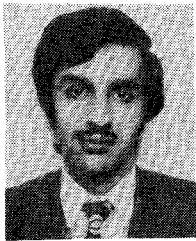


# Contributors



**Faruq Abdullah** was born in Lahore, Pakistan, on June 26, 1944. He received the B.Sc. degree in physics and the Ph.D. degree in theoretical physics (elementary particles) from Queen Mary College, London University, England, in 1965 and 1972, respectively.

From 1968 to 1972 he was with Telecommunications Laboratories, Hirst Research Centre, General Electric Company, Wembley, England, where he worked on theoretical aspects of high- and low-level varactor upconverters. He is currently a Research Fellow in the Systems Science Department, City University, London, England, engaged in mathematical modeling and computer-aided design of instrument transducers.

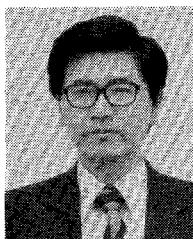


**F. Michael Clayton** was born in Moretonhampstead, England, on February 28, 1943. He graduated with a degree in mathematics from the University of Cambridge, Cambridge, England, in 1964 and in the following year completed Part III of the Mathematics Tripos.

Since 1965 he has been with Telecommunications Laboratories, Hirst Research Centre, General Electric Company, Wembley, England. His work in the Systems Studies Project has included problems arising in analog and digital

radio communications systems, digital line transmission, and, more recently, telephone traffic studies. He was appointed Project Leader in 1971.

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**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, both in electrical engineering, in 1965 and 1967, respectively.

Since April 1967 he has been a Research Assistant with the Department of Applied Electronics, University of Electro-Communications. He has studied switching transistors, strip transmission lines, and wide-band laser

modulators.

Mr. Atsuki is a member of the Institute of Electronics and Communications Engineers of Japan.

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**J. Brian Davies** (M'73) was born in Liverpool, England, in 1932. From Jesus College, Cambridge, England, he received the B.A. degree in mathematics in 1955, and from the University of London, London, England, he received the M.Sc. degree in mathematics in 1957 and the Ph.D. degree in mathematical physics in 1960.

In six years at Mullard Research Laboratories, Redhill, England, he worked mainly on field theory of waveguide isolators, waveguide and stripline circulators and linear particle accelerators. He was on the Academic Staff of Electrical Engineering at Sheffield University from 1963 to 1967, and since 1967 at University College, London, England, where he has been Reader in Electronics since 1970. His principal research interests are in field theory aspects of microwaves, especially those involving numerical techniques. For the fiscal year 1971/72 he held the post of Visiting Scientist at the National Bureau of Standards, Boulder, CO.

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**J. G. de Koning** (M'65), photograph and biography not available at the time of publication.

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**Jiro Chiba** (S'58-M'60) was born in Fujisawa, Iwate prefecture, Japan, on January 29, 1932. He received the B.E. degree in electrical engineering from Iwate University, Iwate, Japan, in 1955, and the M.S. and Ph.D. degrees in electrical engineering from Tohoku University, Sendai, Japan, in 1957 and 1960, respectively.

From 1960 to 1963 he was a Research and Teaching Assistant at Tohoku University. Since 1964 he has been employed as an Assistant Professor in the Department of Electrical Engineering, Faculty of Engineering, Tohoku University, Sendai, Japan. There he has been doing research and development work on communication systems in tunnel, wave propagation in the sea, transmission lines, and nonlinear oscillation.

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

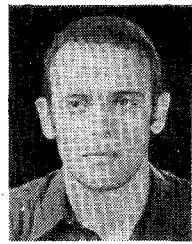


**Jerome J. Green** (SM'66) received the B.S. degree in physics from Northwestern University, Evanston, IL, in 1954, and the M.A. degree in solid-state physics and the Ph.D. degree, from Harvard University, Cambridge, MA, in 1955, and 1959, respectively. His thesis dealt with ferromagnetic resonance effects in ferrites and garnets at high signal levels.

From 1956 to 1959 he worked part time in the Research Division, Raytheon Company, Waltham, MA. Upon receipt of his doctorate in 1959, he joined the company on a full-time basis. At Raytheon, he has been engaged in research concerning all types of high-power effects in ferromagnetic materials at microwave frequencies. Recently, he has been studying the magnetic loss and high-power effects in partially magnetized materials with emphasis on materials for phase-shifter applications. He has been concerned with the development of ferrite phase shifters and phase-shifter materials for phased-array applications. Currently, he is Manager of the Magnetics Group.

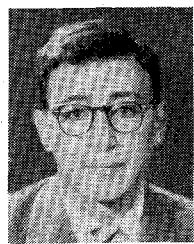
**R. J. Hamilton, Jr. (M'72)**, photograph and biography not available at the time of publication.

**T. L. Hierl**, photograph and biography not available at the time of publication.



**Ali M. Hussein (S'76)** received the B.Sc. and M.Sc. degrees in electrical engineering from Alexandria University, Alexandria, Egypt, in 1967 and Ain-Shams University, Cairo, Egypt, in 1972, respectively.

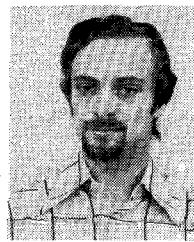
From 1967 to 1974 he was a Teaching Assistant at Ain-Shams University. He was engaged in research on ferrite devices from 1970 to 1974. He is currently a candidate for the Ph.D. degree at the University of Toronto, Toronto, Ont., Canada.



**Magdy M. Ibrahim (M'73)** was born in Cairo, Egypt, in June 1944. He received the B.Sc. degree (honors) and the M.Sc. degree from Ain-Shams University, Cairo, Egypt, and the Ph.D. degree from the University of Nebraska, Lincoln, in 1965, 1969, and 1971, respectively, all in electrical engineering.

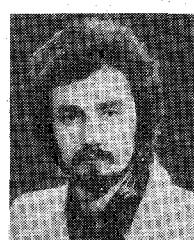
Since 1972 he has been on the Engineering Faculty of Ain-Shams University, Cairo, Egypt. His main research interest is currently in optical communication.

Dr. Ibrahim is a member of Sigma Xi.



**Wolfgang Menzel** was born in Brilon-Wald, Germany, on December 10, 1948. He received the Dipl. Ing. degree from the Technical University of Aachen, Aachen, Germany, in 1974.

Since this time he has been working on microstrip circuit problems as an assistant at the Department of Electrical Engineering, University of Duisburg, Duisburg, Germany.



**D. Mirshekar-Syahkal** was born in Tehran, Iran, in 1951. He received the B.Sc. degree in electrical engineering from Tehran University, Tehran, Iran, and the M.Sc. in microwaves and modern optics from University College, London, England. He is now working towards his Ph.D. degree at University College, London.

**Tetsuro Mori**, photograph and biography not available at the time of publication.

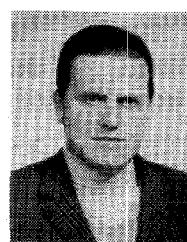


**Tsutomu Noguchi** was born in Omiya City, Saitama, Japan, on June 21, 1949. He received the B.S. degree from the Science University of Tokyo, Tokyo, Japan, in 1972 and the M.S. degree from the Tokyo Metropolitan University, Tokyo, Japan, in 1974.

In 1974 he joined the Nippon Electric Company Ltd., Kawasaki, Japan, and is now a Research Engineer in the Electron Device Research Laboratory, Central Research Laboratories. He has been engaged in the development of microwave circuit devices.

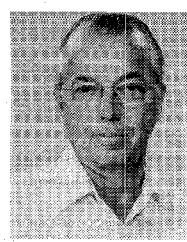
Mr. Noguchi is a member of the Institute of Electronics and Communication Engineers of Japan.

**John D. Nordgard**, photograph and biography not available at the time of publication.



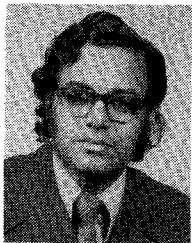
**Vittorio Rizzoli** was born in Bologna, Italy, in 1949. He graduated from the School of Engineering, University of Bologna, Bologna, Italy, in 1971.

From 1971 to 1973 he was with Centro Onde Millimetriche of Fondazione Ugo Bordoni, Pontecchio Marconi, Italy, where he worked in the area of microwave integrated circuits. In 1973 he spent six months with Hewlett-Packard Company, Palo Alto, CA, working in the field of microwave power devices. Since 1974 he has been an Associate Professor at the University of Bologna.



**Robert G. Rogers (S'45-A'46-M'60)** received the B.S. and Ph.D. degrees from the University of Texas, Austin, in 1945 and 1953, respectively. He received the M.S. degree from the California Institute of Technology, Pasadena, in 1947.

From 1953 to 1961 he was responsible for microwave subsystems in various radar and navigation projects at General Electric's Advanced Electronics Center, Ithaca, NY. Since 1961 he has been responsible, in the Advanced Development Department, for microwave techniques for GTE Lenkurt, Inc., San Carlos, CA, where he has worked on diverse microwave elements of communication, including tunnel diode and parametric amplifiers, and oscillators and amplifiers using transistors, Gunn, and IMPATT devices. He holds several United States and foreign patents.

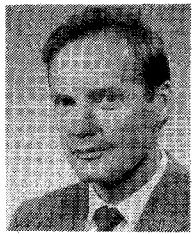


**Vijai K. Tripathi** (M'68) was born in Kanpur, India, on December 23, 1942. He received the B.Sc. degree from Agra University, Agra, Uttar Pradesh, India, the M.Sc. Tech. degree in electronics and radio engineering from Allahabad University, Allahabad, India, and the M.S.E.E. and Ph.D. degrees in electrical engineering from the University of Michigan, Ann Arbor, in 1958, 1961, 1964, and 1968, respectively.

From 1961 to 1963 he was a Senior Research Assistant at the Indian Institute of Technology, Bombay. In 1963 he joined the Electron Physics Laboratory of the University of Michigan where he worked as a Research Assistant from 1963 to 1965, and as a Research Associate from 1966 to 1967 on microwave tubes and microwave solid-state devices. From 1968 to 1973 he was an Assistant Professor of Electrical Engineering at the University of Oklahoma, Norman. In 1974 he joined Oregon State University, Corvallis, as an Assistant Professor of Electrical and Computer Engineering, where his current research activities are in the areas of microwave circuits and devices and solid-state devices.

Dr. Tripathi is a member of Eta Kappa Nu and Sigma Xi.

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**H. Jerrold Van Hook** received the A.B. degree in geology from Dartmouth College, Hanover, NH, in 1954. He received the M.S. and Ph.D. degrees in geochemistry from the College of Mineral Industries, The Pennsylvania State University, University Park, PA, in 1956 and 1958, respectively.

In 1958 he joined the Research Division, Raytheon Company, Waltham, MA. His general field of specialization has been the chemical and physical properties of magnetic ceramics. Early investigations included phase equilibria in iron oxide systems at melting temperatures and crystal growth under conditions of high temperature and variable oxygen pressure. More recently, he has been responsible for the development of ultralow-loss polycrystalline calcium-vanadium-substituted garnets and composite ferrite-dielectric structures produced by cofiring and arc plasma spraying. He has written about 25 technical papers on these subjects, including a chapter on microwave ferrite materials in a monograph on phase equilibria. He has also been involved in research on samarium-cobalt alloys and on thin-film garnets for bubble memories.

Dr. Van Hook is a member of the American Ceramic Society and the American Association for Crystal Growth.



**Ingo Wolff** was born in Köslin, Germany, on September 27, 1938. He received the Dipl. Ing. degree, the Dr. Ing. degree, as well as the Habilitation degree from the Technical University of Aachen, Aachen, Germany.

From 1964 to 1974 he worked on millimeter-wave techniques, microwave ferrite techniques, and microstrip techniques at the Technical University of Aachen. Since 1974 he has been a Professor of Electrical Engineering at the University of Duisburg, Duisburg, Germany.

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**Eikichi Yamashita** (M'66) 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 at the same university. Since September 1967 he has been an Associate Professor with the Department of Applied Electronics, the University of Electro-Communications, Tokyo. His research work since 1956 has been on microstrip transmission lines, dielectric waveguides, wave propagation in a gaseous plasma, pyroelectric-effect detectors, semiconductor oscillators in waveguides, and ultrawide-band laser modulators.

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

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**Saad E. Youssef** received the Ph.D. degree from Durham University, Newcastle, England, in 1951. He is currently Professor of Radio Engineering and Electronics at Ain-Shams University, Cairo, Egypt.