

# THE FORMATIVE YEARS: 1955-1960

## 1957 ADVANCE PROGRAM

### 1957 TRANSISTOR AND SOLID STATE CIRCUITS CONFERENCE

SPONSORED BY  
**IRE - AIEE - U of Pa.**  
 FEBRUARY 14-15, 1957  
 UNIVERSITY OF PENNSYLVANIA  
 PHILADELPHIA, PA.

#### THURSDAY, FEBRUARY 14

8:00 A.M. - REGISTRATION OPENS - Irvine Auditorium  
 9:30 A.M. - 12:00 Noon - SESSION I - Irvine Auditorium

##### SWITCHING CIRCUITS

Chairman: JAMES L. WALSH, IBM Engineering Laboratory, Poughkeepsie

- 1.1 A Decade Ring Counter Using Avalanche-Operated Junction Transistors - J. E. Lindsay - Radio Corp. of America, Camden
- 1.2 Transistor Circuits for Magnetic Drum Recording - Gordon Kuster - Ferranti Electric Limited, Toronto
- 1.3 Large Scale Testing of Switching Speeds of Junction Transistors - Irwin Dorros - Bell Telephone Laboratories, Murray Hill
- 1.4 Effects of Low Temperatures on Transistor Characteristics - A. B. Credle - IBM, Poughkeepsie

9:30 A.M. - 12:00 Noon - SESSION A

##### TUTORIAL - University Museum Auditorium

Chairman: THEODORE H. BONN, Sperry Rand Univac, Phila.

- A.1 A Survey of Solid State Devices for Control and Information Handling Systems - Jan A. Rajchman - RCA Laboratories, Princeton
- A.2 Thermal Considerations in Transistor Circuit Design - Sorab K. Ghandi - General Electric Company, Syracuse

12:00 Noon - 2:00 P.M. - LUNCH

##### University Museum Egyptian Gallery

2:00 P.M. - 2:20 P.M. - Irvine Auditorium

Formal Opening of Conference and Presentation to University of Pennsylvania

ARTHUR L. SAMUEL - Chairman of Conference  
 GEORGE L. HALLER - Past Chairman of Conference  
 J. CRIST BRAINERD - University of Pennsylvania

2:30 P.M. - 5:30 P.M. - Irvine Auditorium

##### COMPUTER SWITCHING

Chairman: ROBERT E. McMAHON - MIT Lincoln Laboratory, Lexington

- 2.1 Millimicrosecond Transistor Current Switching Circuits - Hannon S. Youkic - IBM Laboratory, Poughkeepsie
- 2.2 DCTL Complementing Flip-Flop Circuits - E. Gary Clark - Burroughs Research Center, Paoli
- 2.3 A New Bistable Transistor Element Suitable for Digital Computers - N. F. Moody - Defense Research Board, Ottawa
- 2.4 An Analysis of the Complementary Pair Trigger Circuit - C. D. Florida - Defense Research Board, Ottawa
- 2.5 A Complementary Symmetry Monostable Multivibrator - C. F. Chong and A. I. Aronson - Radio Corp. of America, Camden
- 2.6 The Design of Dual-Range Transistor Circuits for Minimum Standby-Current Systems - Howard E. Tompkins - Univ. of Penna.

SEE REVERSE SIDE FOR REGISTRATION INFORMATION

2:30 P.M. - 5:30 P.M. - SESSION III

##### University Museum Auditorium

##### LINEAR AMPLIFIERS

Chairman: ARTHUR P. STERN, General Electric Company, Syracuse

- 3.1 Transistor Low Noise Preamplifier with High Input Impedance - Andrew E. Bachmann - General Electric Company, Syracuse
- 3.2 Wide Band Feedback Amplifiers - F. D. Waldhauer - Bell Telephone Laboratories, Murray Hill
- 3.3 A Transistorized High Voltage Push-Pull Sweep Generator Using High Impedance Techniques - P. J. Anzalone - Radio Corp. of America, Camden
- 3.4 Series Tuned Methods in Transistor Radio Circuitry - W. P. Chow and Donald A. Paynter - General Electric Company, Syracuse
- 3.5 A New Approach to Transistor Receiver Design - A. Proudfit, K. M. St. John, C. R. Wilhelmsen, and R. J. Farber - Hazeltine Research Corp., Little Neck

6:00 P.M. - COCKTAIL BUFFET

##### Bellevue-Stratford Hotel

8:00 P.M. - INFORMAL GROUP DISCUSSIONS

##### Bellevue-Stratford Hotel Conference Rooms

#### FRIDAY, FEBRUARY 15

8:30 A.M. - REGISTRATION OPENS

9:00 A.M. - 12:00 Noon - SESSION IV - Irvine Auditorium

##### POWER CIRCUITS

Chairman: HOWARD T. MOORES, Minneapolis-Honeywell, Boston

- 4.1 Some Solutions to Problems of Operating Germanium Transistor Servo Amplifiers at High Ambient Temperatures - P. M. Thompson and J. Mitchell - Defence Research Board, Ottawa
- 4.2 Phase Controlled Transistor Power Supply Regulation - D. E. Deutch - Radio Corp. of America, Camden
- 4.3 Transistor D. C. Amplifier Utilizing "Firing-Angle" Control - H. R. Lowry - General Electric Company, Syracuse
- 4.4 An Improved Square-Wave Oscillator Circuit - James Lee Jensen - Minneapolis-Honeywell
- 4.5 Three-Phase Static Inverter - Thomas M. Corry and Rudy P. Putkovich - Westinghouse Electric Corp., East Pittsburgh
- 4.6 A New Tramag Oscillator - Albert J. Meyerhoff and Robert M. Tillman - Burroughs Research Center, Paoli

9:00 A.M. - 12:00 Noon - SESSION B

##### TUTORIAL - University Museum Auditorium

Chairman: FRANK H. TENDICK, Bell Telephone Laboratory, Murray Hill

- B.1 Characteristics and Application of New High Frequency Transistors - Robert L. Pritchard - General Electric Research Laboratories, Schenectady
- B.2 Design of High Frequency Amplifiers - George T. Lake - Defence Research Board, Ottawa

12:00 Noon - 2:00 P.M. - LUNCH

##### University Museum Egyptian Gallery

2:00 P.M. - 4:30 P.M. - SESSION V - Irvine Auditorium

##### SPECIAL DEVICE CIRCUITS

Chairman: CHANG HUANG, Sylvania, Wabun

- 5.1 Temperature Compensation of Transfluxors - Harold W. Abbot and J. J. Suran - General Electric Company, Syracuse
- 5.2 Counting Circuits Using Ferroelectric Devices - R. M. Wolfe - Bell Telephone Laboratory, Murray Hill
- 5.3 Switching Characteristics of Magnetic Cores as Circuit Elements - R. D. Torrey, A. Krell, C. Meyer - Sperry Rand Univac, Philadelphia
- 5.4 Transient and Frequency Response Characteristics of Field Effect Unijunction Transistors - J. J. Suran and B. K. Eriksen - General Electric Company, Syracuse

## 1957 TRANSISTOR AND SOLID STATE CIRCUITS CONFERENCE

### SPONSORSHIP AND SCOPE

The 1957 Transistor and Solid State Circuits Conference is sponsored jointly by the Philadelphia Section of the IRE, the Science and Electronics Technical Division of the AIEE, the IRE Professional Group on Circuit Theory, and the University of Pennsylvania. Patterned after the previous Conferences held at the same location for the past several years, this Conference will include information on both linear and nonlinear transistor circuits. Also, one session will be devoted to other solid-state circuits, including ferro-electrics and magnetic cores. Two tutorial sessions are aimed at surveying recent advances in the subject and will provide the practicing engineer in solid-state circuitry a broader picture of the state of the art.

Although no Conference Transactions will be published, a Technical Addendum to the Program Booklet will be available at the time of registration, containing reproductions of all slides, including mathematical expressions.

### LOCATION

The Conference will be held on the Campus of the University of Pennsylvania, in the Irvine Auditorium and the University Museum.

Irvine Auditorium is located at the northwest corner of 34th and Spruce Streets; the University Museum is just east of the southwest corner of 34th and Spruce Streets, Philadelphia, Pennsylvania. Bus Route No. 42 provides a convenient transportation between the University Campus on Spruce Street and Central Philadelphia, Broad Street. The Thirtieth-Street Station of the Pennsylvania Railroad is less than a mile from the Campus.

Informal discussion groups will meet in conference rooms at the Bellevue-Stratford hotel following the Cocktail-Buffer on Thursday night.

### REGISTRATION

Registration and hotel reservation forms are being mailed to members of the sponsoring groups. Others may obtain them from Mr. F. W. Anderson, General Electric Company, Missile and Ordnance Systems Department, 3198 Chestnut Street, Philadelphia 4, Pennsylvania. Fees for the Conference are as follows:

	Advance	At Conference
Registration . . .	3.00	4.00
Thursday Lunch . . .	2.50	3.00
Cocktail-Buffer . . .	6.00	6.50
Friday Lunch . . .	2.50	3.00
Totals . . .	14.00	16.50

Advantage of the reduced fees can be had only by registering before February 7, 1957.

Because of limited facilities, and to assist the Local Arrangements Committee, advance registration and meal purchases are strongly recommended.

### ACCOMMODATIONS

The Bellevue-Stratford Hotel, Broad and Chestnut Streets, has reserved a block of rooms for those attending the Conference. For those who do not wish to participate in the Luncheons on Thursday and Friday or the Cocktail-Buffer on Thursday night, Philadelphia offers many fine restaurants.



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