

is seen that the  $z$  dependent waves have the similar properties except that they are always forward waves.

We conclude that the nonuniformity of the dc magnetic field is available for magnetostatic waveguides. The possibility of the  $z$  independent backward magnetostatic waves is also suggested.

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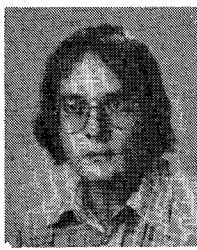
## Contributors



**Takeo Abe** (M'79) was born in Niigata, Japan, on March 8, 1926. He received the B.Eng. and D.Eng. degrees from Tokyo Institute of Technology, Tokyo, Japan, in 1949 and 1966, respectively.

From 1950 to 1959, he was a Research Scientist at the Electrotechnical Laboratory, Tokyo, Japan. From 1962 to 1966 he was an Associate Professor of Electrical Engineering at Tokyo Institute of Technology. From 1966 to 1978, he was a Professor of Electronic Engineering at Niigata University. Since 1978, he has been a Professor of Information Engineering at Niigata University, Niigata, Japan. He is engaged in research and education in electromagnetic theory and microwave engineering.

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**Michael Alberty** was born in Coesfeld, West Germany, on May 9, 1952. He received the Dipl.-Ing. degree in electrical engineering from the Technische Universität Karlsruhe, Karlsruhe, West Germany, in 1976.

Since then he has been with AEG-Telefunken, Backnang, West Germany, where he has worked on parametric amplifiers and low-noise FET amplifiers. He is now engaged in the development of microwave modulators and demodulators for regenerative satellite repeaters.



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From 1976 to 1977 he was with the Ministry of Education in Kuwait. At present he is a Ph.D. Candidate and a Research Assistant at the University of Colorado. His current fields of interest include microstrips, wide-band dielectric directional couplers, and the dielectric image line.



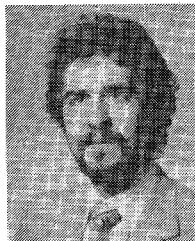
**John W. Bandler** (S'66-M'66-SM'74-F'78) was born in Jerusalem, Palestine, on November 9, 1941. He studied at Imperial College of Science and Technology, London, England, from 1960-1966. He received the B.Sc. (Eng.), Ph.D., and D.Sc. (Eng.) degrees from the University of London, London, England, in 1963, 1967, and 1976, respectively.

He joined Mullard Research Laboratories, Redhill, Surrey, England, in 1966. From 1967 to 1969 he was a Postdoctorate Fellow and Sessional Lecturer at the University of Manitoba, Winnipeg, Man., Canada. He joined the Department of Electrical Engineering, McMaster University, Hamilton, Ont., Canada, as Assistant Professor in 1969. He became Professor in 1974, Chairman of the Department in 1978, and Dean of the Faculty of Engineering in 1979. He has been Coordinator of the Research Group on Simulation, Optimization and Control since 1973. During part

of the year 1975/76 he was a Visiting Professor at the Technion-Israel Institute of Technology, Haifa, Israel, and the University of Bologna, Bologna, Italy. He is a contributor to *Modern Filter Theory and Design* (G. C. Temes and S. K. Mitra, Eds., New York: Wiley-Interscience, 1973). He has over 165 publications, four of which appear in *Computer-Aided Filter Design* (G. Szentirmai, Ed., New York: IEEE Press, 1973), and one in *Microwave Integrated Circuits* (J. Frey, Ed., Artech House, 1975). He was an Associate Editor of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES (1969-1974). He was Guest Editor of the Special Issue of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES on Computer-Oriented Microwave Practices (March 1974).

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**Adalbert Beyer**, photograph and biography not available at the time of publication.



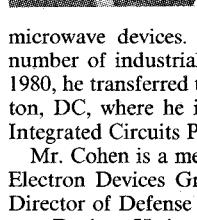
**Aristos Christou** (M'79) received the Ph.D. degree in materials science from the University of Pennsylvania, College Park, in 1971. In 1972, he joined the Naval Research Laboratory, Washington, DC, and was responsible for the development of device diagnostic techniques and metallization systems for microwave power transistors.

In 1974, he became Head of the Device Reliability and Failure Analysis Section, where he directed reliability programs in microwave power transistors, field-effect transistors and microwave diodes. He presently directs programs in advanced technology and reliability of compound semiconductor devices and integrated circuits.

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**Jacques Citerne**, for a photograph and biography please see page 175 of the February 1981 issue of this TRANSACTIONS.



**Eliot D. Cohen** (S'47-M'63-SM'78) received the B.E.E. and M.S.E. degrees in electrical engineering from The George Washington University, Washington, DC, in 1963 and 1966, respectively.

In 1963, he joined the Naval Research Laboratory, Washington, DC, and in 1972 became the Head of the High Frequency Devices Section. In that capacity, he was responsible for the development of microwave solid-state devices and associated circuitry. In addition, he directed and participated in programs to assess the reliability of microwave devices. He also served as Navy Program Manager for a number of industrial and university microwave contracts. In November 1980, he transferred to the Naval Electronic Systems Command, Washington, DC, where he is presently Director of the Navy Very High Speed Integrated Circuits Program.

Mr. Cohen is a member of the Microwave Theory and Techniques and Electron Devices Groups. He is currently serving on the Office of the Director of Defense Research and Engineering Advisory Group on Electron Devices. He is also a member of the technical program committees of the IEEE International Solid-State Circuits Conference and the Microwave Theory and Techniques Symposium, Co-Chairman of the MTT-7 technical committee on microwave and millimeter-wave solid-state devices and has served on IEEE committees on microwave transistor characterization and microwave devices.

**A.-M. A. El-Sherbiny** (M'78), photograph and biography not available at the time of publication.



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From 1963 to 1966 he was employed by the General Electric Company, Communication Products Department, in the design of low noise solid-state microwave sources for multichannel telecommunication equipment. In 1972 he joined the Bedford Laboratories of Raytheon Missile Systems Division as Senior Engineer and was involved in the design of microwave sources, GaAs FET amplifiers, and a variety of other microwave circuits. He is presently Manager of the Sources and Devices Section and is responsible for directing the development of master oscillators, excitors and amplifier combining circuits for missile seeker applications.

Dr. Galani has collaborated on several inventions and is co-inventor of the planar combiner/divider network. He has authored several papers in the areas of power FET amplifiers and amplifier combiner circuits.



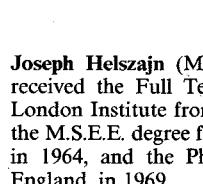
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From 1946 to 1959 he was a Research Associate, from 1959 to 1964 he was an Associate Professor, and since 1964 he has been a Professor at the Research Institute of Applied Electricity, Hokkaido University, Sapporo, Japan. From 1963 to 1964 he was a Visiting Research Associate, Imperial College of Science and Technology, London, England. He has been engaged in research on distributed-constant networks and microwave circuits.

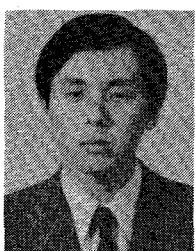
Dr. Hatori is a member of the Institute of Electronics and Communication Engineers of Japan and the Institute of Electrical Engineers of Japan.



**Joseph Helszajn** (M'64) was born in Brussels, Belgium, in 1934. He received the Full Technological Certificate of the City and Guilds of London Institute from Northern Polytechnic, London, England, in 1955, the M.S.E.E. degree from the University of Santa Clara, Santa Clara, CA., in 1964, and the Ph.D. degree from the University of Leeds, Leeds, England, in 1969.

He has held a number of positions in the microwave industry. From 1964 to 1966 he was Product Line Manager at Microwave Associates, Inc., Burlington, MA. Currently, he is working as a Consultant. He is also a Senior Research Fellow at Heriot-Watt University, Edinburgh, Scotland. He is the author of the books *Principles of Microwave Ferrite Engineering* (New York: Wiley) and *Nonreciprocal Microwave Junctions and Circulators* (New York: Wiley, 1975).

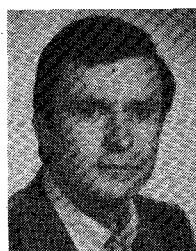
Dr. Helszajn is a fellow of the Institution of Electronic and Radio Engineers (England). In 1968 he was awarded the Insignia Award of the City and Guilds of London Institute.



**Kazuhiko Honjo** was born in Saitama, Japan, on October 28, 1951. He received the B. E. degree from the University of Electrocommunications, Tokyo, Japan, and the M.E. degree from the Tokyo Institute of Technology, Tokyo, Japan, both in electrical engineering, in 1974 and 1976, respectively.

He joined the Central Research Laboratories, Nippon Electric Co., Ltd., Kawasaki, Japan, in 1976. He has been engaged in the research and development of TRAPATT oscillators, high power GaAs FET amplifiers and ultrabroad-band GaAs FET amplifiers, and is presently concerned with GaAs monolithic ICs.

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

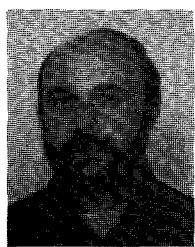


**Alessandro Lipparrini** was born in Bologna, Italy, on August 31, 1947. He graduated in electronic engineering from the University of Bologna, Bologna, Italy, in 1974.

Since 1974 he has joined the Technical Staff of the Istituto di Elettronica, University of Bologna, Pontecchio Marconi, Italy, where he is currently involved in research in the field of microwave integrated circuits. Since March 1975 he has been a Researcher for the Italian Ministry of Education at the University of Bologna, where he has

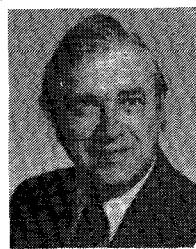
also served as a Lecturer on Circuit Theory.

Mr. Lipparrini was awarded the G. Marconi Prize for Scientific Research in 1974.



**Patrick Kennis** was born in Tourcoing, France, on September 2, 1948. He received the third cycle Doctorat degree from the University of Lille, Villeneuve d'Ascq, France, for work on high-efficiency X-band GaAs IMPATT diodes in 1977. In October 1978, he joined the "Propagation and Circuits" group of the Centre Hyperfréquences et Semiconducteurs where he is a Doctorat es Sciences Physiques degree candidate. His research concerns characteristics and properties of MIC on semiconductor substrates.

He has been with the Centre Hyperfréquences et Semiconducteurs (L. A. au C. N. R. S., no. 287), University of Lille, since 1972. Currently he is Assistant Professor at that University.



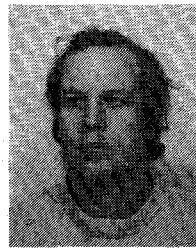
**Alan C. Macpherson** (SM'61) was born in Washington, DC, on December 24, 1920. He received the B.S. degree in physics from the University of Maryland, College Park, MD, in 1943 and the M.A. degree in physics from George Washington University, Washington, DC, in 1950. Serving in the Signal Corps from 1943 to 1946, where his duties included work on radar, proximity-fuse production, and special purpose electronic tubes. From 1947 to 1954 he worked on precision measurements of power and impedance at the National Bureau of Standards, Washington, DC. At the Naval Research Laboratory, he has worked on the design and fabrication of various microwave semiconductor devices. He is presently working on the reliability of microwave semiconductor power devices.



**Hidemitsu Komizo** (M'72) was born in Tokyo, Japan, on December 3, 1939. He received the B.S. degree in electrical engineering from the University of Electro-Communications, Tokyo, Japan, in 1962.

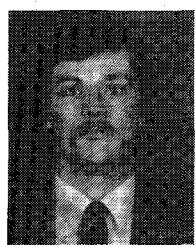
He joined Fujitsu Laboratories Ltd., Kawasaki, Japan, in 1962. From 1962 to 1978 he was engaged in research and development of microwave and millimeter-wave components and subsystems for radio relay systems. Since 1979, he has been engaged in research and development of radio-communication systems, optical-fiber communication systems, and components for these systems.

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From 1973 to 1978 he has been working at the Institut für Hochfrequenztechnik of the Technische Universität Braunschweig, first engaged in theoretical and experimental investigations on microwave measurements, superconductivity, and low-temperature dielectric-loss mechanisms, then concerned with the development of multimode optical-fiber communication systems. In 1978 he joined the Microwaves and Measurements Group at Philips GmbH Forschungslaboratorium Hamburg, Hamburg, West Germany, where he was responsible for the development of microwave measurement equipment for industrial purposes. Since 1980 he leads the research group.



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During the 1973-1980 time period he worked on development of IMPATT diode power combiners, FET amplifiers, and other microwave components at Raytheon Missile Systems Division, Bedford, MA. Presently he is at AVCO Systems Division, Wilmington, MA.



**Gerhard Ohm** was born in Verliehausen, West Germany, on March 5, 1945. He received the Dipl.-Ing. degree in electrical engineering in 1973 and the Dr.-Ing. degree in 1977, both from the Technische Universität Braunschweig, Braunschweig, West Germany.

From 1973 to 1977 he was a Research Assistant at the Institut für Hochfrequenztechnik of the Technische Universität Braunschweig, where he was engaged in investigations on frequency multiplication with MIS diodes. In 1977 he joined

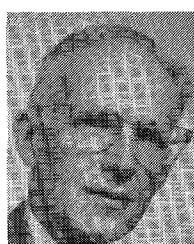
AEG-Telefunken, Backnang, West Germany, and worked on FET amplifiers. His current work involves the design and development of microwave components for regenerative satellite repeaters.

Dr. Ohm is member of VDE/NTG.

been Associate Professor at the University of Bologna, teaching a course on microwave integrated circuit analysis and design. In 1980 he joined the University of Bologna as a full Professor of Electromagnetic Fields and Circuits. His current fields of interest are MIC design and the theoretical aspects of electromagnetic propagation in optical fibers.

Mr. Rizzoli is a member of AEI and IEEE.

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**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, CN, in 1935 and 1939, respectively.

From 1939 to 1941 he taught mathematics at Adelphi College, Garden City, NY, and at Hofstra College, Hempstead, NY. He joined the staff of the Massachusetts Institute of Technology Radiation Laboratory, Cambridge, in 1942, and at the close of World War II was in charge of one of the three development sections of the

Antenna Group. From 1946 to 1948 he headed the RF group at the Submarine Signal Company, Boston, MA. At present he is affiliated with the Microwave Development Laboratories, Inc., Needham Heights, MA.

Dr. Riblet is a member of the American Mathematical Society and a Fellow of the Institute of Electrical and Electronic Engineers. In 1976 he was awarded the 1975 Microwave Career Award by the Professional Group, Microwave Theory and Techniques.

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**Koji Shibata** was born in Otaru, Japan, on June 2, 1946. He received the B. Eng. and M. Eng. degrees in electronics engineering both from Hokkaido University, Sapporo, Japan, in 1969, 1971, respectively.

He was with Musashino Electrical Communication Laboratory, N.T.T., from 1971 to 1973. Presently, he is an assistant Professor of Electronic Engineering at the Kitami Institute of Technology, Kitami, Japan.

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



**Mohamed R. M. Rizk** (S'75-M'79) was born in Alexandria, Egypt, on September 17, 1949. He received the B.Sc. (Hons.) degree in electrical engineering in 1971 from Alexandria University, and the M.Eng. and Ph.D. degrees from McMaster University, Hamilton, Ont., Canada, both in electrical engineering in 1975 and 1979, respectively.

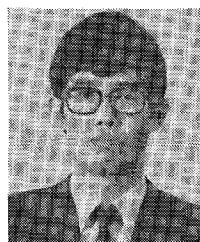
From 1971 to 1973, he was a Teaching Assistant at Alexandria University. He has been with McMaster University since 1973. In 1979 he was awarded a Postdoctoral Fellowship by the Natural Sciences and Engineering Research Council of Canada. In 1979, he joined the Electrical and Computer Engineering Department at McMaster University as an Assistant Professor. His main research interests are in the area of computer-aided circuit analysis and design, and optimization techniques.

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**Vittorio Rizzoli** (M'79) was born in Bologna, Italy, in 1949. He graduated from the School of Engineering, University of Bologna, Bologna, Italy, in July 1971. From 1971 to 1973 he was with the Centro Onde Millimetriche of Fondazione Ugo Bordoni, Pontecchio Marconi, Italy, where he was involved in a research project on millimeter-waveguide communication systems. In 1973 he was with Hewlett-Packard Company, Palo Alto, CA, working in the areas of MIC and microwave power devices. Since 1974, he has



**Yoichiro Takayama** was born in Kanagawa, Japan, on January 3, 1942. He received the B.E., M.E., and Dr. Eng. degrees from Osaka University, Osaka, Japan, in 1965, 1967, and 1973, respectively.

He joined the Nippon Electric Company, Ltd., Kawasaki, Japan, in 1967 and is now Research Manager of the Electron Device Research Laboratory, Central Research Laboratories. He has been engaged in the research and development of microwave solid-state oscillators, amplifiers, modulators and sensors. He is now leading GaAs IC research group.

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



**Steven J. Temple** (S'72-M'74) was born in Kingston, NY, on March 23, 1952. He received the B.S. and M.E.E. degrees in electrical engineering in 1973 and 1974, respectively, from Cornell University.

In 1974, he joined the Bedford Laboratories of Raytheon Company's Missile Systems Division and since 1977 has been responsible for the development of GaAs power FET amplifiers and transmitter subsystems for advanced missile systems. He has published several papers on pulsed operation of power FET's, power combining techniques, and improvements in FET performance. He has collaborated on a number of invention disclosures and is coinventor of the planar (fork) combiner/divider network.

Mr. Temple was recently selected to receive the Honorable Mention Award in the Outstanding Young Electrical Engineer program of the Eta Kappa Nu. From 1976-1980 he served on the Membership Services Committee of the IEEE Microwave Theory and Techniques Society.



**Serge Toutain** was born in Paris, France, in March 1948. He received the B.S. degree in electrical engineering from the Ecole Nationale Supérieure de l'Electronique et de ses Applications (ENSEA) in 1970, and the Doctor Engineer degree in 1975.

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**Yasuyuki Tokumitsu** (M'79) was born in Yamaguchi, Japan, on May 15, 1943. He received the B.S. and M.S. degrees from Kyushu Institute of Technology, Kitakyushu, Japan, in 1966 and 1968, respectively.

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



**Yoshio Yamaguchi** was born in Niigata, Japan, on March 12, 1954. He received the B.S. degree in electronic engineering from Niigata University, Niigata, Japan, and the M.S. degree in electronic engineering from Tokyo Institute of Technology, Tokyo, Japan, in 1976 and 1978, respectively.

He has been working as a Research Assistant at Niigata University since 1978, and has been engaged in the research of propagation characteristics of electromagnetic waves in lossy medium. Mr. Yamaguchi is a member of the Institute of Electronics and Communications Engineers of Japan.