

## PUBLICATIONS AND REPORTS

### MEETING PAPERS PRESENTED

American Physiological Society, Eighth Autumn Meeting, University of Rochester, Rochester, N. Y., Sept. 4-7, 1956

R. C. Gesteland, Impedance characteristics of metal microelectrodes

J. Y. Lettvin, W. S. McCulloch, W. H. Pitts, Some synaptic effects in motoneurons

1956 Symposium on Information Theory, Massachusetts Institute of Technology, Cambridge, Sept 10-12, 1956

R. C. Booton, Jr., Final-value control systems

A. N. Chomsky, Three models for the description of language

D. A. Huffman, A linear circuit viewpoint on error-correcting codes

C. E. Shannon, The zero error capacity of a noisy channel

W. McC. Siebert, A radar detection philosophy

V. H. Yngve, Gaps analysis and syntax

Illuminating Engineering Research Institute, Ithaca, N. Y.  
Sept. 12, 1956

W. S. McCulloch, Nervous mechanism behind the eye (invited)

National Electronics Conference, Chicago  
Oct. 1-3, 1956

P. Elias, Information, noise, and error probability

W. McC. Siebert, Statistical theories of radar synthesis

AIEE Fall General Meeting, Chicago  
Oct. 1-5, 1956

V. H. Yngve, The technical feasibility of translating languages by machine  
(see the transactions of the meeting)

Department of Psychology Colloquium, University of Chicago, Chicago  
Oct. 15, 1956

N. Y. S. Kiang, A review of recent research on the auditory system (invited)

New York Academy of Sciences, New York  
Oct. 15, 1956

W. A. Rosenblith, Relations between auditory psychophysics and auditory electrophysiology (invited)

Department of Physiology Colloquium, University of Wisconsin, Madison  
Oct. 17, 1956

N. Y. S. Kiang, Current electrophysiological studies on the cat's auditory system (invited)

MEETING PAPERS PRESENTED (continued)

International Conference on Mechanical Translation, Massachusetts Institute of Technology, Cambridge, Oct. 16-20, 1956

- J. R. Applegate, Descriptive methodology
- A. N. Chomsky, Theory of linguistic description
- R. B. Lees, Examples of linguistic description
- G. H. Matthews, Methods of evaluating linguistic descriptions
- M. P. Schützenberger, Remarks on the theory of translation
- V. H. Yngve, Mechanical translation at M. I. T.

Symposium on Information Theory in Health Physics and Radiobiology (Health Physics Division, Oak Ridge National Laboratory), Gatlinburg, Tenn., Oct. 29-30, 1956

- L. S. Frishkopf and W. A. Rosenblith, Fluctuations in neural thresholds and related probability models in the nervous system (see the proceedings of the symposium)

Color Center Symposium, Argonne National Laboratory, Lemont, Illinois  
Oct. 31-Nov. 2, 1956

- M. W. P. Strandberg and G. J. Wolga, Observed F-center paramagnetic microwave resonance absorption in alkali-halide crystals (invited)

9th Annual Gaseous Electronics Conference, Westinghouse Research Laboratories, Pittsburgh, Oct. 31-Nov. 3, 1956

- S. J. Buchsbaum, Microwave measurements of high electron densities
- M. P. Madan, S. J. Buchsbaum, and E. Gordon, Microwave determinations of the frequency of ionization and the coefficient of free diffusion in hydrogen

10th Annual C. C. Beling Lecture, New Jersey Neuropsychiatric Association, East Orange, Nov. 14, 1956

- W. S. McCulloch, Disorder of homeostasis in nervous and mental disease (invited)

New England Radio Electronics Meeting, Boston  
Nov. 15-16, 1956

- R. M. Fano, A look at communication systems of the future (invited)

Fifty-second Meeting of the Acoustical Society of America, Los Angeles  
Nov. 15-17, 1956

- M. H. Goldstein, Jr., Pitch judgments for repeated bursts of tone and noise
- T. T. Sandel and N. Y. S. Kiang, "Off" responses in the auditory nervous system of anesthetized cats

American Speech and Hearing Association, Chicago  
Nov. 19-21, 1956

- M. Halle, Linguistic criteria in the study of speech (invited)

JOURNAL ARTICLES ACCEPTED FOR PUBLICATION

(Reprints may be requested from the Document Room, 20-B-221,  
Research Laboratory of Electronics, Massachusetts Institute of  
Technology, Cambridge 39, Massachusetts)

- J. S. Barlow, An electronic method for detecting evoked responses of the brain and for reproducing their average waveforms (EEG and Clin. Neurophysiol.)
- E. F. Bolinder, The classical electromagnetic equations expressed as complex four-dimensional quantities (J. Franklin Inst.)
- E. F. Bolinder, Graphical methods for transforming impedances through lossless networks by the Cayley-Klein diagram (Acta Polytechnica)
- A. N. Chomsky, Review of "Manual of Phonology" by Hockett (International J. Am. Linguistics)
- C. F. Davis, Jr. and M. W. P. Strandberg, The paramagnetic resonance spectrum of ammonium chromium alum (Phys. Rev.)
- P. Elias, A. Feinstein, and C. E. Shannon, A note on the maximum flow through a network (Trans. IRE, PGIT)
- H. A. Haus and D. L. Bobroff, Small-signal power theorem for electron beams (J. Appl. Phys.)
- J. R. Hughes and W. A. Rosenblith, Electrophysiological evidence for auditory sensitization (J. Acoust. Soc. Am.)
- C. R. Hurtig, Sensory aid with transistors (Electronics)
- S. J. Mason, Topological analysis of linear nonreciprocal networks (Proc. IRE)
- S. J. Mason, Transmission and reflection of waves by nonuniform one-dimensional media (Proc. IRE)
- S. J. Mason, Some properties of three-terminal devices (Trans. IRE, PGCT)
- M. Peter and M. W. P. Strandberg, High-field Stark effect in linear rotors (J. Chem. Phys.)
- C. Schwartz, Theory of hyperfine structure II (Phys. Rev.)
- L. J. Slutsky and C. W. Garland, Lattice dynamics of hexagonal close-packed metals (J. Chem. Phys.)
- M. W. P. Strandberg and C. F. Davis, Jr., Review of "Spectroscopy at Radio and Microwave Frequencies" by D. J. E. Ingram (Rev. Sci. Instr.)
- G. W. Stroke, Photoelectric measurement of interference fringe "visibility" and effective length corrections for precise length measurements in interferometers with continuously moving mirrors (Bull. Res. Council of Israel)
- H. H. Stroke, V. Jaccarino, D. S. Edmonds, Jr., and R. Weiss, Magnetic moments and hyperfine structure anomalies of  $\text{Cs}^{133}$ ,  $\text{Cs}^{134}$ ,  $\text{Cs}^{135}$ , and  $\text{Cs}^{137}$  (Phys. Rev.)
- J. S. Waugh and R. W. Fessenden, Nuclear resonance spectra of hydrocarbons: The free electron model (J. Am. Chem. Soc.)
- W. M. Whitney, Absorption of sound in liquid helium II (Phys. Rev.)
- V. H. Yngve, The technical feasibility of translating languages by machine (Electrical Engineering)

## LETTERS TO THE EDITOR ACCEPTED FOR PUBLICATION

- E. F. Bolinder, Graphical method of determining the efficiency of two-port networks (Proc. IRE)  
H. A. Haus and R. B. Adler, An extension of the noise figure definition (Proc. IRE)  
M. W. P. Strandberg, Quantum mechanical amplifiers (Proc. IRE)

## TECHNICAL REPORTS PUBLISHED

(These and previously published technical reports may be obtained from the Document Room, 20-B-221, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge 39, Massachusetts)

- 302 J. C. Stoddard, Measurement of second-order probability distributions of pictures by digital means  
303 S. J. Mason, Feedback theory — Further properties of signal flow graphs  
304 M. W. P. Strandberg, M. Tinkham, I. H. Solt, Jr., and C. F. Davis, Jr., Recording magnetic-resonance spectrometer  
305 R. A. Pucel, Network synthesis for a prescribed impulse response

## SPECIAL PUBLICATIONS

- J. R. Zacharias and J. G. King, Technology in molecular beams, chapter in Vol. VIII, Advances in Electronics and Electron Physics (Academic Press, New York, 1956).  
A. N. Chomsky, Syntactic Structures (a monograph) (Mouton and Company, S Gravenhage, Netherlands, 1956).