

# Contributors

**J. M. Arnold**, photograph and biography not available at the time of publication.



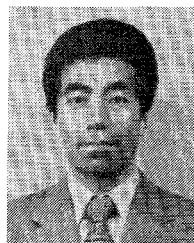
**Kazuhiko Atsuki** was born in Tokyo, Japan, on November 2, 1942. He received the B.S. and M.S. degrees from the University of Electro-Communications, Tokyo, Japan, and the Dr. Eng. degree from the Tokyo University, Tokyo, Japan, all in electrical engineering, in 1965, 1967, and 1979, respectively.

He became a Research Assistant in 1967, and in 1979 Instructor in the Department of Applied Electronics, the University of Electro-Communications, Tokyo, Japan. He has been

studying switching transistors, microstrip transmission lines, wide-band laser modulators, and optical fibers.

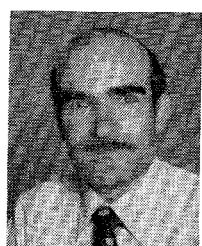
Dr. Atsuki is a member of the Institute of Electronics and Communication Engineers of Japan.

also serves as Associate Dean (Research Services) in the School of Graduate Studies and Research, Queen's University, and remains actively involved in his own research on applications of microwave technology in close cooperation with industry.



**Masaharu Bessho** was born in Tochigi, Japan, on March 10, 1942. He received the B.S. degree from the Tohoku University, Sendai, Japan in 1964.

In 1964 he joined the Oki Electric Industry Co., Ltd., Tokyo, where he was engaged in development of FDM microwave equipment and of digital microwave equipment since 1973, and he is a manager of the electrical communication division of the company.



**Richard J. Cameron** was born Glasgow, Scotland in January 1947. He received B.Eng. degree in electronics from Loughborough University, England in 1969.

In 1969 joined Marconi Space and Defence Systems in Stanmore, England. Activities there included small earth station design, satellite telecommunication system analysis and computer-aided microstrip component and circuit design. Since joining the European Space Agency's technical establishment (ESTEC, in the Netherlands) in 1975, he has been concerned with research and development of advanced microwave passive and active components and circuits with applications to future telecommunication satellite systems.

Mr. Cameron is a member of the Institution of Electrical Engineers.



**Kwo Ray Chu**, for a photograph and biography please see page 436 of the April 1980 issue of this TRANSACTIONS.



**Rudolf Deutsch** was born in Brasov, Romania, in 1931. He studied chemistry at the University of Cluj, Cluj, Romania from 1950 to 1954. In 1962 he received the Ph.D. degree in theoretical physics from the Lomonosov University of Moscow, Moscow, USSR.

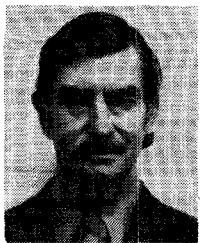
From 1954 to 1959 he was a teacher at a secondary school and a Research Assistant at the University of Cluj, Cluj, Romania. From 1962 to 1973 he was a Reader in physics at the Polytechnical Institute at Iasi, Romania. From 1973 to 1977 he did research work for a brewery in Innsbruck, Austria. In 1975 he became a Reader in theoretical physics at the University of Innsbruck, Innsbruck, Austria. Now he is working as Visiting Professor at the University of Stuttgart, Stuttgart, Germany. He has published four books and 68 papers in physics.



**Adam T. Drobot**, for a photograph and biography please see page 436 of the April 1980 issue of this TRANSACTIONS.



**John C. Beal** (M'66) was born in London, England in 1933. He received the B.Sc. (Eng.) and Ph.D. degrees in electrical engineering from University College London, London, England, in 1958 and 1964, respectively. After three years in industry with Redifon, Ltd., in England he joined Colorado State University, Boulder, in 1965 as an Assistant Professor of Electrical Engineering. In 1967 he moved to Queen's University, Kingston, Ontario, Canada, where he is now a Professor of Electrical Engineering. He



**Leopold B. Felsen** (S'47-A'53-M'54-SM'55-F'62) was born in Munich, Germany, on May 7, 1924. He received the B.E.E., M.E.E., and D.E.E. degrees from the Polytechnic Institute of Brooklyn, Brooklyn, N.Y., in 1948, 1950, and 1952, respectively.

During World War II he was concerned with work on electronic ballistics-calibration devices in the U.S. Army. Since 1948 he has been with Polytechnic Institute of Brooklyn, now Polytechnic Institute of New York, first with its Microwave Research Institute, then with its Department of Electrical Engineering and Electrophysics, and he now holds the position of Institute Professor. From 1974-1978, he was Dean of Engineering. On a leave of absence during 1960-1961 he served as a Liaison Scientist with the London Branch of the Office of Naval Research. His research work has dealt with a variety of areas in electromagnetic radiation and diffraction theory, and his present interest is centered primarily on quasioptic techniques for wave propagation. He has been teaching graduate courses on various topics in electromagnetic theory, and during the summer of 1967 he was a Visiting Professor at the University of Colorado, Boulder. During September 1967 he was in Russia as an invited guest of the Soviet Academy of Sciences for the purpose of lecturing and scientific discussion, and he was also their invited guest to attend the 1971 Electromagnetic Theory Symposium in Tbilisi, USSR. In 1974, he was appointed a Distinguished Lecturer for the Antennas and Propagation Society. He was awarded a Guggenheim Fellowship for 1973, the Balthasar Van der Pol Gold Medal from URSI in 1975, and an honorary doctorate from the Technical University of Denmark in 1979. In 1977, he was elected to the National Academy of Engineering. He has served as Vice-Chairman and Chairman of both the U.S. and the International URSI Commission B.

Dr. Felsen is a member of Eta Kappa Nu, Tau Beta Pi, and Sigma Xi. He is listed in Outstanding American Educators and in other biographical volumes. He is a former Associate Editor of Radio Science, and is presently one of the Editors of the Springer Series in Electrophysics.



**George I. Haddad** (S'57-M'61-SM'66-F'72) was born in Aindara, Lebanon, on April 7, 1935. He received the B.S.E., M.S.E., and Ph.D. degrees in electrical engineering in 1956, 1958, and 1963, respectively, from the University of Michigan, Ann Arbor.

From 1957 to 1958 he was associated with the Engineering Research Institute of the University of Michigan, where he was engaged in research on electromagnetic accelerators. In 1958 he joined the Electron Physics Laboratory, University of Michigan, where he has been engaged in research on masers, parametric amplifiers, detectors, electron-beam devices, and microwave solid-state devices. He held a University of Michigan Research Institute Fellowship for the academic year of 1958-1959 and a sponsored research fellowship for the spring semester of 1959-1960. He served successively as Instructor, Assistant Professor, and Associate Professor in the Department of Electrical Engineering from 1960 to 1969. He is presently a Professor and Chairman of the Department of Electrical and Computer Engineering.

Dr. Haddad received the 1970 Curtis W. McGraw Research Award of the American Society for Engineering Education for outstanding achievements by an Engineering Teacher. He is a member of Eta Kappa Nu, Sigma Xi, Phi Kappa Phi, the American Physical Society, and the American Society for Engineering Education.



**Masayasu Hata** (M'75) was born in Kyoto, Japan, on March 18, 1935. He received the B.S. degree in the electrical engineering from the Nagoya Institute of Technology in 1958 and Dr. Eng. degree from the Tokyo Institute of Technology, Japan, in 1968, respectively.

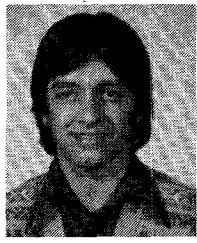
In 1958 he joined the Oki Electric Industry Co., Ltd., Tokyo, where he was engaged in research and development of digital communication system especially of radio transmission.

Dr. Hata is a member of the Institute of Electronics and Communication Engineers of Japan and he is a manager of the research laboratories of the company.



**Michio Higuchi** was born in Niigata, Japan, on September 5, 1936. He graduated from the Waseda technical high school in 1959.

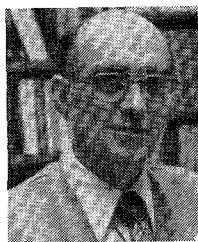
In 1960 he joined the Oki Electric Industry Co., Ltd., Tokyo, where he was engaged in development of FDM microwave equipment in the engineering division and in research and development of FDM system and digital microwave equipment in the research laboratories since 1966 and he is now responsible for the service of the microwave equipment in the service division of the company.



**Daniel J. Gale** (S'77-M'78) was born in Saskatoon, Saskatchewan Canada on March 8, 1954. He received the B.Sc. degree and M.Sc. degrees in electrical engineering from Queen's University, Kingston, Ontario, Canada in 1976 and 1978, respectively.

From 1978-1979 he was a Research Associate at Queen's University involved in the investigation of electromagnetic aspects of leaky coaxial cables and guided radar. Having joined the University of Surrey, Guildford, England in 1979, he is currently investigating electromagnetic means of communication with trapped coal miners.

**Tatsuo Itoh** (S'69-M'69-SM'74), for a photograph and biography please see page 812 of the July 1980 issue of this TRANSACTIONS.



**Darko Kajfez** (SM'67) was born in Delnice, Yugoslavia, in 1928. He received electrical engineer's degree (Dipl. Ing.) from the University of Ljubljana, Yugoslavia, in 1953, and the Ph.D. from the University of California, Berkeley, in 1967.

Between 1950 and 1963 he was with companies "IEV", "Rudi Cajavec", and "Iskra" in Yugoslavia, primarily working on the design of microwave communications and radars. From 1963 to 1966 he was a Research Assistant at the Electronics Research Laboratory, University of California, Berkeley, investigating antennas for circular polarization and their feeding circuits. In 1967 he joined the University of Mississippi University, where he is now a Professor of Electrical Engineering. During the academic year 1976-1977 he was a visiting professor at the School of Electrical Engineering, University of Ljubljana, Yugoslavia. His research and teaching interests are in electromagnetic theory and in computer aided design of microwave circuits and antennas.

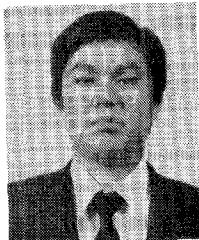


**Jagannath Mazumdar** received the B.Sc. (Hons.) and M.Sc. degrees from the University of Patna, India, in 1953 and 1955, respectively, and the Ph.D. degree from the Moscow State University, U.S.S.R., in 1965.

After his M.Sc. degree, he worked as an Assistant Professor of Mathematics at the Institute of Technology, Bihar, India, until the time he left for Moscow to undertake research for the Ph.D. degree. Soon after being awarded the Ph.D. degree he joined the University of Adelaide, South Australia, in 1966, where he is currently involved in teaching and research in Solid Mechanics and Biomechanics in the Department of Applied Mathematics. He has published a significant number of papers in these fields. He was a Visiting Professor in the State University of New York at Stony Brook and in Michigan State University, East Lansing, in 1972 and 1977, respectively.

Dr. Mazumdar is an elected member of the American Academy of Mechanics and many other prestigious bodies. He is also the Vice-Chairman of the Australasian College of Physical Scientists in Medicine and Biology, South Australia Branch.

+



**Ryoji Kuzuya** was born in Kanagawa, Japan, on July 29, 1956. He received the B.S. degree from the University of Electro-Communications, Tokyo, Japan, in 1979.

He is presently with Microwave and Satellite Communications Division, Nippon Electric Company.



**Masamichi Ohmori** (M'77) was born in Ibaragi, Japan, on March 28, 1941. He received the B.S., M.S., and Ph.D. degrees in electronic engineering from Tohoku University, Sendai, Japan, in 1963, 1965, and 1976, respectively.

Since joining the Electrical Communication Laboratory, Nippon Telegraph and Telephone (NTT) Public Corporation, Tokyo, Japan, in 1965, he has been engaged in the research works on millimeter-wave IMPATT diodes and frequency multipliers, and GaAs logic devices. He is currently a Chief of Semiconductor Device Section, Musashino Electrical Communication Laboratory, NTT.

Dr. Ohmori is a member of the Institute of Electronics and Communication Engineers of Japan, and the Japan Society of Applied Physics.

+

+



**Takashi Makimura** was born in Tokyo, Japan, on October 6, 1950. He graduated from Karasuyama Technical High School in 1969.

Since joining the Electrical Communication Laboratory, Nippon Telegraph and Telephone (NTT) Public Corporation, Tokyo, Japan, in 1969, he has been engaged in the research works on the process technology of millimeter-wave and submillimeter-wave diodes. He is presently a member of the Semiconductor Device Section, Musashino Electrical Communication

Laboratory, NTT.

Mr. Makimura is a member of the Institute of Electronics and Communication Engineers of Japan.

**Dean F. Peterson** (S'70-M'71), for a photograph and biography please see page 155 of the February 1980 issue of this TRANSACTIONS.

+

+



**Shoji Makino** was born in Fukui, Japan, on April 24, 1943. He received the B.S. and M.S. degrees from the Tohoku University, Sendai, Japan, in 1966 and 1968, respectively.

In 1968 he joined the Oki Electric Industry Co., Ltd., Tokyo, where he was engaged in research and development of analog and digital radio equipments and he is responsible for research of microwave systems, circuits and devices.



**J. David Rhodes**, for photograph and biography please see page 99 of the February 1980 issue of this TRANSACTIONS.

+

+

**Lorenz-Peter Schmidt** was born in Germany on August 21, 1949. He received the Dipl.-Ing. degree in electrical engineering from the Technical University, Aachen, West Germany, in 1974. Afterwards he worked as a Research Assistant at the Institute of High Frequency Techniques, Technical University Aachen, and received the Dr.-Ing. degree in 1979.

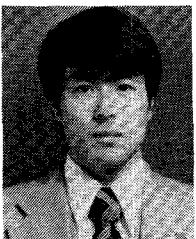
Following an invitation from Mr. Itoh, he worked as a Research Associate at the University of Texas, Austin for three months, before he

joined the AEG-Telefunken Co., Ulm, West Germany in the beginning of 1980. He is doing research and development on micro- and millimeterwave integrated circuits, and his special research interests are in the area of numerical solutions of eigenvalue and excitation problems of planar and quasi-planar waveguiding structures.



**Joseph Dov Silverstein** (M'68) was born in New York, NY, on July 5, 1935. He received the B.A. degree in physics from Yeshiva College, New York, NY, in 1957, and the M.A. and Ph.D. degrees in physics from Columbia University, New York, NY, in 1960 and 1965, respectively.

From 1964 to 1967 he served at the Naval Research Laboratory, Washington, DC, as a National Academy of Sciences-National Research Council Postdoctoral Research Associate in the nuclear Physics Division, and later performed research in high-power lasers in the Plasma Physics Division. He joined the U.S. Army Electronics Research and Development Command/Harry Diamond Laboratory (HDL), Adelphi, MD, in September 1970 as Supervisor of the Flash X-Ray Facility, HIFX. He is currently chief investigator in the development of high-power near-millimeter wave gyrotrons and other sources in the Components and Materials Laboratory of HDL.



**Tohru Takada** was born in Iwate, Japan, on October 12, 1950. He received the B.S. degree in electrical engineering from Iwate University, Morioka, Japan, in 1973.

In 1973, he joined the Electrical Communication Laboratory, Nippon Telegraph and Telephone Public Corporation, Musashino, Japan, where he has been engaged in the research and development of millimeter-wave integrated circuits and gallium arsenide diodes.

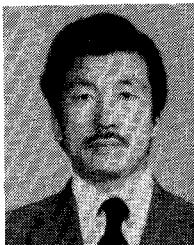
Mr. Takada is a member of the Institute Electronics and Communication Engineers of Japan.



**B. Sarma Vidula** (S'78-M'79) was born in Alair, Andhra Pradesh, India, on September 1, 1952. He received the Bachelors degree in electronics and communication engineering from Osmania University, Hyderabad, India in 1974, and the M. S. degree in electrical engineering at the University of Mississippi, University, in 1979.

From 1974 to 1977 he was with the Television Division, Electronics Corporation of India Limited, Hyderabad, India, engaged in the design and development of CCTV cameras and systems. From 1977 to 1979 he served as a Research Assistant in the Electrical Engineering Department of the University of Mississippi, University. In 1979 he joined Channel Master, Division of Avnet, Inc. as Electronics Engineer, where he is presently engaged in the design and development of microwave circuits. His current research interests are in the areas of electromagnetic theory and microwave circuits.

Mr. Vidula is a member of Eta Kappa Nu and a Graduate Member of the Institution of Engineers (India).



**Eikichi Yamashita** (M'66-SM'79) was born in Tokyo, Japan, on February 4, 1933. He received the B.S. degree from the University of Electro-Communications, Tokyo, Japan, and the M.S. and Ph.D. degrees from the University of Illinois, Urbana, all in electrical engineering, in 1956, 1963, and 1966, respectively.

From 1956 to 1964, he was a Member of the Research Staff on millimeter-wave engineering at the Electrotechnical Laboratory, Tokyo, Japan. While on leave from 1961 to 1963 and from 1964 to 1966, he studied solid-state devices in the millimeter-wave region at the Electro-Physics Laboratory, University of Illinois. From 1966 to 1967 he was with the Antenna Laboratory, University of Illinois. He became an Associate Professor in 1967, and in 1977 Professor in the Department of Applied Electronics, the University of Electro Communications, Tokyo, Japan. His research work since 1956 has been on microstrip transmission lines, hybrid modes of Goubau lines, wave propagation in a gaseous plasma, pyroelectric effect detectors in the submillimeter-wave region, tunnel-diode oscillators, wide-band laser modulators, and optical fibers.

Dr. Yamashita is a member of the Institute of Electronics and Communication Engineers of Japan and Sigma Xi.