

## PUBLICATIONS AND REPORTS

### MEETING PAPERS PRESENTED

Seminar, Department of Electrical Engineering, Johns Hopkins University, Baltimore, Maryland

February 19, 1964

J. L. Hall II, Binaural Interaction in the Medulla of the Cat (invited)

Washington Area Magnetic Resonance Seminar, Washington, D. C.

March 4, 1964

M. W. P. Strandberg, Defect Character of Spin-Lattice Relaxation in Dilute Paramagnetic Crystals (invited)

Symposium on Neurophysiology, Program of Japan-United States Scientific Cooperation, Tokyo, Japan

March 9, 1964

W. A. Rosenblith, Several Aspects of Coding in the Auditory System (invited)

Linguistic Circle, New York

March 14, 1964

W. K. Percival, A Recalcitrant Problem in German Syntax (invited)

Sixth AGARD Combustion and Propulsion Colloquium, Cannes, France

March 16-20, 1964

W. B. Nottingham, Thermodynamics of Thermionic Energy Conversion

Applied Physics Laboratory Colloquium, Johns Hopkins University, Baltimore, Maryland

March 20, 1964

A. Bers, The Nature of Stable and Unstable Waves in Plasmas and Other Dispersive Media (invited)

Third Congress (International) on Cybernetic Medicine, Naples, Italy

March 24, 1964

L. Stark, Principles of Neurological Feedback Systems

IEEE International Convention, New York

March 24-27, 1964

J. D. Bruce, On the Optimum Quantization of Stationary Signals

A. V. Oppenheim, Superposition in a Class of Nonlinear Systems

Fifth Symposium on Engineering Aspects of Magnetohydrodynamics, Massachusetts Institute of Technology, Cambridge, Massachusetts

April 1-3, 1964

G. A. Brown, W. D. Jackson, K. S. Lee, and M. H. Reid, MHD Power Generation with Liquid Metals (invited)

W. D. Jackson and J. R. Ellis, Jr., Friction Factor Measurements in Liquid-Metal MHD Channel Flows (invited)

MEETING PAPERS PRESENTED (continued)

Physics Colloquium, Argonne National Laboratory, Lemont, Illinois

April 3, 1964

S. C. Brown, Far Infrared Studies of Gas Discharge Plasmas (invited)

American Physical Society, New England Section Meeting, Brandeis University, Waltham, Massachusetts

April 4, 1964

J. Y. Lettvin and W. F. Pickard, Passive Transport of Ions across Nerve Membranes

M. W. P. Strandberg, Microwave Spectroscopy (invited)

Conference on "Instabilities due to Streams or Currents," University of California, Berkeley, California

April 6-7, 1964

A. Bers, Interactions of a Plasma with a Beam Injected along the Magnetic Field (invited)

Sixth Annual Electron Beam Symposium, Boston

April 27-28, 1964

L. M. Lidsky, Plasma Generation in the Hollow-Cathode Discharge

American Physical Society Meeting, Washington, D. C.

April 27-30, 1964

V. Arunasalam and S. C. Brown, An Experiment on Microwave Scattering from Acoustic Ion Plasma Wave Instability

G. Bekefi and E. B. Hooper, Jr., Cyclotron Radiation of a Plasma Generated by an Electron Beam

R. L. Kyhl and B. D. Nagewara Rao, Nonergodic Behavior in Ruby Cross Relaxation

W. T. Walter and H. H. Stroke, Magnetic Scanning of Hg<sup>193</sup>

School of Science Faculty, University of Maine, and Public Lecture, University of Maine, Orono, Maine

May 4, 1964

M. W. P. Strandberg, Two Lectures: Microwave Physics (invited)  
Some Experiments in Undergraduate Education and in Solid State Physics at M. I. T. (invited)

Fifth IEEE National Symposium on Human Factors in Electronics, San Diego, California

May 4-5, 1964

W. S. McCulloch and W. L. Kilmer, Toward a Theory of the Reticular Formation

International Conference on Electron and Ion Beam Science and Technology, Toronto, Ontario

May 5-7, 1964

W. B. Nottingham, Fundamentals of Thermionic Energy Conversion

MEETING PAPERS PRESENTED (continued)

Sixty-seventh Meeting, Acoustical Society of America, New York

May 6-9, 1964

- J. B. Dennis, Control Language for Experimental Speech Synthesis  
J. B. Dennis, E. C. Whitman, and R. S. Tomlinson, On the Construction of a Dynamic Vocal-Tract Analog  
J. M. Heinz and K. N. Stevens, On the Derivation of Area Functions and Acoustic Spectra from Cineradiographic Films of Speech  
A. S. House and K. N. Stevens, Analysis of Glide Consonants  
B. E. F. Lindblom, Articulatory Activity in Vowels  
S. E. G. Öhman, Numerical Model for Coarticulation Using a Computer-Simulated Vocal Tract  
R. P. Pfeiffer, Response Characteristics of Some Single Units in the Cochlear Nucleus to Tone-Burst Stimulation

Deutsche Bunsengesellschaft, West Berlin, Germany

May 7-10, 1964

- G. G. Hammes and Renata E. Cathou, Relaxation Spectra of Ribonuclease

Eighteenth Annual Power Sources Conference, Atlantic City, New Jersey

May 19-21, 1964

- W. B. Nottingham, Emitter Materials for High Temperature Energy Conversion

JOURNAL ARTICLES ACCEPTED FOR PUBLICATION

(Reprints, if available, may be obtained from the Document Room, 26-327, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts, 02139.)

- A. H. Barrett and D. H. Staelin, Radio Observations of Venus and the Interpretations (Space Sci. Revs.)  
Renata E. Cathou and G. G. Hammes, Relaxation Spectra of Ribonuclease.  
I. The Interaction of Ribonuclease with Cytidine-3'-Phosphate (J. Am. Chem. Soc.)  
M. Clark, Jr., P. Robertson, and D. Luce, A Preliminary Experiment on the Perceptual Basis for Musical Instrument Families (J. Audio Eng. Soc.)  
T. H. Dupree, Theory of Radiation Emission and Absorption in Plasma (Phys. Fluids)  
G. Fiocco and G. Colombo, Optical Radar Results and Meteoric Fragmentation (J. Geophys. Research)  
J. A. Fodor, Review of "The Diversity of Meaning" by L. Jonathan Cohen. New York: Herder and Herder, 1963. (J. Philos.)  
R. G. Gallager, A Simple Derivation of the Coding Theorem and Some Applications (IEEE Trans. IT)  
W. J. C. Grant and M. W. P. Strandberg, A Statistical Theory of Spin-Spin Interactions in Solids (Phys. Rev.)

JOURNAL ARTICLES ACCEPTED FOR PUBLICATION (continued)

- W. J. C. Grant and M. W. P. Strandberg, Line Shapes of Paramagnetic Resonances of Chromium in Ruby (Phys. Rev.)
- E. M. Hofstetter, Construction of Time-Limited Functions with Specified Autocorrelation Functions (IEEE Trans. IT)
- W. D. Jackson, Magnetohydrodynamic Power Generation - A Status Report (Electronics and Power (J. I. E. E. , London))
- J. J. Katz, Mentalism in Linguistics (Language)
- L. M. Lidsky, Orbit Stability in a Helically Perturbed Magnetic Field (Phys. Fluids)
- G. H. Matthews, A Note on Asymmetry in Phrase Structure Grammars (Information and Control)
- L. M. Mendell and P. D. Wall, Presynaptic Hyperpolarization: A Role for Fine Afferent Fibres (J. Physiol.)
- W. S. McCulloch, Review of "Brains, Machines, and Mathematics" by Michael A. Arbib (American Scientist)
- Paula Menyuk, Syntactic Rules Used by Children from Preschool through First Grade (Child Develop.)
- Paula Menyuk, Comparison of Grammar of Children with Functionally Deviant and Normal Speech (J. Speech Hearing Research)
- P. Mermelstein and M. Eden, Experiments on Computer Recognition of Connected Handwritten Words (Information and Control)
- C. H. Perry, B. N. Khanna, and G. Rupprecht, Infrared Studies of Perovskite Titanates (Phys. Rev.)
- D. C. Teas and N. Y-S. Kiang, Evoked Responses from the Auditory Cortex of Unanesthetized Cats (Exptl. Neurol.)
- J. Viertel, Generative Grammars (College Composition and Communication)
- N. O. Weiss, Correction and Differential Rotation in the Sun (The Observatory)

LETTERS TO THE EDITOR ACCEPTED FOR PUBLICATION

- A. H. Barrett, M. L. Meeks, and S. Weinreb, High-Resolution Microwave Spectra of H and OH Absorption Lines of Cassiopeia A (Nature)
- E. R. Berlekamp, Note on Recurrent Codes (Trans. IEEE (PGIT))
- M. Eden, A Note on Short-Term Storage of Information in Vision (Perpetual and Motor Skills)
- G. Fiocco and G. Grams, Observations of the Aerosol Layer at 20 km by Optical Radar (J. Atmospheric Sci.)
- C. L. Liu, About the Review of "Kth-Order Finite Automaton" by J. A. Brozowski (IEEE Trans. (EC))

LETTERS TO THE EDITOR ACCEPTED FOR PUBLICATION (continued)

- J. Y. Lettvin, W. F. Pickard, W. S. McCulloch, W. Pitts, A Theory of Passive Ion Flux through Axon Membranes (Nature)
- C. F. Price and A. Bers, Dynamically Independent Equilibrium Equations for RLC Networks (IEEE Trans. (PTGCT))

TECHNICAL REPORTS PUBLISHED

(These and previously published technical reports, if available, may be obtained from the Document Room, 26-327, Research Laboratory of Electronics, Massachusetts Institute of Technology, Cambridge, Massachusetts, 02139.)

- 420 Vidal R. Algazi, Study of the Performance of Linear and Nonlinear Filters
- 421 Luiz C. Bahiana, Electromagnetic Induction on an Expanding Conducting Sphere
- 422 Uri F. Gronemann, Coding Color Pictures

SPECIAL TECHNICAL REPORTS PUBLISHED

(These monographs are available from The M. I. T. Press, 238 Main Street, Cambridge, Massachusetts, 02139.)

- Number 9 Jerrold J. Katz and Paul M. Postal, An Integrated Theory of Linguistic Descriptions

SPECIAL PUBLICATIONS

- J. S. Barlow, Some Statistical Characteristics of Electro cortical Activity in Relation to Visual-Oculomotor Tracking in Man (Boletín del Instituto de Estudios Médicos y Biológicos, México, D. F., Vol. 21, No. 3, December 1963)
- A. H. Barrett, M. L. Meeks, and S. Weinreb, Microwave Detection of OH in the Interstellar Medium (Abstract, American Astronomical Society Meeting, Washington, D. C., December, 1963) (Astron. J.)
- P. Elias, Coding for Practical Communication Systems (Monograph on Radio Waves and Circuits, edited by S. Silver. Elsevier Publishing Company, Amsterdam, 1964, pp. 125-147).
- W. B. Nottingham, Emitter Materials for High Temperature Energy Conversion (Proc. Annual Power Sources Conference, 1964)
- W. B. Nottingham, A "Thermionic" Analysis Applied to Transistor Characteristics (Proc. Twenty-fourth Annual Conference on Physical Electronics, M. I. T., March 25-27, 1964, pp. 257-269)
- V. H. Yngve, Implications of Mechanical Translation Research (Proc. American Philosophical Society)