

PUBLICATIONS AND REPORTS

MEETING PAPERS PRESENTED

Sixty-ninth Meeting, Acoustical Society of America, Washington, D. C.

June 2-5, 1965

W. T. Peake and J. J. Guinan, Jr., Middle Ear Movement in Anesthetized Cats
U. Ingard, Propagation of Acoustic Waves in Plasmas (invited)

Cold Spring Harbor Symposium on Quantitative Biology, Long Island, New York

June 6-11, 1965

J. Y. Lettvin and R. C. Gesteland, Speculations on Smell (invited)

First IEEE Annual Communications Convention, Boulder, Colorado

June 7-9, 1965

R. G. Gallager, Coding Concepts for Error Control
A. V. Oppenheim, Optimum Homomorphic Filters
H. L. Van Trees, Bounds on the Accuracy Attainable in the Estimation of
Continuous Random Processes

Symposium on Far Infrared Transpose Spectroscopy, Mellon Institute, Pittsburgh,
Pennsylvania

June 10-11, 1965

C. H. Perry, Application of Interferometric Techniques for Solid-State
Spectroscopy (invited)

20th Annual Molecular Spectroscopy Symposium, Columbus, Ohio

June 14-18, 1965

C. H. Perry and E. F. Young, The Far Infrared Spectra of Some Cubic
Perovskite Fluorides
G. Rupprecht, P. H. Smakula, C. H. Perry, and R. Geick, Normal Modes in
Hexagonal Boron Nitride

Lectures, Technische Universität, Berlin

June 14-July 9, 1965

W. A. Rosenblith, June 14-18, Introduction and a Historical Overview.
June 21-25 (a) A Communication Scientist's View of Sensory Systems,
(b) Psychophysical Thresholds: Ordering and Scaling. June 28-July 2
(a) Information in Auditory and Visual Displays, (b) Fundamentals of
Neuroelectric Activity. July 5-9 (a) Neuroelectric Responses to Sensory
Stimuli, (b) Coding of Sensory Information: Model-Making in Relation
to Sensory Communication

The 1965 Solid-State Device Research Conference, Princeton University, Princeton,
New Jersey

June 21-23, 1965

A. Bers and A. L. McWhorter, Helicon Instabilities in Drifted Plasmas
T. Musha and A. Bers, Electron-Phonon Instabilities in a Magnetic Field

MEETING PAPERS PRESENTED (continued)

American Nuclear Society Meeting, Gatlinburg, Tennessee

June 21-24, 1965

P. S. Spangler, N. C. Rasmussen, and D. J. Rose, Fusion Reactor Blanket Experiment

American Physical Society Meeting, New York

June 23-25, 1965

W. D. Getty, Wave Amplification and Plasma Heating by Electron Beam-Plasma Interaction (invited)

E. B. Hooper, Jr. and G. Bekefi, Electron Density Measurements with a Laser Interferometer

Twenty-third Annual Conference on Electron Device Research, University of Illinois, Urbana, Illinois

June 23-25, 1965

A. Bers and A. L. McWhorter, Helicon Instabilities in Drifted Plasmas

T. Musha and A. Bers, Electron-Phonon Instabilities in a Magnetic Field

1965 Conference on Quantum Electronics, San Juan, Puerto Rico

June 28-30, 1965

R. Y. Chiao, Brillouin Scattering and the Dispersion of Hypersonic Waves

C. Freed and H. A. Haus, Amplitude Noise in Gaseous Lasers below and above the Threshold of Oscillation

International Symposium on Meteor Orbits and Dust, Smithsonian Astrophysical Observatory, Harvard University, Cambridge, Massachusetts

August 9-13, 1965

G. Fiocco, Evidence of the Influx of Micrometeorites in the Earth's Atmosphere by Optical Radar (invited)

NATO Summer Institute on Plasma Waves and Instabilities, Breukelen, Netherlands

August 9-20, 1965

J. Clarke, Single-Particle Interactions with Transverse Plasma Waves

Conference on Photoelectric and Secondary Electron Emission, University of Minnesota, Minneapolis, Minnesota

August 9-10, 1965

R. E. Stickney and P. B. Sun, Temperature Dependence of Photoemission from Tungsten

VIIIth European Congress on Molecular Spectroscopy, Copenhagen, Denmark

August 14-20, 1965

C. H. Perry, R. Geick, and E. F. Young, The Infrared Spectra of Some Cubic (ABF) Perovskite Fluorides (invited)

MEETING PAPERS PRESENTED (continued)

6th International Conference on Medical Electronics and Biological Engineering,
Tokyo, Japan

August 22-27, 1965

W. D. Jackson, R. F. Lercari, and G. O. Barnett, Linear System Analysis of
Blood-Pressure Regulation

American Physiological Society 17th Autumn Meeting, University of California, Los
Angeles, California

August 23-27, 1965

P. R. Gray, N. Y. S. Kiang, and J. W. Shipley, Probabilities Associated with
Spike Discharges in Auditory Nerve Fibers

N. Y. S. Kiang and M. B. Sachs, Effects of Acoustic Stimuli on Spontaneous
Spike Discharges in Auditory Nerve Fibers

Seventh International Conference on Phenomena in Ionized Gases, Belgrade,
Yugoslavia

August 22-27, 1965

T. J. Fessenden and L. D. Smullin, A Simple Technique for Measuring the
Density of a Plasma in a Large Metal Box

T. J. Fessenden and L. D. Smullin, Electron Production and Loss in a Plasma
Produced by Pulsed Microwaves at the Electron-Cyclotron Resonant Frequency

W. H. Glenn, Jr., S. C. Brown, and D. R. Whitehouse, Ion-Cyclotron Oscilla-
tions in a Plasma

E. B. Hooper, Jr. and G. Bekefi, Electron Density Measurements with a Laser
Interferometer

J. C. Ingraham, Electron-Atom Collision Cross-Section Measurements in the
Afterglow of a Pulsed Cesium Plasma

R. L. Kronquist and G. Bekefi, Radiation near Electron Cyclotron Harmonics
from a Beam-Generated Plasma

Boulder Millimeter Wave and Far Infrared Conference, Estes Park, Colorado

August 30-September 1, 1965

J. M. Andrews, Jr. and M. W. P. Strandberg, Thermal Microwave Phonons

R. Geick and C. H. Perry, Solid-State Studies by Means of Fourier Transpose
Spectroscopy

JOURNAL PAPERS ACCEPTED FOR PUBLICATION

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

M. A. Arbib, Hitting and Martingale Characterisations of One-Dimensional Diffusions
(Z. Wahrscheinlichkeitstheorie)

V. Arunasalam and S. C. Brown, Microwave Scattering Due to Acoustic-Ion-Plasma-
Wave Instability (Phys. Rev.)

H. A. Baldwin, S. Frenk, and J. Y. Lettvin, Glass-Coated Tungsten Microelectrodes
(Science)

JOURNAL PAPERS ACCEPTED FOR PUBLICATION (continued)

- J. E. Brown, Dendritic Fields of Retinal Ganglion Cells of the Rat (J. Neurophysiol.)
- J. E. Brown and J. A. Rojas, Rat Retinal Ganglion Cells: Receptive Field Organization and Maintained Activity (J. Neurophysiol.)
- N. Chomsky and M. Halle, Some Controversial Questions in Phonological Theory (J. Ling.)
- L. S. Cutler and C. L. Searle, Some Aspects of the Theory and Measurement of Frequency Fluctuations in Frequency Standards (Proc. IEEE)
- J. M. Deutch and J. S. Waugh, Correlation Functions in Nuclear Relaxation. I. Analysis of Random Motions from Field Dependence of Relaxation Times (J. Chem. Phys.)
- C. F. Doggenweiler and S. Frenk, Staining Properties of Lanthanum on Cell Membranes (Proc. Natl. Acad. Sci. U.S.)
- Jeanne H. Fertel and C. H. Perry, Long-Wave Infrared Spectra of Alkali Salts of Platinum Halide Complexes (J. Phys. Chem. Solids)
- G. D. Forney, Jr., On Decoding BCH Codes (IEEE Trans. (IT))
- J. B. Heywood, An MHD Channel Flow with Temperature-Dependent Electrical Conductivity (AIAA J.)
- U. Ingard, Acoustic Wave Generation and Amplification in a Plasma (Phys. Rev.)
- W. A. Jeffers, Jr. and W. M. Whitney, Temperature and Frequency Dependence of Ultrasonic Absorption in Liquid Helium below 1° K (Phys. Rev.)
- J. J. Katz, The Relevance of Linguistics to Philosophy (J. Philos.)
- P. A. Kolers, Review of Communication Processes, Frank A. Geldar (ed.), Pergamon Press, New York, 1965. (Psychol. Rev.)
- H. C. Koons and G. Fiocco, Proton Flow into the Magnetosphere (Sky and Telescope)
- R. M. Logan and R. E. Stickney, Simple Classical Model for the Scattering of Gas Atoms from a Solid Surface (J. Chem. Phys.)
- R. Melzack and S. K. Burns, Neurophysiological Effects of Early Sensory Restriction (Exptl. Neurol.)
- D. L. Morse, Erratum: Plasma Rotation in a Hollow-Cathode Discharge (Phys. Fluids)
- P. Penfield, Jr., Circuit Theory of Periodically Driven Nonlinear Systems (Proc. IEEE)
- W. F. Pickard, On the Propagation of the Nervous Impulse down Medullated and Unmedullated Fibres (J. Theoret. Biol.)
- H. Putnam, Trial and Error Predicates and the Solution to a Problem of Mostowski (J. Symbolic Logic)
- G. C. Theodoridis and E. P. Gyftopoulos, Cesium Ion Beam Neutralization with Energetic Electrons (AIAA J.)

JOURNAL PAPERS ACCEPTED FOR PUBLICATION (continued)

- A. Taub and P. O. Bishop, The Spinocervical Tract: dorsal column linkage, conduction velocity, primary afferent spectrum (Exptl. Neurol.)
- H. L. Van Trees, Analog Communication over Randomly Time-Varying Channels (IEEE Trans. (IT))
- H. L. Van Trees and C. J. Boardman, Optimum Angle Modulation (IEEE Trans. (CS))
- C. G. Wade and J. S. Waugh, Temperature and Pressure Dependence of Self-Diffusion in Liquid Ethane (J. Chem. Phys.)
- F. M. Wiener, R. R. Pfeiffer, and A. S. N. Backus, On the Sound Pressure Transformation by the Head and Auditory Meatus of the Cat (Acta Oto-Laryngol.)
- J. S. Waugh and E. L. Wei, Strong Coupling in Nuclear Resonance Spectra. V. Perturbation Theory for the Extreme Coupling Case (J. Chem. Phys.)

LETTERS TO THE EDITOR ACCEPTED FOR PUBLICATION

- J. M. Deutch and J. S. Waugh, On the Detectability of the Quadratic NMR Electric Field in Liquids (J. Chem. Phys.)
- T. S. Huang and A. Gabrielian, Minimizing the Maximum Signal Energy (IEEE Trans. (CS))
- C. J. Johnson, Some Dielectric and Electro-optic Properties of BaTiO₃ Single Crystals (Appl. Phys. Letters)
- E. B. Hooper, Jr. and G. Bekefi, A Laser Interferometer for Repetitively Pulsed Plasma (Appl. Phys. Letters)
- B. T. Lubin, T. L. Földvári and W. D. Jackson, Nonlinear Network for the Measurement of the Relative Electrical Conductivity Between Highly Conducting Materials (Rev. Sci. Instr.)
- H. B. Lee, An Additional Realization Cycle for LC Impedances (IEEE Trans. (CT))
- P. Penfield, Jr., The Lorentz Force (Proc. IEEE)
- D. Snyder, Some Useful Expressions for Optimum Linear Filtering in White Noise (Proc. IEEE)
- D. L. Snyder, Some Useful Expressions for Optimum Filtering in White Noise. II. (Proc. IEEE)
- O. J. Tretiak and T. S. Huang, Resistance of an N-Dimensional Cube (Proc. IEEE)

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.)

- 439 J. E. Savage, The Computation Problem with Sequential Decoding
- 440 G. David Forney, Jr., Concatenated Codes

SPECIAL TECHNICAL REPORT PUBLISHED

(These monographs are available from The M. I. T. Press,
E19-741, Massachusetts Institute of Technology, Cambridge,
Massachusetts 02142.)

- Number 12 Robert R. Capranica, The Evoked Vocal Response of the Bullfrog - A Study of Communication by Sound (M. I. T. Research Monograph No. 33)

SPECIAL PUBLICATIONS

- J. S. Barlow, Review of Techniques and Methods of Electroencephalography (in Russian), V. G. Kratin, N. P. Bechtereva, V. I. Gusselnikov, V. A. Kozhevnikov, B. T. Senichenkov, V. V. Usov. (Publishing House of the Academy of Sciences of the USSR, Moscow and Leningrad, 1963, 312 p.) (EEG Clin. Neurophysiol. and Medical Electronics and Biological Engineering (J. Int. Fed. Med. Electronics))
- J. S. Barlow, Review of Contemporary Methods of EEG Analysis (in Russian), V. A. Koshevnikov and R. M. Meshcharski. (State Publishing House of Medical Literature, Moscow, 1963, 325 p.) (EEG Clin. Neurophysiol. and Medical Electronics and Biological Engineering (J. Int. Fed. Med. Electronics))
- J. S. Barlow, Review of Progress in Brain Research, Vol. 1: Brain Mechanism, edited by G. Moruzzi, A. Fessard and H. H. Jasper. (Elsevier Publishing Company, Amsterdam, 1963) (Am. J. Med. Electronics)
- B. Liu and R. E. Kahn, Optimum Prefiltering in Sampled Data Systems with Read-in Jitter (1965 IEEE International Convention Record, Part 7, pp. 127-133)
- G. H. Matthews, Hidatsa Syntax (Mouton and Co., The Hague, 1965)
- W. S. McCulloch, Lektion - An Introduction to 'The Logical Structure of Mind' by Eilhard von Domarus (Proc. Symposium on Communication Theory and Research, University of Missouri in Kansas City, March 24-25, 1965)