William McClellan, *honorary chairman*; Fischer Black, *general chairman*; W. F. Dietz, *arrangements*; D. K. Steidinger, *secretary-treasurer*; D. S. Bender, *technical meetings*; J. S. Antel, *students*; R. D. Bennett, *special meetings*; L. H. Cleary, *finance*; I. F. Conrad, *publicity*; F. B. Crider, *smoker*; C. H. Giroux, *sports*; Mrs. W. J. Lank, *ladies*; W. J. Lank, *entertainment*; D. Lewis, *dinner*; J. O. Pease, *registration*; G. R. Wilhelm, *inspection trips*.

Tentative Technical Program

Middle Eastern District Meeting, Washington, D. C., October 5-7, 1948

Tuesday, October 5

2:00 p.m. Air Transportation

CP.* Captain A. H. Bergeson, United States Navy, Bureau of Aeronautics

48-213. Analysis and Redesign of a Carbon Pile Voltage Regulator for Aircraft Generators. *W. B. Kouwenhoven, G. J. Thaler*, Johns Hopkins University

48-214-ACO**. Aircraft Carbon-Pile Voltage Regulators, Fundamentals and Design Improvements. *B. O. Austin, H. H. C. Richards*, Westinghouse Electric Corporation

CP.* Personnel Safety in Aircraft High-Voltage Electric Systems. *M. H. Adolphe*, Lockheed Aircraft Corporation

2:00 p.m. Power

48-212. The True Dielectric Breakdown Strength of Electric Cable Insulating Papers. *Paul Cloke, Burt Bates*, University of Maine

48-216. An Experimental Investigation of the Electrical Performance of Bolted Aluminum to Copper Connections. *W. F. Bonwill*, Burndy Engineering Company, Inc.

2:00 p.m. Electric Instruments

48-217. Naval Ordnance Laboratory 6-Trace Cathode-Ray Oscillograph. *P. L. Edwards*, Naval Ordnance Laboratory

48-218-ACO**. A Precision Electrothermic Voltmeter for Measurements between 20 and 20,000 Cycles Per Second. *F. L. Hermach*, National Bureau of Standards

48-219. Performance of Portable Electric Instruments in Magnetic Fields. *A. E. Peterson*, National Bureau of Standards

CP.* Effects of Harmonics on Watt-hour Meter

Registration *A. G. Ennis*, John Hopkins University Applied Physics Laboratory

2:00 p.m. Marine Transportation

48-220. Silicone Insulation in Submarines—Toxicity. *H. P. Walker*, Bureau of Ships, United States Navy Department; *Lieutenant Commander T. E. Shea*, Naval Medical Research Institute

48-221. Functional Evaluation of Insulating Materials. *K. N. Mathes*, General Electric Company

48-222. Magnetic Amplifiers for Naval Shipboard Applications. *L. W. Buschler*, Bureau of Ships, United States Navy Department

Wednesday, October 6

9:00 a.m. Air Transportation

48-215-ACO**. Sensitive Relay Contact Protection Systems. *J. P. Dallas, T. H. McCully*, Hughes Aircraft Company

48-203-ACO. Protection of the Airplane Main Bus. *D. W. Exner*, Boeing Airplane Company

48-223. Proposed Circuit for Aircraft Reverse-Current Cutout. *J. M. Marzolf*, Naval Research Laboratory

48-224. A Polarized Relay as an Aircraft Control Element. *R. E. Johnson, F. A. Glassow*, Barber Coleman Company. Demonstration

9:00 a.m. Illumination Joint Session Illuminating Engineering Society-AIEE

CP.* Sources for Projection Equipment. *J. A. Bartlett*, Engineer Research and Development Laboratories, Fort Belvoir

CP.* Modulated Light Sources. *W. S. Huxford*, Northwestern University

CP.* Atmospheric Transmissometry. *C. A. Douglas*, National Bureau of Standards

CP.* Lamp Progress and Development in 1948. *Alston Rodgers*, General Electric Company, Nela Park

9:00 a.m. Naval Testing

CP.* The Design of an Instrument Servomechanism to Be Used on a Recording Ship Model Dynamometer. *Henry Carleton*, David Taylor Model Basin

CP.* Safety Control Features of Towing Dynamometers at the David Taylor Model Basin. *L. G. Lehman*, David Taylor Model Basin.

CP.* The Electrical Design Features and Prediction of the Performance of the Navy's New 12-Motor High-Speed Towing Dynamometer. *S. E. Dawson*, David Taylor Model Basin

9:00 a.m. Nuclear Engineering

CP.* Survey of Radiation Measurement Methods. *G. W. Dunlap*

CP.* Power from Piles. *Farrington Daniels* or *Clark Goodman*

CP.* Relative Comparison of Various Types of Accelerators. *Stanley Livingston*

CP.* Instrumentation and Techniques of Protection from Radiation Injuries. *K. Z. Morgan*

9:00 a.m. Marine Transportation

48-225. Selective Tripping Arrangements for Protection of Ships' A-C Electric Distribution Systems. *J. R. Cole*, Bureau of Ships, United States Navy Department

CP.* Development of Selective Tripping of Low-Voltage Air Circuit Breakers. *William Deans*, I-T-E Circuit Breaker Company

48-227. Shipboard Degaussing Installations for Protection Against Magnetic Mines. *N. B. Michel*, Bureau of Ships, United States Navy Department

Middle Eastern District Meeting Program (Continued)

48-228. Compensation of Effects of Degaussing Coils on Shipboard Magnetic Compasses by Use of Compass Compensating Coils. *R. A. Robinson*, Bureau of Ships, United States Navy Department

2:00 p.m. Air Transportation

48-243-ACO**. A 24,000-RPM Alternator for Aircraft. *T. J. Martin*, Jack and Heintz Precision Industries, Inc.

48-250. Steady-State Analysis of Aircraft D-C Generators. *Earnest Van Valkenburg*, *Whitney Matthews*, Naval Research Laboratory

48-230-ACO**. Electrical Prerotation of Landing Gear Wheels. *J. H. Keyser, Jr.*, formerly with the Lockheed Aircraft Corporation

CP.* Aircraft Cockpit, and Instrument Lighting. *J. M. Roper*, Bureau of Aeronautics. Demonstration

2:00 p.m. Power

48-211. Effects of Silicone Vapor on Brush Wear. *J. Marsden*, *R. H. Savage*, General Electric Company

48-231. Use of Propulsion Generators on Naval Vessels to Supply Shore Power. *F. E. Anderson*, *W. H. Fifer*, Bureau of Ships, United States Navy Department

CP.* Use of Power in Connection with Floating Dry Docks. *W. W. Neuland*

48-232. Origin of the Electric Motor. *Joseph Michalowicz*, Catholic University of America

2:00 p.m. Communications

CP.* Military Meteorological Communication. Major *J. M. Van Arsdell*, United States Army

CP.* Multipoint Networks for Telephone and Telephotographic Services. *E. Nichols*, American Telephone and Telegraph Company

48-233. Facsimile Transmission for Pickup and Delivery of Telegrams. *G. H. Ridings*, Western Union

2:00 p.m. Electrical Engineering Developments

48-234. Automatic Standing Wave Indicator. *P. J. Allen*, Naval Research Laboratory

48-235-ACO**. Some Characteristics of the Human Servo. *F. V. Taylor*, Naval Research Laboratory

48-236. Recent Research on Pulsed Light Sources. *B. R. Whelen*, Naval Ordnance Laboratory

48-237-ACO**. External Magnetic Field Patterns Surrounding Minute Portions of Recording Wires. *I. L. Cooter*, National Bureau of Standards

48-238. The Magnetic Fluid Clutch. *Jacob Rabinow*, National Bureau of Standards

Thursday, October 7

9:00 a.m. Air Transportation

48-229-ACO**. A Rectified A-C Electric System for Aircraft. *L. M. Cobb*, *W. L. Kenshaw*, *O. E. Erlandson*, The Glenn L. Martin Company

—PAMPHLET reproductions of author's manuscripts of the numbered papers listed in the program may be obtained as noted in the following paragraphs

—PRICES for papers, irrespective of length, are 30 cents to members (60 cents to nonmembers) whether ordered by mail or purchased at the meeting. Mail orders are advisable, particularly from out-of-town members, as an adequate supply of each paper at the meeting cannot be assured. Only numbered papers are available in pamphlet form.

—COUPON books in five-dollar denominations are available for those who may wish this convenient form of remittance.

—THE PAPERS regularly approved by the technical program committee ultimately will be published in PROCEEDINGS and TRANSACTIONS; also, each is scheduled to be published in ELECTRICAL ENGINEERING in digest or other form.

48-239. Starter-Generator Control System for a Multijet Engine Airplane. *Victor Hart*, Boeing Airplane Company

CP.* Lockheed, "Constitution," Electrical Test Program. *H. F. Rempt*, Lockheed Aircraft Corporation

48-240. Ground Power for Aircraft. *J. H. Blankenbuehler*, Hobart Brothers Company, and the Motor Generator Corporation of Troy, Ohio

9:00 a.m. Rural Electrification

48-241. Rural Distribution Voltages. *W. M. Edmunds*, *G. B. Roloson*, Rural Electrification Administration

48-242-ACO**. Inductive Co-ordination Practices. *M. W. Rothpletz*, *H. S. Williams*, Rural Electrification Administration

9:00 a.m. Communication. Joint Session URSI (International Scientific Radio Union) —IRE (Institute of Radio Engineers)—AIEE

CP.* A Report on the New York-Boston Radio Relay System. *C. A. Borgeson*, American Telephone and Telegraph Company

CP.* Washington Television Installations of NBC. *Donald Cooper*, National Broadcasting Company

CP.* Progress in Air Transport Radar. *Lieutenant Commander E. W. Harrison*, United States Navy Department

CP.* A paper on the general topic of "Electronic Heating" by a speaker from the Westinghouse Electric Corporation

9:00 a.m. Marine Transportation

CP.* Magnetic Minesweeping Systems. *J. F. Condon*, *H. M. Koslow*, Bureau of Ships

48-226. Ventilation of Rotating Electric Equipment on Shipboard. *A. M. Harrison*, Westinghouse Electric Corporation

48-244. Electric Propulsion in Naval Surface Vessels. *N. T. Jucarone*, Bureau of Ships

2:00 p.m. Naval Testing

CP.* The Development of Instruments to Measure Performance of the Navy's New 8-Inch Rapid Fire Gun. *Edward Wenk, Jr.*, David Taylor Model Basin

CP.* The Design of Lightweight Velocity Meters for Measuring High Shock. *G. C. Riggle*, David Taylor Model Basin

CP.* A Measurement System for the Determination of Minute Charges in Capacitance. *G. W. Cook*, David Taylor Model Basin

CP.* Instrumentation for and the Conduct of Full-Scale Trials of Naval Vessels. *W. R. Romaine*, David Taylor Model Basin

2:00 p.m. Government Relations

Address: Supervisory Aspects of Government. *Percy H. Thomas*, Federal Power Commission

Address: Discussion on Development of Electric Power by Government. *H. J. McPhail*, Bureau of Reclamation

Address: Government in Relation to Communications. *E. W. Allen*, Federal Communications Commission

2:00 p.m. Marine Transportation

48-245. Overload Protection for Silicone-Insulated Motors for Shipboard Use. *J. C. Grigg*, *J. E. Watkins*, Bureau of Ships

CP.* Improving Internal Lighting in United States Naval Vessels. *E. Boghosian*, Bureau of Ships

48-246. Effective Resistance and Inductance of 3-Conductor Shipboard Power Cables. *S. D. Summers*, Naval Research Laboratories

Discussion of proposed revisions to Section 45 of AIEE Standards (Electrical Installations on Shipboard). To be led by members of AIEE committee on marine transportation

*CP Conference paper; no advance copies are available; not intended for publication in TRANSACTIONS

**ACO. Advance copies only available; not intended for publication in AIEE TRANSACTIONS.

1948 Midwest General Meeting to Be Held in Milwaukee, Wis.

Colorful fall, Wisconsin's most beautiful and most famous season, awaits AIEE members attending the Midwest general meeting in Milwaukee, October 18-22, 1948.

The beautiful scenery may be seen to advantage in Wisconsin's many state parks, reported to be among the finest in the United States. Within a day's traveling time of Milwaukee are dozens of parks, each featuring its own private type of natural setting, yet

having the same, complete facilities that make a picnic or hike so enjoyable, and AIEE members are warned to bring cameras loaded with Kodachrome film.

Within the city limits of Milwaukee is Mitchell Park nationally known for its sunken gardens and botanical conservatory where flower shows are held the year around. A few miles to the south is Grant Park, with its steep bluffs, expansive beaches, green golf

course, tennis courts, and miles of hiking trails through the woods. Inland from Grant Park is Whitnall Park, with acres and acres of rolling green grass, carefully tended flower gardens, and big trees.

Sixty miles north of Milwaukee is Terry Andrae State Park, which is also on Lake Michigan and has a wide variety of trees that turn into a kaleidoscope of color in the fall, and within an easy day's drive of the AIEE meeting headquarters is Devil's Lake State Park where ice-age rocks blocked off a river and left a deep lake. Nearby Derward Glenn offers an interesting study in geology. Other state parks, Potawatomi, Peninsula, Kettle Moraine, Tower Hill, plus dozens of state and national forests also are within easy