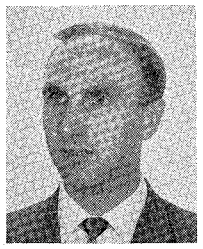
Contributors



Mark R. Barber (M'62) was born in Wellington, New Zealand, on July 23, 1931. He received the B.Sc. and B.E. degrees from the University of Auckland, New Zealand, in 1954 and 1955, respectively, and the Ph.D. degree in electrical engineering from the University of Cambridge, England, in 1959. While in England he studied cathode loading and beam formation in high current electron guns.

From 1959 to 1961 he was at the Naval Research Laboratory, Auckland, New Zealand, working on the processing of signals from under-water acoustic arrays. Since 1962 he has been with Bell Telephone Laboratories, Inc., Murray Hill, N. J., working on solid-state microwave devices.

Dr. Barber is a member of the IEE, London.

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Charles R. Boyd, Jr. (S'52–M'58–SM'63) was born in Pittsburgh, Pa., on October 21, 1932. He received the B.S.E.E. degree from the Carnegie Institute of Technology, Pittsburgh, in 1953. In 1959, he completed the General Electric Company's Advanced Courses in Engineering, a 3-year, part-time program of graduate level engineering studies. He received the M.E.E. degree and the Ph.D. degree in electrical engineering at Syracuse University, Syracuse, N. Y., in 1962 and 1964, respectively.

In 1953, he joined the Westinghouse Electric Corp., Baltimore, Md., as an Electronics Engineer, working on field services of developmental auto-pilot and radar equipment. In 1956, he joined General Electric's Light Military Electronics Department, Utica, N. Y. as a Design Engineer. He assisted there in the design of airborne radio beacons for the Atlas Guidance System. He transferred to the staff of the General Electric Electronics Laboratory, Syracuse, in 1957, where he worked on the advanced development of microwave circuits, including directional couplers, hybrid junctions, and parametric amplifiers. He spent the academic year 1961–1962 on educational leave at Syracuse University and the following year, on temporary General Electric assignment operating, developing, and teaching a portion of the General Electric Advanced Courses in Engineering. In June 1963, he has resumed active participation at the General Electric Electronics Laboratory, mainly in the area of ferrite devices. Since June 1965, he has been associated with Rantec Corp., Calabasas, Calif., as Manager of the Microwave Solid-State Department.

Dr. Boyd is a member of Eta Kappa Nu and a licensed Professional Engineer in the state of New York.

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Glen E. Collins was born in Mitchell, Nebr., on November 11, 1929. He received his education from Los Angeles City College and the University of Southern California, and in 1965 was awarded the B.S.E.E. degree from the latter school.

He served with the U. S. Army Signal Corps from 1948 to 1952 in radio-teletype communications, and while attending the Radar and Radio Teletype School at Fort Monmouth, N. J., was awarded a certificate for scholastic excellence. In 1953 he joined Hughes Aircraft Company, Los Angeles, Calif., as a student employee and served as an engineering assistant in the Standards Laboratory. In 1956 he was employed by the Kearfott Microwave Division of General Precision, Inc., Little Falls, N. J., working on the research and development of waveguide filters, isolators, and associated microwave components. In 1961 he joined Rantec Corporation, Calabasas, Calif., and is presently engaged in the design and development of waveguide filters, ferrite devices, and strip-line components.

Mr. Collins has been a member of Sigma Phi Delta since 1952.

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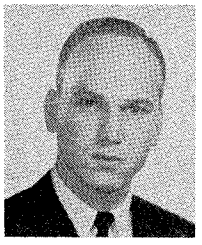

Edward G. Cristal (S'58—M'61) was born in St. Louis, Mo., on January 27, 1935. He received the B.S. and A.B. degrees in 1957, in electrical engineering and mathematics, respectively, and the M.S. degree in electrical engineering in 1958, all from Washington University, St. Louis. He received the Ph.D. degree in electrical engineering from the University of Wisconsin, Madison, in 1961.

Since 1961, when he joined the staff of the Electromagnetic Techniques Laboratory at Stanford Research Institute, Menlo Park, Calif., he has been engaged in research in microwave filters, amplifiers, and multiplexers.

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Raymond C. Cumming (S'50–A'55–SM'56) was born on January 6, 1927, in Missoula, Mont. He received the B.S. degree in physics at Montana State College, Bozeman, in 1950, and the M.S. and Ph.D. degrees, both in electrical engineering at Stanford University, Calif., in 1951 and 1955, respectively.

His professional experience includes research and teaching at Stanford, and consultation with industry. In 1951 he began full-time employment at Stanford where he is presently a Senior Research Engineer and Lecturer.

Dr. Cumming is a member of Phi Kappa Phi, Tau Beta Pi, and Sigma Xi.

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Harold J. Curnow was born in Birmingham, England, in November, 1930. He attended Birmingham University, receiving the B.S. degree (with honors) in mathematical physics in 1951.

Since graduation he has been a member of the Royal Naval Scientific Service and has been engaged in the design and development of microwave tubes at the Services Electronics Research Laboratory (SERL), Baldock. More recently, his assignment has been with the Microwave Electronics Division of SERL, Harlow, Essex, England.

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M. N. Engineer Photograph and biography not available at time of publication.

Edmond S. Gillespie (S'50 – A'51 – M'56) was born in Birmingham, Ala., on May 13, 1928. He received the B.E.E. degree in 1951 from Auburn University, Auburn, Ala., and the M.S. degree in engineering from the University of California at Los Angeles in 1961. He is nearing completion of the requirements for Ph.D. degree in engineering from UCLA.

During 1946 and 1947 he served in the U. S. Air Force as an instructor at the USAF Radar School at Boca Raton, Fla. From 1951 through 1955 he was employed by Sandia Corporation, Albuquerque, N. Mex., primarily concerned with the development of telemetry antenna and transmission-line systems. From 1955 to 1963 he was a senior research specialist with the Lockheed Aircraft Corporation, Burbank, Calif.; his duties included research and development of aircraft antennas and studies of surface wave phenomena with emphasis on the antenna problem. While studying for the doctoral degree, he received a teaching appointment as Associate in the Department of Engineering at UCLA. From 1963–1965 he was a Senior Engineer at UCLA's Institute of Geophysics and Planetary Physics. Recently he joined the faculty of the San Fernando Valley State College, Northridge, Calif., as an Associate Professor in the Engineering Department.

Mr. Gillespie is a member of Eta Kappa Nu and Tau Beta Pi.

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Harry E. Green was born in Adelaide, South Australia, on February 11, 1935. He received the B.E. degree (with honors) in electrical engineering and the M.E. degree, both from the University of Adelaide, in 1957 and 1964, respectively.

From 1955 to 1958 he was employed by the Post Master General's Department where he was involved with communications work. In 1958 he joined an antennas and microwave group at the Weapons Research Establishment, Salisbury, where he is currently employed as a Research Scientist. Here he has been engaged in the design and development of antennas and transmission-line components with, in more recent years, with particular emphasis on the application of numerical methods to this work. Currently, he is working on the digital simulation of certain aspects of guided weapons performance.

Mr. Green is an Associate Member of the Institution of Engineers, Australia, and I.E.E., London.

Jacob Gustincic (S'61–M'65) was born in Cleveland, Ohio, on October 3, 1938. He received the B.S., M.S., and Ph.D. degrees from Case Institute of Technology, Cleveland, Ohio, in 1960, 1962, and 1963, respectively. In 1963 he held a Case Engineering Fellowship.

Since 1963 he has been an Assistant Professor at the University of California at Los Angeles in the Department of Engineering. He is presently engaged in research concerned with surface wave phenomena.

Dr. Gustincic is a member of Sigma Xi.

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David W. Howell (S'65) was born in Pasadena, Calif., on May 13, 1939. He received the B.S. degree in 1961 from the Harvey Mudd College of Science and Engineering, Claremont, Calif., in 1961 and the M.S. and E.E. degrees in electrical engineering in 1963 and 1964, respectively, from Stanford University, Calif. He is presently engaged in preparing a doctoral dissertation on the analysis of noise-type electronic-countermeasures signals.

Since 1961, he has been working with the System Techniques Laboratory of Stanford Electronics Labs., Stanford University, Calif., as a Research Assistant.

Mr. Howell is a member of Sigma Xi.

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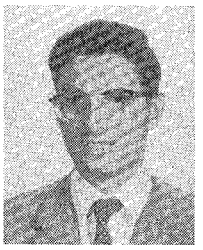
Ralph Levy (SM'64) was born in London, England, on April 12, 1932. He received the M.A. degree in physics from Cambridge University, England, in 1953, and at present is completing requirements for the Ph.D. degree at the University of London.

From 1953 to 1959 he was a member of the Scientific Staff at the Applied Electronics Laboratories of the General Electric Company, Stanmore, Middlesex, England. In 1959 he joined Mullard Research Laboratories, Redhill, Surrey, England, working in the broadband receiver section on systems research and development, microwave component design and network synthesis. Since September 1964, he has been a lecturer in the Department of Electrical and Electronic Engineering at the University of Leeds, with research interests in microwave network synthesis.

Mr. Levy is an associate member of the Institution of Electrical Engineers (London).



D. Marcuse (M'58) was born in Koenigsberg, East Prussia, Germany, on February, 27, 1929. He received the degree of Diplom Physiker from the Freie Universitaet Berlin, Germany, in 1954 and the degree of Dr. Ing. from Technische Hochschule Karlsruhe, Germany, in 1962.

From 1954 to 1957 he worked at the Central Laboratory, Siemens and Halske, Berlin, Germany, on transmission line problems and the development of the circular electric waveguide. In 1957 he became a member of the technical staff of the Bell Telephone Laboratories, Inc., Holmdel, N. J., and has worked on the circular electric waveguide and masers. He is presently working on the transmission aspect of a light communications system.

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George L. Matthaei (S'49 – A'52 – M'57 – F'65) was born in Tacoma, Wash., on August 28, 1923. After leaving college for three years of military service, he returned to the University of Washington, Seattle, and received the B.S. degree in electrical engineering in 1948. He then did graduate work at Stanford University, Calif., and received the Ph.D. degree in electrical engineering in 1952.

While at Stanford he was a Research Assistant in the Electronics Research Laboratory where he did research on network synthesis. In 1951 he joined the faculty of the Division of Electrical Engineering of the University of California at Berkeley, where he became an assistant professor. He continued research on network synthesis and supervised graduate student research in that field. During 1955 to 1958 he was on the Technical Staff of the Ramo-Wooldridge Corp., Inglewood, Calif., engaged in system analysis and research on microwave components. From 1958 to 1964 he was at the Stanford Research Institute where he did research on microwave devices. He became Manager of the Electromagnetic Techniques Laboratory of SRI in 1962. In July, 1964, he joined the Dept. of Electrical Engineering of the University of California, Santa Barbara, Calif., where he is a Professor.

Dr. Matthaei is a member of Sigma Xi and Tau Beta Pi. He was the winner of the 1961 Microwave Prize of the IRE Professional Group on Microwave Theory and Techniques.

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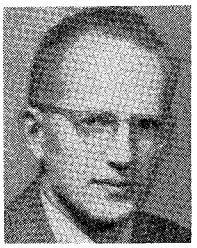
B. R. Nag (A'58–SM–'62) Photograph and Biography not available at time of Publication.



Henry J. Riblet (A'45 – M'55 – F'58) was born in Calgary, Canada, on July 21, 1913. He received the B.S. and Ph.D. degrees from Yale University, New Haven, Conn., in 1935 and 1939, respectively.

From 1939 to 1941 he taught mathematics at Adelphi College, Garden City, N. Y., and at Hofstra College, Hempstead, N. Y. He joined the staff of the Massachusetts Institute of Technology Radiation Laboratory, Cambridge, Mass., in 1942 and at the close of World War II was in charge of one of the three developmental sections of the Antenna Group. From 1946 to 1948 he headed the RF group at the Submarine Signal Company, Boston, Mass. At present he is affiliated with the Microwave Development Laboratories, Inc., Needham Heights, Mass.

Dr. Riblet is a member of the American Mathematical Society and the American Physical Society.

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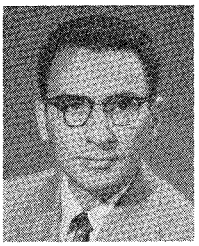

Bernard M. Schiffman (S'51–A'53–M'57) was born in New York, N. Y., on December 5, 1915. He received the B.S. degree in electrical engineering from State University of Iowa, Iowa City, in 1952, and the M.S. degree in electrical engineering from Stanford University, Calif., in 1959.

In 1952 he was employed at the Hazeltine Electronics Corp., Little Neck, N. Y. From 1954 to 1956, he worked at Sylvania's Electronic Defense Laboratory, Mountain View, Calif., where he designed a high-power countermeasures transmitter and did microwave components research. In 1956, he joined the Microwave group of Stanford Research Institute, Menlo Park, Calif., where he worked on 90° phase shifters and developed the first waffle-iron filter. From 1959 to 1961, he worked at Varian Associates, Palo Alto, Calif., and while there, invented and received patents for new forms of the orthogonal mode mixer. In 1962, he returned to the Electromagnetic Techniques Laboratory of SRI where he has been engaged in microwave component research.

Mr. Schiffman is a member of the Scientific Research Society of America and Eta Kappa Nu.

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Robert L. Sleven (M'57) was born in New York, N. Y., on April 25, 1932. He received the B.E.E. degree from the City College of New York in 1953, and the M.E.E. degree from the Polytechnic Institute of Brooklyn in 1959.

He has worked in the field of electronic countermeasures at RCA and at W. L. Maxson, and in 1958 he joined the Department of Applied Electronics at the Airborne Instruments Laboratory of Cutler-Hammer, Inc., Deer Park, L. I., N. Y. He is now a section head in this department, responsible for various microwave and parametric amplifier programs. During his association with the Airborne Instruments Laboratory, he has been engaged in the development of microwave filters, strip-transmission-line components, and low-noise receiving systems, as well as study programs on directional filters and multimode measurement methods.

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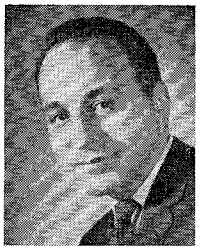

Jesse J. Taub (S'48–A'50–M'55–SM'61) was born in New York City on April 27, 1927. He received the B.E.E. degree from the City College of New York in 1948, and the M.E.E. degree from the Polytechnic Institute of Brooklyn in 1949.

In 1949 he joined the microwave tube section of the Naval Material Laboratory, Brooklyn, N. Y., as a project engineer, and in 1951 he became supervisor of the klystron and microwave semiconductor unit. In 1955 he joined the Airborne Instruments Laboratory of Cutler-Hammer, Inc., Deer Park, L. I., N. Y., where he is now a consultant in the Applied Electronics Department.

Mr. Taub is a member of Sigma Xi, and serves on the Editorial Board of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES.

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Alva C. Todd (A'38–M'47 – SM'54) was born in Ligonier, Ind., on July 30, 1917. He studied at Indiana University the George Washington University and Purdue University and received the degrees of B.S. E.E., M.S.E.E., and Ph.D. from Purdue University, Lafayette, Ind., in 1947, 1949 and 1957, respectively.

After serving as a Lieutenant at the U. S. Coast Guard Laboratory during World War II, he joined the staff of the electrical engineering department at Purdue University. In addition to teaching assignments and thesis direction, he was responsible for the organization and operation of the Electronics Instrumentation Laboratory. In 1953 he became Director of Engineering at the Fournier Institute of Technology, Lemont, Ill. In addition to his administrative responsibilities, he taught courses in communication engineering, network theory, and antennas and waves. He joined the Farnsworth Electronics Company in Fort Wayne, Ind., in 1955 and served as a consultant to the microwave and radar departments, and in 1956 entered private practice, specializing in electronic instrumentation and control. He joined the staff of the Armour Research Foundation of the Illinois Institute of Technology, Chicago, in 1957, and was responsible for a wide range of programs, including the development of circular electric waveguide components and special-purpose microwave antennas, and a broad study of advanced instrumentation techniques. He joined the Hallicrafters Company, Chicago, Ill. in 1960 and served as Manager of the Active Electronic Warfare Division. In 1961 he joined the staff of the Illinois Institute of Technology where he now serves as Professor of Electrical Engineering. He is engaged in undergraduate course supervision and teaching in electronic devices, circuits, and systems, in nuclear instrumentation, and in graduate teaching in electromagnetic theory, electronic systems and solid-state circuits, and M.S.E.E. and Ph.D. research and thesis supervision.

Dr. Todd is a member of Eta Kappa Nu, Tau Beta Pi and Sigma Xi, and the American Society for Engineering Education. He is a registered professional engineer in Illinois and Indiana, and is engaged in a general practice as a consulting engineer.

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Eugene N. Torgow (S'48 – A'49 – SM'54) was born in New York City on November 26, 1925. He received the B.E.E. degree from Cooper Union School of Engineering, New York, in 1946, and the M.E.E. degree from Polytechnic Institute of Brooklyn in 1949.

During 1946–1947, he served with the U. S. Air Force in the Pacific theater of operations. In 1948 he joined the staff of the Microwave Research Institute (MRI) of Polytechnic Institute of Brooklyn. From 1951 to 1953 he was supervisor of the microwave laboratory of the Allan B. DuMont Labs in Clifton, N. J., and in 1953 he returned to MRI to head the Component Research Section. From 1959 to 1960 he was in charge of the Special Products Department at PRD Electronics in Brooklyn; after which he joined Dorne and Margolin, Inc., Westbury, N. Y., first as chief engineer and later as Manager of Microwave Products. In 1964 he joined the Rantec Corporation, Calabasas, Calif., as assistant to the vice-president and technical director, where his duties

range from consultation on various projects to direct assignment on research and development in the microwave component and antenna areas.

Mr. Torgow is a member of Sigma Xi and has served on numerous committees of the IEEE.

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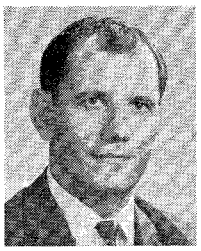

Peter P. Toulious (S'59–M'62) was born in Kastoria, Greece, on January 16, 1934. He received the B.S. and M.S. degrees in electrical engineering from the University of Illinois, Urbana, in 1960 and 1961, respectively. He has completed the course work requirements for the Ph.D. degree in electrical engineering at Illinois Institute of Technology, Chicago, Illinois.

In 1961 he joined ITT Research Institute, Chicago, Illinois, where his work has been concerned with antenna studies and microwave devices, including the design and development of microwave tunnel-diode amplifiers and oscillators. Recently he has been engaged in the development of exact synthesis techniques for distributed networks.

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D. B. Weller (S'57–M'58) was born in Buffalo, N. Y., on October 21, 1930. He received the S.B.E.E. degree from the Massachusetts Institute of Technology, Cambridge, and the M.S.E.E. degree from the University of Southern California, Los Angeles, in 1957 and 1962, respectively.

Upon graduation he joined Sylvania Electric Products, Inc., and worked on microwave components and ECM systems at their Amherst Research Labs., Amherst, N. Y. From 1959 to 1963, he was engaged in the design and development of airborne radar systems at the Bendix Corp., North Hollywood, Calif. In 1963 he joined the staff of Stanford Research Institute, Menlo Park, Calif., where he is currently working on magnetically tunable filters.

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R. J. Wenzel, for a photograph and biography, please see page 394 of the May 1965 issue of these TRANSACTIONS.

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Leo Young, for a photograph and biography, please see page 481 of the July 1965 issue of these TRANSACTIONS.

Announcements

SPECIAL INTERDISCIPLINARY ISSUE OF RADIO SCIENCE ON THE MODE THEORY OF WAVE PROPAGATION

Planned for 1966 is a special issue of *Radio Science* (NBS Journal of Research, Section D), devoted to the subject of the mode theory of wave propagation. Although emphasis will be placed on electromagnetic waveguides, papers dealing with guided wave concepts in acoustics, seismology, and hydromagnetics will be welcomed.

Workers in these seemingly diverse fields perhaps do not always appreciate the carry-over of some analytical and experimental methods into other disciplines. By collecting definitive papers on mode theory as applied to these various fields, it is possible that a service will be rendered, particularly to radio scientists (who often are unaware of developments outside their specialty).

Keeping in mind the interdisciplinary nature of this special issue, theoreticians and experimentalists are hereby invited to submit manuscripts for consideration to the editor, (Dr. James R. Wait, National Bureau of Standards, Boulder, Colo. 80301), before December 31, 1965. These should be prepared in accordance with the Instructions-to-Authors inside the back cover of any current issue of *Radio Science*. In order to facilitate editorial planning it would be appreciated if prospective authors would submit a short abstract or summary of the paper to the editor at their earliest convenience.

1966 NATIONAL SYMPOSIUM ON MICROWAVE THEORY AND TECHNIQUES

The eleventh National Microwave Symposium will be held at Palo Alto, California, the week of May 16, 1966. It will be sponsored by the IEEE Group on Microwave Theory and Techniques. The program will include visits to the Stanford Linear Accelerator and local microwave industries.

Papers are requested in the areas of microwave solid-state devices and integrated circuits, waveguides and components for microwaves through millimeter and optical wavelengths, microwave acoustics, and in all other areas within the field of microwave theory and techniques. Authors should submit four copies each of a summary and abstract. The summary should consist of 500 to 1000 words and not more than six figures; the abstract, about 200 words with no figures.

Summaries and abstracts should be mailed to: Dr. Leo Young, Chairman, Technical Program Committee, 1966 Symposium, Stanford Research Institute, Menlo Park, Calif., 94025. Deadline for receipt is January 3, 1966, and authors will be notified of acceptance or rejection by February 1, 1966.