

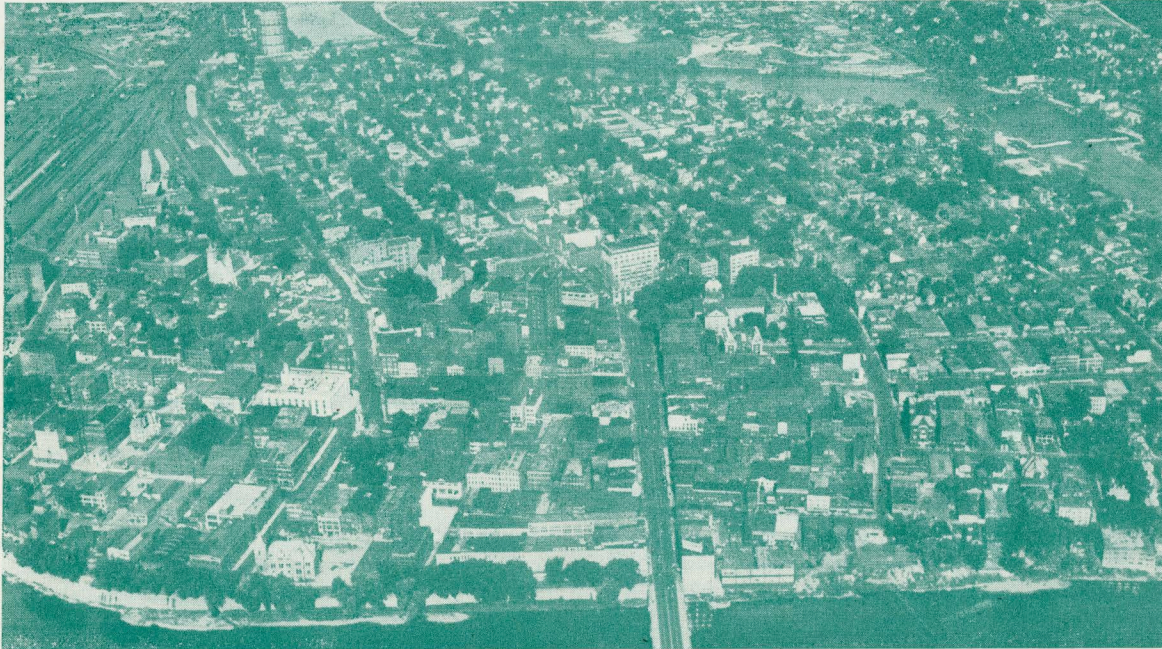
# NORTH EASTERN DISTRICT MEETING

BINGHAMTON, N. Y.

APRIL 30 - MAY 2, 1952



**Headquarters  
Arlington Hotel**



City of Binghamton, New York

## MEETING FEATURES

The 1952 AIEE North Eastern District Meeting will be held at the Arlington Hotel, Binghamton, N. Y., on April 30th, May 1st and 2nd. The Ithaca Section of AIEE, which is the host, will celebrate its 50th anniversary. The triple cities, which include Binghamton, Johnson City and Endicott, are one of the fastest growing industrial communities in the eastern part of the United States. There will be fifteen sessions of technical papers with three sessions scheduled concurrently, which will cover all phases of electrical engineering with particular emphasis on power, transmission, and distribution.

The North Eastern District Executive Committee will meet for dinner at 6:30 p.m., Tuesday evening, April 29, 1952 in the Pine Room of the Arlington Hotel.

On Thursday afternoon, May 1st, there will be a Symposium on the Engineering Aspects of the Hydro-Electric Development on the Niagara River at Niagara Falls and the St. Lawrence River Development near Messina, N. Y. Prominent members of the AIEE, in the United States and Canada will present papers on this subject.

**Inspection Trips**—A schedule and brief description of the various trips are shown below. Members are urged to make reservations for these trips immediately upon registering at Headquarters. Advanced registration by mail on the cards furnished for these trips will give us an indication as to how many to prepare for.

1. Goudey Generating Station—Westover, New York.  
Wednesday afternoon, April 30, 1952.  
This generating plant located adjacent to Binghamton, is the largest plant on the New York State Electric and Gas System. Very recently a new 75,000 KW reheat turbine generator went into operation. This is known as #8 unit in the station. The machine uses steam at 1250 pounds with 1000 degree initial temperature and 1000° reheat. Some of the more novel features of the plant will be covered in a talk given by the Power Company engineers.
2. Endicott Johnson Corporation—Johnson City, New York.  
Thursday morning, May 1, 1952.  
Endicott Johnson is one of the largest shoe manufacturers in the

country. The inspection trip will be devoted primarily to the types of drives as found in their rubber mill and in the actual manufacture of shoes. This trip will be concluded with lunch at the Endicott Johnson cafeteria.

3. Link Aviation Corporation—Binghamton, New York.  
Thursday afternoon, May 1, 1952.  
This factory is the location of the manufacturer of the widely known Link trainer. The present day trainer only remotely resembles the Link trainer as used during World War II, and those making the trip will have a chance to inspect portions of the assembly line where these trainers are manufactured and may also have an opportunity to "fly" one of the units.
  4. Ozalid Division of General Aniline & Film Corporation—Johnson City, N. Y.  
Friday Morning, May 2, 1952.  
This factory, to which a large addition has recently been added, contains one of the largest coating machines in the world for the manufacture of sensitized paper. The motors and control involved are very novel. The well-known Ozalid reproducing machine is also made at this factory and inspection of the assembly aisles of these devices will be made. Lunch in the cafeteria will be served at the conclusion of this morning trip.
  5. International Business Machines Corporation—Endicott, N. Y.  
Friday afternoon, May 2, 1952.  
This Company manufactures a large number of the I.B.M. business machines in Endicott. It is one of the most modern industrial plants to be found any place in the country. A guided tour through the factory will be of much interest to all electrical engineers, especially those interested in electronics.  
All of the above trips may be subject to change depending on security measures that could be imposed by the Government. Buses will be available for transportation.
- Ladies' Entertainment**—The Ladies' Entertainment Committee, under the Chairmanship of Mrs. E. G. Kniffen, has arranged an interesting program. *(Continued on Page 4)*

# AIEE North Eastern District Meeting — Program — Binghamton, New York, April 30-May 2, 1952

## ADVANCE COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 30c each (60c each to nonmembers), by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Coupon books in \$9 denominations are available for those who wish to avoid remittance by check or otherwise. Most of the papers ultimately will be published as AIEE Proceedings and in the Transactions. District Papers denoted by DP.\*\* are intended for presentation only and are not available.

## Wednesday, April 30

### 8:30 a.m.—Registration

Hotel Lobby

### 9:30 a.m.—Distribution for Coming Power Loads and Economics

Art Gallery

Chairman: E. K. KARCHER

- DP.\*\* Impact of Future Loads on Distribution Systems. F. S. Black, Electrical World.
- DP.\*\* Economical Wire Sizes. A. T. Green, Niagara-Mohawk Power Corp.
- DP.\*\* Economical Combinations of Transformers and Secondaries Brought Up To Date. V. A. Rydbeck, General Electric Co.
- DP.\*\* Distribution Performance As An Index To Economical Design. T. D. DeVore, Niagara-Mohawk Power Corp.

### 9:30 a.m.—Power Stations and Equipment

Pine Room

Chairman: S. W. ZIMMERMAN

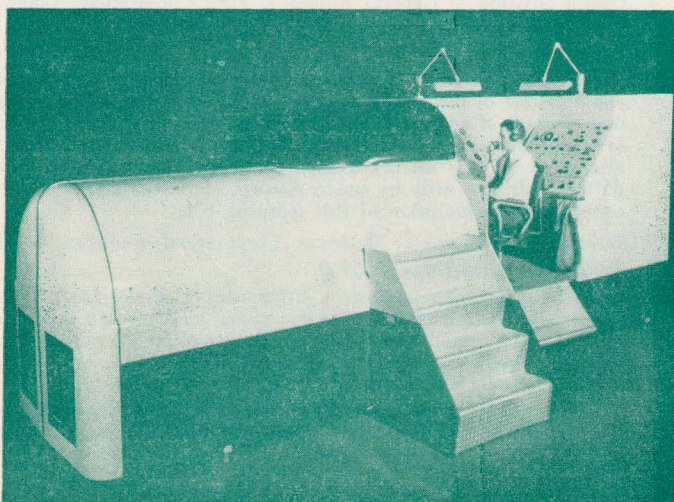
- DP.\*\* Relay Protection of a Double-Circuit-Winding Generator. N. Stadfeld, Jr., Westinghouse Electric Corp.
- DP.\*\* High Integrated Fault Duty Field Test on 69 Kv Breaker. P. L. Taylor, Allis-Chalmers Mfg. Co.
- DP.\*\* Engineering Features of 60,000/75,000 kw Reheat Unit, Goudey Station, Binghamton. W. Greacen, 3rd and J. R. Stover, New York State Electric & Gas Corp.

### 9:30 a.m.—Electronics and Servomechanisms

Gold Room

Chairman: W. E. MESERVE

- 52-120. A New Partner for Electronic Control Systems. R. L. Scraf-ACO.\* ford, Cornell Aeronautical Laboratory.
- DP.\*\* Electronic Instruments for the Production Testing of Camera Shutters. R. Lavendar, Ansco, Division of General Aniline & Fam Corp.



Link Trainer

- DP.\*\* A Milli-Microsecond Oscilloscope. L. G. Abraham, Jr., Graduate Student, Cornell University.

- 52-121. Piecewise Linear Servomechanisms. J. W. Schwartz, Graduate Student, Cornell University.

### 2:00 p.m.—Adequacy and Quality of Service

Art Gallery

Chairman: A. E. KNOWLTON

- DP.\*\* Distribution Design for High Density Loading. J. S. Williams, Westinghouse Electric Corp.
- DP.\*\* Standard Substation Design. L. F. McGowan, R. W. Blake, N.Y.S. Electric & Gas Corp.
- DP.\*\* Functional Utilization of Aerial Cable. J. C. Hlavac, Central Hudson Gas & Elec. Corp.
- DP.\*\* Merits of Bus and Feeder Regulation. W. L. Peterson, Allis-Chalmers Mfg. Co.
- DP.\*\* Capacitor Application. A. D. Tuttle, N.Y.S. Electric & Gas Corp.
- DP.\*\* Distribution Transformer Capabilities. J. B. Hodtum, Allis-Chalmers Mfg. Co.

### 2:00 p.m.—Computing Devices

Pine Room

Chairman: J. W. FORRESTER

- DP.\*\* Proof of Accuracy in Number Transmission As Applied to Computers. G. V. Hawkins, International Business Machines Corp.
- DP.\*\* A New Approach to Ring and Storage Circuits Without Triggers. E. S. Hughes, Jr., International Business Machines Corp.
- DP.\*\* Control Problems to be Solved on the Analog Computer. A. O. Fitzer, Westinghouse Electric Corp.
- DP.\*\* Development of the Wire-Contact Relay. R. E. Markle, International Business Machines Corp.
- 52-118. A Dial-Reading Translator for Digital Machine Inputs. A. L. Klein and K. P. Gow, Southern California Cooperative Wind Tunnel.

### 2:00 p.m.—Industrial Applications and Lighting

Gold Room

Chairman: R. O. BELL

- DP.\*\* Distribution at 270/480 Volts for Power and Lights in Industrial Plants and Office Buildings. D. S. Brereton, General Electric Co.
- DP.\*\* Low Voltage Distribution Systems for Industrial Plants. H. L. McGee, Westinghouse Electric Corp.
- DP.\*\* Engineering Experience in the Application of Superimposed Frequencies for Clock Systems. W. Webb, International Business Machines Corp.
- DP.\*\* Features of Power Distribution in Westinghouse Electronic Tube Plants. F. J. Miller, Westinghouse Electric Corp.
- 52-119. Lighting a Network Analyzer Area. V. L. Dzwonczyk, American Gas and Electric Service Corp.

### 2:00 p.m.—Applications of Electricity in Aviation

Parlor 611

Chairman: A. MONTGOMERY

- DP.\*\* Special Purpose Servo Analogue Computer for Aircraft Control. R. E. Frazier, Cornell Aeronautical Laboratory.
- DP.\*\* The Modern Flight Simulator. W. W. Wood, Jr., Link Aviation, Inc.
- DP.\*\* Practical Aspects of Servo Amplifier Design. R. R. Redemske, Servomechanisms, Inc.
- DP.\*\* Development of Potentiometers. L. Packard, Technology Instrument Corp.
- DP.\*\* The Comparative Advantages of Some Vector Analogues. C. D. Bock, Arma Corp.

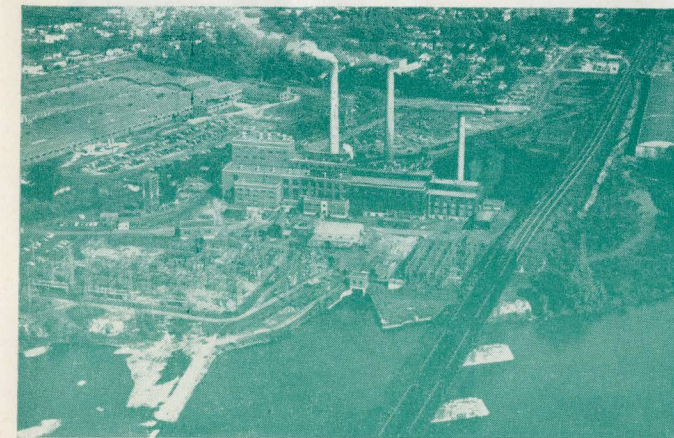
## Thursday, May 1

### 9:30 a.m.—Protection and Transformer Loading

Art Gallery

Chairman: S. O. SCHAMBERGER

- DP.\*\* Standard Fuse Links. W. L. Vest, Western Massachusetts Electric Co.



Goudey Station, New York State Electric & Gas Corp.

- DP.\*\* Lightning Protection for Transmission Lines. R. M. Butler, General Electric Co.

- DP.\*\* Latest Trends in Transformer Insulation. W. C. Seeley, Allis-Chalmers Mfg. Co.

- DP.\*\* Practice in Transformer Loading. A. F. Sedgwick, United Illuminating Co.

- DP.\*\* Thermal Overload Indication On Power Transformers. J. F. Brubaker and E. A. Thompson, Westinghouse Electric Corp.

### 9:30 a.m.—Industrial Applications

Pine Room

Chairman: E. M. GUYER

- DP.\*\* Industrial Applications of the Magnetic Amplifier. R. W. Moore, Westinghouse Electric Corp.

- DP.\*\* Economic Factors that Influence Dieselization and Electrification of Railways. C. Kerr, Westinghouse Electric Corp.

- DP.\*\* Direct-Current Drive for Multi-Sectional Machines. L. F. Lewis, General Electric Co.

- 52-122. Self-Excitation of Capacitor Motors. G. Angst, General Electric Co.

### 9:30 a.m.—Network Theory

Parlor 611

Chairman: A. B. CREDLE

- 52-123. Semi-Finite Terminated Electric Wave Filters. S. S. L. Chang, Robbins & Myers, Inc.

- 52-124. The Effective Feedback Ratio of Magnetic Amplifiers. L. A. Finzi, H. L. Durand and G. F. Pittman, Jr., Carnegie Institute of Technology. Presentation by title only for discussion.

- 52-125. A Turns Index for Pulse Transformer Design. H. W. Lord, General Electric Co.

- DP.\*\* Dielectric Amplifiers. G. W. Penny, Carnegie Institute of Technology.

### 9:30 a.m.—General Power

Gold Room

Chairman: I. B. JOHNSON

- DP.\*\* Travelling Waves on Transmission Lines. E. W. Boehne, Massachusetts Inst. of Technology.

- DP.\*\* Apparatus Economy of Open-Delta Transformer Banks. J. E. Mulligan, Worcester Polytechnic Institute.

- 52-128. Capacitance and Surface Voltage Gradient of Transmission Lines. H. B. Dwight and F. E. Scheidler, Massachusetts Inst. of Technology.

- DP.\*\* The Variation at Constant Density of the Dielectric Break-down of Paper with Air Resistance. P. Cloke and K. K. Khandelwal, University of Maine.

### 2:00 p.m.—Symposium on Engineering Aspects of Proposed Hydroelectric Developments in New York State and Ontario

Ball Room

Chairman: J. C. TARBOUX

- DP.\*\* Proposed Increased Use of Hydro Power on the American Side of the Niagara River. E. S. Bundy, Vice President and Chief Engineer, Niagara-Mohawk Power Corporation.

- DP.\*\* Generation and Transmission of Power from the St. Lawrence River. F. J. Leerburger, Consultant to the New York State Power Authority.

- DP.\*\* Generation and Use of Niagara and St. Lawrence Power in Ontario. R. L. Hearn, General Manager and Chief Engineer, The Hydro-Electric Power Commission of Ontario, Toronto.

## Friday, May 2

### 9:30 a.m.—Distribution Maintenance

Art Gallery

Chairman: GEORGE FIEDLER

- DP.\*\* Some Aspects of Joint Pole Use with Increasing Line Voltages. W. Bloeker, American Telephone and Telegraph Co., W. R. Bullard, Ebasco Services, Inc.

- DP.\*\* Chemical Treatment of Right of Way. L. Phillips, Penna. Power & Light.

- DP.\*\* Hot Line Operations and Maintenance. R. M. Grogan, Long Island Lighting Co.

- DP.\*\* Demonstration of Street Lighting Trouble Location. E. S. Licht, N.Y.S. Electric & Gas Corp.

- DP.\*\* What the Engineer Should Know About Wood Products. F. A. Ashbough, West Penna. Power Co.

### 9:30 a.m.—Conference on the Circuitry and Application of Transistors

Parlor 611

Chairman: F. B. BRAMHALL

- DP.\*\* Preview of Transistor Applications. R. A. York, General Electric Co.

- DP.\*\* Application of Transistors in an IF Amplifier. D. M. Powers, Raytheon Manufacturing Co.

- DP.\*\* Transistors in Pulse Circuits. A. E. Anderson, Bell Telephone Labs., Inc.

### 9:30 a.m.—Basic Science

Gold Room

Chairman: M. G. MALTI

- 52-129. The Derivation of Vector Potential from Tables of Scalar Potential. J. J. Smith, General Electric Co.

- DP.\*\* A Study of the Electrical Behavior of Gases at High Pressures. Alexander Kusko, Massachusetts Inst. of Technology.

- DP.\*\* Analysis of Network Response to Periodic Waves. P. M. Seal, University of Maine.

- 52-126. Tensor Analysis of Unbalanced Three-Phase Circuits. Y. H. ACO.\* Ku, Massachusetts Inst. of Technology.

### 9:30 a.m.—Student Paper Contest

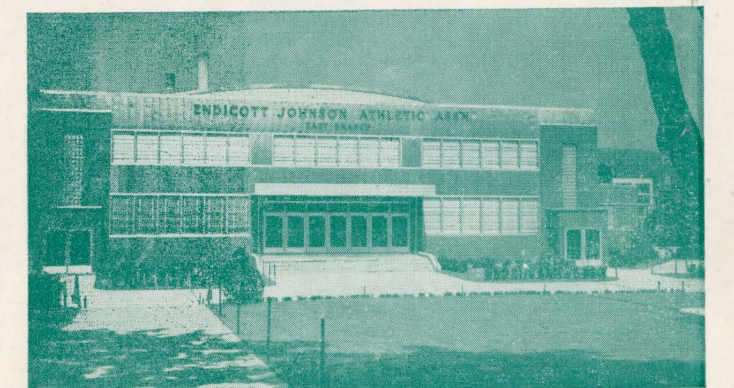
Pine Room

Chairman: W. H. ERICKSON

### 12:00 noon—Student Branch Chairman and Counselors Luncheon, Arlington Hotel

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

- DP.\*\* District paper; no advance copies are available; not intended for publication in TRANSACTIONS.



Recreation Center — Endicott-Johnson Corporation

(Continued from Page 1)

On Wednesday, April 30th, from 3:00 to 5:00 p.m., a get-acquainted tea will be held at the Arlington Hotel. A dinner and entertainment will be held at 6:30 p.m. on Wednesday evening at the Trinity Parish House.

At 10:00 a.m. on Thursday, there will be an interesting inspection trip through the Kroehler Manufacturing Plant for home furniture. This inspection trip will be followed by luncheon at the Binghamton Country Club and a bus sight-seeing trip to various points of interest in the area.

On Thursday evening the ladies will join the men in the banquet to be held at the Arlington Hotel.

On Friday at 10:00 a.m., coffee will be served at the hotel, followed by an inspection trip through the Sheltered Work Shop, a shop where physically handicapped people are gainfully employed.

The remaining time will be available for shopping.

**Entertainment**—On Wednesday, April 30th, a smoker will be held in the main ball room of the Arlington Hotel. There will be a lively program of entertainment with Mr. M. M. "Irish" Kennealy as master of ceremonies.

An informal banquet and social hour will be held on Thursday evening, May 1st, in the main ball room of the hotel. The ladies are cordially invited to attend. Dexter Kimball, Professor Emeritus, former Dean of the College of Engineering, Cornell University, will be the toastmaster. A resume of the history of the activities of the Ithaca Section, AIEE, for the past fifty years will be given by Dean Kimball. Mr. James F. Fairman, Vice President of Consolidated Edison Company of New York, and past President of AIEE will speak on "The Engineers' Role in Defense Mobilization."

Tables will be arranged for smoker and banquet in groups of ten (10) and all tables will be numbered. Reservations may be obtained from Mr. J. R. Stover, New York State Electric and Gas Corporation, 62 Henry Street, Binghamton, New York.

**Sports**—Golf has been planned for registered members and guests at the Binghamton Country Club. Arrangements may be made through any member of the Entertainment Committee or at the registration desk. No golf tournament has been scheduled. However, members and guests may arrange for golf at their convenience.

**Hotel Reservations**—Members planning to attend the North Eastern District Meeting are urged to make hotel reservations now to be sure of accommodations. The committee states that it will be necessary, where possible, to double up in rooms and that reservations may be made that way. Blocks of rooms have been reserved in the Arlington Hotel. However, late comers may be required to take rooms in nearby hotels and motels. Reservations must be made before April 15th and requests should be sent directly to the hotel, using the enclosed hotel reservation card. Refer to this card for rates.

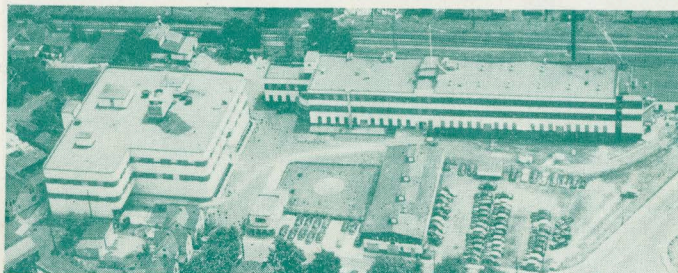
**Advance Registration**—Please register in advance by returning the accompanying advance registration card properly filled out. In so doing, you will save time in completing registration details upon arrival at the hotel. The registration fee payable at the meeting will be \$2.00 for members and \$3.00 for nonmembers. No fee will be required of enrolled students and immediate families of members.

### COMMITTEES OF 1952

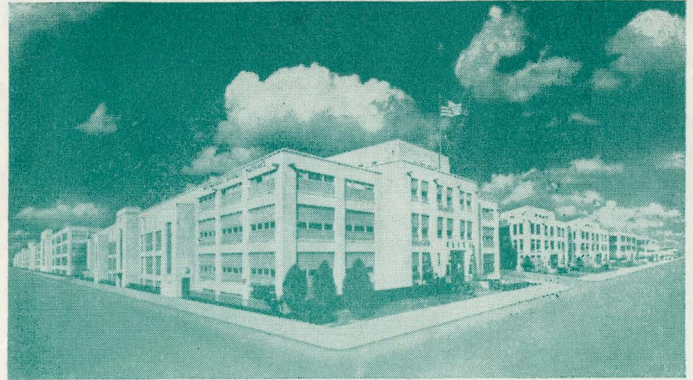
#### NORTH EASTERN DISTRICT MEETING

##### General Advisory Committee

W. W. Perry, <i>General Chairman</i>	J. G. Tarboux, <i>Vice Chairman</i>
E. B. Alexander, <i>Secretary</i>	M. S. Hall, <i>Historian</i>
R. F. Bovier	K. S. Koon
G. E. Dana	J. P. Peterson
E. M. Guyer	E. F. Wood
S. W. Zimmerman	



Ozalid Division — General Aniline & Film Corp., Johnson City, N. Y.



International Business Machines — Endicott Plant

##### Budget and Finance

L. F. McGowan, <i>Chairman</i>	S. Q. Stephens
	W. J. Rider
	R. W. Blake

##### Technical Program

M. S. McLroy, <i>Chairman</i>	H. L. Livingood, <i>Vice Chairman</i>
	W. W. Wood

##### Hotel Reservations and Registration

A. O. Kenyon, <i>Chairman</i>	E. Presley
H. W. Thomas	A. Montgomery
A. D. Tuttle	R. E. Markle
	W. Webb
	D. Dawson

##### Publicity

N. L. Platt, <i>Chairman</i>	D. Purdy
	L. H. Stantz
	L. V. Vacca

##### Student Branch Activity

W. H. Erickson, <i>Chairman</i>	P. D. Ankrum
	A. B. Credle

##### 50th Anniversary Banquet and Smoker

J. R. Stover, <i>Chairman</i>	J. L. Scott
T. S. Cowen	K. E. Personius
P. P. Brereton	W. R. Jones
L. A. Dudley	R. F. Bovier
	A. G. Cox

##### Inspection Trips and Transportation

J. P. Peterson, <i>Chairman</i>	A. Boon
	R. New
	A. R. Leinbach

##### Ladies Entertainment

J. E. Gahagan, <i>Chairman</i>	Mrs. Earl Kniffen, <i>Chairman Ladies Activities</i>
Mrs. J. Wagner	Mrs. E. Alexander
Mrs. J. Tarboux	Mrs. L. Livingood

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